

# **2023 New London-Waterford Speedbowl Truck Rules**

**Last Updated: 1/26/2023**

## **1) Introduction:**

Interpretations of the rules contained herein will be the sole responsibility of authorized officials of New London-Waterford Speedbowl. Their interpretations and judgments shall be final.

All equipment is subject to the approval of the New London-Waterford Speedbowl Officials.

It is the competitor's responsibility to become familiar with the Truck Division Rules and the New London-Waterford Speedbowl General Rules.

Contact Information:

Joseph Delorimiere - New London-Waterford Speedbowl Technical Director

Email: [grip340@aol.com](mailto:grip340@aol.com)

Phone: 860-514-1713

## **2) Driver Eligibility:**

Drivers 14 years old and up are eligible to compete in the New London-Waterford Speedbowl Truck division. In order to participate in any on-track activity all cars must complete a technical & safety inspection and all drivers must be signed in with all completed paperwork on file. This includes Driver Registration Form and Number Registration Form. By registering as an owner or driver you agree to be knowledgeable and bound by the contents found in these rules and in the New London-Waterford Speedbowl General Rules.

## **3) Safety:**

Racing Seat

An aftermarket, aluminum fabricated racing seat, sized correctly for the driver, must be used. See General Rules for detailed requirements.

Seat Belts

A minimum 5-point safety harness is mandatory. Belts must be SFI rated and dated no older than 3 years from the date of manufacture. See General Rules for detailed requirements.

Window Net

A commercially manufactured, SFI rated, nylon window net must be installed in the driver's side door window opening. See General Rules for detailed requirements.

Fire Suppression

A fire extinguisher or fire bottle suppression system securely mounted in the car is mandatory. See General Rules for detailed requirements.

#### Safety Gear

A double-layered, full fire suit made of Nomex material is mandatory. SFI rated gloves and shoes are mandatory. Full- face SA2005 rated or newer helmets are mandatory. A head and neck restraint system (Ex: HANS, Hutchens, or similar) is mandatory. See General Rules for detailed requirements.

#### **4) Transponders & Radios:**

All cars must have functional transponders in order to participate in any on-track activity (see Figure 1 for mounting location).

Spotters are mandatory. Teams must monitor the race control frequency (464.5000) and comply with all requests from race control.

One (1) rear view mirror mounted at the top of the windshield is permitted. Maximum mirror size is 14" X 2".

#### **5) Technical 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.

No carbon fiber or titanium parts allowed. 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.

#### Outlook Notes:

##### Built Engine Options

2023: Permitted

2024: Not permitted. GM Performance Factory Sealed Circle Track 602 (Part# 19258602 or 19434602) will be the only engine option allowed.

##### Hubs, Wide 5 Style

2023: Permitted with 100 lbs weight penalty

2024: Not permitted

##### Quick Change and Straight Racing Rear Ends

2023: Permitted

2024: Not permitted

##### Shocks

Spec shocks to be investigated

## Lower A-Frames

2024: Aftermarket replacements must be stock length.

### **6) Approved Models:**

The NLWS Truck Division will be based off of the GM G-Metric Chassis. New trucks may be built using the illustrations contained within these rules (see figures 4 & 5) so long as it is constructed on an unaltered 1978 to 1987 GM G-Metric Chassis or similar aftermarket tubular chassis (Johnson Chassis, Hamm Chassis, etc.) that maintains factory dimensions, pick-up points, etc.

Any truck that meets the current year Seekonk Sport Truck rules is allowed to compete in the Truck division. For variances see section: 8) Weight

### **7) Body, Appearance:**

Dimensions of all bodies must remain as manufactured except for changes needed for tire clearance and/or to fit the appropriate wheelbase. Bodywork must maintain the original manufacturer's configuration. Size and shape must adhere to the body diagram.

Any commercially produced race truck body is permitted so long as it is fiberglass and/or aluminum. No magnetic steel side panels allowed. AR Race Car bodies, Speedway Racing Bodies, Five Star Race Car Bodies, Lightning Light, Performance Fiberglass Products and Haltin Bodies. Available options include:

Chevrolet Silverado: 1997 through the current year

Ford F-150: 1997 through 2016

Dodge Ram: 1997 through the current year

Toyota Tundra: 2008 through the current year

Doors and rear quarter panels may be fabricated from aluminum sheet of the same thickness as the manufacturer uses. Any fabricated panels must have body lines similar to the original manufacture.

#### Roof

Minimum roof height must be 55", measured 10" back from the leading edge of the roof.

