

# 2016-19 RULE BOOK SUPER STOCK

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#### SUPER STOCK DIVISION RULES

#### **GENERAL**

The word **stock** shall be defined as any part for that particular make, model, and year as found in the manufactures catalogue. Unless specifically noted all **stock parts** shall be mounted in both the **stock location** and **stock position** as engineered by the manufacture. In addition to the location and mounting, only parts identified in the manufactures catalogue for that particular make, model, and year shall be eligible. Any deviation to the above mentioned rule shall be superseded by written updates and duly noted in the specific sub-section of the rules and in accordance with the rules.

Any driver, car owner, chief mechanic who refuses a claim will surrender all prize money and points for that race and may subject themselves to an immediate and indefinite suspension and or fine.

#### 1. AIR CLEANERS:

- 1. Maximum air cleaner size 14" x 4-1/2". Must have solid air cleaner top.
- 2. All air boxes, and or extensions from the air cleaner as described above shall maintain a minimum of five (5) inches between any part of the fire wall and any part of the air cleaner and/or air box assembly.
- 3. There shall be no sealing devices anywhere on the air cleaner and/or air box with the exception of the gasket between the carburetor and air cleaner.
- 4. The height of the add-on devices (air box, cowl, and deflectors) shall not exceed the height of the air cleaner installed on the vehicle when measured with reference to the carburetor center line.

## 2. BATTERY:

- Minimum two 5/16" mounting bolts must secure the battery. Both the battery and spill-proof container must be independently fastened. If the battery is mounted outside of the vehicle interior, it must be anchored securely and separated from driver by a firewall.
- 2. 12 VOLT electrical system only.

## 3. BODY & APPEARANCE:

- 1. Open to any make of North American built car inclusive with a minimum wheelbase of 108" as factory listed for that year model.
- 2. Only 2-door hardtops or 2 door sedan models allowed to compete. No interchange of body and frame.
- 3. Race cars participating in racing events must be presentable in appearance at all times. Cars that are considered improperly prepared may be rejected by the tech committee at any event. No battered cars.
- 4. Body must be straight, sound, stock appearing and in stock position on frame. Body mount insulators may be removed.

- 5. All chrome moldings, ornaments, door handles, glass or plastic components must be removed. No plastic grills. All door handle, tail lamp and headlamp openings may be filled in with replacement magnetic steel panels.
- 6. All hood and trunk seams must stay original.
- 7. Original wheel arches must be retained.
- 8. Aluminum side skirts of no more than 5" (five) will be allowed. Original body must remain in place if skirts are installed.
- 9. Five Star nose and tail is acceptable for associated year, make and model design.
- 10. Optional approved non-functional hood scoop / bulge for extra throttle clearance is allowed. See section 10-3.
- 11. Unless otherwise specified all steel body & interior panel materials must be made of minimum 22 gauge magnetic steel.
- 12. Rear coil spring cars MUST use stock type steel body only.
- 13. Approved fibreglass bodies: Ford Mustang and Dodge Challenger fiberglass bodies manufactured by Ultimate Custom Fiberglass can be used to replace steel bodies. No mixing of Steel and fiberglass body panels. Ultimate Custom Fiberglass Bodies can ONLY be used on cars with a Minimum of 108" wheelbase & rear leaf spring suspensions
- 14. Alterations or customization to gain any advantage is prohibited. Aluminum or other light-weight material may not be used to replace heavier items on car. All crush panels and rear filler panels must be made of minimum 22 gauge magnetic steel.
- 15. **Rear Spoiler:** Maximum spoiler size 42" Wide X 5" high. Total Measurement will include approved side skirts. Approved side skirts are triangle in shape, 5" at spoiler reducing to 1". Maximum length of side skirts is 14"
- 16. Windshield:
  - a. Front windshield used must be lexan, minimum 3/16", and must cover full area.
  - b. Lexan rear windows optional
  - c. All windows must have sufficient bracing to prevent the window from deflecting.
  - d. A Minimum of two interior support beams (NO PLASTIC) no more than 1" wide to follow contour of inside windshield are mandatory
  - e. You may paint the upper 7" (seven inches) of the windshield or rear window black.
  - f. Sponsor of the class reserves the right to use the upper portion of the front windshield for advertising.
- 17. Paint & Lettering: All cars must be neatly and brightly painted. Numbers, assigned by the track, must be painted or decaled on both sides of car and roof (readable from right side) in a colour offering distinct contrast to colour of the car. Numbers must be a minimum of 20" high and 3" wide. Numbers must be legible (subject to approval of Head scorer.) Front fenders must be kept clear of markings or lettering from the door number to the headlight area.

