



## **2022** New London-Waterford Speedbowl *Mini Stock Rules*

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### **2022** NLWS Mini Stock Competition and Tech Contacts:

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All items marked in **RED** are new and/or are wording changes from the 2020 NLWS Mini Stock Rulebook.

All references to the New London-Waterford Speedbowl in the following rules may be referred to as (NLWS) as an abbreviation of the speedway name and deemed an official recognition of the New London-Waterford Speedbowl in this rulebook.

**Drivers & Car Owners are required to familiarize one's self with the General Track Rules as well as the Mini Stock rulebook.**

**By registering as an owner or driver you agree to be knowledgeable and bound by the contents found in these divisional rules and in the General Rules.**

## **2022** NLWS Mini Stock General Rules

### **5.0) General Mini Stock Division Rules**

In the following rules you will see the term "stock OEM" used. This means "original equipment manufacturer". These parts must come on a standard production car.

- a) No carbon fiber or titanium parts allowed.
- b) None of the following will be allowed in or on any engine or driveline component or part:  
abrasive cleaning, acid dipping, chemical milling, coating, epoxying, finishing, grinding, painting, plating, polishing, porting, etc.
- c) The rules herein are for the New London-Waterford Speedbowl only, with no expressed or implied agreement with any other Division or Speedway as to their interpretation and/or method of inspection.
- d) All equipment must be approved by track officials. No equipment is considered to be approved by reason of having passed through a technical or safety inspection unobserved. No car will be



- considered as having passed inspection for the event until the finish is made official.
- e) All engine models, equipment changes, or modifications not specifically addressed in this rule book must be submitted to the New London-Waterford Speedbowl for consideration of approval prior to competition.
  - f) All equipment is subject to the approval of the New London-Waterford Speedbowl Officials.
  - g) Once a car has been presented to the New London-Waterford Speedbowl Officials for post-race inspection the entire car and all of its components become subject to inspection. This includes but is not limited to items designated for inspection following a particular event
  - h) All rule changes and updates made during the course of the season for the current rulebook will be posted to the New London-Waterford Speedbowl website ([www.speedbowlct.com](http://www.speedbowlct.com)). This will serve as the only form of official notification until the printing of the **2023** New London-Waterford Speedbowl rule book.
  - i) An aftermarket, aluminum fabricated racing seat, sized correctly for the driver, must be used. The seat frame must be made of steel tubing (min 1" round or square) and must be welded to the roll cage and/or frame. The seat cannot attach to any part of the floor pan. The seat must be bolted at 4 places at the bottom of the seat, and 4 places at the back. The bolts must be Minimum 3/8" diameter grade 8, with large fender washers on the seat side. You must have (2) head supports, (2) shoulder supports, and (2) leg supports, or a "full containment" assembly bolted to your seat.

#### 5.0.1) Scoring Transponder Location

Transponder mounting brackets will be installed on the inside (or outside) of the right rear frame rail. The round post of the bracket must be on top and the square tab on the bottom flush with the lower edge of the frame rail. The bracket must be mounted with its center line exactly 12" to the rear of the rear axle centerline and must be completely vertical to the ground. Transponders are required on the cars at all times. Any car not registering a transponder signal during practice will be black-flagged to be made aware of their scoring transponders failure and is required to remedy it before proceeding further in the event.

Transponders are available from: AMB, US, Inc. 32 Highlands Parkway, Suite 104 Smyrna, GA 30082 Tel 678-816-4000 Fax 678-816-4001

#### 5.0.1) Driver Eligibility

- A) Drivers 14 years old and up are eligible to compete in the New London Waterford Speedbowl Mini Stock Division.
- B) In order to participate in any on-track activity, a driver must be signed in with the handicapper **and have all completed paperwork on file. Paperwork includes Driver Registration form, Number Registration Form, etc.**



## 2022 NLWS Mini Stock Technical Rules

### 5.1) Approved Models

- a) No turbo, rotary, mid-engine or rear engine cars allowed.
- b) The four cylinder, two or four door coupes of the following makes and models are allowed:

**Ford:** Mustang (94-98 must use 2.3 engine), Escort (Carbureted only)

**Nissan:** 200SX FWD

**Toyota:** Celica

**Volkswagon:** Scirocco, Rabbit, Golf (Carbureted only) *No GTI's permitted.*

**Chevrolet:** Cavalier (Carbureted only)

**Saturn:** S Series

**Chrysler:** Charger, Lance, Shadow, Neon (Carbureted only)

**Honda:** Accord, Prelude

**Acura:** Integra

**Mitsubishi:** Eclipse

### 5.1) 5.2) Electronic Fuel Injection (EFI): Car Weights Post Race

- a) All specified weight requirements will be with the driver.
- b) The minimum total weight for NON variable valve timing engine cars:
  - 1) Below 1999cc's will be 2350lbs
  - 2) 2000cc's and above will be 2450lbs
- c) The minimum total weight for variable timing engine cars:
  - 1) Below 1999cc's will be 2450lbs
  - 2) 2000cc's and above will be 2500lbs
- d) Maximum left side weight of fuel injected cars is 55.0% of total weight.
- e) Weight may be added or subtracted to cars by NLWS Officials in the best interest of competition.