#### Hood

Any hood may be used so long as the hood completely covers the engine compartment and air cleaner, except where specified in the rule section: Fuel System; Air Cleaners.

Hoods must have a minimum of four hood pins. Hood must fit flat to the fenders. Hood may have a gap of 1" maximum to the windshield.

#### Windows

A full windshield and rear window opening made of clear polycarbonate material ( $\frac{1}{8}$ " minimum thickness) are required. Windshield must be supported in center top to bottom and braced to the windshield bar. Windshield angle (checked at center of windshield) must be no less than 37 degrees. The windshield and rear window must be bolted or riveted in along all four sides. Polycarbonate side window vents are permitted but cannot exceed 12 inches in length from the leading edge of the window opening.

#### Bumpers

Nose piece and tailgate may be polypropylene plastic or fiberglass. Front air dams must maintain their original configuration. Front Bumpers must be made of no larger than 1- $\frac{3}{4}$ " round steel tubing and must follow the contour of the bumper cover. Front bumpers may be 2 tubes, stacked and welded together. Rear bumpers may be no larger than 2 "x 3" box tubing or similar. A single aluminum modified type bumper may be used as the rear bumper. All bumper ends must be capped. All body support brackets must be located inside the body structure.

#### Nerf Bars

Polycarbonate rub rails are the only type of nerf bars permitted outside of the body.

#### Rear Deck

Full rear deck lids completely covering the rear of the body are mandatory. Deck lids may be fiberglass, sheet metal, or aluminum. The rear half of the lid must be easily accessible for inspection purposes. Openings in the rear or any other area to release air is not permitted. Positive fasteners must be used to secure the opening position of the rear deck lid. Dzus-type fasteners are not allowed to secure the rear deck lid. Maximum rear deck height is 40".

#### Rear Spoiler

A rear spoiler is mandatory, no more than 10" tall and may not be wider than the rear deck. Spoiler must be made of  $\frac{1}{8}$ " clear polycarbonate material. Spoiler braces may be used on the rear of the spoiler only. A  $\frac{1}{2}$  inch break at the top of the spoiler is permitted as long as the break is going away from the truck.

#### Interior Sheet Metal

The front firewall must completely seal the driver's compartment from the engine compartment. The rear firewall must completely seal the driver's compartment from the fuel cell/trunk area. All holes in either firewall must be suitably covered with a minimum of 22 gauge (.031") magnetic steel.

### **8) Weight:**

All specified weight requirements are driver included. Car minimum weight must be labeled on the right A-pillar of the car.

#### Minimum weights:

A- Unaltered GM sealed "602" crate engine: 2850 lbs.

- B- GM 305, Ford 302, Chrysler 318 "Open" Engine: 2850 lbs.
- C- Stafford Motor Speedway SK Light "602" crate engine: 2950 lbs.
- D- 350 Chevrolet Sportsman/Truck engine: 2950 lbs.
- E- Seekonk Sport Truck: 2950 lbs.
- F- 3-Link Rear Suspension must add 50 lbs. to the total weight listed above.

The maximum left side must be 56.0% of the total weight.

Any car found to be under the minimum overall car weight allowance will be penalized one position for every pound under the minimum total weight.

All ballast weight must be magnetic steel or lead only, in block form, weighing no less than 5 lbs per block. Pellet weight is not permitted. Weight must be welded in a box or attached with (2) or more 7/16" minimum diameter, grade-8 bolts and locking nuts. Added weight may be mounted under the car, securely bolted or welded as high as possible, and painted white with the car number labeled in black. No added weight will be permitted inside the driver's compartment.

## **9) Frame & Chassis:**

Open to most any race trucks based off of the GM "G" Metric Chassis. All measurements, lines, holes, etc., must retain the manufacturer's specifications. There are two options for the design and construction of the roll cage & chassis (shown in figures 3 & 4). Must be one or the other, no converging of the two designs. No plating of the frame. Boxing the C-channel is permitted.

Rear cross members must remain in the factory location. Lower and upper trailing arm mounting brackets must remain in factory location and configuration. Rear spring and shock perches must remain in the factory location. A 4" tall x 6" O.D spring bucket may be installed to raise the original spring pocket. Spring bucket must remain in the original stock factory location. Rear shocks must be mounted in their original location.

2" x 3" rectangular steel tubing (minimum .083", maximum .125") may be used to replace the rear frame horns starting from the back side of the spring pocket perch.

The Johnson and Hamm's "X-Y-G Metric" chassis and front clip are allowed. The chassis and the front clip must remain as manufactured and retain all factory OEM specs including but not limited to upper and lower A-frame locations, steering component locations, shock locations, rear trailing arm locations, and engine mounting locations.

