

Firefighter Demolition Derby Rules

Car

- Any passenger car with a minimum 110" wheel base may be used.
- No hybrid, electric, CNG or similar alternative fuel vehicles.
- Convertibles, hearses, ambulances, panel trucks, pick-up trucks, car-platform trucks (El Camino, Ranchero, etc.), vans, SUV's, or commercial vehicles.
- No pre-1974 Chrysler Imperial's, New Yorker's, Bonneville's after 2024 Derby year.

Car Body (interior)

- All glass (including windshield) shall be removed.
- All interior trim shall be completely removed from the passenger area and trunk. Interior trim shall include but not be limited to carpet, insulation, seats (with exception of the driver seat), headliner, door panels, door lock stems, etc.; trunk area shall be completely empty.
- To prevent fluid or flame intrusion into the driver compartment the engine bay firewall and floor to the B pillar bar shall be intact and free of significant penetrations.

Car Body (exterior)

- All exterior trim, lights and or accessories shall be removed. Attached exterior trim and or accessories shall include but not be limited to light buckets, lenses, side mirrors, grills, decorative trim / molding, door handles and emblems.
- Body panels shall remain stock sheet metal
- Front inner fenders may be removed.
- Trimming fenders is allowed for tire clearance (pre and post Derby heat).
- Bolting, pinching, creasing, or rolling fenders is prohibited.
- Other than where specifically designated by rule all body panels shall remain unaltered.
- Fenders may be welded to the door only (see Doors section)

Doors

All doors shall be permanently closed and secured using **one or all** of the following methods:

- **Welded** using maximum 2" wide X 1/8" thick material or 3/8" diameter round stock; doors may be completely welded.
- **Bolted** using 1/2" bolts at multiple points if door is additionally secured by B pillar plate. See Safety Components
- **Chained** at multiple points using 3/8" minimum diameter chain and 3/8 bolts using 1/2" washers if door is additionally secured by B pillar plate. See Safety Components
- The exterior of the driver door may be reinforced. Reinforcing material shall be welded to the body no bolting or chaining of reinforcing material. No welding of door reinforcement to the frame. Material shall not exceed more than 6" past the front or rear edge of the door and no material shall be within the immediate area of the window opening or otherwise be an obstruction to egress. All installations shall be approved not less than one week prior to the event. Door reinforcing material shall be painted bright orange and shall have no sharp edges.

Hood

Hood shall be closed and secured using **one or all** of the following methods:

- **Bolted** at a maximum of (6) points; (2) of which may extend to the frame if desired. Bolt sizing shall be a minimum of 5/8" in diameter and not to exceed 1 inch in diameter. When plates are used to bolt through they shall not exceed 6 X 6 inches. Bolts shall not protrude more than 1" beyond the surface of the hood and shall not present a hazard to safety personnel.
- **Chained** using 3/8" minimum diameter chain and 3/8 bolts using 1/2" washers.
- Hood shall be provided with two 6" minimum diameter openings to allow for firefighting access.
- *For inspection purposes hoods shall not be welded closed.*

Windshield opening

The windshield shall be replaced using black painted expanded metal. A minimum 2" wide 1/4" thick center support securely connecting the firewall, roof and expanded metal is required. Partial width windshields permitted but are subject to approval. Expanded metal shall not extend past the windshield opening.

Trunk

Trunk shall be closed and secured using **one or all** of the following methods:

- **Bolted** at a maximum of (6) points; (2) of which may extend to the frame if desired. Bolt sizing shall be a minimum of 5/8" in diameter and not to exceed 1 inch in diameter. When plates are used to bolt through they shall not exceed 6" X 6". Bolts shall not protrude more than 1 inch beyond the surface of the trunk. An adequate inspection hole shall be provided for verification.
- **Welded** using non-continuous sections of flat stock material 6" x 2" x 1/8" thick having 6" breaks between welded sections.
- **Chained** using 3/8" minimum diameter chain and 3/8" bolts using 1/2" washers.
- One 6-inch diameter inspection hole shall be provided in the trunk area to verify rule compliance.

Fuel and Fuel Delivery System

- The stock fuel tank shall be removed or be provided with a minimum 6"X6" inspection hole to verify that it is empty. One 6-gallon maximum capacity metal fuel tank or racing type fuel cell is required to replace the stock fuel tank.
- The fuel cell shall be securely installed within the passenger compartment of the car located forward of the rear axle housing, behind the driver seat and a minimum of 12" from any inner door panel.
- A fuel tank with a mounting flange shall be securely installed per the manufacturer's instructions. A fuel tank without installation instructions shall be installed using metal straps 1/8" minimum thick 1" wide solid metal flat stock. Metal flat stock shall not be perforated; "plumbers tape" or water heater install material is not permitted. Fuel tank shall be secured across its length and width using a combination of 3/8" minimum bolts and large washers in a manner preventing motion in any direction.

- Fuel system shall be leak free. Fuel line penetrations made through sheet metal shall have sufficient clearance to prevent damage to the fuel lines and be free of sharp edges.
- One 6” diameter hole shall be made at the lowest point of the floorboard in the immediate vicinity of the fuel tank to drain any spilled fuel.
- Only one electric or mechanical fuel pump may be used.

When using an **electric fuel pump** all of the following requirements shall be met:

- Clearly identify the electric fuel pump using orange paint.
- Install and identify (1) pump shut off switch as “FUEL SHUTOFF” within 12” of the ignition switch to avoid the confusion of safety personnel. Clearly identify electric fuel pump switch on and off positions
- A carburetor guard may be fabricated and used if:
 - The device provides adequate clearance around lines, linkages and cables.
 - The device does not extend past the valve covers.
 - The device is solely attached to the engine.
 - The installation receives technical inspection approval.

Electrical

One passenger car battery may be used; no hybrid, truck or industrial batteries. Battery shall be re-located to the passenger compartment, passenger side floor area. Battery shall be adequately secured to prevent movement and installed using fasteners directly through the floor and fully enclosed within a plastic battery box. Ignition switch shall be readily identified as “IGNITION” and within reach of the belted driver. The use of the factory ignition switch is allowed but the switch shall be readily identified as “IGNITION” to avoid the confusion of safety personnel.

Engine

Any passenger car engine and transmission may be used. When a carburetor is used the engine is limited to (1) carburetor only (any CFM model). An air cleaner or approved spark arrestor is mandatory for all engines regardless of induction method. An engine width distributor guard may be used but shall be solely attached to the engine; for forward mounted distributors guard shall not extend past the water pump. Stock exhaust may be shortened but shall extend past the driver; upright exhaust headers are permitted. Upright exhaust headers shall terminate at a point above the drivers head.

Radiator

Any passenger car radiator may be used; the radiator shall remain in the factory location. An expansion tank may be used as an alternative to a radiator however the expansion tank shall be installed in the location of the factory radiator and the total liquid coolant capacity shall remain the same as the system with a radiator. The radiator core support shall not be strengthened or otherwise reinforced.

Frame, Suspension, Powertrain

- All cars shall have working suspension; welding of suspension components to alter height is not permitted. Foreign material added to alter height such as spring spacers shall not be used.
- No material may be added to the frame pre or post derby heats. Welding cracks and splits is allowed, up to three passes max. Plating, stuffing, or otherwise strengthening the frame is prohibited.
- Upper frame seam may be welded forward of the firewall only, the remainder of the vehicle frame shall be unaltered.
- Suspension system types shall not be interchanged (coil spring to leaf spring conversion, etc.).
- Unaltered passenger car springs shall be used. Leaf spring cars shall not have additional springs.
- Any passenger car bumper may be used. Conversions shall retain the brackets of the bumper being used; stock bumper assembly shall be completely removed in conversion. Bumper assembly shall not be reinforced, trailer hitches are not allowed.
- Bumper brackets may be welded but not reinforced.
- Maximum bumper height shall not exceed 24" as measured by the Official.
- Bumper straps may be added to cars with metal bumpers. Straps shall extend from the side of the bumper directly to the fender in a manner to prevent bumpers from being hooked during competition. Straps shall not exceed the width of the bumper and strap material shall not exceed 1/8th inch in thickness.
- Engine and transmission mounts may be fabricated but shall not strengthen or reinforce the frame.
- An aftermarket transmission cooler may be used but shall be installed within the engine compartment area, away from exhaust components and forward of the firewall. Direct frame mounting is prohibited.
- Drive shaft on rear wheel drive cars shall be painted white.

Brakes, Wheels and tires

- Each car shall have at least two working brakes.
- No studded tires or tire chains.
- Welded on valve stem protection is permitted.
- All wheel weights, trim rings and wheel covers shall be removed.
- If dirt is not provided in the arena the minimum tire pressure is 35 PSI as measured by the official.
- Steel wheels only. Aluminum, magnesium or similar wheels are not permitted.

Car Appearance

- Car numbers must be clearly visible on the car in a contrasting color.
- Numbers must be a minimum of 18 inches in height and 2 inches in width, located on both sides of the car and the roof.
- Car numbers shall not duplicate; numbers will be granted in a first requested first approved order.

- Driver door and door frame including the A and B pillar shall be painted florescent orange. Orange cars are not permitted. *See attachment*
- Nothing may be placed on the car which might be considered offensive.

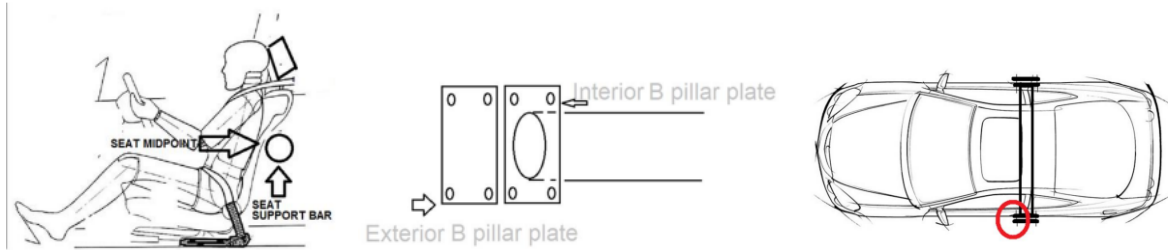


Safety Components

- The driver seat may be OEM from any model or an aftermarket racing style seat. Plastic or fiberglass seats are not permitted. Factory seat bolts shall be used and headrests are mandatory.
- Seat belts are mandatory. Either OEM seat belts or purpose-built racing harness systems are acceptable for use. Racing harness systems shall be installed exactly per the requirements of the manufacturer using the provided hardware; no exceptions. **Racing harnesses if used shall not be mounted in a manner which would allow them to move independently of the seat.**
- Portable fire extinguisher. One charged 10B: C: or higher rated dry chemical portable fire extinguisher shall be installed within reach of the secured driver in an approved quick release bracket; cable ties, bungee cords and similar restraints are not permitted.
- Any roll bar, driver door reinforcement or similar safety system is subject to the approval of the event officials.

B Pillar Support Bar:

- One seat support bar shall be installed extending the full width of the passenger compartment and connecting both B pillars (see diagrams).
- Support Bar will be no larger than 8" in diameter.
- Each end of the support bar shall be provided with a minimum ½" thick B pillar plate welded to the support bar which is not less than 3" in diameter and not to exceed 15" in diameter.
- Each B pillar plate shall then be through-bolted to a matching external B pillar plate on the exterior of the body using high grade fasteners
- The seat support bar shall be installed in immediate proximity of the driver seat and shall be installed not more than 6" from the seat back supporting the seat back horizontally at its midpoint.
- When a seat support bar is constructed in interlocking collapsible sections it shall be through bolted using (1) ¾" diameter high grade fastener.

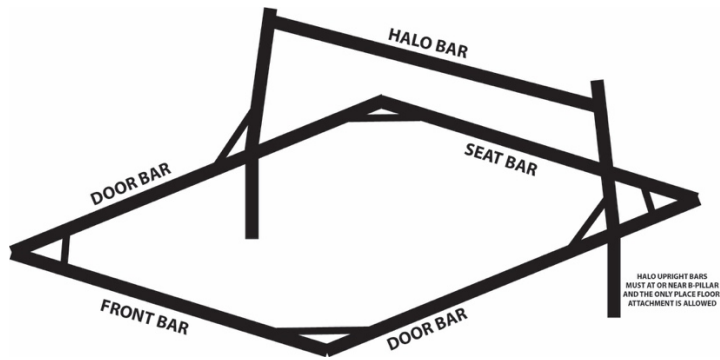


Driver Protection Cube: A four bar enclosure around the inside cab may be installed. One dash bar, one seat bar (required), one across each front door only.

- All bars must be inside passenger compartment.
- Door bars may run from dash to the B pillar.
- Door bar maximum length of 60".
- Front bar must be above the steering column and must not attach to the firewall or dash. Front bar cannot extend through the firewall and must remain inside the passenger compartment
- Seat bar may be no further back than 6 inches behind seat and cannot attach to the rear seat area. Seat bar must be no larger than 8". (see support bar section)
- A single door bar may be used on each door, up to 6" rectangular/square tubing or channel for flat mounting.
- Padding recommended on driver's side door bars.
- Dash bar can be no larger than 6" diameter.
- Door bars will be bolted or welded to the door only.
- Gussets 2"x2" max size may be used at all welded connections and cannot be any farther than 8" from the corner on both sides but can only be welded to the protection area. NOT to the car body itself.
- **Used for protection only, not reinforcement.**

Roll over bars (HALO): A single Halo bar may be installed across the roof to protect the driver in the event of a rollover.

- May not extend more than 6 inches above the roof line.
- Halo shall be attached to the seat bar (welded or bolted)
- Halo may attached to the floor at the B pillar only. No gussets or kickers allowed to the floor.
- May use one forward facing gusset attached to the door bar. Gusset 2"x2" max size. Gussets cannot extend past 8" from the Halo bar.
- Halo material may be no larger than 6".



Personal safety

- Any D.O.T. approved helmet may be used; a full-face helmet is recommended; no bicycle helmets. Drivers shall use a NOMEX hood and gloves while competing; use of a racing suit is permitted and recommended.

Inspection

Each car will be inspected by the Event Officials prior to competition; the driver shall be present during the inspection and the car's hood shall be open. Any inconspicuous noted shall be corrected prior to competition. Other than the replacement of approved like for like components no car may be altered without expressed consent from an Event Official after inspection.

Competition

- Driver meeting attendance is mandatory for all competitors. Competition will take place using the "heat", "LCQ / last chance qualifier" and "main event" format (number of cars participating in each event to be determined by Event Officials). Heat and LCQ determination will be made using a draw method at each driver meeting.
- The safety orientation meeting is mandatory for any driver who did not compete in the event held last year and will take place immediately after the driver meeting.
- Each car shall have (1) 12" orange competition flag and mast affixed to the exterior of the A pillar and within reach of the belted driver. When displayed this flag indicates the driver's intent to compete; flag removal displays the driver's inability to compete in this heat. Mast shall extend flag a minimum of one foot above the roof.
- Any driver may be disqualified if their car fails to hit another competing car for an extended amount of time (potentially longer than 2 minutes). This will be left to the discretion of the event officials and shall be final once scoring has taken place.

- Any car pushed out of the arena through competition contact may cautiously re-enter the event if the Officials determine that the driver has not been out of competition for an extended amount of time.
- Any car stuck on the safety berm will be removed once that round of competition has ended.
- Drivers shall remain seated with their seat belts on until competition ends, until instructed to do otherwise by an official or unless immediate personal safety dictates otherwise. Removing your safety belts or helmet during competition is actionable by immediate disqualification.
- Drivers shall avoid hitting a competitor's driver door; this action may lead to disqualification.
- Light bars, sirens and air horns or similar items may not be activated during the competition.
- Competition questions from drivers will be addressed at organized meetings only.