### 5.3) Carbureted Cars: Car Weights Post Race

- a) All specified weight requirements will be with the driver.
- b) The minimum total weight at all times will be 2100 lbs. for cars with engine displacement up to 1999 cc's. Cars with engine displacement greater than 2000 cc's must weigh a minimum of 2450 lbs.
- c) Maximum left side weight of carbureted cars is 55.0% of total weight.
- d) Weight may be added or subtracted to cars by NLWS Officials in the best interest of competition.



#### 5.4) Ballast Weight

- a) Added weight may be mounted under the car, providing that it is securely bolted to the floor pan and up as high as possible. The weight may not block the area behind the left front tire and the area in front of the left rear tire in order to allow for chassis height to be checked.
- b) Added weight must be magnetic steel or lead only, in block form, and weighing no less than five (5) lbs. per block (no pellets). Added weight must be securely bolted or welded and painted white with the car number stenciled in black. No added weight will be permitted inside the driver's compartment. Weight must be welded in a box or attached with two (2) or more 7/16" minimum diameter, grade 8 bolts and locking nuts. All weight must make 5" ride height.
- c) Any car losing ballast weight or found with unmarked weight is subject to a fine.
- d) The mounting of ballast weight is subject to the approval of NLWS Officials.

#### 5.5) Window Net

A commercially manufactured, SFI-rated, nylon window net must be installed in the driver side door window opening. It must be positioned to cover the entire window opening. Window nets may not be used beyond three (3) years from the date of manufacture. The window net must be rib type, made from minimum three-quarter ( $\frac{3}{4}$ ) inch and maximum one (1) inch wide nylon material with a minimum one (1) inch and a maximum two and one-quarter ( $2\frac{1}{4}$ ) inch square opening between the ribs. The minimum window net size must be 22 inches wide by 16 inches high. All window net mounts must be a minimum one-half ( $\frac{1}{2}$ ) inch diameter solid steel rod on the bottom and a minimum one (1) inch wide by three-sixteenths ( $\frac{3}{16}$ ) inch thick flat steel or a minimum one-half ( $\frac{1}{2}$ ) inch diameter solid steel rod on the top, with mounts welded to the roll cage. The window net must fit tight and be secured with a lever-type quick release latch. The lever must be secured by a detent ball in the lever and may be supplemented by Velcro® fastener only – pins or clips are not permitted. The latch must mount at the top in the front to roof bar (#3) and release from the inside.

#### 5.6) Body Panels

- a) All body panels must remain stock, including angles and openings.
  - i) The Duraflex fiberglass roof part # (DUR-79-93) or Speedwayone part # (FM309) will be permitted for use on Mustangs. If fiberglass roof is used, a halo bar safety plate (Exhibit C) must be installed.
- b) Stock or aftermarket, fiberglass hoods must lay flat with no openings. Cowl inductions hoods with maximum 3" rise are allowed. Cowl Opening must not be more than 4.0" as installed on the car.
- c) Fenders, quarter panels and door panels may be replaced with **Magnetic** steel onlsheet metal, minimum thickness 0.030", provided that it follows the same contour as the original body panel. Saturn's may run composite factory panels.



- d) A vent window is allowed. It must be maximum seven (7) inches measured from the base of the A-pillar. It may not be tapered back, and must go straight up to the pillar.
- e) The headlight and tail light openings must be covered with sheet metal.
- f) No holes are permitted in the rear bumper or tail panel.
- g) The only panels allowed to be gutted will be the hood, roof, trunk lid, trunk floor and the doors.
- h) The doorpost, inner quarter panels, and rocker panels must remain.
- i) The full stock floor pan and stock front and rear firewall must remain. The inner sheet metal panel in front of the strut tower to the radiator support may be removed.
- j) The minimum roof height for Mustangs is 51" measured six (6) inches back from the top of the windshield opening at all times.
- k) Crush panels must be installed between the front firewall and fenders sealing off the drivers compartment.
- l) Cars not conforming to these regulations will be assessed weight penalties at the discretion of NLWS Officials.

#### 5.7) Bumpers

- a) Only stock bumpers will be allowed.
- b) Factory absorbers must be replaced with steel brackets.
- c) The outside edges of the bumper must be capped to prevent hooking.
- d) Front and rear aftermarket covers are allowed for the make and model being used. If aftermarket bumper covers are used, bumper tubing must be inside of the cover and may not extend past the flat surface of the tire. No dirt or outlaw-type bumper covers permitted.

#### 5.8) Rear Spoiler

- a) The spoiler must be mounted on the rear of the trunk or follow the contour of the rear panel. The spoiler cannot exceed the contour of the body at the base.
- b) No side gussets or rear vanes will be permitted.
- c) The spoiler must be made of clear polycarbonate material. Only the bottom one (1) inch of the spoiler may be steel or aluminum.
- d) No decals will be permitted on the spoiler.
- e) Maximum Spoiler height is 4.0". Maximum width is 60.0". 4.0" height will be measured from the horizontal plane of the trunk lid and/or bumper cover on which it is attached to.

#### 5.9) Glass

- a) A full windshield made of minimum 1/8" polycarbonate material is required.



- b) Quarter glass is allowed, but must be made of clear polycarbonate material. If quarter glass is not used, the window opening must remain open.
- c) Rear windows are not allowed.