#### 18. Floor:

- a. Must be stock, complete and in original position on the driver's side from the front firewall to rear firewall.
- b. All holes must be covered with 22 gauge magnetic steel.
- c. Floor can be raised on right-hand side no higher than driveshaft tunnel to provide clearance for exhaust.
- d. Must retain stock driveshaft tunnel.

#### 4. Brakes:

- 1. Four wheel hydraulic brakes are mandatory.
- Any stock-type master cylinder mounted in stock location may be used. Brake biased is allowed as long as the biased switch is located at the master cylinder and cannot be controlled or adjusted from the driver's seat or while the vehicle is in motion. Only one master cylinder is allowed.
- 3. Single piston calipers only. No Aluminum calipers.
- 4. Stock OEM or stock type slotted, grooved or drilled aftermarket rotors will be allowed.
- 5. Rear disc brakes will be allowed on any vehicle however only in cases where they are installed on a full floating 9" rear end assembly. The rotors must be a minimum .810" when installed on this assembly.

# 5. Bumpers:

- Stock-type bumpers or equivalent in stock position. Metal guards extending from bumper to body panel and riveted in place may be used to prevent bumper gouging.
- 2. Support bars may be installed between the bumper and upper portion of the front hoop. All support bars must measure less than 1.0" O.D., and are subject to the approval of the tech committee.
- 3. Fiberglass/plastic front and rear bumpers approved from Five-Star, Larry Knott Fiberglass and Ultimate Custom Fiberglass.

# 6. Chassis and steering/suspension:

- Control Arms: Stock upper control arms or approved tubular upper control arm not of equal length (no needle bearing or mono-ball cross-shaft) or equivalent. Stock lower control arms
- 2. Screw in ball joints allowed. No Howe or Mono-ball ball joints allowed.
- 3. No repositioning of the shocks, upper control arms, lower control arms, and other suspension mounting point.
- 4. Coil, torque bars and sway bars may be interchanged provided they fit original mounting and are not altered from stock appearance and position. Mono ball allowed on sway bar mounts. Hollow sway bars not allowed.
- 5. Spindles may be interchanged from the older model cars to newer model car or vice versa as long as they are the same make and model car. Left and right side spindles must be the same. (E.g.Chevelle to Monte Carlo, Ford to

- T-bird, not Olds or Cadillac to Monte Carlo) and doesn't require any fabrication or modification to existing suspension parts.
- 6. NO spring spacers are allowed between coil winding.
- Adjustable spring pockets maybe be mounted on either top or bottom of spring, frame maybe trimmed to access adjustable spring pocket. Stock type coil springs.
- 8. Steering: Stock type tie rods. Aluminum adjustment sleeves permitted. Aftermarket centre link, pitman arm & idler arm allowed.
- 9. Shock absorbers (one per wheel), must be sealed steel with stock-type fixed mounts, and no altering of shock and/or painting allowed. \$80.00 (U.S) maximum per shock. Shocks will have fixed ends and be non-rebuildable.
- 10. No rod end or ball mounts.
- 11. No bump stop devices allowed on or in any suspension and or chassis component.
- 12. Rear Fiberglass leaf springs are allowed.
- 13. No mono balls other than those found in rule6-#4 are allowed.
- 14. Unless otherwise specified all chassis and suspension parts are to be constructed of magnetic steel.
- 15. Any newly constructed chassis must use:
  - ➤ 2012 Super Stock chassis must use 71-81Camaro pick up points and measurements on both the front and rear.
  - All newly constructed vehicles must conform to measurements as listed.

NOTE: PLEASE CONTACT DELAWARE SPEEDWAY TECH DIRECTOR TO CONFIRM CAR ELIGIBILITY IN THE SUPER STOCK DIVISION.

16.2012-present Super Stock Chassis:

# All new cars must be approved prior to construction. The 2012 Super Stock is considered to be a car built completely from scratch as opposed to an original car modified to Super Stock rules.

1.	Wheel base	108"
2.	Maximum tread width	73"
3.	Minimum roof height	48"
4.	Rear quarter panel height	35"-37"
5.	Stock front dip, attached to center section at 90 deg,	No Chassis offset permitted
6.	Lower ball joint to center section	24"
7.	Center section frame width	57"- 60"
8.	LF Shock to "A" pillar	35"
9.	"A" pillar to "B" pillar	45"-48"
10.	Minimum top of frame to halo	38"
11.	Minimum halo width	46"
12.	Minimum door bar height from top of frame	22"
13.	Each side will have 4 door bars	
14.	Minimum side to side door bar width	70"

- 15. Antiintrusion plates must be securely welded to the outside of the left side door bars. This plate must be formed to match the curvature of the door bars, and the fill the area between the horizontal centre lines of the top and bottom door bar. This plate will be manufactured of 16 gauge (0.0598 inch thick) and can not be inset anymore than ½ inch from the tangent or outside surface of the door bar.
- 16. Must have center windshield bar
- 17. Must have center halo bar
- 18. Rear dip width

