

FIGURE 8 RULES

*** Please refer to General Section for rules and regulations applicable to all divisions***

1. THE CAR, BODY & SPOILERS:

- 1.1 The Figure-8 Division is open to strictly American made cars manufactured after 1955.
- 1.2 Deleted.
- 1.3 Any other make or model up to 2008 permitted. Exception: muscle car bodies (Camaro, Mustang, Charger) up to current year allowed.
- 1.4 High down-force bodies and/or part will not be permitted.
- 1.5 Carbon fiber parts of any type are not allowed.
- 1.6 Greenhouse body allowed. No lightweight Greenhouse components.
- 1.7 Body must remain stock appearing.
- 1.8 No chopping or channeling allowed on any part of the body.
- 1.9 Bodies must be mounted to manufacturer specification with an inch added for ride height to appropriate dimensions.
- 1.10 No convertibles, four-wheel-drive trucks allowed. The driver and passenger side doors may have inner panels removed for roll bar clearance only.
- 1.11 All forced air openings must be used for radiator or brake cooling only.
- 1.12 A metal firewall must separate the driver from the trunk area.
- 1.13 Inner front fender wells may be removed on non-unibodied cars.
- 1.14 Fenders and quarters may be trimmed at the wheel opening for the tire clearance, a maximum 4 inches from tire, rolled with no sharp edges.
- 1.15 Fiberglass hood and fenders are permitted. No one piece front ends allowed.
- 1.16 Aftermarket nose cannot be wider than stock.
- 1.17 No handmade nose pieces allowed.
- 1.18 Single side kick-off bars flush with the body are optional.
- 1.19 Doors must be welded bolted, or riveted shut at all times.
- 1.20 No external nerf bars of any type allowed.
- 1.21 Reinforcement behind stock bumpers is permitted, if properly welded to the frame.
- 1.22 Deleted.
- 1.23 No fabricated nerf bars are allowed on the front or rear bumpers.
- 1.24 Altering of body and roof lines is not allowed.
- 1.25 A firewall of a minimum of .040 steel is required between the driver and engine.
- 1.26 Trunk area floorboard optional, but firewall must remain intact.
- 1.27 Rear clip may be fabricated. Fabricated rear clip cars must be in stock position.
- 1.28 All unnecessary holes must be covered with metal.
- 1.29 Stock grills may be exchanged with steel or aluminum mesh.
- 1.30 All upholstery and glass must be removed including headlights, tail lights, chrome trim, and anything else that could come loose and become hazardous.
- 1.31 Dashboards are optional, if removed, all sharp edges must be rounded off.
- 1.32 Original seat must be removed and replace with an aluminum racing seat that is properly fastened to the roll cage.
- 1.33 No functional hood scoop or air cleaners sticking out of the hood is allowed.
- 1.34 Raised hoods are allowed.
- 1.35 All hoods must seal against windshield.
- 1.36 Hoods and deck-lids must be properly fastened with quick release pins.
- 1.37 No interior spoiler, wings, skirting behind the rear tires or wind deflectors allowed.
- 1.38 Side skirting and front nose require a minimum of 5 inches ground clearance with driver in the car.

- 1.39 A minimum 3 inch amber colored light must be mounted across the top front portion of all Figure-8 cars.
- 1.40 Floorboards must be flat and made of a minimum .040 steel.
- 1.41 Black or dark colored cars are allowed provided bright contorting colored numbers are used.
- 1.42 All flammable materials/insulation, carpet, etc. must be removed from interior and under hood areas.
- 1.43 A rear spoiler, non-adjustable by driver, may be attached to the rear deck-lid, not to exceed 5 inches in height and 60 inches in length. Must be 1/8 inch metal or 1/4 inch Lexan and control the flow of air over one surface only.
- 1.44 No rudders of forward mounting brackets allowed.

2. WINDSHIELD, GLASS, & MIRRORS:

- 2.1 Front and rear windows are recommended.
- 2.2 Windshield must remain at factory angle and a minimum of three 5/16 inch bars must be mounted in front of the driver.
- 2.4 Front and rear Lexan optional.
- 2.4 No side or vent windows allowed.
- 2.5 No rear view mirrors allowed.

