

2022

Bomber Rules

1 General

1.1 Glossary

Original Equipment Manufacturer: Manufactured by the original manufacturer.

The part may not be modified in any way that affects the performance specifications.

1.1.2 Stock

OEM, or after-market with performance specifications that are comparable to that of the OEM part.

The part may not be modified in any way that affects the performance specifications.

1.1.3 Technical Discretion

Inspection and assessment according to the spirit and intended purpose of the rules. The spirit, intended purpose, and safety concerns will always override the current wording of the rules.

1.1.4 Abbreviations

OD Outer Diameter Tube or hole cross-section diameter measured from the outer edges.

ID Inner Diameter Tube or hole cross-section diameter measured from the inner edges.

1.1.5 Measurement Units

A double-quote (2") inches, A single-quote (2') feet, Ci = volume in cubic inches Psi = pressure in pounds per square inch, Rpm = revolutions per minute, A super-script circle (90°) angle in degrees, Sound level (90dba) A-weighted decibels A measure of sound weighted by how it affects the human ear. 0 dba is barely not hearable in a quiet room, and 140 dba will cause pain.

1.2 All rules are subject to Technical Discretion.

1.3 Bombers race with both a driver and a passenger sitting side-by-side and facing forward in the car.

1.4 The passenger must be at least 16 years of age. A photo ID is required of passengers. Anybody under the age of 18 years old, has to be authorized by the track promoter and head tech before getting into a racecar for safety reasons. All safety will be checked by both the promoter and head tech. Must have parents approval, a signed release will have to be signed by a PARENT. If anyone under the age of 18, without being authorized by the promoter and head tech, the driver of the car will be disqualified from the event.

1.5 All parts must be OEM unless otherwise specified in these rules.

1.6 No traction control (TC / ETC) devices are allowed in any part of the car.

2 Models

2.1 Year -1960 or newer, American made full size passenger cars

2.1.1 Includes: Station Wagons, El Caminos, Rancheros

2.1.2 Excludes: Pickups, Convertibles, 4-Wheel drives, Vans

2.2 Wheelbase 108" to 128", ±1/2" of the stock wheelbase

3 Weights

3.1 Minimum Total, Coil spring cars – 3,300 lbs (if crate motor, 3,200 pounds) Leaf spring cars – 3400 lbs (if crate motor, 3,300 pounds)

3.2 Maximum Left Side 53.0% At all times

3.3 Legal Crate motors will have 100 pound weight break.

4 Chassis

4.1 All parts must be OEM and of the same manufacturer.

4.2 No modifications or cutting unless otherwise specified.

4.3 No modification to widen or narrow the cross-members. Fuel pump clearance, steering clearance and exhaust clearance okay must pass tech..

4.4 The chassis may not be stiffened or reinforced in any way except as specified.

4.5 Can have a front hoop made from up to 1 1/2" OD .125" thick tubing, with no more than two (2) uprights. This is meant to be stiff enough to protect the radiator, but not so stiff that it becomes a car damaging battering ram.

4.6 Can have a rear hoop made from up to 1 3/4 OD .125" thick pipe or tubing, with no more than four (4) uprights. This is in addition to the required fuel cell guard (see §9.2.7).

4.7 Must have exposed tow hooks or straps on the front and rear. Chain or cable must be strong enough for a quick tow around or off the race track.

4.8 A minimum ride height of 4" is required when measured at the underside of the dog leg of the front frame. Will be measured on the designated tech pad at the scales with the driver and passenger in the car, ready to race. Teams will be allowed to have 1 crew member make one "lift" on the car prior to being measured.

5 Suspensions

5.1 Springs

5.1.1 Front springs may be stock, or after-market with a minimum diameter of 5".

5.1.2 Rear springs may be stock or after-market with a minimum diameter of 5". Aftermarket

rear leaf springs are allowed but must be multiple steel springs.

5.1.3 Adjustable spring buckets are allowed on the front suspension only.

5.1.4 Front Camber, Left side maximum 3 degrees and Right side maximum 5 degrees. No tolerance on this rule.

5.1.5 Shims are allowed.

5.1.6 No weight jacks allowed.

5.1.7 Rear shackles must be equal length.

5.1.8 Steel bushing's are allowed. After market ball joints are okay.

5.1.9 Aftermarket tubular upper a-arms are allowed, must be factory OEM frame mounts in stock location.

5.2 Shocks

5.2.1 Must be OEM Mount Shock, unaltered. Steel shocks only.

NO BUMP STOP SHOCKS ARE ALLOWED. If you are found with bump stop shocks, the driver be disqualified for the remainder of the season. If you are found with internally bump stop shocks, the driver will be disqualified for the remainder of the season.

