

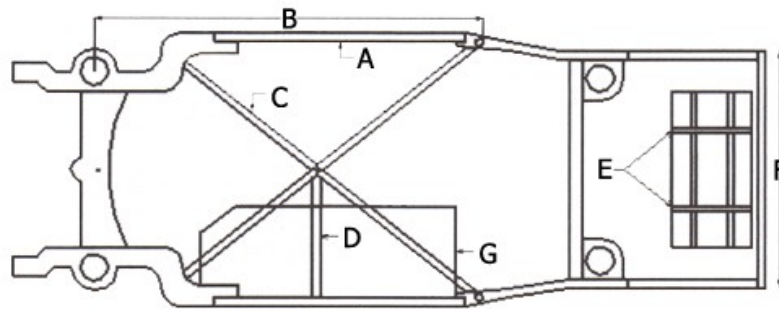
EWSC Grand National Rules for 2012

(As of 1/20/2012)

All general track rules apply. Please refer to general track rules section for car number requirements, appearance guidelines, start times, age requirements and many more issues. Race teams not complying with general rules will not be allowed to compete. Rule violations are in parentheses and listed in the general rules.

REFERENCES TO "OEM, METRIC, GM METRIC OR GM OEM METRIC" IN THE FOLLOWING PARAGRAPHS SHALL BE UNDERSTOOD TO BE THE 1978-1988 VINTAGE 108" WHEELBASE METRIC G.M. "G-BODY" CARS

1. **Eligible Models:** (car bodies) GM, AMC, Chrysler, Ford or U.S. manufactured auto. No pickups, station wagons or convertibles allowed (Must meet these requirements in order to race.) **(B)**
2. **Frame:** 1978 to 1988 GM intermediate metric frames only unless run previously. Frames must be X-ed; side rails must be plated where open. Front cross member may be notched and plated for fuel pump clearance only. Weight jacks or screw jacks allowed. Frame rails behind rear spring pockets may be cut and fabricated. Must have a minimum 108" wheelbase. No other improvements allowed except to repair rusted or damages areas. See diagram (for reference only) **(B)**

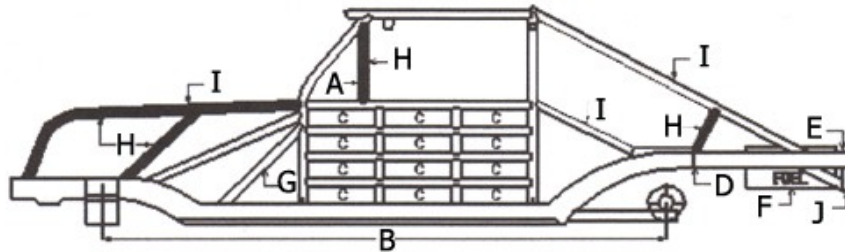


Construction Guidelines

- A. Frame plating material (4" x 1/8") flat strip steel.
- B. Roll cage main hoop set back 82 1/2", measured from center of lower ball joint to back of main hoop tubing. No layback cages. Roll cage main hoop must be at a 90 degree right angle to main frame rails at the discretion of the safety inspector. No portion of the seat may extend beyond 80 3/4" from the left lower ball joint.
- C. **Mandatory** X-brace, (Choose 1 material, no mixing).
- D. Drivers compartment safety bar (same material as X-brace).
- E. Fuel cell safety straps (minimum 4) 1" x 1/8" strap steel.
- F. Tail section replacement, same dimensions as stock frame.
- G. Floor plate 1/8" steel plate, minimum width 20" at seat.

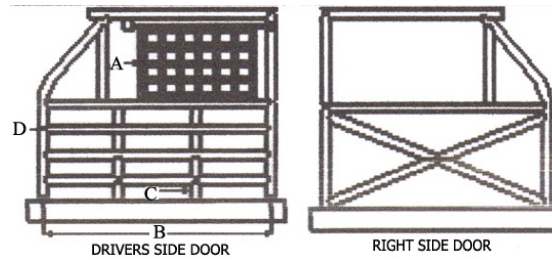
(X-brace must tie into original frame, not frame plating)