36"-38"

- 19. Transfer bar from rear B pillar cross bar to RF frame mandatory
- 20. Camaro rear leaf springs only and must be mounted in stock location.
- 21. Rear clip to be constructed of 2X3X.095 tubing.
- 22. Both the front and rear bay bars must be in line with the top door bars.
- 23. Driver's foot box must incorporate intrusion protection bars.
- 24. Front passenger firewall even with front bay bar
- 25. Dash panel complete from "A" pillar to "A" pillar
- 26. Dash panel complete from top of cross bar, 90 DEG bend, level with base of cowl
- 27. Rear firewall to extend up from frame to top bay bar and extend to base of rear window
- 28. Sheet metal in drivers area must be welded, passenger side maybe riveted. All interior sheet metal must be constructed with magnetic steel
- 29. Two windshield support bars required on passenger side
- 30. Hood hinges not required, Minimum of 4 pins across both front and cowl
- 31. Trunk hinges not required, Minimum 4 pins across cowl and 2 across the rear
- $32.\,Minimum\,1/8"$  floor plate on drivers side from firewall to "B" pillar
- 33. Minimum foot box width 15"
- 34. Minimum distance between foot box and centre of shock 20"
- 35. Maximum drive shaft tunnel and passenger floor height 10"

#### 7. GM METRIC FRAME CARS

# Stock Measurements (Engine Locations):

**ENGINE LOCATION** 

- 1. Must be in stock location using stock type solid non-adjustable engine mounts.
- 2. Adjustable engine mounts are not allowed.
- 3. Centre line of the left front shock to be an equal distance between the front two spark plugs
- 4. Inside right front frame rail to the fuel pump mounting surface of the engine block:
  - a) Camaro: Seven and three quarter inches (7 3/4")
  - b) G-body: Seven inches (7")
  - c) Nova: Seven and one half inches (7 1/2")
  - d) All cars must have a minimum crank shaft centre line height of thirteen and one half inches (13 1/2")

# Accepted modifications to GM Metric Frame cars:

# Front Suspension

- Stock upper control arm mounts may be re-positioned laterally and rotated to align the control arm shafts. Mounts may be parallel to frame rail at stock height.
- 6. Frame openings above the lower control arms at the inner end mounting bolt area may be trimmed to prevent "bottoming out".

# Rear Suspension (GM METRIC CARS OR CARS ORIGINALLY EQUIPED COIL SPRING REAR SUSPENSION

- 7. 9-inch Ford rear end can be used as an option. An approved aftermarket third link is allowed and may be no longer than lower trailing arms. Lower trailing arms must remain stock or magnetic steel aftermarket of the stock length +/- 0.5 inches and in stock position on frame.
- 8. Optional Panhard bars are to be fabricated from steel. Rod ends (Heim joints) must be steel. Bar length may be adjustable to <u>maintain the rear axle housing centered in the chassis</u>. Bar attachment to be fabricated from steel and mounted with the pivot point on the rear axle tube no further than the inside of the rear spring and not lower than the bottom of the axle tube. Frame bracket may be braced towards the chassis. Bar attachment to the frame bracket may be a steel or aluminum slider type.
- 9. No external adjustments allowed, and any access holes to allow such adjustments must be sealed.

#### 8. Frame:

- 1. Frame or sub frame must be stock for body used. Sub frames on unibody cars MUST be joined under the car. For full frame cars the rear sections behind the axle can be fabricated with minimum 2X2X.095 magnetic steel.
- 2. Any chassis that did not compete in 2010 must be constructed of 2 X 3 X .100.

## 9. Fuel System:

- 1. Stock-appearing mechanical pump only. Absolutely no electric fuel pumps. No plastic or glass fuel filters allowed.
- The gasoline shall not be blended with alcohols, ethers, or other oxygenates and it shall not be blended with aniline or its derivatives, nitro compounds or other nitrogen containing compounds. Unleaded fuel only. 5.0% oxygen content Max.
- 3. Safety cell mandatory, and the cell must be contained in a magnetic steel container constructed of no less than 22 gauge magnetic steel.
- 4. Fuel cell and container is to be securely mounted in trunk compartment, behind rear firewall, between frame rails, forward as near as possible to the rear axle-housing hump, but no lower than the center of rear axle-housing tube.
- 5. Filler must be inside trunk unless a proper fender, filler assembly is used.
- 6. Only high pressure neoprene line and or braided/kevlar fuel line will be allowed.