### **Roll Cage**

1-3/4 diameter x .095 HREW or DOM steel tubing is mandatory for all roll cage bars. A magnetic steel anti-intrusion plate made from a minimum thickness of .080 must be securely welded to the outside of the left side door bars. All cars must have a foot protection bar located at or in front of the pedal assembly. All roll cage, foot protection bar, and anti-intrusion plate joints must

be suitably and appropriately welded by competent craftsmen. See General Rules for roll cage, foot protection bar, and anti-intrusion plate detailed requirements.

#### **10) Ground Clearance:**

Minimum ground clearance at any location on the chassis is 5". All ground clearance requirements will be measured with the driver in the car.

#### **11) Track Width:**

Maximum tread width is 73" measured at wheel center height from the left outside bead seat to the right outside bead seat.

#### **12) Wheelbase:**

No cutting or welding to alter the wheelbase. The chassis must remain square to factory specifications measurements.

#### **13) Suspension:**

##### **Upper A-Frames**

Steel upper A-frames can be any length, non-adjustable only. No modifications of A-frames allowed. Aluminum cross shafts are allowed. Bushings may be replaced with polyurethane bushings. Eccentric/offset bushings are not permitted. Bushing hole locations may not be altered.

##### **Lower A-Frames**

Lower control arms must mount in the stock location. Lower control arms must be the stock OEM "G" Metric lower control arm or a stock aftermarket "G" Metric replacement. The Johnson (Part# JCI-09-02-01) & Hamm's stock replacement lower A-frame or equivalent is approved for use. Offset control arms are not permitted. Johnson Chassis Lower Ball Joint part #JCI-09-02-01RCSP and the Chrysler K-727 style lower ball joints are permitted. Bushings may be replaced with polyurethane or steel mono ball bushings. Bushing hole locations may not be altered. Eccentric/offset bushings are not permitted.

##### **Coil Springs**

Any manufactured racing spring is allowed. Coil-overs are not permitted.

##### **Shocks**

Any steel bodied shock is permitted as long as it is non-adjustable during competition. Only one shock per wheel is permitted. Shocks must remain as manufactured. Shocks must be available commercially and have a maximum price no greater than \$200.00 advertised racers net price. Custom built shocks are not permitted. Schrader Valve adjustments and nitrogen charged shocks are not permitted. Rear shocks must be mounted at a 70-degree angle (+/- 5 degrees).

### Sway Bar

Any GM or stock OEM type sway bar that mounts in the stock location, without alteration, with a maximum diameter of 2" may be used. No adjustable or controllable sway bars are permitted. A Howe/slapper type sway bar with a bump pad configuration under the left side lower A-frame is permitted.

### Spindle/Hub

Spindles and front brakes may be changed to heavy duty OEM units (GM Impala). No modifications allowed. No aluminum spindles. Spindle Savers are permitted and recommended. They must be bolt-on units and not be altered in any way except the lower ball joint hole may be reamed or tapered to fit the lower ball joint pin. Spindle must be reamed with the same taper as the ball joint. Coleman or similar aftermarket replacement heavy-duty front hub assemblies are permitted.

### Bearings

All bearings (wheel, differential, and transmission) must be of stock OEM design. Bearings may be either angle-type cone, straight barrel-type, or ball bearing. All bearings, including the rollers, must be magnetic steel. Bearing spacers may be used with wheel bearings. No REM machined bearings or micro-polished bearings.

### Rear Suspension

Any rear end using a 4-Link rear suspension must bolt in place of an OEM GM 10 bolt utilizing all 4 rear links and factory mounting holes (see figure 3). Bushings on the upper mounts of the rear end housing only may be of the swivel bearing type. The use of a 3-link rear suspension setup is permitted (refer to "Weight" section for variances).

Adjustable upper and lower rear trailing arms are legal. These may be constructed as 2 Heim Joints with a radius rod between them or be a stock replacement kit for each of the 4 links. All control arms must mount in the stock mounting holes on the chassis and rear end.

### Suspension Tie Downs

Tie downs or limiting devices are not permitted on the front suspension. Rear suspension devices must allow the frame rail to be raised a minimum of 4" before the rear tires come off the ground.

### **14) Steering:**

The stock type steering box must be used and bolt in the stock location using the factory frame holes. Inner tie rods, idler arm, pitman arm, and center drag link must be stock OEM G-Body type. Adjustable idler arm and bump steer correction center drag link may be used. Outer tie rod end and adjustment sleeve may be replaced with 5/8" steel rod end and steel or aluminum tube. Heim Joints for the inner and outer steering tie rods are permitted.

