

Mission Valley Super Oval

Bomber Division Rulebook

Date: 10-01-2025

COMPETING MODELS

1. Competing Models are limited to Rear-Wheel Drive, 110-135 inch wheelbase (as produced, no altering) 1960-1986 American or Canadian passenger Cars, Trucks, Vans, Wagons. (No AWD or FWD)
2. All vehicles need to be a minimum of 3,400 pounds.
3. 55% maximum left side weight.
4. Frame height must not be lower than 5 inches.

BODY COMPONENTS

1. Must have all body parts to race. specifically hood, roof, trunk lid, doors, fenders and Quarter panels.
2. Inner body panels are to remain intact with the exception of the dash, front inner fender, and front inner door panels. pillars and door jams to remain intact.
3. All breakable material is to be removed. outer body trim door, door trim, hood ornaments, glass or plastic lenses. remove all flammable material.
4. Full width windshield is mandatory (OEM or Lexan). Three 1" x 1/8" wide straps required.
5. Bodies must be OEM steel and must remain stock.
6. No sharp edges. All edges must be rolled under.
7. Full floor boards and firewalls required. All holes must be covered with 22 gauge steel.

FRAME

1. Must match body to body, and make to make, model to model and year to year
2. No altering or shortening of frame, or movement to allow suspension travel. clean undersides of all unused brackets or protruding non secured bolts.
3. Bumpers are to remain in original position, but may be reinforced within stock appearing confines.
4. Fenders must be rolled or capped to reduce car hooking and tire cutting.
5. Bumper straps allowed. if used then must be a minimum of 1/8" inch thick and 3 inch wide bolted or welded (no pop rivets).

ROLL BARS

1. Round steel tubing 1 3/4" x .095 inch or 1 5/8" x .120" minimum seamless roll-over bars are compulsory for the basic roll cage and must be approved by the Tech Inspectors. Aluminum and/or other soft metals are not permitted. Roll bar connectors must be welded.
2. On unitized bodied cars, the cage must be attached to 6" square plates or tech approved equal, minimum 3/16" thick. The plate must be fish-plated to plates with the same specifications by four 3/8" bolts. Maximum 3/4 offset cage.
3. A minimum of 3 door bars are required on the left side with 2 bars required on the right side. The left side door bars must curve to the outermost part of the door skin. It is required that a piece of 1/8" steel be welded to the driver's side door bars. The material should be placed between the door skin and cover the seat area. As an option, the material may be welded between the door bars.
4. A dash bar connecting the front cage uprights is required.
5. A wing window bar is required on the driver's side and must be of approved roll bar material.
6. Two bars may attach to the rear roll cage legs and must extend past the fuel cell. No bars from inside 4 point to beginning of front kick-up forward.
7. All roll bars within the driver's reach, along with the steering wheel hub, must be padded acceptable to the Tech Inspector.

8. No bars, no x-ing or tying frames together under the car. Cars with bolt-on sub-frames & uni-body cars may use connectors. Connectors must only run parallel to wheelbase. No X-ing outside the 4 point.
9. Front or rear hoops optional. front hoops can only consist of 2 bars going through the firewall from the 4 point and arc downward touching the frame.

WHEELS

1. 15" diameter by 8" or 7" wide steel racing wheels only. No magnesium or aluminum wheels permitted.
2. 3", 4" and 5" offset wheels approved. Wheel spacers approved.
3. No Bleeders. No nitrogen.
4. 5/8" oversized wheel studs approved. 3" Length Max.

TIRE RULE

1. Class Tire DOT radial, no DOT slicks, no bias-ply, HW tread tires. H - Speed Rated tires max. V, W, Y & Z Speed Rated tires are NOT approved.
2. You must start the Main Event on the tires used for Qualifying, unless prior approval is supplied by the head tech official.
3. No tire softener, compounds, or chemicals for softening.
4. Tread width of 8" maximum. Official measurement provided by tire manufacturer spec sheet.
5. Any tire that appears to be dry-rotted or has visible cracks is prohibited.