3. **Roll Cage:** Four-point roll cage constructed of 1 3/4" x .095" wall steel round tubing. One front and one rear cross brace, recommended height at 20". The main hoop behind driver must be cross-braced. Two passenger side and four driver side door bars, with driver side door bars plated and having two upright bars between each driver door bar. Wing window bars on drivers side mandatory; passenger side recommended. Foot protection bar (may be plated for added safety). Two front support bars must start at cross brace height at roll cage corners and extend forward to frame. Four rear support bars must extend to frame, two starting at the rear cross brace at roll cage corners and two from the top corners of the rear cage hoop. Halo bar must have one cross bar running either front to back or diagonal made of 1-3/4" x .095" wall steel round tubing. See diagram (for reference only). **(B)**



Construction Guidelines

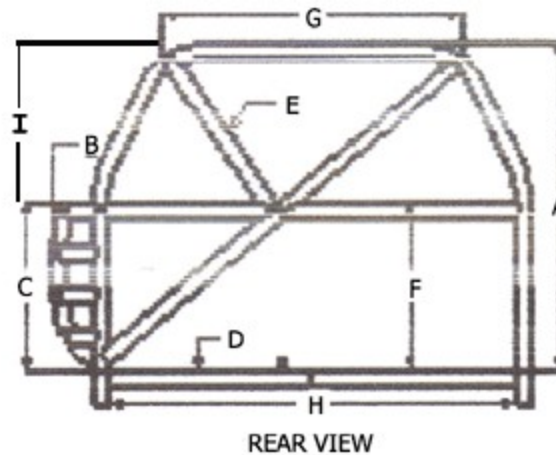
- A. Wing window bars, ***mandatory***
 - B. Minimum wheelbase 108"
 - C. ***Mandatory*** safety plating, 1/8" steel minimum
 - D. Stock frame from this point forward
 - E. Rear frame tail section to be a minimum 2" x 3" x .095" square steel tubing.
 - F. Fuel cell can mandatory (20 gauge steel)
 - G. Foot area protection bar, ***mandatory***
 - H. Dark shaded bars may be 1 1/2" x .065 wall steel tubing, all other tubing 1 3/4" x .095
 - I. All cages must have these front and rear support hoops/bars
 - J. Fuel cell guard to be a minimum 1 3/4" x .095" round steel tubing or optional 1 1/2" x .065 square steel tubing.
4. **Drivers Compartment:** High back aluminum racing seat is mandatory. Seat must be bolted in with six 3/8" Grade 5 or Grade 8 bolts. No carriage bolts. Four bolts in the seat bottom and two in the seat back. No portion of the seat may extend beyond 80 3/4" from the left lower ball joint. A window net with buckle release mounted on the top left corner is required. All roll cages must provide a minimum of 2" of clearance measured from the top of the roll cages to the top of the driver's helmet when driver is seated and strapped in driving position. The center of the steering wheel must be padded and all roll bars that the driver could contact must be adequately padded. **(B).**



For reference only

- A. Approved window net, **mandatory**
- B. Recommended door bar length, 44"
- C. 2 door bar uprights between each door bar, **mandatory**
- D. 4 door bars evenly spaced on drivers side, **mandatory**

for reference only



REAR VIEW

- A. Main hoop (vertical to frame) 39" high from top of frame is recommended.
- B. Door bars should be flush to panel (with the body centered & mounted in stock location on the frame).
- C. Door bar height (minimum 20" high from top of frame)
- D. Floor pan (minimum 20" in drivers seat area)
- E. Extra main hoop, headrest bar (optional)
- F. Cross bar recommended height 20" (for shoulder harness)
- G. Roof hoop to fit roof side to side (minimum length 34")
- H. Roll cage width (same as stock frame width)
- I. Window opening (minimum height 15")