### **15) Brakes:**

Brake systems must be stock OEM hydraulic systems. All (4) brakes must be in working order. Drilling or lightening of any brake part including backing plates, shoes, or pads is not permitted. Aftermarket master cylinders and pedals are allowed. Adjustable proportioning valves are allowed (front to rear adjustment only). Braided stainless steel brake lines are permitted.

Ultra Cool (Part# LMBFS5-625 L or R) hub mounted cooling fans may be used on front brakes. One per wheel. Brake air ducts no larger than 4" diameter may be used.

Howe GM aftermarket caliper (Part# HOW337 or HOW33658) is allowed (must have Howe logo). Capitol Motorsports alternative caliper (Part# LHC258 or LHC21516) is allowed. Rear disc brakes are allowed. Stock GM type calipers only. Calipers must be mounted in the same position left to right side. Steel caliper slider pins only. Caliper brackets must be steel and may be welded or bolted to the housing tubes or tube flanges.

Speedway Motors rotor (Part# 91031043) or aftermarket dimensionally equivalent rotors made of the same material and weight are the only allowed rotors. Maximum rotor diameter is 11.630". Rotors can not be lightened, drilled, scalloped, or slotted in any way.

#### **16) Wheels:**

All (4) wheels must be heavy-duty, aftermarket, steel wheels. All wheels must be 15" x 8". 1" lug nuts and ½" wheel studs are mandatory. No "bleed off" type valve stems. Metal wheel spacers may be used but must be equal thickness, left side to right side. (1) ½" maximum thickness wheel spacer allowed per wheel.

#### **17) Tires:**

Hoosier Tire East will be the sole supplier of tires for the Truck division. The sizes are 26.5 / 8.0 - 15.0 or 27 / 8.0 - 15.0. The compound is 970. Tires must be considered identifiable.

#### **18) Engine:**

GM Unaltered "602" Crate Engine:

The preferred engine is the GM Performance Factory Sealed Circle Track 602 (Part# 19258602 or 19434602). Engines must be purchased directly through General Motors or an authorized service center.

Seals may only be removed by a New London-Waterford Speedbowl official or a New London-Waterford Speedbowl authorized service center. Any seals that appear to have been tampered with or have been removed without one of these two parties being present will result in the engine being deemed illegal. At which point the engine must be re-sealed at the participant's expense.

Rebuilding of crate engines is not allowed. Repairs may be made with authorization from the Tech Department. A New London-Waterford Speedbowl tech inspector must be present when seals are removed. After repairs, the engine will be re-sealed. A fee will be assessed for engine re-sealing.



Note: All engines must be sealed and documented to compete at New London-Waterford Speedbowl. A complete crate engine registration form must be completed and submitted to New London-Waterford Speedbowl Officials.

Authorized crate engine service centers:

Nat's Racing Engines; Swansea, MA

RAD Auto Machine; Ludlow, MA

T/A Engines; Plainville, CT

Pettit Racing Engines; New Milford, CT

Larry's Auto Machine; Groton, CT

Andy's Auto Machine; Plainville, CT

---

Open Engines: Chevrolet 305, Ford 302, and Chrysler 318

Maximum compression ratio is 9.5:1.

No custom strokes are allowed, must be factory to the engine used.

Maximum .060 inch overbore will be permitted.

Blocks must be factory, stock, and cast iron only. Blocks may be lightly de-burred only. No excessive machining of the block is allowed. Align honing, deck milling to square block only, and cylinder boring is acceptable if kept within the allowable specifications.

Crankshaft

Only OEM Chevy, Chrysler, and Ford supplied cast iron or steel crankshafts are permitted. No O.D. turning, lightening, knife edging, weight polishing, or cross-drilling for weight removal will be permitted except for "Mallory Metal" or minimal metal removal for balancing. Any type of harmonic dampener or flywheel may be used. SFI approved units are highly encouraged.

Connecting Rods

Only stock-type, OEM cast or forged, iron or steel connecting rods allowed. Rods must be stock length for the particular type of engine. No lightening, beam polishing, or exterior machine work allowed on rods, except bob weight removal for balancing. Heavy-duty rod bolts and heavy-duty stock OEM connecting rods may be used. Chevrolet engines may use the heavier duty rod from the 350 cubic inch engine in the 305. Fords may use the SVO available 5.0L HD replacement rod in the 302. Chrysler may use the P4349617 HD connecting rod in the 318. Maximum rod length (center to center) is Chevrolet: 5.700, Ford: 5.096, Chrysler: 6.123. The only machine work allowed on the rods are the removal of material for balancing and the setting of the side clearances.