3. RADIOS:

- 3.1 No two-way radios will be allowed.
- 3.2 Receiver radios MUST be utilized

4. FRAMES:

- 4.1 Front and rear stub may be tied together.
- 4.2 Fabricated rear stub must use minimum 2" x 3" steel tubing with .095" or thicker wall.
- 4.3 A minimum ground clearance of 5 inches must be maintained on any part of the frame with the driver. If a car is deemed to repeatedly contact the racing surface it will be immediately black flagged with the corresponding finish.
- 4.4 Non-approved frame or suspension modifications are subject to a minimum weight penalty of 200 lbs.

5. ROLL BARS:

- 5.1 All roll bar material must be mild steel, 1 3/4 inch O.D. x .090 wall or thicker. No pipe-fittings, No gas welding.
- 5.2 Roll bar must be a 4 post design and must be located directly behind the driver and forward to the 'A' pillar. The roll bar must be back-braced from the top of the bars to the rear of the frame (or floor plate) at appropriate 45 degree angle.
- 5.3 Roll bar members may attach to either the frame or the floor. For floor installations, attach members to 1/4 inch x 8 inch x 8 inch or larger steel plates securely bolted or welded to the floor.
- 5.4 "Petty" bar may be installed and attached forward to the right 'A' post of the cage only.
- 5.5 Four horizontal door bars on each side must be used for driver protection, spaced equally apart.
- 5.6 Front and rear hoops are allowed but cannot be outside of car body. Hoops may not extend more than 2 inches in front of radiator. Stock factory radiator supports / bracing may only be removed to allow for front hoop installation. For those cars not running a front hoop, factory radiator supports / mounts must remain in place. Front hoops must be installed with rear bracing at an angle down to the frame horns.
- 5.7 Deleted.

NOTE: ENGINE OPTIONS & SPECIFICATIONS ARE LISTED AT THE END OF THE RULES

6. ENGINE:

- 6.1 No external vacuum pumps or pan-vacuum systems allowed on either engine options.
- 6.2 No engine adjustments are allowed from the driver's compartment. (Compartment is defined as anything the driver can touch while seated in the driving position.)

7. EXHAUST:

- 7.1 Mufflers are mandatory. 95 DBA OR LESS WILL BE STRICTLY ENFORCED! Violation will result in zero points being awarded.
- 7.2 Must extend behind the driver and be securely mounted.
- 7.3 Heat shields to cover exhaust system can be no more than 4 inches wide and no longer than the valve covers.
- 7.4 The minimum penalty for any car found to be too loud at any time by Track Officials will automatically start at the back of a "A" Main, regardless of qualifying position.

8. IGNITION:

- 8.1 Stock HEI ignition allowed, but cannot be used with and external coil.
- 8.2 Coil must be similar in design to OEM. No racing type or performance coils will be allowed. 8.3 No MSD boxes or similar type products. 8.4 Aftermarket or performance modules allowed.

9. COOLING SYSTEM:

- 9.1 Only one radiator ahead of the engine is permitted.
- 9.2 No electric water pumps. Aluminum Water Pumps are permitted.
- 9.3 Electric fan permitted.
- 9.4 Only V-belt pulleys are permitted.

10. TRANSMISSION:

- 10.1 All cars must have stock OEM production passenger car 3 or 4 speed transmission with all working gears.
- 10.2 No racing transmissions allowed.
- 10.3 No Super T-10 transmissions allowed.
- 10.4 Automatic transmissions allowed. Must have a working torque converter.

11. CLUTCHES:

- 11.1 Minimum 10 inch stock steel clutch assembly only. Hydraulic throw-outs are approved. 11.2 No turning, drilling, aluminum or special flywheels permitted.
- 11.3 The minimum weight of the clutch, flywheel, and bolts shall be 30 lbs.
- 11.4 Full disc. No aluminum components.

12. DRIVE SHAFTS:

- 12.1 No aluminum or carbon fiber drive shafts, yolks or slip yolks allowed.

- 12.2 Must have a minimum of two 2 inch wide x ¼ inch thick 360 degree brackets placed around the drive shaft fastened to floor or cross member preventing the shaft from being dislodged & dropping onto the racing surface.
- 12.3 All brackets must be approved by CNS officials.