5. **Bodies:**

- A. Production passenger car, stock or after market template/straight-up style steel or Aluminum body panels for fenders, quarter panels and trunk. Plastic front fenders allowed. Hood must be steel, aluminum or fiberglass and the back of the hood must be sealed down completely. Door panels to be stock or sheet metal or aluminum. No door handles, locks, moldings, factory plastic or chrome accent pieces left on the stock panels. Factory or aftermarket plastic nose legal. Rear of car must be completely enclosed, fender-to-fender from the trunk lid down. With a cover that is a minimum of 20" high. Nose of car must look stock appearing and neat looking – no wedge type or late model noses. NO wedge type bodies. No holes in hood or hood scoops. Hood pins to be used in hood and trunk. Stainless steel windshield screen must be no less than .063" for mesh larger than 1/2" or no less than .035" for 1/2" or smaller mesh (no larger than 1" mesh screen allowed), to cover entire opening with three upright braces tip to bottom of 3/8" or larger solid rod. Spoiler allowed on rear of trunk lid not to exceed 6" in surface height. Rear spoiler to be 60 1/2" wide at widest point, no sideboards. No rear window for safety reasons. Two and one half inch (2 1/2) non-functional hood scoop allowed. **YOUR CAR MUST LOOK STOCK TO RACE! (A)**
- B. Body parts must be neat and well painted. Car numbers must be painted a contrasting color and numbers between 00 and 99. Numbers must be painted on both sides and roof to face grandstand. Numbers must be at least 18" high and 2" wide. Numbers of 6" or higher must be placed on the front and rear of the car to aid in line-ups. **(A)**
- C. The car at its widest point, including rub rails, may not exceed 78" **(B)**
- D. Interior sheet metals to cover all openings, front, rear and side. Floor from driver to right side can be any style as long as no higher than top of door. Floor plate under driver of 1/8" steel, 20" wide and length of driver. **(A)**
- E. Absolutely no air induction of any type allowed. **(A)**
- F. **Hood must be secured and in place to race at all times. (A)**

6. **Engines:**

- A. American made production V-8 engine blocks only. Must be production cast iron block with standard external measurements in all respects with the exception of the permissible .060 over bore maximum. No aluminum, Bowtie, Rocket, SVO, 'X', or 'R' blocks allowed. No removing of casting numbers. No grinding or lightening, and no option motors allowed. **(F)**
- B. Aftermarket crankshafts allowed and cannot weigh less than 48 pounds. Must have stock stroke for the block being used. Must remain unaltered except for the balancing. No lightweight, knife edging, undercut counter weights or scalping allowed. **(F)**
- C. Connecting rods must remain stock length for the block being used (except 400 Chevy may use 5.7 rod). H-beam rods allowed, no titanium or aluminum rods. **(F)**
- D. Any flat top or reverse dome piston may be used as long as it has the stock wrist pin height for the engine being used (except 400 Chevy). Valve relief may be cut into the piston. No portion of the piston may protrude above the top of the block. **(F)**
- E. Any Hydraulic or flat tappet steel camshaft with a maximum of .500 lift measured at the retainer. Stock diameter tappets only. No mushroom or roller tappets allowed. No stud girdles or

rev kits. Standard timing chain only - no gear drive or belt drives will be allowed. Roller rockers and roller tipped rockers allowed. No shaft rockers. **(F)**

F. Only stock, cast iron head or SR Torquer #4266B, #4267B, 4360 or 4361. No Bowtie, Vortec, angle plug, SVO, W2, GT 40 or fuel injection type cylinder heads allowed. Only two valves and one spark plug per cylinder. No titanium parts in the valve train allowed. Intake and exhaust ports must be in the original "as cast" configuration. Any evidence of any sanding, polishing, relieving, grinding, porting, chemical treating, abrasive blasting, alteration to the original form or the addition of material to the ports or combustion chambers is strictly forbidden. No external sanding, grinding or removal of casting numbers or symbols. Valves must be stock production size and in stock location. Small block Chevy maximum valve size is 2.02" intake and 1.60" exhaust, measured across the face of the valve. Small block Chevy valve size to be 11/32 (.3438") at valve retainer. Stock production valve spring diameter for heads used only. Screw in studs and guide plates allowed. Minor relieving for push rod clearance allowed. No chemical or ceramic work allowed in internal areas of intake or heads. **(F)**

G. Oil pump must remain in stock location. No dry sumps or external oil pumps allowed. After market oil pans and breathers are allowed. Oil cooler, if used, to be in engine compartment only. **(F)**

H. Stock production cast iron intakes on engines over 365 cubic inch. Following aluminum intakes numbers allowed on 365 cubic inch or less - GM: Victor Jr 2975 or 2972 and 2101, Weiand 7546 or 7547. Ford: 2981 or 2760 and 2665 or 2750, Cleveland 7516 or 7517. AMC: 2930 or 2035. Chrysler: 2915 or 2176. Edelbrock: 7101 and 7501. After market or stock intakes to remain untouched. NO Marine type intakes. **(F)**