- 7. Line must run through cab, and must run through a steel conduit. This conduit shall be painted a contrasting colour of the car, and will extend beyond each firewall by two (2) inches. The conduit in addition to the colour will also be labeled "FUEL LINE DO NOT CUT"
- 8. In-Line fuel Safety Check Valve MANDATORY. Ex. Part # OBERG FILTERS SV-0828 FUEL SAFETY CHECK VALVE

#### 10. Hood/Trunk:

- 1. Must be stock-type hood & trunk (steel body cars)
- 2. No bulges on the hood. Hood must seal at the cowl
- 3. Optional, stock appearing hood scoops are allowed. A maximum opening in the hood scoop is 2" X 20". (Two inches by twenty inches)
- 4. There shall be no sealing devices, air deflectors, and/or air management systems installed to the underside of the hood.

# 5. For approved fiberglass bodies:

- a. A maximum opening of 2" X 20" (two inches by twenty inches) is allowed on the manufactured hood scoop.
- b. No aftermarket hood scoops allowed.
- c. Bulges are not allowed, hood must seal at the cowl

#### 11. Instruments:

1. Oil pressure and heat gauge mandatory.

#### 12. Mirrors:

- 1. Mirror must be mounted in stock location and a maximum size is 3"X10"
- 2. If either a full containment seat and or a head/neck support restraint system is used a 3" X 14" mirror mounted in the stock location is permitted. In addition to the larger mirror, an optional left side mirror that is no larger than 4" maybe installed. The left side mirror may not extend or protrude outside the vehicle.

#### 13. Radios:

- 1. Approved 1-way radio receiver mandatory. Must receive frequency UHF 451.7125
- 2. Two- way radio communication strictly prohibited!

#### 14. Roll Bars:

- 1. The greenhouse of the vehicle must be constructed of no less than 1 3/4"X.095" OD magnetic steel.
- 2. Any bar that connects to that greenhouse must also be constructed of 13/4"X .095" OD magnetic steel.
- 3. Main greenhouse loop may not exceed 3" inward from either the A, B, or C pillar. Front window bars may not exceed 3" inward from windshield post. Side bars are compulsory.

- 4. Minimum of 4 bars on left side, 3 bars on the right side, and must extend into the door panel. A diagonal bar must be added to the roof hoop as well as the main hoop(behind the driver seat). Top door bar must be within one (1) inch of the top of door panel, and the remaining bars must be equally spaced down. The bay bar must be inline with the top door bar.
- 5. Both front and rear hoops are required, hoops are not to be outside the inside of the tires, and anybody supports off these hoops are to be no larger than 1" o.d.
- 6. All support bars extending to the body panels must be at 90 degrees and welded at both ends.
- 7. Threaded pipe, Pipe fillings, lap weld pipe, magnesium or aluminum are NOT permitted. No square tubing, channel and angle iron will be permitted in the construction of the roll cage or bracing.
- 8. Flush grinding welds are not permitted.
- 9. Rear clips may be constructed of square tubing, minimum 2X2X.095"
- 10.2012 Super Stock chassis & newer must use 71-81Camaro pick up points and measurements on both the front and rear. See section 6-16
- 11. Antiintrusion plates must be securely welded to the outside of the left side door bars. This plate must be formed to match the curvature of the door bars, and the fill the area between the horizontal centre lines of the top and bottom door bar. This plate will be manufactured of 16 gauge (0.0598 inch thick) and cannot be inset any more than ¼ inch from the tangent or outside surface of the door bar.

# 15. Steering Wheel & Column:

- 1. Steering shaft must have a minimum of two (2) u-joints phased and installed properly.
- 2. Collapsible column section is highly recommended.
- 3. Steering wheel must use an approved quick-release mechanism and must have a steering wheel pad installed.

## 16. Safety:

#### 1. Fire Control:

- a. Race cars must have an approved fire extinguisher, with a recharge slip dated back no older than January of the current race season.
- b. Fire extinguisher must be mounted on the right side and within reach of the driver when seat belts are fastened, and in an approved mounting bracket.
- c. On-board fire suppression system highly recommended
- 2. **Helmet & Driver Apparel:** Drivers are required to wear full coverage; one or two piece Nomex multi- layered fire suits which are S.F.I. rated. Fire retardant undergarments are mandatory with a single- layered suit. Fire retardant gloves and shoes are mandatory. Driver are required to wear a full face helmet that