#### 5.10) Body Spoiler

- a) Side skirts are allowed between wheel openings. They must follow the contour of the body and may not be stepped or angled.
- b) Side skirts must make ride height.

#### 5.11) Nerf Bars

- a) Nerf bars may be used between the wheel openings at hub height. Bars must be 1" round or 1" x 1" square tubing. They must be mounted skin tight to the body with no sharp edges, angels or points. Nerf bar ends must be tapered and capped. Carriage type bolts must mount inward.
- b) Polycarbonate nerf bars will be permitted.

#### 5.12) Interior Sheet Metal

- a) The dash may be removed and replaced with a fabricated dash.
- b) Firewalls
  - i) The front firewall must be stock. All holes in the firewall must be covered with sheet metal.
  - ii) The rear firewall may be fabricated, but must follow stock configuration.
  - iii) Hatchback cars must fabricate a rear firewall at the floor level to protect the driver from the fuel cell. Firewalls must be welded, not riveted.
- c) No enclosures around the driver are permitted.
- d) All interior sheet metal must be minimum 0.031" steel.

#### 5.13) Frame & Chassis

- a) All chassis parts must remain unaltered from the manufacturer with the following exceptions:
  - i) In order to obtain proper camber angle, the following will be permitted:
    - (1) The right lower A-Frame may be lengthened.
    - (2) The right strut tower may be cut and moved a maximum of one (1) inch from the passenger side to the driver's side. The strut tower must be re-welded. Moving from front to back will not be permitted. No other modifications to the strut tower will be allowed.
    - (3) A one (1) inch longer, unaltered, stock OEM lower A-Frame, which fits in the stock mounting location, may be used on the right side only.
    - (4) Adjustable caster/camber plates may be used on the top of the front strut towers



- (5) Fabricated or aftermarket strut support brackets may be used on front and rear shock towers. Shock tower locations must remain stock.
  - (6) Aftermarket or fabricated engine cradle supports may be added to stiffen suspension.
  - (7) FWD only, cars with A-frames option: Aftermarket tubular OEM dimension A-frames and mounting hardware may be used. Strut towers cannot be cut and moved, caster camber plates not allowed. All mounting points must remain in stock location. Right side upper control arm may be shortened 1" inch for camber correction.
- b) Frame repairs in front of the front strut/shock tower and behind the rear strut/shock tower may be fabricated with two (2) inch by three (3) inch by 0.083" magnetic steel tubing. Repairs must follow the stock configuration of the stock chassis.
  - c) Wheelbase must be within + or - ½" of the OEM factory listed dimension for the chassis being used.

#### 5.14) Roll Cage

- a) A full roll cage is required. Roll cage must be accordance with diagram numbers: 2, 3, 4, 5 & 6 of the NASCAR Whelen All-American Series rulebook.
- b) A minimum two (2) inch by two (2) inch by 0.120" steel box tubing must be welded inside the car to the floor on each side of the rocker panels. When installing the roll cage, the main bar (referred to as #1) and the front legs (referred to as #2A and #2B) must be welded on top of the box tubing. The main bar (#1) must be vertical (90 degrees) to the box tubing. The roof bar (referred to as #3) must be within four (4) inches of the window and/or the door openings on both sides, as well as the front windshield, with no offsets.
- c) All cars must have front and rear hoop bars that attach to the center section of the roll cage.
- d) A "Petty" bar (referred to as #7A) is mandatory.
- e) The center section of the roll cage must be in accordance with NASCAR design (Exhibit 3).

#### 5.15) Fuel Cell Crash Bar

A reinforcement bar, made of minimum one and one half (1 1/2) by 0.083", must extend below the rear frame section behind the fuel cell. This bar must be as wide as the rear frame rails and extend as low as the bottom of the fuel cell with two (2) vertical uprights evenly spaced between the frame rails and attached to the rear cross member. Two (2) support bars, one (1) located on each corner, must angle upwards and be welded to the rear frame rails.

#### 5.16) Fuel Cell

- a) The use of a commercially manufactured fuel cell is mandatory. Maximum capacity is 16 gallons.
- b) Fuel cell vent check valves are mandatory.
- c) Fuel cell must be mounted using minimum 1" x 1" x .083" square tubing as shown in NASCAR diagrams/exhibits 1, 2, 3.
- d) The use of magnetic steel fuel cell containers made of minimum 22 gauge (.030") steel is



mandatory.

- e) The fuel cell must be a minimum of 10" from the ground.

#### 5.17) Ground Clearance

- a) Ground clearance must measure five (5.0) inches. The measurement will be taken from the lowest point of the frame or unibody.
- b) Front bumper cover, rear tail panel, side skirts and rocker panels must make five (5.0) inch ground clearance.

#### 5.18) Suspension

- a) All suspension parts must remain stock OEM for chassis being used unless otherwise indicated in these rules.
- b) Bushings may be replaced with aftermarket urethane or rubber, provided that they do not alter the original mounting location. No other bushings are permitted. Offset bushings are not permitted, except on rack and pinion mounts.
- c) Aftermarket OEM dimension non-adjustable rear trailing/control arms may be used.
- d) FWD: only may use camber correction hardware in rear suspension. Maximum camber 4 degrees.