5.2.2 Shocks must be mounted in the stock locations with OEM mounts and no heim end-shocks.

5.2.3 Shock mount can be 1 inch from stock location

5.3 Sway Bar

5.3.1 Sway bar must be stock OEM style, steel bushing allowed.

5.3.2 Must be mounted in stock location with sway bar ends on top of lower cont. arm

5.3.2 All thread link pins or bolts allowed, no HEIM ends.

6 Bodies

6.1 The make and model of the body and all parts must be the same as the chassis.

6.2 Body must be complete with all stock appearing body parts, hood only may be stock appearing fiberglass hood.

6.3 No modifications or cutting unless otherwise specified.

6.4 Floor pan and firewall must remain stock.

6.5 Body must be stock height from the rocker panel to the roof.

6.6 Body must be able to cross scales without hitting

6.7 After-market tail or nose pieces are allowed- must match body style of car model. No late model type noses.

6.8 Anything that may shatter or break off during the normal course of racing, such as lights and their socket assemblies, all chrome and trim or plastic grills must be removed.

6.9 Interior must be stripped.

6.10 The hood and deck lid interiors may be stripped for safety.

6.11 Doors must be welded, bolted, chained, or riveted shut. Door, front fenders, and rear quarters skins may be .040" thick steel or aluminum sheet metal. Must look like make and model of car.

6.12 Inner front fender may be removed.

6.13 Wheel opening tire clearance must be within 6" of the tire.

6.14 Rear Spoiler

6.14.1 Optional, but must be a single blade, may not exceed 6" in height, may be no wider than the stock quarter panels, and must be attached directly to the body (no openings between the blade and the body).

6.15.2 No forward bracing or side panels.

6.15 Bumpers

6.15.1 OEM stock or aftermarket tube bumper allowed, tube bumper must be behind nose piece.

6.16 Rub Bars

6.16.1 Optional single horizontal 1" wide x 2" high bar for each side to protect the bodywork.

6.16.2 They must be mounted flush to the body.

6.17.3 End mount points must be within 6" from the end of the bar.

6.17.4 Ends must be closed and angled or turned into the body.

6.17.5 No sharp edges or protruding ends that might be hooked.

6.18 Windows

6.18.1 Windshield

6.18.1.1 Windshield must be safety glass, Lexan, or metal screen mesh.

6.18.1.2 Windshield must be braced by an inside vertical metal strap at least 1" wide x 1/8" thick mounted as close as possible to the center of the windshield.

6.18.1.3 Safety glass must be additionally secured by 4 brackets a minimum of 1” wide x 4” high x 1/8” thick.

6.18.2 Rear window allowed

6.18.3 Side windows must remain open.

6.19 Paint

6.19.1 Any image or content visible on the car is subject to the approval of the track officials.

6.19.2 Car Numbers

6.19.2.1 Must be a contrasting color and easily readable by the track officials. Do not use reflective or silver paint or tape (like duct tape) as it can not be seen at night.

6.19.2.2 Top (oriented to the right side) and side numbers must be at least 18” high with a line width of at least 4”, and must be preceded by a 6” top-aligned letter “A” for A-Bomber or “B” for B-Bomber. The preceding “A or B” is in addition to any letter used after the number to distinguish it from a car that already has that number.

6.19.3 Front and rear numbers are required and must be at least 6” high with a line width of at least 1”.

7 Roll Cage

7.1 The purpose of the roll cage is to protect the driver and passenger from injury during a crash.

7.2 Material

7.2.1 Roll bar tubing from 1 1/2” to 1 3/4” OD .090” thick.

7.3 Design

7.3.1 A full four-point cage over and around both the driver and the passenger.

7.3.2 One (1) dash bar.

7.3.3 Two (2) horizontal bars behind the seats.

7.3.4 One (1) diagonal bar behind the seats from the top corner to the opposite bottom corner of the cage.

7.3.5 Two (2) bars from the top rear of the car to the rear frame or trunk floor.

7.3.6 Door Bars

7.3.6.1 Four (4) horizontal and two (2) vertical bars on each door.

7.3.6.2 The door inner panels may be removed to fit the door bars, but the bars must be flush with the inside of the exterior skin.