13. REAR END:

- 13.1 No cambered rear-ends allowed.
- 13.2 No aluminum center sections or components are allowed. Aluminum lowering blocks and drive plates are allowed.
- 13.3 Welded spider gears or steel spool may be used. No ratcheted or limited slip rear-ends allowed.
- 13.4 No gun drilled or titanium axles allowed.
- 13.5 No titanium lower input shafts allowed.
- 13.6 No rear sway bars allowed.

14. BRAKES:

- 14.1 Working calipers or drums on all four wheels is required.
- 14.2 OEM brake parts only. No carbon fiber. No aluminum calipers. No aluminum components.
- 14.3 Rotors cannot be lightened or drilled, and must not be less than .060 inches of minimum. (i.e. Minimum stamped on rotor is 1.2 inches, cannot be measured less than 1.14 inches)
- 14.4 Racing brake pedals and master cylinders permitted.
- 14.5 Brake adjuster valve permitted.

15. TREAD WIDTH:

- 15.1 78 inches maximum, measured from the outermost part of the tire, at spindle height, zero tow in, front and rear. Must fit CNS gauges as presented for inspection - No tolerance.

16. WHEEL BASE:

- 16.1 107 ½ inches, minimum

17. FRONT SUSPENSION (Only one shock per wheel):

- 17.1 Any stock production lower A-frames permitted. No modifications or alterations of lower A frames except for aftermarket bushings and sway bar mounts.
- 17.2 Front coil spring must be mounted in the stock original position. Ball joint mounts may be altered only to permit the use of a larger ball joint.
- 17.3 No modifications or alterations of spindles except for reaming the ball joint hole.
- 17.4 Any OEM steel spindle only. May be interchanged within manufacturer's line.
- 17.5 Steering linkage must remain factory stock. Only stock component will be permitted. Factory steering column may be removed and ¾" steel steering rod installed.
- 17.6 Front end components must remain stock and in the stock location.
- 17.7 Aftermarket steel upper control arms permitted, aluminum cross shafts permitted. Stock non- adjustable ball joints with OEM specifications must be used; upper control arm mounts may be changed.
- 17.8 Aftermarket non-externally-adjustable shocks permitted. No aluminum shocks or external shock reservoirs permitted.
- 17.9 Steel weight adjusters are permitted & cannot be gun drilled.
- 17.10 No chassis adjustments are allowed from the driver's compartment.

17.11 25lb. must be bolted to the front stub on fabricated stub cars. Fabricated stubs must maintain same geometry as original.

18. REAR SUSPENSION (Only one shock per wheel):

- 18.1 Steel pan hard bar with steel mounting brackets only.
- 18.2 Only one solid upper steel link allowed. All mounting hardware must be made of steel, and can be fabricated.
- 18.3 Steel trailing arms permitted. Location is optional.
- 18.4 Must be three-link suspension only.
- 18.5 All heim joints must be made of steel.
- 18.6 Must use 5- $\frac{1}{2}$ " inch diameter springs.
- 18.7 Rear weight-jackers optional, must be made of steel.
- 18.8 Spring and coil mounts must be made of steel and can be fabricated. Location is optional.
- 18.9 No coil eliminators (sliders) allowed.
- 18.10 Leaf springs are allowed.
- 18.11 No operator controlled, computer controlled or automatic weight transfer, weight shifting, or weight altering devices or techniques will be allowed.

19. WHEELS & TIRES:

- 19.1 Steel wheels only. Maximum width 8 inches.
- 19.2 It is mandatory that all wheel studs be replaced with $\frac{1}{2}$ inch or larger studs.
- 19.3 Mandatory track tire will be the Hoosier 8" Comanche. Tires will be limited to 4 tires per event (2 rights and 2 lefts). **The top 3 Main Event finishers must run the same tires in the next scheduled race (both qualifying and competition). CNS will impound all 4 tires from each of top 3 finishers.** All tires must be purchased at CNS and will be marked - If a driver is found to be using tires that have not been marked, they will automatically be disqualified for the evening with a minimum penalty of loss of points and prize money.
- 19.4 No wheels or tires protruding outside of body panels.
- 19.5 No wheel adapters allowed.
- 19.6 Spacers, steel or aluminum, permitted up to $\frac{1}{2}$ inch per wheel.