- conforms to Snell SA2010 or higher SA standards and have a certification sticker visible inside the helmet. SA-2015 highly recommended.
- 3. **Belts and Harness:** A quick-release 5-point belt (shoulder and lap) of no less than 2" in width, and 2" width anti-submarine harness in good condition are mandatory. Shoulder harnesses must be mounted and secured at the driver's shoulder height. Belts must be securely fastened to the frame, cross-member or roll cage by means of a suitable reinforced mounting, in such a manner that all fittings are in direct line with the direction of pull. Belts may not be any older than 3 years (manufacturer's date). All belts and mounting will be subject to inspection.
- 4. **Window Net:** An approved nylon ribbon type net must be installed in driver's side window opening. Net sizing must be at least 16" x 18". Net must be installed so it is tight. Window net anchors must be attached to roll bars, not body. Window net must be quick-release type. Net must be permanently anchored at the bottom and release at the top. Lever-latch releases are highly recommended.
- 5. **Roll Bar Padding:** All roll bars within driver's area must be covered with approved roll bar padding. No sharp edges, intrusions or bare metal near driver. The definition of all bars is any bar that can be touched by any extremity while sitting in the seat.

#### 6. Seats and head Rest:

- a. Approved aluminum bucket seat is mandatory. NO home-made seats allowed. Seats must be bolted or secured solid so that the seat will not shift or loosen on impact.
- b. All retainer bolts (minimum of 6) must be min. 3/8".
- c. Seat must completely to the left of the centerline of the car and inside the frame rail.
- d. An approved padded headrest is mandatory and must be securely mounted.
- e. Head and shoulder containment seat highly recommended.

#### 17. Tires:

- 1. See tire rule book
- 2. No soaking or altering of tire in any manor allowed. Drivers/teams soaking or altering tires will received major penalties.

## 18. Tow loops:

 Each rear frame rail must have a 3" inside radius tow loop (strong enough to lift the car) securely fastened as far rearward as possible extending above the trunk floor.

# 19. Heights & Weights:

- 1. All cars will be weighted with driver sitting in driver seat.
- 2. Minimum ground clearance of **5**" must be maintained on every part of the vehicle with the exception of tires, exhaust, and flange of safety bell housing. If a flat occurs, no part of the chassis may touch the ground.
- 3. Minimum ground clearance of 4 ½" inch at the centerline of the cross member will be allowed on the first pass through the tech line only.
- 4. Lead ballast weight must be double bolted and painted white with the car number marked on each piece so that the number is visible when installed. No tungsten, lead shot, ball bearing type, or liquid type ballast permitted.
- 5. All bolts must be minimum one half (1/2") inch, and any threaded rod that is used must be double bolted and welded at one end.
- 6. All ballast weight must be bolted to or encased within the frame rail and not mounted lower than the bottom of the frame rail.
- 7. Weights must weigh a minimum of 10 lbs. and be in block form.
- 8. If stacked or bolted weight exceeds thirty (30LBS) pounds it must be bolted into an approved weight tray.
- 9. No weight to be added forward of front firewall or rearward of the fuel cell. All weight added behind the rear axle assembly must be bolted to the stock frame.
- 10. Cars will not be allowed to add gas, oil, and or water after an event to make the minimum weight.
- 11. Loss of add-on weight will result in a severe penalty.
- 12. Maximum rear weight **50%.**

# 13. Weights:

	Fibreglass body		Steel Body	
Crate Engine	3100 lbs	55%left	3050 lbs	56% left
Built Engine	3200 lbs	55%left	3150lbs	56% left

#### 20. Wheels:

- 1. Racing wheels only.
- 2. 15" diameter wheels. Maximum width is measured from bead seat to bead seat. Rim width is specified in Tire Program Rule book.
- 3. Same offset wheels must be used from left side to right not necessarily front to rear.
- 4. Wheel spacers up to ½ inch must be equal side to side.
- 5. NO lightweight aftermarket racing wheels allowed.
- 6. Wheel studs threads must protrude through wheel nuts.

#### 21. Wheelbase/Track width:

- 1. Fibreglass cars must be 108" min.
- 2. All steel body cars must retain the stock wheelbase and tread width for the body used, as per manufacturer's nominal specifications. Front valances must not extend outside of the front tires. Variance may not exceed one inch (1") on wheelbase and one inch (1") on track width.

# **Engine/Drivetrain,etc**

#### 22. Carburetor:

- 1. One Holley 500 CFM Two Barrel Part #0-4412-S or HP equivalent. Main metering jets and power valve may be changed for tuning. Choke components may be removed. Accelerator pump discharge nozzles may be changes utilizing straight type only. NO other modifications may be made and all parts are to remain stock. No grinding, cutting, polishing, acid dipping or modifying of parts. Carburetor subject to "go, no go" gauge test.
- 2. No screens allowed in and or under the carburetor. No altering of the intake manifold with respect to the fuel atomization is allowed.
- 3. Two throttle returns springs mandatory. One spring pulling in each direction.
- 4. CARBURETOR ADAPTER: Adapter May only use two 1/8" maximum gaskets The adapter to be used is Canton Racing Products part #85-060 or #85-060A or, Bicknell #BRP375 or Wilson #041111). No tapered bore adapters.