7.3.7 Door Plates

7.3.7.1 The driver and passenger sides must have door plates installed between the door bars and the door skin.

7.3.7.2 Made from at least 1/8” (.125”) thick steel

7.3.7.3 Must completely cover the door bar openings from the top to the bottom door bar, and from the rear to the front upright posts.

7.3.7.4 If welded to the door bars, can be separate and must have 3” of weld for every foot.

7.3.7.5 If bolted to the door bars, must be a single plate and mounted with at least 6 grade 5 3/8” bolts.

7.3.7.6 Must be visible from the interior for inspection.

7.3.7 Gussets for all tubing angles are strongly recommended, and may be required by technical discretion.

7.3.8 Design, material, gussets, and welds are subject to technical discretion.

7.4 Mounting

7.4.1 On a full frame chassis, each vertical cage and door post must be welded to a frame rail.

7.4.2 On a partial frame or unibody chassis, each vertical cage and door post must be welded to a 6” square x 1/4” thick mounting plate. The mounting plates must be bolted through the floor pan to a matching plate underneath with at least four (4) 3/8” (grade 5) bolts with washers.

8 Engines

8.0.1 You may not run a LS motor.

8.0.2 602 with any 4bbl carb and block hugger headers

Designated crate motor dealer is Maita Chevrolet, Elk Grove, Ca.(916-647-8110.)

Designated crate motor certification and repair is Peters Racing Engines (707-263-7151)

Any repairs, excluding normal maintenance and valve spring replacement must go through Peters Racing Engines and must be approved by designated track official. Must use GM designated replacement valve springs. Crate motors have multiple seals on motors, if any seal is removed, it will be deemed illegal.

8.03 ALL BOMBERS THAT WANT TO RUN THE LAKEPORT UKIAH CHALLENGE AND UPSTATE BOMBERS MUST RUN a MSD style rev Limiter utilizing a chip or adjustable box set at 6400 RPM max. You HAVE to run this in order to run either series.

8.1 Block

- 8.1.1** You may not have aluminum blocks or heads.
- 8.1.2** You may not have dry sump oil systems.
- 8.1.3** You may not have blowers.
- 8.1.4** You must be in the stock location.
- 8.1.5** Solid motor mounts OK.

8.2 Specifications

- 8.2.1** Small Block Motors Only
- 8.2.2** No Vacuum Rule

8.3 Manifolds

- 8.3.1** No modifying or porting is allowed.
- 8.3.2** Intake
 - 8.3.2.1** May be OEM cast-iron,
 - 8.3.2.2** or Edelbrock aluminum Performer manifold: Chevrolet #2101, Ford #2121, Dodge #2176,
 - 8.3.2.3** or aluminum intake GM #12366573 on a sealed 88958602 crate motor.
 - 8.3.2.4** 50 pound penalty will be required if it is not within the rules

8.4 Restrictor Plate Motors

- 8.4.1** You must use a “Ukiah Speedway” designated restrictor plate (two (2) holes – 1.25” maximum ID) placed on the manifold or above an adapter plate, with a non-tapered spacer plate above.
- 8.4.2** Nothing that enhances the venturi flow below the restrictor plate is allowed.
- 8.4.3** If caught altering a restrictor plate driver will be disqualified and have a one year suspension from the date that finding occurs.

8.5 Non-Restrictor Plate Motors

- 8.5.1** Maximum compression ratio is 10.50 to 1
- 8.5.2** Maximum of 360 cubic inches

8.6 Fuel Delivery

- 8.6.1** 500 CFM two barrel allowed
- 8.6.2** May not have fuel injection.
- 8.6.3** Electric fuel pumps okay but a low oil pressure cut off switch must be in place so when motor stops the pump will quit pumping. Has to pass tech.
- 8.6.4** Must have two return springs on carburetor
- 8.6.5** Legal crate motor allowed any 4-barrel

9 Fuels and Fuel System

9.1 Fuel

- 9.1.1** Gasoline, race fuel, or E85 only.
- 9.1.2** No Nitrous (N2O), or any other fuel or combustion additive.
- 9.1.3** No more than 110 octane fuel allowed. If you are caught with fuel that is more than 110 octane, you will be disqualified for the night.