I. Stock cast iron exhaust manifolds or headers okay. No 180-degree headers or step headers. Exhaust must exit under car, behind driver and be angled down. Mufflers are mandatory and car must pass noise level test (95 decibel at 50 feet). **(B)**

J. Factory type ignition, no Multi-spark discharge or mags. Rev limiters allowed, one chip system only. **(F)**

K. One (two or four barrel) carburetor only with maximum spacer height of 1 ¼". Two return springs mandatory. No throttle cables allowed must be mechanical linkage. Toe strap on gas pedal required. **(D)**

L. Stock cast iron or aftermarket aluminum water pump. **(B)**

N. Mini-Starter allowed. No reverse mounted starter. Must be able to start car. **(A)**

O. Engine must be centered between frame rails. Engine set-back to be measured as 33 ½" from top of steering box mounting bolt to rear of engine and 15 ½" from steering box mounting bolt to #1 cylinder spark plug. Crankshaft centerline can be no less than 7 ½" from bottom of front cross member. **(F)**

P. No traction control devices allowed. **(F)**

7. Transmission and Drive Train:

A. Steel blow proof bell housing only. Upper 270 degrees of bell housing must remain intact. **(B)**

B. Flywheel to be stock or aftermarket aluminum. No cut down stock flywheels allowed. **(F)**

- C. 7 ¼" minimum diameter, steel or aluminum, single or multi disc clutches allowed. No spoke type flex plates allowed. OEM or OEM replacement flex plates only. **(F)**
- D. U.S. manufactured passenger car or light truck three or four speed unaltered manual or automatic transmission only. If automatic, must use stock torque converter. **(F)**
- E. Drive shaft to be steel, painted white, and have safety loop of minimum 1" x 1/8" thickness located within 1 foot of front U-joint. **(D)**
- F. Stock rear end for frame used or Ford 9" floater recommended. Any combination okay as long as parts are steel. No aluminum parts except drive plates and spools. No offset. Drive flanges to be of equal distance on both sides of frame. No independent rear end (Corvette, Jaguar). Rear trailing arms must remain mounted in stock frame locations. One hole upper and lower for each trailing arm mount location. No aftermarket limited-slip or ratchet style rear ends (Ex: Gold Track, True Track, or Gleason, etc....). **(F)**
- G. No gun-drilled axles.

8. Suspensions and Steering:

- A. Steering wheel to be quick-release style. **(A)**
- B. Stock steering box and linkage only. Steering quickener allowed. Steering shaft must have 2 u-joints or be collapsible style. Reference numbers to match dimensions are Moog part # D909 for center link, ES2034RL for inner tie rod ends, ES2033RL for outer tie rod ends and K6187 for idler arm. **(A)**
- C. Stock intermediate metric lower "A" arms only. Stock unaltered intermediate metric spindles and rotors except for wheel bolt pattern and hole for outer tie-rod end. No aftermarket or dropped spindles. One steel unaltered shock per wheel at any mounting position. No externally adjustable, coil over, air, or remote reservoir shocks. No Schroeder or gas refill ports. No coil over eliminators. A Coleman hub may be used on the front only. **(D)**
- D. All A-frame, trailing arms, steering components and suspension mountings must remain stock for frame in factory frame position. Outer tie-rod ends may be replaced by 0.625 or larger steel heim joint with a solid (no seam) steel adjuster sleeves and jam nut only. Rear trailing arms may be aftermarket. Must be stock length and use bushings. No heims, mono balls or adjustable. Length measured center-to-center, upper 11-1/8", lower 19-1/4". Must be same measurement side to side. All ball joints must be stock for frame used. Reference numbers to match dimensions are Moog part # K5208 for upper ball joints, K6145 for lower ball joints. **(D) (E)**
- E. Stock dimension intermediate metric ball joints only. **(D)**
- F. Any OEM type sway bar permitted. **(B)**
- G. Front upper control arm may be replaced with complete steel tubular drop in replacement, one-piece control arm of stock length (8"), plus or minus ½" of stock length using stock ball joints. No aluminum components allowed, no adjustable cross shafts and slotting allowed. No bearings, bushings or heim joints allowed. **(D) (E)**
- H. Rubber Bushing Replacement – Stock or plastic and grease-able bushings allowed. No offset, bearing type or mono-ball allowed. **(D)**

9. **Brakes:** Four-wheel foot operated hydraulic brakes in working order. Dual master cylinder allowed. Limiting or proportioning valves okay. GM Metric frames must use unaltered GM Metric calipers only. No aluminum, aftermarket caliper replacements. **(B)**

10. **Fuel and Tanks:**

- A. Pump gas only, E85 allowed, no alcohol or additives. **(F)**
- B. Approved fuel cell to be enclosed in 22-gauge sheet metal with 2 top straps in both directions. Straps to be 1" x 1/8" steel. Ground clearance of 10". Fuel cell protection bar on the bottom (as low as the fuel cell). Fuel cell guard to be a minimum 1 3/4 x .095" round steel tubing or optional 1 1/2" x .065" square steel tubing fuel cell hoop with two or more braces to frame (One on each side of fuel cell). Fuel cell to be filled from top and have approved cap. No fuel lines in driver area. **(B)**
- C. Stock style fuel pump in stock location. No electric or belt driven pumps. **(B)**
- D. No bottom draw fuel cells. Outlet must be on top. **(B)**
- E. The fuel cell breather or vent must have a one-way check valve to prevent spillage in case of a rollover. **(B)**

11. **Bumpers and Protection Bars:**

- A. Stock bumpers may be reinforced; ends must be strapped to fenders. ***Must have both bumpers to start the race night.*** Radiator protection bar may be no higher than the front of the hood or exceed 8" above the frame rail and no wider than the frame rails and may not extend beyond the front of the bumper. Trunk protection bar no higher than the rear of the trunk lid. Protection bars to be 1 3/4" x .095" wall round tubing or smaller. Side protection bars to be no larger than 1" x .095" wall square tubing with the ends capped at 45-degree angle. On doors only, may run lexan rub rails no more than 6" tall and protruding out 1" from door. **(B)**
- B. All cars must have a loop, hook or other provision in the centerline of the front and back, behind the bumper line for the wrecker to hook on to. **(A)**

12. **Wheels and Tires:**

- A. Racing steel wheels of 8" maximum width. Bead locks are allowed on all wheels. **(B)**
- B. 1" hex steel lug nut mandatory. Studs must pass through lug nut completely. **(B)**
- C. Hoosier "E-MOD RC-4" tires only. No grooving, siping, or softening allowed. Tire grinding allowed with a 16 grit or finer fiber disc (no steel discs) **(D) (E)**

13. **Electrical:** 12-volt electrical system only. One 12-volt battery only, which must be located behind driver area and securely fastened. On/Off and start switch to be clearly marked in driver area and easily reached by driver and safety crew. It is highly recommended to have a main battery kill switch to be easily accessible by the driver and safety crew. **(A) (D)**

14. **Weights:** Minimum car weight 3,000 lbs. Weights to be bolted on securely and painted white with car number and division on each weight. . No weights in driver's compartment allowed. Loss of any weight during a race will result in disqualification from that event.
15. **Mirrors:** Absolutely no mirrors allowed. **(C)**
16. **Drivers Safety:** In 2011 Snell SA 2005 helmet mandatory. No "M" rated helmets. Approved goggles or face shield must be worn and securely fastened at all times when car is on track. Complete fire retardant driver's suit, fire retardant underwear, must be worn with a single layer driver's suit. Fire retardant socks, shoes and gloves are mandatory. Fire retardant neck brace or neck restraint device is mandatory. Condition of seat belts and shoulder harness is up to the discretion of the Inspector. Belts must not be frayed. Lap and shoulder belts must be approved snap type release belts at least 3" wide and securely fastened to the frame and/or roll cage. A 2" or wider crotch or anti-submarine belt is required. The shoulder belts are to be mounted lever with or slightly below the driver's shoulders. **(B)**
17. **IMCA Stock Car crossover rule:** IMCA Stock Cars must run their rules with the exception of using Hoosier "E-MOD RC-4" tires.