# 23. Cooling System:

- 1. Radiators must be in stock location.
- 2. WATER PUMP -- Stock O.E.M. water pumps only (refer to stock definition for further clarification).
- 3. Large rads are permissible only if they are safely installed in a rad cradle.
- 4. Rad must include liquid overflow container minimum of 1 liter mounted ahead of engine firewall. WATER ONLY permitted in cooling system.
- 5. The overflow tube must exit the body at the base of the windshield.
- 6. Aluminum radiators allowed.
- 7. Electric fans optional with wiring exposed for inspection.
- Must use stock-type v-belt drive. Stock serpentine belts are allowed. No aftermarket serpentine belts allowed. SEE STOCK DEFINITION FOR FURTHER CLARIFICATION

## 24. Clutch and Flywheel:

1. Stock O.E.M. type friction disc steel clutch units utilizing dampening springs only.

- 2. NO triple disc, NO double disc.
- 3. Clutch disc diameter minimum 10 inches. If hydraulic clutch is utilized only one slave cylinder is allowed.
- 4. Flywheels may not weigh less than 13 lbs. Clutch and pressure plate assembly may not weigh less than 17 lbs.
- 5. Must have an NHRA steel bell housing, Sema 6.1 flywheel shield or scatter shield of ¼" magnetic steel.
- 6. An inspection hole of no less than one (1") inch in diameter must be drilled in the bellhousing to allow for flywheel and clutch assembly inspection.

#### 25. Drive line:

- 1. Drive shaft and universals MUST be stock steel standard production type.
- 2. Steel, 360-degree retainer loops, 1/4 inch thick x 2 inches wide, must be positioned at the front and rear of shaft, and within 12 inches of each U- joint.
- 3. Drive shaft must be painted white.
- 4. Minimum driveshaft OD is 2 1/2 inches.
- 5. All driveshafts must be constructed of magnetic steel.
- 6. No light weight material allowed.

# 26. Engine location:

- 1. ENGINE LOCATION -- Must be stock location on stock-type non-adjustable solid engine mounts. For GM Nova Style ('75 '79), centre of rear axle housing tube to rear of engine block 95-1/2". Inside of right frame rail to fuel pump mounting surface of engine block 7-1/2".
- 2. All cars must have a minimum crank height of 12 inches

# 27. Exhaust System:

- 1. Exhausts pipes must extend back under car, and exit behind driver and outside of the vehicle and be flush with the outside of the vehicle.
- 2. Exhausts system will consist of exhaust pipes max 3" O.D., minimum of 1 muffler, and one or 2 tail pipes max 3" O.D.
- 3. Balance tube between exhaust pipes is optional max 3" O.D.
- 4. A decibel reading of 92 or less at a 100 foot distance will be strictly enforced.
- 5. NO 'X', no merge collectors. All components must be magnetic steel.
- 6. All engines may use approved header Schoenfeld part #185 or #165 or Dyantech part #01-21900 or #01-20900. No merge collectors. All components must be magnetic steel.

## 28. Ignition & Electrical:

Any tampering, alterations, or violations with respect to the ignition box and related components will result in the severe penalties from Delaware Speedway. All penalties will be at the discretion of Delaware Speedway officials. The tampered components, which must be removed at the team's expense, will be impounded at both the team's expense and risk

# until the ruling is finalized. The speedway reserves the right to destroy all tampered with parts.

- 1. Car must be self-starting.
- 2. Ignition "on/off" switch must be mounted in the centerline of the vehicle and clearly labeled in such a manner that the engine can be turned off from outside of vehicle in the event of an emergency.
- 3. The only switches allowed are:
  - a. Master on/off mounted in the centre of the car.
  - b. Push button start switch.
  - c. Ignition power other than master on/off. If an electric fan is used one additional two pole switch is allowed.
- 4. All cars must have MSD soft touch rev control part #8728 installed on right-hand side of dash, out of driver's reach within 6" of right-hand A-post bar. An operational 6300 rpm chip must be installed. All MSD and ignition wiring to remain open and clearly visible for inspection.
- 5. GM weather pack connector must be installed within 6" (six inches) of the MSD box.
- 6. Stock-type distributor & module for make and model or GM HEI-type distributor from DUI optional.
- 7. All vehicles will operate using a conventional twelve (12V) volt electrical system
- 8. No other electrical devices are allowed anywhere on the vehicle.
- 9. If an alternator is used, it must be engine driven, and mounted on the front of the engine.