#### 5.19) Sway Bar

The sway bar may be changed, but must follow stock design and mounting points. Maximum sway bar diameter is 1-5/16".

#### 5.20) Bearings

All wheel (front and rear), differential and transmission bearings must remain stock OEM. Bearings must be angle type cone, straight barrel type, or ball bearing. All bearings, including the rollers, must be magnetic steel only.

#### 5.21) Brakes

- a) Only stock OEM brakes for the chassis being used are permitted. Exception to this is Ford Mustangs may use Stock OEM Rear Disc Brakes for the Fox Body or SN-95 chassis.
- b) Brakes must be operational on all four wheels at all times.
- c) Only brakes lines made of steel will be permitted.

#### 5.22) Steering

- a) The steering must be the stock OEM for the chassis being used.
- b) A collapsible steering shaft is recommended. If one is not used, however, then the shaft must be made with at least two (2) U-joints and deflect to the side upon heavy frontal impact.





#### 5.23) Struts/Shocks

- a) Stock OEM replacement, non-adjustable steel struts/shocks, as purchased from a stock automotive parts supplier, must be used. No racing struts/shocks allowed. No Bilstein struts/shocks allowed.
- b) Struts/shocks may not be altered in any way, and must bolt into stock OEM mounts in the front and rear stock OEM locations.
- c) Right front strut lower mounting hole may be lengthened and reinforced providing mounting hole remains in the original outline of strut.

#### 5.24) Springs

- a) Racing springs will be permitted. Springs may be changed provided that they fit onto the stock strut/shock or spring pocket.
- b) Spring adjuster cups will be allowed.
- c) Jacking bolts will be allowed. FRONT jacking bolts must be installed in the centerline of the original OEM spring pocket. The angularity of the springs must not be changed.
- d) Coil-over, adjustable spring kits may only be used on front-wheel drive cars.

#### 5.25) Panhard Bar

- a) On front-wheel drive cars only one, single steel bar is allowed. The rear panhard bar may be changed and/or relocated. Location is subject to NLWS approval.

#### 5.26) Wheels

- a) Eight (8) inch, 14 lb. minimum steel racing wheel is required.
- b) Eight (8) inch wheels must have between three (3) and four (4) inch backspace. Rear wheel drive cars must use four (4) inch backspace only.
- c) All four wheels must have the same offsets.
- d) Heavy duty wheel lug/studs are highly recommended. Studs must pass completely through the lug nuts.
- e) Wheel spaces are not allowed.

#### 5.27) Valve Stems

No "bleed off" type valve stems permitted.

#### 5.28) Tires

- a) Hoosier Tire East of Manchester Connecticut will be the sole supplier of tires for the Mini Stock Division.
- b) The size is 23.0 x 7.0 x 13.0 or 23.5 x 7.0 x 13.0. Both tires must be 800 compound. If a tire cannot be identified, it will be considered illegal.



- c) NLWS Officials may confiscate and/or impound tires at any time for inspection.
- d) The JTR Eagle PPM Tester will be set at a fixed level and will be strictly enforced throughout the 2014 season.
- e) A participant competing in any race at the NLWS specifically agrees that he/she acknowledges it is illegal to soak or treat racing tires and that said soaking or treatment of racing tires is against EPA regulations and further contains carcinogens and hazardous material which are unfit for his/her health and the health of all competitors and spectators. Any participant found violating the rule is subject to suspension.

### 5.29) General Engine Requirements

- a) Stock OEM engines for year, make and model of car must be used. Maximum of 2400 CC engines.  
No turbo engines will be allowed. All engines must have two or four valves per cylinder.
- b) All engine parts must be stock OEM.
  - i) All engine parts, including stock replacement parts or aftermarket parts – where allowed – must maintain stock OEM weight specifications and must remain unaltered. Parts may not be lightened in any way.
  - ii) Only stock OEM type engine bearings will be permitted.
  - iii) No stroking, porting, polishing, lightening, deflashing, glass beading, sandblasting, abrasive cleaning, chemical (acid) milling, will be allowed in the engine or on any engine parts. No internal painting or coatings of any type will be permitted.
  - iv) All engines will be allowed a maximum of 0.045" overbore.
  - v) Only normal OEM type engine balancing is permitted.
- c) Due to the limited availability 2.2 dodge engines, the Dodge Neon with 2.0 multi-valve single overhead cam engines will be allowed for competition with a weight penalty. 2.0 Neon must comply with above rules.
- d) Ford 2.3 may use Race Engineering short block assembly part # FD-SB-THOMP/NEWL. It must be used as supplied from the manufacturer with no modifications.
- e) Ford 2.3 may use Race Engineering rotating assembly part # FD-ROT-THOMP/NEWL. It must be used as supplied with no modifications. Any component from this rotating assembly may be used in existing engines.

### 5.30) Compression

- a) Maximum compression is 10.0 to 1 on all non-Volkswagen engines. Volkswagen engines maximum compression is 10.5 to 1.
- b) Compression will be checked with the "Whistler." No tolerance allowed on maximum compression.



### 5.31) Engine Location

The engine must remain in stock OEM location.