Pistons

The only pistons permitted are cast or hypereutectic, dished or flat top, with the stock type (for that particular engine) ring package and compression height. Pistons must be a stock type replacement piston. No custom made or lightweight pistons permitted. No gas porting of pistons allowed. Minimum deck heights are: Chevrolet 305 - 0.0 inches, Ford - 0.0 inches, Chrysler +

0.015 inches. The only machine work permitted on the pistons is for removal of minute material for engine balancing. One piston in the engine must be as produced from the factory and unaltered. No slant tops, angle milling, or excessive lightening of the pistons allowed. Wrist pins must be pressed in type; no lightweight or floating wrist pins; no wrist pin buttons. Chrysler engines may fly-cut the piston tops, .050 of an inch, maximum, on the exhaust valve side only.

## Heads

All heads must have visible and unaltered casting numbers and production date codes. Only factory produced, cast iron heads that are OEM for the engine type being used that produce factory specified volumes, are permitted. No bowtie, angle-plug, special high-performance, canted-valve, or marine-type heads permitted. Chevy Vortec heads are permitted. Chevrolet Vortec head casting #'s 12557113, 12552520, 12558059 are permitted. The Ford GT-40 (cast iron) and the GT-40P head are permitted. The Chrysler or Mopar magnum-type heads are permitted.

Maximum valve sizes: Chevrolet 1.84 Intake 1.5 exhaust. Ford 1.84 Intake, 1.5 exhaust. GT-40P 1.847 Intake 1.546 exhaust. Chrysler 1.84 Intake, 1.5 exhaust.

Minimum combustion chamber volumes: Chevrolet 53cc. Ford 53cc. Chrysler 62cc.

No porting, port matching, excessive decking beyond the chamber minimum volume, angle milling, chamber polishing, or grinding allowed. Valve bowl area is to be untouched except as in guide replacement. No machine work is permitted except for valve seat grinding, seat replacement, deck and flange milling, valve guide replacement, crack repair, stem seal machining, and rocker stud boss machining and drilling.

Only the stock type steel or stainless steel valves are permitted. No four-angle valve jobs allowed. Any type guide material may be used. The valve guides must be in the stock factory location, angle, and spacing. Cutting for larger diameter springs is allowed. Valve springs must be of the stock type. No triple, conical, or progressive springs allowed. Any valve stem with a polish or undercut of .015" or more will not be allowed. Valve spring pressure cannot exceed 120 lbs of seat pressure. Valve stems must be stock height only. Retainers must be stock type and must be steel or chrome-moly steel. Plus or minus height retainers are allowed. Valve spring keepers must be stock type only. No plus or minus height keepers allowed. 7 or 10 degree locks may be used.

## Valve Train

Hydraulic lift cams only with a maximum lobe lift of .333. Camshaft lift may be measured at the valve, rocker arm, or directly on the camshaft. It may not exceed the gross valve lift, divided by the listed rocker arm ratio. Tolerance for camshafts will be +0.005. Only hydraulic lifters are permitted and must be able to pass a bleed down test. Anti-pump-up lifters allowed. No lightweight push rods allowed. Push rods may be sized to length to fit geometry. Rev-kits, stud girdles, offset rocker arms, full roller rocker arms, roller pivot rocker arms, roller lifters, light weight lifters, coated lifters, mushroom lifters, or oversize lifters are not permitted.

Stock or roller timing chains are allowed. Torrington Thrust Bearings are legal. Gear or belt drives are not permitted. Cam thrust-buttons are permitted. Camshaft degreasing is optional. Aftermarket rocker arm retaining nuts are allowed.

The Chevrolet rocker studs may be pinned or machined for screw-in studs up to 7/16" and guide plates. Stock rocker ratios must be 1.5:1. Stock (OEM) type roller tipped rockers are permitted. The Ford rocker studs may be pinned or machined for screw-in studs up to 7/16" and may use Ford factory, stock style, early 1.6: 1, non-rail rocker arms and guide plates. Stock (OEM) type roller tipped rockers are permitted. Rocker arm pivot shims may also be used. The Chrysler may be converted to use the factory type Dodge truck adjustable rocker arms and pushrods. The adjustable rockers must retain the stock ratio of 1.5:1. Stock (OEM) type roller tipped rockers are permitted. Oil return screens are permitted. Lifter valley baffles are permitted.