# 29. Rear Axle Assembly:

- 1. Wheel bolt pattern must be the same as front end.
- 2. No locker type rear axles.
- 3. No light weight components allowed.
- 4. No Cambered rear ends allowed.
- Integral type rear end with horseshoe clips holding the axles in may be tack welded to prevent fall out. C clip eliminator kit may be used on rear axle assembly.
- 6. A 9"in. floater rear end complete with disc brakes will be allowed. When the floater is used minimum of .810" brake rotors must be used.
- 7. Maximum total rear end gear ratio between transmission and rear end pot is 5.14 ie 5.13 OK, 5.15 not allowed.
- 8. Full spool only. Max 6 holes permitted in spool housing (excluding ring gear bolts holes) Magnetic steel only. No scalloped spools.
  - EX. Strange Engineering D1552



#### 30. Transmission:

- 1. Transmission must be manual transmission(Stock), 3 or 4 speed. All gears must be operational, including reverse.
- 2. Transmission must be stock with no internal lightening of parts, not altering of shift patterns and or ratios, and original brass syncro's must be installed.

# **ENGINE OPTIONS:**

Any tampering, alterations, or violations with respect to the crate engine program will result in the immediate suspension of the driver, car owner, and chief mechanic for a minimum of 1 year (365 days) from the date of the infraction. Further monetary fines and reduction of points will be assessed by the technical committee. The tampered engine which must be removed at the team's expense will be impounded at both the team's expense and risk until the ruling is finalized. The speedway reserves the right to destroy all tampered with parts

# 31. Option A: GM 602 Crate Engine:

- 1. GM 602 may be used in any approved make or model of car in competition. If at any time when the engine is being repaired and or the oil pan is removed an inspection plug of 1 ¼" must be installed prior to the engine being resealed either by an approved Delaware speedway vendor or the Speedway itself.
- 2. Only approved, sealed, unaltered engines.
- 3. No changes, substitutions or modifications to engine.
- 4. All Chevrolet crate engines to be purchased from dealer approved by Delaware Speedway.
- 5. New and repaired crate engines must be sealed by a Delaware Speedway approved engine builder.
- 6. It is the competitor's responsibility to have paperwork of where the engine was purchased and competitors will be held accountable for alterations to engine.

7. Approved engine part replacement: A double roller timing chain set may be install by an approved Delaware Speedway Engine repair facility. The timing chain set must be installed to factory timing settings. Engine must be sealed by Delaware Speedway approved engine repair facility. Engine seals must be obtained from Tech Director

# 32: Option B – Built Engine:

1. No interchange of engine between makes (i.e., must be a Ford engine in Ford, Chev in Chev and Dodge in Dodge etc.).

MAKE		MAXIMUM	MAXIMUM	
OF CAR	ENGINE	<b>OVERBORE</b>	DISPLACEMENT	
Chev	350 Cu In	.045	358 Cu In	
Dodge	360 Cu In	.045	368 Cu In	
Ford	351 Cu In	.045	360 Cu In	

# 32.1 Cylinder Block:

- All engine blocks must be product of the manufacturer of the make for the engine being used in competition. Aftermarket engine blocks will not be permitted.
- 2. The engine block must retain all engine dimensions with the exception of the maximum allowable overbore and the surfacing of the engine block deck.
- 3. Angle cutting of the engine block will not be permitted.
- 4. Aluminum blocks will not be permitted.
- 5. Only iron cylinder sleeves may be used to repair.
- 6. Must maintain stock lifter bore: Dodge .904 inch, Ford .875 inch, Chevrolet .842 inch.
- 7. Repair sleeving of lifter bores permitted to a maximum of 4.
- 8. Deburring of block permitted. Excessive grinding, lightening, polishing, painting or coating internally, screening or vent stacking is not allowed.
- 9. Crankshaft must be stock OEM-type. Must have factory I.D. numbers that are legible through inspection hole in oil pan (except Chrysler). Only standard magnetic steel or cast-iron production design crankshafts will be permitted. No lightening, knife edging or polishing allowed. Balancing okay.
- 10. Harmonic balancer stock iron elastomer-type only. No aftermarket or aluminum. Must maintain stock dimensions and weight.
- 11. Connecting rods. Stock-type I-Beam rods only of stock length for manufacturer: General Motors 5.7 inches, Ford 5.956 inches, Chrysler 6.125 inches. Must be magnetic steel, iron or powdered

- metal. No titanium, aluminum, stainless or exotics.
- 12. Must use OE-type insert bearings. No rollers.
- 13. Piston. Stock-type or flat-top three ring pistons with all rings in place. Must use stock pin and mounting (i.e., pressed fit if equipped). Must not protrude through deck.
- 14. Head Gasket: Any composite gasket allowed. **MUST MAINTAIN 9.5:1 COMPRESSION RATIO MAXIMUM**. To be determined by tech officials.