### 5.32) Crankshaft

- a) An unaltered, stock OEM crankshaft, maintaining stock stroke, must be used. No lightening or knife edging allowed.
- b) Minimum crankshaft height is 13.0" for Mustangs.
- c) Ford 2.3 may use Esslinger crankshaft (Part No. P.3125.2047BLM or SLM). Crankshaft must be used stock unaltered as supplied from manufacturer. Only normal OEM engine balancing will be allowed.

### 5.33) Harmonic Balancer

An aftermarket, stock-appearing harmonic balancer will be permitted.

### 5.34) Pistons

All pistons must be stock OEM or an exact replacement.

### 5.35) Rods

Rods must be stock OEM in every way, including length, for the engine being used. Aftermarket rod bolts will be allowed. Ford 2.3 may use CROWER sportsman rods (part no. SP93231PF-4) as manufactured.

### 5.36) Oil Pan & Engine Oil Specifications

- a) Stock OEM oil pan for engine being used must be used. Ford 2.3 may use the CANTON stocker oil pan part #11-900. Stock OEM oil pans may be modified to CANTON stocker specifications.
- b) The use of combustion enhancing oils or additives is not permitted.

### 5.37) Camshaft

- a) Aftermarket camshafts are allowed. The maximum lift at the valve with zero (0.000") lash will be 0.465".

### 5.38) Valve Lifters

Only solid valve lifters will be allowed. No roller lifters are allowed, even if standard on the OEM engine being used.



#### 5.39) Rockers/Followers

- a) Only stock OEM rockers and followers will be allowed. No roller rockers or roller tips, even if standard on the OEM being used.
- b) Stock ratio is required for the engine being used. Ford 2.3 must use 1.64 ratio followers. Ratio will be checked with the valve lash used during the event at 0.0238" lobe lift.
- c) Rocker studs may be oversized.

#### 5.40) Cylinder Head

Only stock OEM production cylinder heads for your engine will be allowed.

#### 5.41) Valves

- a) Only stock OEM or direct replacement valves will be permitted.
- b) No Pro Flo valves allowed. Any valve stem with an undercut of 0.015" or more will not be allowed.
- c) Aftermarket stock diameter valve springs will be allowed.
- d) Only steel valve spring retainers allowed.

#### 5.42) Valve Job

- a) Multi-angle valve job is permitted.
- b) The bottom cut of the valve job may not exceed three-eighths (3/8) of an inch into the valve pocket. The bottom cut will be measured from the top of the cut upon which the valve is sealed.
- c) The maximum diameter of the top cut must be no larger than 3/8" in diameter larger than the size of the valve.
- d) All cutting or grinding must be centered off the centerline of the valve guide.

#### 5.43) Intake Manifold

Unaltered, stock OEM intake manifolds only. The Ford 2.3 may use an EFI intake manifold. No marine intake manifolds allowed.

#### 5.44) Carburetor

- a) The Holley 350 CFM, two-barrel carburetor (part number: 0-7448, or Keith Dorton part number: 0-80787-1) are the only carburetors allowed. The carburetor must be stock and unaltered.
- b) The diameter of every hole in the carburetor must pass the standard NASCAR/NLWS pin and tooling gauges as part of our routine inspection process.
- c) The only changes that will be allowed are as follows:
  - i) The choke plate and shaft may be removed.
  - ii) Jet, power valve, accelerator pump cam, and accelerator pump discharge nozzles may be changed.



- iii) Idle holes may be drilled in the butterflies.
- iv) No other changes will be permitted. No reshaping, polishing, grinding, drilling or coatings of any kind allowed. No adjustable (jetted) air bleeds or circuits. Gaskets must remain unaltered.
- d) No chrome carburetors. Holley Carbs may NOT use aluminum center sections.

#### **5.45) Carburetor Spacer/Adapter**

- a) One spacer/adapter, made of solid material, is allowed. Maximum height of one (1) inch will be permitted.
- b) No wedge shape spacers/adapters will be allowed. Both the top and bottom surfaces must be parallel.
- c) The porthole may be tapered to meet the stock intake opening. No additional openings for air induction will be allowed.
- d) Only one 0.075" gasket per side of the spacer will be allowed.

#### **5.46) Fuel Injection**

- a) Fuel injection must be stock for the year, make, and model of the car being used. Throttle body diameter must be stock OEM for engine being used.
- b) All electronically fuel injected cars will be required to have an air restrictor in the intake piping. Air restrictors will be available for purchase from the NLWS.

#### **5.47) Electronic Fuel Injection: Air Cleaner/Filter**

Fuel injected cars may run aftermarket air intake/filter which must remain under the hood, inside the engine compartment.

#### **5.48) Air Cleaner/Filter**

- a) Only a round, dry paper, maximum four (4) inch high air filter element allowed.
- b) Air filter may not be sprayed or soaked with chemicals.
- c) The air cleaner top and bottom must be metal.
- d) No ducts, baffles or anything that may control airflow is allowed on, or in, the air cleaner assembly. All air entering the carburetor must pass through the air filter.
- e) A shield may be used on the front outer half of the element if it is on the element. Air cleaners must remain under the hood.
- f) All air cleaners are subject to NLWS official approval.