#### Intake Manifold

Edelbrock Performer RPM series: Chevrolet 7101, 7116. Ford 7121. Chrysler 7176 (may be modified to be used with Magnum heads).

Edelbrock RPM Air Gap series: Chevrolet 7501, 7516. Ford 7521.

Intake manifolds must be "as cast" by Edelbrock. No alterations to the manifolds will be allowed. Milling to facilitate engine fit is acceptable. No drilling, porting, port matching, acid dipping or other processes are allowed. All air drawn into the engine must be drawn in through and metered by the carburetor. No add-on devices are permitted inside the plenum or runners, and no coatings will be allowed inside or outside the intake manifold.

---

#### Engine Location

Engine must be centered between frame rails. Engine location is measured from the forward most spark plug centerline to the imaginary line projected between the left and right, front, jacking bolts. The forward most spark plug centerline must be no less than 5" forward of this imaginary line for the Chevrolet, 7" for the Ford, and 1.75" for the Chrysler.

Minimum crankshaft height is 12" from the ground to the centerline of the crankshaft pulley bolt.

#### Engine Oils

Combustion enhancing oils or additives are not permitted. Oil coolers, remote filters, and accumulators may be used. Components must be mounted securely in the engine compartment.

### **19) Cooling System:**

Radiators must remain in the stock OEM location. Any automotive style radiator or aftermarket aluminum racing radiators are permitted. An electric radiator fan is permitted. All cars must be equipped with a minimum (1) gallon overflow container. Only water or Water Wetter type additives may be used in the cooling systems. Antifreeze is not permitted. Only stock OEM steel water pumps for the engine being used is allowed. Aluminum water pumps are permitted. Electric Water Pumps are not permitted.

## **20) Electrical:**

### **Battery**

Only a single 12-volt OEM automotive type or an automotive type gel-battery is permitted. Battery must be mounted behind the driver's seat, on the left frame rail, against the rear firewall. The battery must be held in place with a metal crossbar and two threaded rods, welded or bolted to the chassis or roll cage. The positive cable of the battery must be inside the frame rails.

A battery cutoff switch must be present in the passenger's side area of the car. The switch must be within reach of the driver and accessible to safety crews.

All crate engine ignition systems must be equipped with a working MSD rev limiter (Part # 8727CT) mounted to the engine side firewall, with all wiring visible. Maximum engine RPM must be set to 6,500 RPMs.

### **Ignition System - Applies to All Open Engines**

OEM or OEM-replacement HEI distributor is permitted. HEI aftermarket type distributor modules or coils may be used but must mount in the OEM distributor location. The external mounted coil may be used. MSD ignition #6AL6420 and #64306ALN, or MSD Soft Touch Rev Limiter systems are required.

For engines 325 cui or less a maximum 6,800 RPM rev limiter chip or digital setting is mandatory. For engines 326 cui or more a maximum 6,500 RPM rev limiter chip or digital setting is mandatory.

Wire Ends must be original factory MSD or weather pack connectors installed by MSD. MSD must be located on the right side of the dash panel, as far from the driver as possible and out of reach. All wires must be wrapped in a loom material, and must pass through the firewall at first option. Rivets to hold the bottom panel must be drilled out.

Only one MSD box is permitted.

## **21) Exhaust:**

Only stock type or "up and over" headers are permitted. Headers with 180-degree design (cross over) are not permitted. Stainless steel, ceramic coatings, and/or merge collectors are not permitted. Spread port adaptor flanges are not permitted. The maximum cost of headers is \$300.00. Schoenfeld headers are recommended. Approved header heat shields are permitted.

Exhaust equalizer "H", "X", and "Y" pipes are permitted. The maximum exhaust I.D. is 3". All exhaust systems must exit past the driver's compartment and must be pointed towards the ground at a 90 degree angle. Exhaust will not be permitted to exit out the side of the truck.

Exhaust mufflers are required. Approved mufflers for competition are the Lobak (Part# RCM-25-12-25 or RCM-30-12-30), Moroso Spiral Flow (Part# 94051 or #94050), and Schoenfeld Headers (Part# 83030). Only one muffler per header permitted. Mufflers must be removable for inspection. Mufflers must remain complete with ends as manufactured. Check

valve tubes are not allowed in any part of the muffler. Interior or exterior coatings are not permitted. The life expectancy for all mufflers is (2) 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 modified.

## **22) Fuel System:**

Engine and General Engine Carburetor

Holley two-barrel model #4412 carburetor may be used. The body, base plate, metering block, and bowl must be a standard Holley 4412 part.