#### 32.2 Camshaft:

- 1. Mandatory flat tappet hydraulic camshafts. Maximum valve lift .500 inch measured at valve with zero lash.
- 2. No mushroom lifters. No rocker rollers.
- 3. Must use stock-type timing chain and gears.
- 4. Must use manufacturer's firing order.

# 32.3 Cylinder Heads:

- 1. Only stock O.E.M. cast iron heads allowed. Absolutely no deburring, grinding, acid dipping, acid porting or polishing of intake or exhaust ports allowed.
- 2. Must use 11/32" stem. No undercut valves. No hollow valves. No titanium. No Sodium.
- 3. Maximum valve size: General Motors 1.94" intake and 1.50" exhaust, Ford and Chrysler 1.94"intake and 1.60" exhaust
- 4. Must use OE-type valve spring and retainers. Maximum diameter 1.255" for standard spring 1.310 for beehive spring).
- 5. Stock rockers, push rods and valve train to be used. Guide plates on Ford and GM optional. Shafts mandatory on Chrysler. No aluminum, titanium exotic metals allowed.
- 6. Ford may use Windsor Jr. 180 #053030 or stock iron heads.
- 7. No GM camelback or angle plug heads. No aluminum heads. GM MAY USE ENGINE QUEST CH350C OR RHS 12407 or Dart Iron Eagle S/S165.

#### 32.4 Intake Manifold:

- Chevrolet engines must use Edelbrock part#7101 or #7116 or GM part # 12366573 or STOCK cast iron 2BBL intake manifold (NO marine intake manifolds)
- 2. Dodge Engines must use Edelbrock part # 7176 or mopar part #P4876335 or STOCK cast iron intake manifold
- Ford engines must use Edelbrock part# 7181 or STOCK cast iron intake manifold
- 4. Manifold must remain stock and unaltered. No port matching, grinding, acid dipping or porting.
- 5. Two adjacent intake bolts on each side of manifold must be drilled for sealing.
- 6. No foreign materials allowed that will alter the atomization of the fuel.

#### 32.5 Oil Pan:

- 1. Option 1: Any O.E.M. factory production oil pan permitted. No altering of stock oil pan permitted. Windage tray may be used. Oil filter must be directly attached to block. Minimum ground clearance must be retained.
- 2. Option 2: Aftermarket racing-type kickout oil pan permitted. The oil pan must be wet-sump type and must be manufactured using a production-type pan with only a wet sump reservoir added to the bottom. All bolt holes and bolt hole flanges must be visible. Kickouts will not be permitted between the bolt-on flanges and the top of the added sump. Spacers other than sealing gaskets will not be permitted between the oil pan side rails and the engine block surface. Must be made of magnetic steel only.
- 1-1/4"-inch NPT inspection hole mandatory or oil pan may be subject to removal for inspection. Inspection hole must be located so crank shaft numbers can be inspected.
- **33.** Engine Claim: See Delaware Speedway General Regulations rule book for engine claim procedures.

Claim amounts:

- 1. 602: \$4,100 plus H.S.T. Subject to G.M. price changes.
- 2. Delaware Built: \$5,800 plus H.S.T.
- 3. All claims also require \$500 cheque payable to Delaware Speedway to cover costs of transporting and checking of engine claimed.

NOTE: Interpretation of these rules will be solely up to the judgment of the officials in charge of the area in question. DELAWARE SPEEDWAY reserves the right to impound non-complying components with no compensation to the owner(s). Noncompliance with the specifications outlined herein may subject violating teams to disqualification, loss of points and moneys and/or fine.

NOTE: IF IT DOESN'T SAY YOU CAN DO IT, ASK THE TECH DIRECTOR ALL

DECISIONS BY PIT STEWARDS, CHIEF TECHNICAL INSPECTOR OR DELAWARE SPEEDWAY EXECUTIVE COMMITTEE MEMBERS WILL BE FINAL. ALL RULES SUBJECT TO INTERPRETATION BY DELAWARE SPEEDWAY OFFICIALS. RULE BOOKS WILL BE ISSUED TO MEMBERS. ALL EQUIPMENT NOT GOVERNED BY THE AFOREMENTIONED RULES ARE TO BE SUBMITTED TO DELAWARE SPEEDWAY, NOT LESS THAN 30 DAYS PRIOR TO THE DATE OF INTENDED USAGE. NO EQUIPMENT WILL BE CONSIDERED APPROVED BY REASON OF HAVING PASSED THROUGH INSPECTION UNOBSERVED. RULES APPLY TO ALL RACE EVENTS.

DELAWARE SPEEDWAY RESERVES THE RIGHT TO CHANGE ANY RULES

For all tech related questions, please contact Darryl Timmermans -

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