#### **5.49) Exhaust Manifold**

- a) Only a stock OEM exhaust manifold or factory tubular manifold for your engine is permitted. No modifications are allowed. No headers allowed.



- b) The Mustang must use a stock OEM Ranger Factory tubular manifold or Schoenfield header part # F238V. Header must be used as manufactured with no modifications or coatings. **The last 6" of the header collector may be cut and angled rearward for ground clearance.**

#### 5.50) Mufflers & Exhaust System

- a) Mufflers are mandatory. The only approved mufflers are the Lobak RCM 12" Spiral Flow (part number: RCM251225) or Moroso (part number: 94050).
- b) Only one (1) muffler per exhaust pipe. The end of the muffler must be located six (6) inches from the end of the exhaust system. The last six (6) inches of the exhaust system must be turned down. The exhaust system must extend six (6) inches beyond the driver's seat and remain under the car. The exhaust system must exit within 12" (Twelve inches) of the rear axle tube and remain under the car.
- c) Mufflers must be removable for inspection.
- d) Muffler must remain complete with ends as manufactured.
- e) Check valve tubes are not allowed in any part of the muffler.
- f) Interior coatings are not permitted.
- g) Exterior coatings are not permitted. All other coatings including powder coatings are not permitted.
- h) The life expectancy for all Lobak mufflers is two years. Race teams are responsible for the condition of their mufflers. Mufflers found to have deteriorated baffles due to rust/rot will be treated the same as if they were modified. Your mufflers must be in good condition and have complete baffles.
- i) Exhaust system subject to approval by NLWS Officials.
- j) Maximum diameter of the exhaust pipe will be two and one-half (2 1/2) inches.
- k) A flex coupler maximum 12 1/2" in length may be used in the exhaust system forward of the muffler. All flex couplers are subject to NLWS Officials approval.

#### 5.51) Fuel Specifications

- a) Sunoco Race Fuel 260GTX and 93 octane Super Unleaded automotive pump gasoline are the only fuels permitted in the Mini Stock Division. The 93 octane Super Unleaded automotive pump gasoline must be purchased from a retail outlet and must contain a minimum of 7 percent and a maximum of 10 percent of ethanol. The use of an additives or catalysts is not permitted. These two fuels may be mixed together.
- b) NLWS Officials will take fuel samples as part of their normal inspection process.
- c) Icing or cooling of the fuel system is not permitted in the garage, pit or paddock areas.
- d) Nothing may be placed in the fuel line except a standard fuel filter. The use of any type of fuel catalyst or other fuel-altering device is prohibited.



#### 5.52) Fuel System

- a) Only one fuel line will be permitted from the fuel cell to the fuel pump, and one line from the fuel pump to the carburetor. EFI cars will be allowed to have a return line.
- b) The inside diameter of the fuel line for all cars can be no larger than one-half (1/2) inch.
- c) The fuel line from the fuel cell to the fuel pump must either remain under the floor of the car or run through the passenger compartment of the racecar, and be protected by a secondary form of tubing. The tubing must be one continuous tube extending through the front and rear firewalls.
- d) An OEM style mechanical fuel pump must be run. An electronic fuel pump will be allowed. Fuel pump must be as close to the fuel cell as possible. The fuel pump must be tied with the oil pressure switch.

#### 5.53) Fuel Shut Off Valve

- a) A ¼-turn fuel shut off valve is required in the fuel line.
- b) The fuel shut off valves ON and OFF positions must be clearly labeled.
- c) The valve must be open when the handle is aiming front to back, and the valve must be closed when the handle is aiming left to right.
- d) No fuel shut offs permitted on the driver's side. The switch must be easily accessible to emergency workers.
- e) Any car connecting the fuel line to the fuel cell through the racecar must have the fuel shut-off valve located in the trunk, with a reach rod to the passenger compartment.

#### 5.54) Electronic Fuel Injection: Ignition

Fuel injected cars must run OEM computers for engine being used.

#### 5.55) Ignition

- a) A Stock OEM type HEI distributor must be used. The distributor must have a stock type housing, have stock type controls and modules, be equipped with a magnetic pickup, be gear-driven, and be mounted in the stock location.
- b) Only one OEM-type ignition coil is permitted. Stock-appearing aftermarket allowed.
- c) Electronic firing module amplified box is not permitted.
- d) Adjustable timing controls are not permitted.
- e) Retard or ignition delay devices are not permitted.
- f) Accessories to regulate the power supply are not permitted.
- g) The tachometer wire must run from the distributor to the tachometer along the #8 dash bar, separate from any other wires and in unobstructed view for inspection. The tachometer wire must be isolated from any other wires, connections or devices. The entire length of the tachometer wire must be visible from distributor to gauge.



- h) The vacuum advance unit may be replaced with a manual, non-electronic timing adjuster that does not extend more than two (2) inches beyond the distributor housing.
- i) For carbureted Volkswagen and Chrysler products, the use of a Hall Effect switch with module distributor is allowed to eliminate the computer system.

#### 5.56) Spark Plugs

- a) The spark plug must match the type of head being used.
- b) The gasket-type head must use the gasket seat spark plug.
- c) A tapered head must use the tapered seat spark plug.