STEERING:

1. A steel quick release steering wheel is required.
2. The center of the steering wheel hub must be padded acceptable to Tech Officials.
3. Stock steering components only. No heim joints permitted. No adjustable centerlinks.
4. Stock steering box only.

ACCESSORIES

1. Race cars will not be permitted to carry onboard computers, micro-controlled processors, recording devices, electronic memory chips, digital readout gauges or traction control devices.

MUFFLERS

1. All cars shall be equipped with a non leaking exhaust system exiting the engine bay.
2. Zoomies or derby headers allowed.
3. The exhaust system must exit down from the engine bay and must extend past the driver and exit between the door and the rear tire.
4. OEM cast iron manifolds or block hugger headers allowed not exceeding 1 5/8" inch diameter. Note these are the only approved headers.

BRAKES

1. Four wheel, stock, foot actuated brakes are mandatory. All brakes must work.
2. All brake components must remain stock.
3. OEM Stock rear disc brakes approved if available on that car from the factory.

REAR ENDS

1. OEM stock.
2. Mini spools approved or spider gears may be welded.
3. NO Detroit lockers. NO Gold Track. NO Gleason.
4. The rear end must be in stock location and must use unaltered stock parts for attachment.
5. No cambered axle housings. No gun drilled axles.
6. Aftermarket axles approved. No Twist-up or sprung axles.

SUSPENSION

1. All suspension components must be OEM for make (Ford to Ford, GM to GM) with no modifications
2. Springs must be OEM type mounted in stock location. OEM rubber bushing only.
3. OEM front and/or rear sway bars are permitted. Must be mounted in stock holes.
4. Lowering blocks allowed (nothing lower than 5 inch ground clearance) measured to the lowest part of the frame. Solid aluminum or steel spring spacers permitted.
5. No altering of suspension parts, all components must remain in stock location and only use stock adjustments.
6. OEM stock mounted steel bodied shocks only. No adjustable or rebuildable shocks permitted.

RADIATOR

1. The radiator must be mounted in the engine compartment.
2. Stock steel or aftermarket aluminum radiators are permitted. NO ANTIFREEZE.
3. All cars will be equipped with an over-flow can.
4. Mechanical fans recommended. Electric fans approved.

DRIVE SHAFTS

1. Drive shaft and universal must be similar in design to standard production type. Only a one piece steel drive shaft is permitted.
2. It is mandatory that two 160 degree solid steel brackets, no less than 2" wide and 1/4" thick, or steel chain, be placed not more than 12" from each universal joint and fastened to the floorboard.
3. All drive shafts must be painted white.

TRANSMISSIONS, FLYWHEEL & CLUTCH

1. A stock OEM automatic transmission, with a stock working torque converter is permitted. Three and four speed manual transmissions with all gears working are permitted.
2. Transmission must bolt to the engine with no modifications.
3. All cars with manual transmissions must have an approved scatter-shield around the clutch, or a constructed shield made of a minimum of 1/4" steel over the bell housing section of the floorboard.
4. Stock steel or cast iron flywheels only. No GM Nodular. Minimum thickness .870". No Modifications permitted. No aluminum flywheels allowed. Stock OEM type pressure plate and OEM Single disc clutches only.
5. No aluminum clutch components.
6. Aftermarket clutch pedal & master cylinder assembly approved. Hydraulic slave cylinder & throwout bearing approved.

CARBURETOR & INTAKE

1. Edelbrock 500 CFM replacement allowed (1403)
2. Holley 500 CFM (4412) only for replacement, or stock carburetor from engine. Only choke and related parts may be removed. Choke horn must remain intact.
3. No tubes, funnels, or any other device which may control the flow of air is permitted inside of the air cleaner or between the air cleaner and the carburetor.
4. A one piece 1" maximum in thickness, non-tapered carburetor spacer is permitted.
5. Stock cast iron automotive 2 barrel or 4 barrel intake with adapter. No high rise or GM Z-28 replacement manifolds of any kind. No Marine intakes permitted.
6. No porting, polishing, acid dipping, adding epoxy or similar substances allowed on intake. No gasket matching allowed.
7. An air cleaner is mandatory at all times. No foam type air cleaners. Top and bottom of air filter housing must be solid and be the same diameter, K&N filter element OK. It is permissible to attach a shield in front of the air filter housing up to half the air filter circumference. It cannot be higher than the air filter element. No air boxes.