9.2 Fuel Cell

- 9.2.1** Fuel cell has to be completely enclosed in a metal container made of at least 22 gauge.
- 9.2.2** Fuel cell has to be mounted to the car in a very secure manner. Examples include mounting all four (4) top edges, or with four (4) under-slung metal straps at least 1” wide x 3/32” thick or equivalent. The mounting is subject to technical inspection and should remain secure even when damaged.
- 9.2.3** The mounting area may be reinforced with 2” x 2” box tubing.
- 9.2.4** Fuel cell may not use plumbers tape, chain, or bungee cords as mounting materials.
- 9.2.5** Fuel cell can be no lower than 10” from the ground.
- 9.2.6** Fuel cell has to have an electrical grounding wire from the fuel cap plate on the fuel cell to chassis ground.
- 9.2.7** Fuel cell must have a fuel cell guard made of at least 1 1/2” OD .095” thick tubing that is as wide and as low as the fuel cell.
- 9.2.8** No rubber hose from filler spout to tank.
- 9.2.9** The gas tank vent must have a check valve.

9.2.10 If fuel lines are run through the driver's compartment, they must be enclosed in a protected conduit, such as a steel or race-rated tube.

9.3 Gas Cap

9.3.1 Gas cap has to be strapped or chained to the fuel cell.

9.3.2 Gas cap has to be clearly marked with the car number.

9.3.3 Gas cap may not have snap open types.

10 Radiators / Cooling System

10.1 An after-market aluminum radiator is allowed.

10.2 Only water is allowed in the cooling system. No anti-freeze, coolant, or any other liquid that may slick up the track when spilled.

10.3 Must have a radiator overflow catch can or must exit the engine compartment

11 Electrical Systems

11.1 Battery

11.1.1 Battery **MUST** be enclosed inside a covered and vented box that is mounted on the floor of the driver compartment.

11.1.2 The battery box must be mounted with at least two (2) 3/8" or larger bolts attached to at least a 11/4" x 1/8" metal strap across the top.

11.2 Radio and communication

11.2.1 Race Receivers are optional

11.2.2 No other communication devices are allowed what so ever, including cell phones and Social media i.e.: Facebook live.

11.3 Transponders

11.3.1 Must be located 13' ($\pm 1''$) from the tip of the front nose of the car with a clear sight of the track surface (sheet metal will degrade the signal). The mount must be $\pm 1''$ so that the transponder log matches what is seen by the scorekeepers and fans.

11.3.2 To pass technical inspection, the transponder must be in place prior to inspection and must remain in working condition for the rest of the event. Measure and adjust your transponder mount before every event.

11.3.3 If the bumper-to-transponder distance changes for any reason (like damage, repair, or modification), either the front nose or the transponder mount must be adjusted to re-establish that distance before every event.

11.4 H.E.I. will be allowed except model ITK127212 that has an adjustable timing control and fingered tipped related system in them. No other ignitions control system allowed.

12 Steering

12.1 The steering column must not have a locking device.

12.2 No aftermarket center links or idle arms. **TIRE ROD ENDS MUST ALL BE STOCK.**

12.3 Steering box- stock style. No Turn One or lightening units. Steering quickener OK

13 Drive Trains

13.1 Transmission

13.1.1 Transmission has to have OEM and have at least two (2) forward and one (1) reverse gears in working order.

13.1.2 Cars with an automatic transmission must use a stock-type torque converter, filled with OEM fluid

13.2 Clutch

13.2.1 Clutch has to be a stock-type single-disk clutch (10 inch) with a stock-type pressure plate

13.2.2 Any bell housing around the clutch must be an approved explosion-proof type.

13.3 Driveline

13.3.1 **Car must have** two (2) driveline hoops, near both the front and rear universal joints, that fully enclose the driveline (3 60°) and will keep a broken driveline from falling off. They must be at least as strong as 2" wide x 1/8" thick metal straps.

13.3.2 The driveline must be painted white.

14 Rear Ends

14.1 Stock rear end mounts for make and model of car. Maximum of 6 degrees of pinion angle

14.1.1 Ford 9" allowed

14.1.2 Floater rear ends ok, steel hubs and solid axles

14.2 All parts have to use stock mountings.

14.3 Differential - Differentials must be functionally open. No fully, binding or partially locked or dynamically locking rear end systems of any kind are allowed. **No binding**

14.4 Axle

14.4.1 No 3/4 ton

14.4.2 Solid Axle (No gun drilling)

15 Brakes

15.1 Stock OEM steel brake calipers required in stock location. Aftermarket master cylinders allowed.

15.2 Disc brakes permitted on all 4 wheels. Max 1 per brake per wheel

15.2.1 One piece only, No Hats styles

15.3 Aftermarket brake and clutch pedals allowed.

15.4 Brakes all four brakes must be in good working order for any race

16 Wheels

16.1 You can have any 15" diameter steel after-market made with 3/16" steel centers.

16.2 Maximum width of 8".

16.3 Left wheels may be stock but may not exceed the 8" width.

16.4 Must have 1" lug nuts.

16.5 No acorn lug nuts.

16.6 1/2" studs are recommended.

16.7 Brakes All four brakes must be in good working order for any race. After market pedals and masters ok.

16.8 Tires

16.8.1 American Racer MR970.

16.8.2 No altering, conditioning, or softening.

17 Exhaust Systems

17.1 The exhaust pipe must run under the floor boards and extend past the driver compartment.

17.2 Must have a muffler that dampens the sound volume to a maximum of 90dBA at 100' (Violators will be fined or penalized).

17.3 You will be black flagged if you lose a muffler.

17.4 Has to be stock cast-iron.

17.4.1 Must have a maximum of 2 1/2" OD pipes (single or double).

18 Safety

18.1 All safety equipment is subject to technical discretion.

18.2 Interior

18.2.1 The interior compartment must be completely sealed from the track with no open holes in the floor.

18.2.2 All padding must be resilient and effective.

18.2.3 Roll cage bars around the driver or passenger must be padded.

18.2.4 The steering wheel center must be padded.

18.2.5 Driver and passenger windows must have SEMA approved window nets mounted securely and for quick and easy removal from either the inside or the outside.

18.2.6 Must have a fire shield between the drivers compartment and the fuel cell compartment made from at least 24 gauge sheet steel or a 40 aluminum

18.2.7 A motor kill switch must be installed between the driver and the passenger. It must be clearly marked, easily identifiable, and easily accessed by the driver, passenger, or anyone reaching through from the driver or passenger window.

18.2.8 Must have at least one (1) fire extinguisher of at least 23/4 lb., or a commercial fire system, mounted in easy access of the driver and passenger, and with gauges or status indicators readable from either the driver or passenger window.

18.3 Driver and Passenger Equipment

18.3.1 **Must have** high backed aluminum racing seats.

18.3.2 Head and neck restraints are strongly recommended.

18.3.3 Must have a five (5) point SEMA approved racing harness at least 3" wide for both the driver and the passenger.

18.3.4 All belts must have the manufacturer's date tag, be no older than five (5) years, and in good and serviceable condition.

18.3.5 Both driver and passenger must wear a 2010 Snell SA approved with full face shield. No motorcycle helmets allowed

18.3 Driver and Passenger Equipment (continued)

18.3.6 Both driver and passenger must wear a complete (top and bottom) SFI approved fire suit in serviceable condition. There can be no holes or rips, NO TOLERANCE

18.3.7 Fire proof gloves and shoes are strongly recommended.

18.3.8 Race-Receiver are optional

19 Policy Statements

19.1 Any modifications not covered in these rules will not be allowed unless approved by Speedway Officials.

19.2 Equipment will not be considered legal simply because it went through inspection unobserved or because a rule has not been written against it.

19.3 Cars are subject to inspection at any time.

19.4 Officials reserve the right to confiscate and hold any parts and/or equipment not conforming to the rules.

19.5 Officials reserve the right to judge, decide, and establish what constitutes a legal part of car.

19.6 Weight may be added or adjusted at any time to benefit or equalize the racing program.

19.7 Racing grows steadily and with growth, new situations arise, therefore, rules must be adapted or revised periodically

All Tech Officials' decisions are final

**Thank you for racing with
The Lakeport Ukiah Challenge**