#### 5.57) Battery/Starter

- a) Only a single 12-volt OEM automotive type or an automotive type gel-battery is permitted.
- b) The battery may be located in the right side front firewall or behind the driver's seat, mounted to the floor. The battery and/or box may not extend below the frame rails where it is mounted.
- c) The battery box may be made of steel and welded in place or must be in a marine type case.
- d) The battery must be padded or lined to prevent battery from moving inside the box.
- e) The battery box must be completely sealed off from the driver's compartment.
- f) The battery must be tied down by a minimum of two steel rods and a steel cross bar running through the floor pan and be bolted or welded.
- g) **Aftermarket Starters will be allowed.**

#### 5.58) Engine Cooling System

Radiators must remain in the stock OEM location. All cars must be equipped with a minimum one (1) gallon overflow container. Only water or Water Wetter-type additives may be used in the cooling systems. No antifreeze allowed.

#### 5.59) Oil Coolers

Oil coolers will be permitted.

#### 5.60) Clutch and Flywheel

- a) Only a stock OEM or exact replacement clutch disc and pressure plate will be allowed.
- b) No lightweight disc or pressure plates allowed.
- c) Only a stock OEM steel wheel flywheel will be permitted. The flywheel must remain unaltered. No lightening allowed. A one (1) lb. tolerance from stock OEM specs will be allowed for resurfacing. Minimum weight for the Mustang is 20.0 lbs.
- d) An optional clutch and flywheel package manufactured by RAM (Capitol Motorsports part number CAPARC2300A) may be used. Anyone choosing to use this clutch must add 50 lbs. of total weight.





- e) A one (1) inch hole must be drilled in the bell housing, over the clutch, for inspection on front wheel drive cars. Rear-wheel drive cars must have a one (1) inch hole drilled in the bell housing, under the clutch, for inspection.

#### **5.61) Transmission/Transaxle**

- a) Four or five speed stock OEM transmissions only. Transmission must be stock OEM for chassis being used. No REM machining or REM type processes are allowed.
- b) All gears must be in working order.
- c) The differential must be locked.

#### **5.62) Drive Shaft/Half Shafts**

Only stock OEM drive shaft/half shafts will be allowed.

#### **5.63) Rear End**

- a) The rear end must be stock for the make and model of the car.
- b) Rear ends must be open or locked. No Posi, limited slip or ratchet rears of any type allowed.
- c) No REM machining or REM type processes are allowed.
- d) The Ford 8.8 rear axle from the SN95 Mustang may be used in any Ford Mustang. This will include use of stock rear disc brakes.

#### **5.64) Radios**

- a) One way communication from the Race Director/Tower to the driver is mandatory.
- b) A scanner or Raceceiver must be used.
- c) The preferred scanner is the Raceceiver scanner used by 600 racing.
- d) If a scanner other than the Raceceiver is used it must be locked onto the track tower frequency. Monitoring the track is your responsibility. You may be placed at the tail end of the field for failure to monitor the track frequency.
- e) No other type of communication, one way or two way, is permitted. Drivers found using any type of communicating device other than the Raceceiver or scanner locked on track frequency may be disqualified for that event.
- f) If the Raceceiver is not working, you may be black flagged from the event if it presents a problem on the race track.

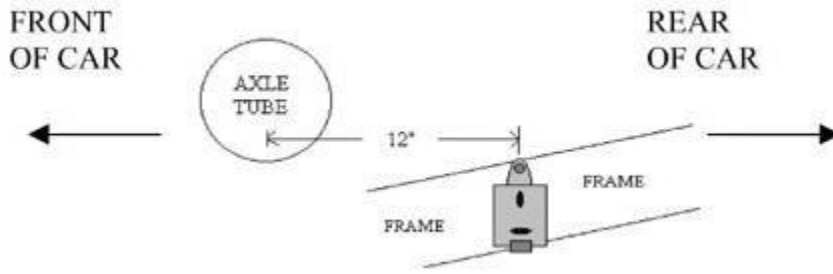
#### **5.65) Electronics**

- a) No onboard computers, automated electronics, recording devices or digital readout gauges of any kind are permitted.
- b) All teams must get approval before using any in-car camera equipment.