ENGINE SPECIFICATIONS

1. Stock production V-6 or V-8 engines only. No engine interchange between makes, (must be Ford to Ford, GM to GM). Engine must have been available to the general public to purchase
2. The engine must be stock OEM. All internal parts must be OEM replacement parts for the engine except as noted. The engine must be mounted in stock location.
3. Stock flat top OEM type replacement cast or hypereutectic pistons only. No forged pistons.
4. Factory OEM "as produced" Stock steel rods. May use aftermarket rod bolts. Must be "as produced" bore, stroke and rod length combination.
5. Any flat tappet hydraulic camshaft. No solids, mushroom or roller camshafts. .500" lift maximum
6. No gear drives. OEM HEI ignition systems are approved. GM style HEI distributors approved in all makes.
7. OEM early model stock cylinder heads only. No Camel Humps, No Vortec, GT40 or GT40p heads, No Aftermarket. No porting, polishing or gasket matching of heads.
8. No crate engines.
9. No stud girdles.
10. Factory stamped stock rockers arms and with stock ratio only. No full roller or roller tip rockers.
11. Exhaust manifolds must be stock cast iron OEM or stock replacement only, from a standard production car. Chassis or 1 5/8" diameter block hugger headers are allowed exhaust approved.
12. Fuel pump must be mechanical stock OEM type and mount in stock location.

FUEL

1. Fuel shall be automotive gasoline only.
2. The gasoline shall not be blended with alcohol, ether's, or other oxygenates and it shall not be blended with anine, or its derivatives, nitro compounds or other nitrogen containing compounds.
3. The Speedway reserves the right to require all cars to use the same fuel.

FUEL CELL

Tech Officials will reject any previously approved fuel cells, containers, or check valves which appear to be damaged, defective, or do not function properly. Fuel cell vent check valves are compulsory. No pressure systems allowed. Any concealed pressure type containers, fuel lines or actuating mechanism will not be permitted, even if inoperable. The use of a commercially manufactured fuel cell is mandatory.

1. The minimum fuel tank capacity can be 5 gallons and must be secured appropriately .
2. Must be mounted in the center of the trunk, a minimum of 12" ahead of the rear bumper.
3. Fuel line is preferred to be run under the car and securely fastened to the frame. Grommets are required when passing through the trunk or firewall. If the fuel line is routed through the cab it must be fully enclosed in 3/4" conduit and securely mounted to the passenger floor.
4. Fuel cell and fuel cell must be installed as far forward as possible in the trunk compartment.
5. Fuel cell and fuel cell must be secured with steel tubing no less than 2 lengthwise and 2 crosswise evenly spaced across the top. Tubing must be made of 1"x1"x.065 thick square steel tube. The support frame must be constructed using 2 tubes that are welded to and extend from the left side to the right side frame rails. Three tubes must be equally spaced across the fuel cell container. These tubes must be welded to the cross support tubes and extend down the front sides, rear sides, and under the fuel cell container. The bottom of the fuel cell cannot be lower than 10" from the ground.
6. A firewall free of holes must be located between trunk and driver.

FUEL CELL PROTECTOR BAR

1. If the fuel cell is installed through the trunk floor, the car must have a bar installed at the rear of the fuel cell. The bar must be a minimum of 1 3/4" x .090 thickness and must attach to the frame rails and extend down and across the bottom of the fuel cell, with a center support bar that attaches to the rear cross member. (Protector bar is not required if fuel cell is installed above the floor of the trunk.)