20. WEIGHT WITH DRIVER BEFORE RACE: Weight must be posted on passenger A-Pillar!

- 20.1 Up to 365 Maximum C.I.D. 3200 lbs. Minimum
- 20.2 Over 365 Minimum C.I.D. ~~3500~~ 3300 lbs. Minimum (small blocks only)
- 20.3 602 Crate Engine ~~3100~~ 3200 lbs. Minimum

21. FUEL:

- 21.1 RACING FUEL ONLY permitted and must be purchased from CNS directly.
- 21.2 Racing fuel shall not be blended with any other gasoline or any additives, nitro compounds, or other oxygen containing compounds.
- 21.3 It is the competitor's responsibility to ensure that fuels are not mixed in previously used containers.
- 21.4 The gasoline shall not be blended with aniline or its derivatives, nitro compounds or other nitrogen containing compounds.
- 21.5 Icing or cooling of fuel system will not be permitted in the pit or racing areas.
- 21.6 Icing, Freon type chemicals or refrigerants may not be used in or near the fuel system.

22. FUEL TANK:

- 22.1 Stock gas tanks must be removed and replaced with a fuel cell: 22 gallons maximum
- 22.2 Fuel cell must be enclosed in approved metal container.
- 22.3 Containers must be securely mounted behind the driver in the trunk area and have all steel braided fuel lines or lines sealed in pipe or conduit, running under the floorboard.
- 22.4 Fuel system must be well protected from rupture and must have a flapper or check valve in the vent hose.
- 22.5 Fuel cell height 9 inches minimum, measured from the bottom of the cell to the ground.
- 22.6 It is recommended that fuel cell be supported by here straps a minimum of 1 inch square tubing and secured by at least two straps lengthwise and two crosswise - all bolted to the frame.
- 22.7 A reinforcement plate of not less than 1/8 inch magnetic steel must be installed behind fuel cell. Plate must be welded to cage and must extend the entire width and height of the fuel container.
- 22.8 Any concealed pressure type containers, feed lines, or actuating mechanisms will not be permitted, even if inoperable.
- 22.9 Only one (1) gasoline filter may be used between the fuel cell and fuel pump. The location and size of the filter must be acceptable to CNS Officials.
- 22.10 **Oberg or SRI antisiphon valve is mandatory; mounted near fuel cell after fuel filter.**

OUT-OF-TOWN CARS: CNS invites all Out of Town competitors. Because of differing levels of competition, CNS reserves the right to adjust gear, total or car weight bias on an individual basis.

ENGINE REQUIREMENTS AND APPROVED ENGINE OPTIONS

Approved Engines ONLY

ENGINE OPTION 1: GM 602 CRATE ENGINE

Engines must be sealed by the manufacturer and must remain in the “as shipped” condition. The Track Officials reserve the right to confiscate, impound and/or replace any competitor’s engine at any time. Competitor’s refusing confiscation, impounding and/or replacement, will be disqualified from the event, and all future events until engine issue has been solved. Disqualification includes forfeiture of all monies, points and contingencies earned for that event. Teams may be subjected to additional fines, penalties and or point’s loss, based on inspection of the engine. Teams fined or penalized for engine infractions are not eligible for competition until all fines and/or penalties have been fulfilled or paid. Engine seals may be removed with the written approval by CNS officials. Oil pans may be replaced with steel aftermarket oil pan.

- No aftermarket engine dampers are permitted
- Oil coolers are recommended
- Engine Option 1 Sealed Component Violation Melonized (hardened) distributor gear must be used on distributor to prevent engine damage.
- Requires an externally balanced flywheel

Carburetor for Engine Option 1 ONLY

Deleted.

ENGINE OPTION 2:

Minimum 311 C.I., American made V-8 steel or cast iron engine, OEM stock. May be interchanged in family line of car only, i.e.: any Chevrolet may be installed in any other GM car, but not a Ford or Mopar. Engine must match Frame/Chassis being used, body make optional. No engine set back. Engine must be located where #1 park plug lines up with center line of upper ball joint. Engine must be centered. No lowering of engine allowed. All engines must be assembled with stock OEM parts only. The distributor must mount in the stock location and maintain the same firing order as a factory produced engine for the make and model engine being used. A ¾ inch plug must be installed in the oil pan for inspection; the access hole must be in line with a connecting rod journal. No roller type cam bearing allowed. Stock magnetic steel connecting rods with stock length for engine being used, i.e.: 350 C.I. 5.70:. Connecting rod beams may be cleaned and peened for strength. OEM exotic metal rods are not allowed. Flat top stock type or aftermarket equivalent, stock piston with stock pin location. Piston cannot come up higher than block deck surface. Only flat tappet cam permitted. Roller rockers permitted. No stud girdles allowed. Headers optional. No 180 degree headers allowed or cross-over headers allowed. Must have stock stroke for engine being used. No internal, external polishing or lightening of block allowed. No internal painting. Maximum compression ratio is not to exceed 10.5 to 1. Stock type harmonic balancers only. Valve train must be steel, no composite or titanium allowed. Oil pan sumps may be enlarged, must be stock appearing, straight sides must be maintained and must be steel. No dry sumps allowed. No belt or gear driven timing components allowed. Crank must weigh a minimum of 48 lbs. Inertia balancing not allowed. No external vacuum pumps allowed. Oil coolers are allowed. No lifter bore truing allowed.

CYLINDER HEADS:

1. All cylinder heads must retain all factory dimensions and configurations as casted. Machine work or work above the valve in the bowl area will not be allowed.
2. Valve size must be stock for heads being used, on all engines. 1.94-1.5 or 2.02-1.6 valves permitted. Vortec heads must use 1.94-1.5 valve. No Bowtie Vortec heads.
3. Only one flat stock standard gasket may be used between the head and the intake manifold.
4. No wedge type gaskets or metal spacers allowed.
5. Guide plates and screw in studs are permitted.
6. Head may be machined for bigger valve spring and push-rod clearance only.
7. Only steel valve spring and retainer are permitted
8. No angle plug or bow tie heads allowed.
9. Mandatory rocker arm ratio of 1:5 or 1:6 only permitted.
10. CNS reserves the right to impound 1 head for inspection by outside independent sources. If legal, head will be available no later than the following Wednesday at 12:00 noon.
11. No titanium or hollow stem valves allowed. Undercut stem valves allowed.
12. The following aftermarket stock replacement unaltered cast iron cylinder heads will be approved for use in competition.
 - E-Force P/N 175679 Casting 3 10024561
 - World Parts P/N 43619
 - Ford and Chrysler participants call for more information.

INTAKE MANIFOLD:

1. The following aftermarket aluminum intake manifolds are permitted:
 - Chevrolet - Edelbrock part # 2101.
 - Chevrolet with Vortec #2116
 - Ford 2181, 2665, and 2750

- Chrysler #2176 1.
- 2. 2-bl or 4-bl cast iron manifold is permitted, provided it is for an OEM production car. No marine applications.
- 3. Absolutely no modifications/alterations allowed. This includes grinding, porting, polishing, etching, coating, painting, acid dipping, port matching, increasing entry port size. No beveling or machining of the carburetor mounting surface allowed.
- 4. Intake must be approved by CNS officials
- 5. Intake may be machined down internal 2 inches from the top of the manifold.

CARBURETOR:

1. Stock Holley #R4412 2-bl 500 cfm is the only legal carburetor. Carburetor must meet Holley factory stock specifications.
2. No polishing, grinding, or drilling (i.e. Metering block) of holes allowed.
3. Choke, blade, and rod may be removed.
4. Size and shape of boosters must not be altered.
5. Booster height must remain stock.
6. Jets of any size may be used.
7. Venturi area must not be altered in any way.
8. Casting ring must remain completely visible and may not be removed.
9. Base plate must not be altered in size or shape.
10. No holes may be drilled in the base plate.
11. Stock butterflies must not be thinned or tapered.
12. Screw ends may be cut even with the shaft, but screw heads must remain stock.
13. Throttle shaft must remain standard and must not be thinned, cut or nicked in any matter.
14. Only a one piece metal carburetor spacer a maximum of 1 inch, may be installed between the intake manifold and the carburetor, with no taper or bevels. No anti-reversion or similar machining allowed.
15. The maximum gasket thickness shall be .065.
16. No electric fuel pumps allowed.
17. No cool air boxes allowed.
18. The top and bottom of the air filter housing must be solid and must be the same diameter. A maximum of a one inch lip will be permitted from the air filter element to the edge of the air filter housing top and bottom. Air deflector must be attached to the body only.