Applies to crate engine option only: Holley 650 CFM 4-Barrel (Part# 80541) carburetor may be used. The body, base plate, metering block, and bowl must be a standard Holley 80541 part.

HP parts are not permitted. Carburetors and/or carburetor components machined from billet materials are not permitted.

OEM type gaskets, jets, and power valve must be used.

The diameter of every hole in the carburetor must pass the standard New London-Waterford Speedbowl pin and tooling gauges.

The only changes allowed are:

The choke plate and shaft may be removed, but must be permanently sealed.

Throttle plate screws may be trimmed flush with the shaft.

Choke horn may not be removed.

Polishing, grinding, or reshaping of any part of the carburetor or metering block is not permitted.

Drilling of additional holes or plugging of holes is not permitted.

Boosters may not be changed. Booster size or shape may not be altered. Height must remain standard.

Venturi area must not be altered in any manner. Casting ring must not be removed.

Alterations to allow additional air to be picked up below the opening of the venturi such as altered gaskets, base plates, and drilling holes into the carburetor is not permitted.

Base plate must not be altered in shape or size.

Stock Holley 4412 or Stainless Steel Holley (Part# 346) butterflies must be used with Holley 4412 carburetor. Butterflies must remain as manufactured and must maintain the Holley production tolerance thickness of .0438" to .0398".

Stock Holley 80541 butterflies must be used with the 80541 carburetor.

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

Throttle shaft must remain standard and must not be thinned or cut in any manner.

## **Air Cleaners**

Only (1) round, dry paper, maximum 5" tall air filter element is allowed. The air cleaner top and bottom must be solid metal, measuring 12-16", matching the size of the air filter being used. The air cleaner must be totally covered by the hood. Shields, baffles, or other add-on equipment are not permitted. No holes, vent tubes, ducts, or any other devices may be used to guide air to the air cleaner unit with the exception of a cold air box. Cold air boxes are allowed, a slot in the

back of the hood at the windshield is permitted. The slot must be no more than 60 square inches.

#### Fuel Pump

(1) Mechanical, stock-type diaphragm pump is permitted in the stock location.

#### Fuel Shut-off Valve

A ¼ turn fuel shutoff valve is required in the fuel line with ON and OFF positions clearly labeled. The valve must be open when the handle is aiming front to back and must be closed when the handle is aiming left to right. Fuel shut-off valves must be on the passenger's side and easily accessible to emergency workers.

#### Fuel Specifications

Sunoco Race Fuel 260GTX and 93 octane super unleaded automotive pump gasoline are the only fuels permitted in the Truck division. These two fuels may be mixed together. 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 additives, catalysts, or fuel-altering devices are not permitted. Nothing may be placed in the fuel line except a standard fuel filter. Icing or cooling of the fuel system is not permitted.

#### Fuel Cell

The use of a commercially manufactured fuel cell is mandatory. The fuel cell and fuel cell container must be installed as far forward as possible, centered between the frame rails and behind the rear axle. Fuel cell vent check valves are mandatory. Fuel cell must be mounted using 1" x 1" x 0.083" square tubing. Fuel cell containers are mandatory and must be made of 22-gauge (0.031") magnetic steel. The fuel cell must be a minimum of 8" off the ground. Gas caps must be tethered and be identified with the car number (XX) and division (TK).

### **23) Drivetrain:**

#### Bellhousing

A commercially manufactured blow-proof bellhousing made from a minimum of 1/4" magnetic steel must be used. It must fully enclose the flywheel and clutch completely, 360 degrees around. An opening, no larger than 3-½" x 4", may be used for throw out bearing access.

#### Clutch & Flywheel

Flywheel must be GM (Part# 14088646) or an aftermarket version of the OEM flywheel, made of the same material, design, and weight.

Minimum weights (crate engine):

Flywheel (no bolts): 14.5 lbs.

Pressure plate (no bolts): 13 lbs

Clutch disc: 2.5 lbs.

Minimum weights (built engine):

Flywheel (no bolts): 20 lbs.

Pressure plate (no bolts): 13 lbs.

Clutch Disc: 3 lbs.

Drilling or lightening of any part is not permitted. Steel bolts only. Flat surface machining is allowed, only on the face side of the flywheel. Stock OEM or aftermarket clutch pedal and master cylinder assembly are permitted. Stock type mechanical linkage or hydraulic throw out bearings are permitted.

#### Automatic Transmission

The only automatic transmissions permitted are the Chevrolet Turbo-350, Ford C-4, C-6, and Dodge Torqueflite Transmissions.