BATTERY

1. Battery must be securely mounted behind the driver's seat in a battery container per tech approval.

ELECTRICAL SWITCH LOCATION

1. A clearly marked Master Battery shut-off switch within 6 inches of the center of the car must be installed. Emergency Responders must be able to reach the switch from both sides of the car. A brightly painted, solid square of at least 4 inches square must surround the switch. The shut-off switch must be operational at all times.

FIRE CONTROL

1. Race cars must have fire extinguishers securely mounted within reach of the driver. This extinguisher must be mounted on a metal mounting bracket (no extinguisher may be taped to roll bars). It is strongly recommended that each car have built-in fire extinguisher equipment, but it cannot be of the dry powder type. ALL ENTRANTS SHOULD HAVE IN THEIR PITS AT ALL TIMES A FULLY CHARGED 15 POUND CAPACITY DRY POWDER FIRE EXTINGUISHER OR ITS EQUIVALENT, SHOWING CURRENT INSPECTION CERTIFICATE.
2. It is mandatory that, AT ALL TIMES, suits of fire retardant material that effectively cover the body from neck to ankles and wrists, along with fire retardant or leather shoes and gloves, to be worn on the racing surface. It is strongly recommended that at all times drivers wear at least a 4 layer driving suit made of fire retardant material that effectively covers the entire body. It is also strongly recommended that drivers wear long underwear, headgear, gloves and socks made of fire retardant material.
3. It is strongly recommended that at all times while the car is being refueled or while fuel is being transported from the pit area, all crewmen involved should wear at least a 4 layer suit made of fire resistant material that effectively covers the body. It is also strongly recommended that the crew members wear long underwear, headgear, socks, gloves and shoes made of fire resistant material, plus protective eye wear.
4. NO ANTIFREEZE; NO SYNTHETIC OILS OR ADDITIVES
5. ALL SAFETY REQUIREMENTS ARE MANDATORY

SEATS

1. Aluminum racing type seat only. No fiberglass or stock bucket seats.
2. It is recommended that all seats have padded rib protectors and seat leg extensions on both sides.
3. A padded head rest approved by Tech Officials is required.
4. Seat and seat belts must mount to the roll cage, not to the floor pan. Must use Grade 8 bolts and large flat washers.

SEAT BELT AND SHOULDER HARNESS

1. SFI Rated 5-Point Harnesses are required. A quick release lap belt no less than 3" wide is required. Both ends of the lap belt must be fastened to the roll bar with high quality bolts, not less than 3/8" in diameter.
2. Shoulder harness must be SFI Rated with no less than 3" wide unless used with a HANS Device and must be installed per manufacturer installation guidelines. Where the harness crosses the roll cage, it must pass through a guide that will prevent the harness from sliding from side to side. Shoulder harness inertia reels cannot be used.
3. A center (crotch) belt must be securely mounted to the lower seat frame at the bottom.
4. Where the belt passes through the seat edges, it must have a grommet installed, be rolled, and/or padded to prevent cutting the belt.
5. All seat belts and shoulder harnesses must connect at the lap belt with an approved quick release buckle.
6. Seat belts must be dated by the manufacturer and must not be used beyond 5 years after the manufacture date.

WINDOW SCREEN

1. An SFI Rated nylon window screen must be installed in the left side glass opening. The minimum window screen size shall be 22" wide by 16" high. All window screen mounts must be welded to the roll cage. The window screen, when in the closed position, must fit tight. Must be secured with a quick release type lever.

HELMETS & NECK ROLLS

1. Head and neck restraints are highly recommended - eg. HANs or Hutchens Devise.
2. It is required that all helmets meet the specifications set forth in the SFI Spec 31.1 regulations.

NUMBERS

1. A minimum 24" high, 3" wide number is required on the door area (and only on the door area) of both sides of the car. A minimum 30" high, 3" stroke number is required on the top of the car facing the right side.
2. A minimum 8" high white number is required on the upper right corner of the windshield.
3. Numbers must be renewed each year.

If it does not say you can't, then that doesn't mean you can.
Please call and ask if you need additional clarity.