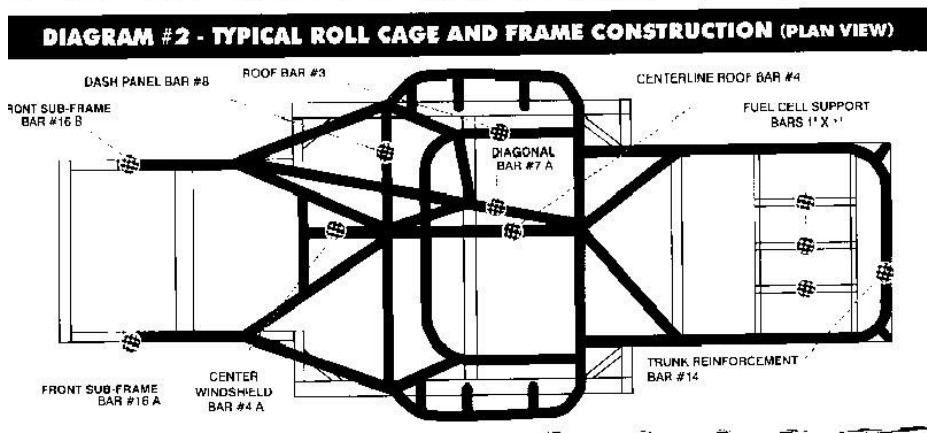
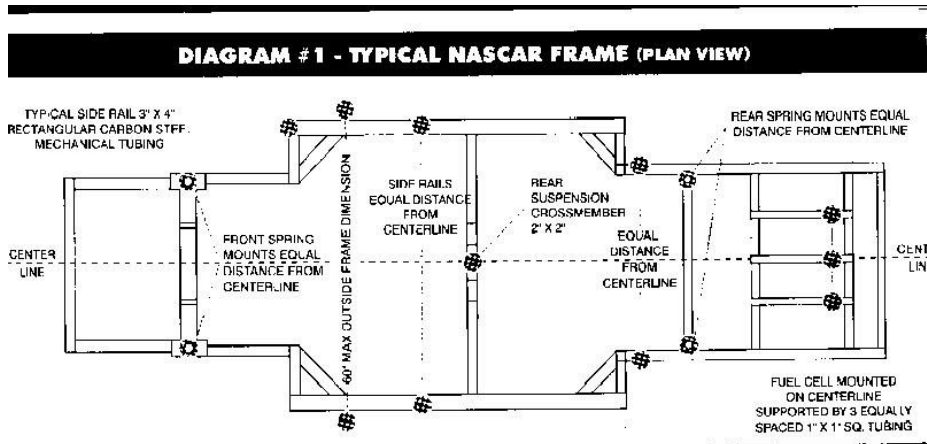


5.66) Picture Exhibits

a) Exhibit A – Transponder Location

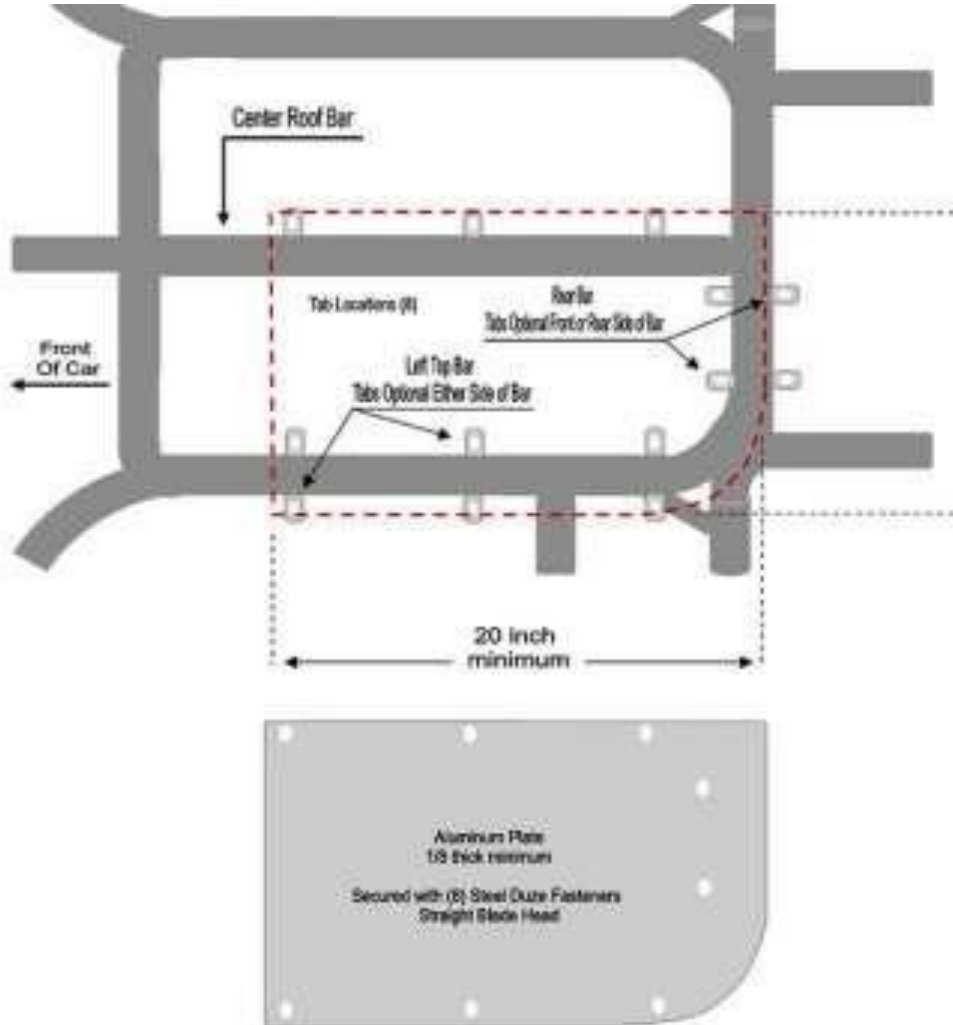


b) Exhibit B- NASCAR Construction Diagram





c) Exhibit C- Halo Bar Safety Plate



NewLondon-Waterford Speedbowl officials reserve the right to interpret any and all of the above the published rules in any way, under the guidelines of the published [2020 NLWS Mini Stock rules](#).