Automatic transmissions may be converted to manual operation. Steel and cast hubs are allowed. Transmissions must use a fluid filled torque converter with a minimum diameter of 11" (+/- 0.20" for manufacturer's variance). The maximum legal stall speed is 3,000 RPM.

Modifications may be made to internal transmission parts for durability only. The transmission must have all forward and reverse gears functional. Transmission oil cooler size and placement is optional. Lockout shifters are permitted. No solenoid lockups or fluid clutches. No extra hand or foot controls permitted. A (1) quart catch can is required from the overflow. Transmission cooler may have a fan and ducting leading to the fan. Fan and ducting must seal to the cooler and may not exceed more than 36" from the cooler.

#### Manual Transmission

The only manual transmissions allowed are OEM 3 or 4 speeds. Cast iron or aluminum case. Transmission modifications are not permitted. The transmission mount may be stock or fabricated.

#### Rear End

Approved rear ends include: GM 10 Bolt 7.5", GM 12 Bolt 8.5", and Ford 9-inch. The final drive gear ratio must not exceed 6.25 at the rear end.

10" Quick Change rear ends are permitted (note: Section 5 - Technical Rules).

Differentials may be open or locked. When locked, they must be welded securely or locked with a mini-spool or full spool. The Auburn Gear L/S differentials for GM 7.50" 10-bolt rear ends (Part# AUB 542057 and AUB 542058 for the 26-spline and AUB 542041 and AUB 542040 for the 28-spline) are permitted. The Lock-Right differential by PowerTrax and the OEM posi-trac units (for 7.5" & 8.5" GM rear ends) with no modifications are permitted. Steel mini spool or steel full spool (8 lbs minimum) allowed. No aluminum spools, lockers, or ratchet (Detroit Locker) type units allowed.

Axles must be magnetic steel. Gun-drilled axles are not permitted. Axle-saver bearings, c-clip eliminators, heavy-duty c-clips, and heavy duty aftermarket axles are allowed and recommended.

All drive shafts must be made of magnetic steel and painted white. Drive shafts must be a minimum of 2" diameter. Two drive shaft loops must be installed. One loop between the transmission and the aft side of the driver's compartment; and one loop between the aft side of the driver's compartment and the rear universal joint. The loops must be flat bar steel (minimum 2" x 3/16") or round steel tube (1" x .095").

#### 24) Figures:

Figure 1:

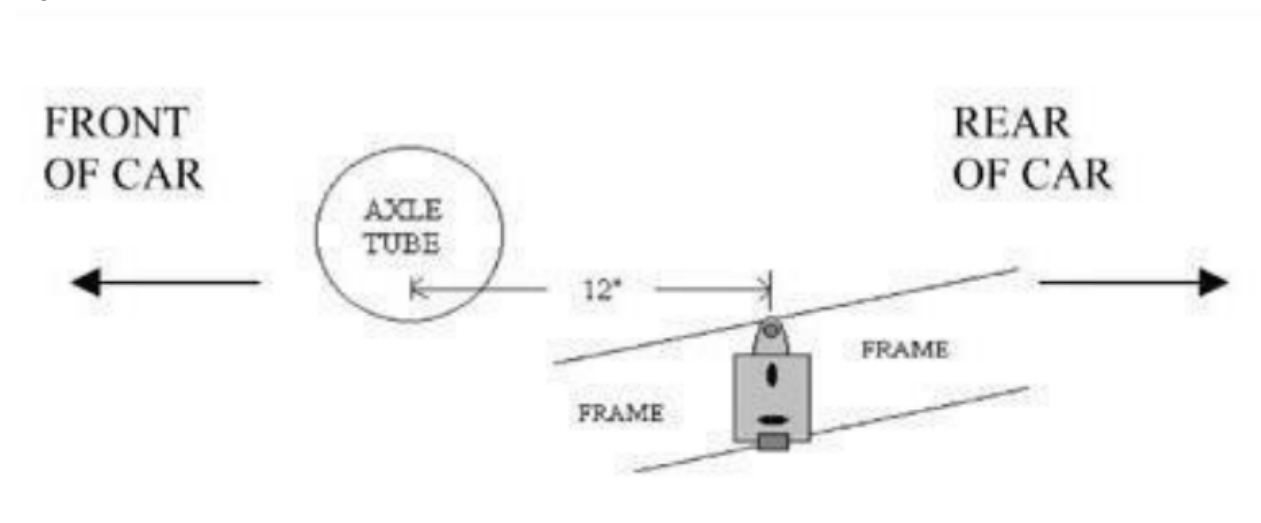


Figure 3:





Figure 5:

