



2016 World Figure 8 Car Car Construction Rules

The absence of a particular rule does NOT necessarily mean it is approved!

Revised March 28, 2016

ROLL CAGE

- A. Overall – All parts of the cage must be constructed of 1 1/2" round steel tubing with a minimum thickness of .095".
- B. Main Section – Must begin with a 4-point cage. The roll cage must be completely welded with no gaps. Key stress points must have steel gusset plates for reinforcement.
- C. Door Bars – There must be 4 equally spaced horizontally mounted door bars on the driver's side. The left side must be curved outward as far left as possible and covered by a 1/8" steel plate. The driver's side door bars must be connected by at least 3 equally spaced vertical bars. This includes connecting the bottom bar to the frame. The passenger side door bars can be curved or straight.
- D. Foot Bars – Must be 2 curved outward horizontal bars to protect the driver's legs/feet and be covered by a 1/8" steel plate.
- E. Behind the Driver – A diagonal bar will go from top to bottom of the rear vertical hoop. A bar connecting the left and right of the vertical hoop at seat height must be welded to the diagonal bar. A bar must connect the legs of the rear hoop at their base or it is recommended that an X connects the left and right frame rails at the points the front legs and rear hoop are connected.
- F. Dashboard Bar – Must be a bar installed across the dash area connecting the left roll cage leg to the right roll cage leg.
- G. Other – Any additional front and rear support bars are welcome and recommended.

CHASSIS

- A. Frame – The front clip can begin as a factory clip or can be fully fabricated with tubing at a minimum thickness of .090". All other parts of the chassis can be fully fabricated, but must be made of structural steel tubing.
- B. Wheelbase – Must be a minimum of 100".
- C. Ground Clearance – Must be a minimum of 4" off the ground with car in racing condition.
- D. Fuel Cell – A racing fuel cell must be used with 22-gallon maximum. It must be enclosed in a 20-gauge steel can and inside of a cage made of minimum 1 1/2" tubing. It must be between the rear end and bumper and inside frame rails.

SUSPENSION

- A. Front Suspension, Rear Suspension, Sway Bars, Shocks, Etc – Any may be utilized with safety being the primary goal.
- B. Brakes – Car must have operating brakes on all 4 wheels.
- C. Wheels – Maximum 10" wheels are allowed.
- D. Tires – All competitors must use the designated Speedrome spec tire. It will ONLY be sold at the Speedrome. No tire softening or tire soaking or tire altering. No chemicals or materials for these purposes allowed on the Speedrome property. The tech staff can check tires at ANY time and by ANY means. Their decisions being final. Violators will be penalized.

BODY

- A. Design – The overall design is open to creativity with limitations detailed below. The design should not prohibit the operation of the car mechanically and safely. This includes the sightlines for the driver and the sightlines of the other competitors.
- B. Mounting – The body must be mounted smoothly with no protrusions on the exterior surface. Body panels must be securely fastened to prevent loosening or loss on the racetrack.
- C. Windshield – The car must have a windshield and vertical steel bars covering the front of the driver. The recommended size goes from top to bottom of the front opening and from the windshield post to the center of the car. At least 3 solid steel rods of at least 1/2" diameter must be welded to the roll cage in front of the driver's head. The bars may be no more than 5" apart. The windshield must provide a minimum 12" vertical front opening.
- D. Roof – A roof is required. The roof is for appearance purposes and not for aerodynamics. Roof is to be of streetcar appearing type or flat with slight continuous angle upward. No curved or aero-foil roofs or skateboard ramp roofs. No roof wings added or a part of the roof allowed.
- E. Hood – The hood must cover the entire engine compartment including the radiator and be securely mounted. A hood scoop covering the air cleaner is allowed if the scoop does not obscure the driver's view. The hood must be closed in the rear to separate the engine compartment from the driver's compartment. No car will be allowed to compete under any conditions without a hood.
- F. Rear Spoiler – The rear spoiler can be a maximum of 41" from the ground and solidly mounted to the car.
- G. Sideboard Wings – These can be a maximum of 60" from the ground and cannot extend past any part of the driver compartment.
- H. Interior – A floor pan, foot box, front and rear firewall is required built out of at least 20-gauge steel.

BUMPERS and RUBRAILS

- A. There shall be NO sharp edges on ANY of these items. They should be capped and rounded where ever possible.
- B. Front Bumper – The front bumper is not to exceed the center of the tires.
- C. Rear Bumper – The rear bumper is not to exceed outside of the tires. A fuel cell protection hoop must be welded beneath the bumper
- D. Rub Rails –The rub rail on each side must be mounted as close to the body as possible and mounted between the tires. Rub rails must be curved inward on both ends.

MORE

- A. Weight – The car must weight a minimum of 2,400 pounds after the race with driver.
- B. Ballast – It must be a piece of steel or a solid substance (such as lead) encased in steel and solidly mounted (as not to be dislodged in an accident). No “temporary” mounting permitted. All ballast must be painted white and include car number. No ballast containers may be installed inside the driver's compartment.
- C. Driver's Seat – It must be racing type seat. The seat must be at least 8 inches from any door bar and mounted in front of the rear hoop of the roll cage and inside the left frame rail or frame rail extension. The frame rail extension must be constructed from the same material as the frame rail and it must extend at least from the front left roll cage post to the left rear hoop upright. If the seat does not extend up behind the driver's head, a steel plate of at least 8"x8" must be welded to the roll cage directly behind the driver's head and covered by at least 2 inches of padding. From the racing seat to the right side of the chassis, nothing should interfere with a driver's ability to exit the right side of the car or to be extricated.
- D. Seat Belts – A minimum of a 5-point harness system must be used. All seat belts must be new or no more than 3 years old with the manufacturers date being visible. The belts must be a minimum of 3" wide (the crotch strap can be a 2" wide minimum). All belts must connect to a quick release buckle. No frayed belts allowed.
- E. Window Net – A window net is mandatory and used at all times on track for increased driver safety.

DRIVE TRAIN

- A. Engine Block – It must be a V-8 cast iron block.
- B. Engine Location – The engine must be located so at least one spark plug hole is even with or forward of a line projected between the upper ball joints. The lateral (side to side) location of the engine, measured from the cylinder heads, must be centered between the upper ball joints and the front clip side rails within one inch.
- C. Items with Few or No Restriction – Heads, Intake Manifold, Exhaust Manifolds, Ignition System (no traction control), Transmission, Differential, Clutch, and Flywheel.
- D. Carburetor – Can use any model. The carburetor throttle linkage must have two fail-safe return springs on the throttle shaft that provides sufficient pressure to return the throttle to a closed position in case of linkage failure. The throttle linkage must be constructed from rod, No cable type linkages allowed. A throttle "comeback" enabler is mandatory.
- E. Oil System –Oil filters and oil coolers may be moved to locations outside the engine, but must be mounted in the engine area between the frame rails.
- F. Radiator and Fan – The radiator must be located in front of the engine and the fan must be shrouded at the top to prevent injury. A one-gallon overflow tank must be mounted securely near the radiator with the overflow hose from the radiator emptying into the can. The radiator cap must be of the safety, pressure-release type.
- G. Fuel Pump – No electric fuel pumps, belt driven fuel pumps, or pressurized fuel systems are allowed. The fuel pump must be mounted on the engine block and be mechanically powered by the engine.
- H. Fuel – No alcohol or nitrous allowed, only pump gasoline with no fuel additives or oxygen-bearing agents.
- I. Exhaust System and Mufflers – Solid exhaust pipe must be used (no flex pipe is allowed). Mufflers meeting track specs must be installed on each exhaust pipe. The noise created cannot exceed 105dB.
- J. Starter and Battery – Car must be capable of starting the engine without assistance before each race. The battery must be mounted in front of the rear axle between the frame rails, and be covered or separated from the driver by a firewall. The battery must be securely mounted in a position that will prevent it from being dislodged in a crash and avoid the leaking of acid on the driver if the car is inverted. The positive battery cable must be insulated and protected well-especially at any points it goes through the firewalls or other metal parts. Battery cables must be separated from fuel lines in their routes to the engine compartment.
- K. Drive Shaft – It must be one piece, open, at least 3" in diameter and painted white. The drive shaft is to be encircled by two 360-degree steel straps (minimum 1 1/2" wide by 1/4" thick). These straps must be mounted securely enough to prevent the front of the drive shaft from falling onto the ground or flailing into the driver's compartment.



2016 World Figure 8 Car Car Construction Rules