



## 2020 Large Car Demo Rules

Evergreen Speedway, Monroe, WA

**UPDATED FEBRUARY 2020**

**NO EXPRESSED OR IMPLIED WARRANTY OF SAFETY SHALL RESULT FROM PUBLICATIONS OF OR COMPLIANCE WITH THESE RULES AND/OR REGULATIONS.**

These rules are intended as a guide for the conduct of the sport and are in no way a guarantee against injury or death to a participant, spectator, official or others. Track Officials shall be empowered to permit minor deviations from any of the specifications or impose further restrictions that, in their opinion do not alter the minimum acceptable requirements.

**NO EXPRESSED OR IMPLIED WARRANTY OF SAFETY SHALL RESULT FROM SUCH ALTERATIONS OF SPECIFICATIONS.**

Interpretation of or deviation from these rules is left to the discretion of the officials. Their decision is final. It is the responsibility of the driver to ensure their car conforms to all rules and regulations at all times.

### Explanation

The Large Car Demo Derby Class is designed to be a class that allows builders more latitude when prepping their vehicles. Some welding, Engine swaps, Engine cradles and more are allowed. These rules specifically state what can be done to the vehicle. **There are no gray areas. If it doesn't say you can, then you can't.**

### Competition Rules:

1. You must make an AGGRESSIVE HIT every 2 MINUTES. Sandbagging will not be tolerated
2. You will be given ample time for restarts. 90 seconds max. We do not use the clock exclusively. Hitters get more time than sandbaggers.
3. Team driving will not be tolerated.
4. Any open door may cause DQ.

5. You are allowed 2 fires. A third fire will be cause for DQ in the current event.
6. Any careless or intentional driver's door hit will be cause for DQ
7. Using your driver's door as a defense will be cause for DQ
8. Drivers must remain in the vehicle with helmet, seatbelt and eye protection on until notified by an official that is safe to exit the vehicle.
9. All cars are required to have a bright colored stick or flag firmly attached to the driver's side A pillar. You must pull your flag if you are unable to continue competing or if directed by an Official.
10. Intentional or repeatedly exiting the defined area of competition may result in disqualification
11. Obey the Officials commands.
- 12. Time Limits for FINAL 2 COMPETITORS. MUST make AGGRESSIVE HIT EVERY 1 MINUTE. AT the end of 10 Minutes a Tie May be Called with the 2 Competitors splitting first and second place.**

#### **A. Competing Models**

1. Open to any make of car
2. Imperials of any year are not allowed.
3. No Imperial sub frames
4. No Ambulances, Hearses or Limousines allowed.

#### **B. General Preparation**

1. All Glass except front windshield must be removed. All loose glass must be cleaned out
2. Front windshield may be replaced with expanded metal.
3. Car exterior must be stripped of all molding, headlights, trim, tail lights etc.
4. All Flammable material must be removed from interior. Head liner, rear seats, door panels, carpet etc.
5. All vehicles must have a roof sign showing their number on both sides. Minimum of 15" x 15". Must not strengthen the car in any way.
6. Front seat must be securely fastened to the floor. These bolts may not go through the frame.
7. 5 point safety harness is required.
8. Rear seats in all cars and all decking in station wagons must be removed
9. No fresh sedagon or wedge cars are allowed.
10. All cars must be painted. No dark colored cars without contrasting lettering scheme.

#### **C. Frames**

1. No painting, buffing, oiling, or undercoating of Frames. You will not be inspected or allowed to compete
2. May weld from the front control arm forward. Factory seams only.
3. Front Frame rails may be cut off no further than the front of the factory core support holes.
4. Closing of the Y frames allowed. No added metal.
5. You may pitch, tilt or tip cars in the followings ways only.
  - a. You may cold pitch. No added metal

- b. 1980-2002 Fords may cut the 3 crush box flaps, pull the front end down, than re-weld only those 3 seams. Do not weld any other seams. No added metal.
  - c. You may pitch at the transmission cross member, since you are already allowed to weld a 5 inch piece of angle there to mount your cross member.
6. **1998 and newer Watts-Link conversion for Fords.**
- a. You may convert a Watts-Link to a standard 4 link system.
  - b. Use of upper and lower trailing arm brackets of an older Ford or Aftermarket brackets are allowed.  
Aftermarket upper brackets cannot be larger than 5"x7"x ¼" and may be attached with a max of (4) ½" bolts on each side. May not be connected.  
**Lower brackets may be welded to the side of the frame but may not be larger than 4"x4".**
  - c. No positioning of brackets to strengthen the front down legs of the rear hump
  - d. Must be mounted in the stock location
7. **2003 and newer**
- a. Must run the original aluminum cradle and stock lower A- Arms
  - b. Upper A-arm, motor mounts and spring buckets must mount off the existing cradle bolts. No frame welding allowed for these components.
  - c. No mounting plate or component may extend more than 2" in front of or behind the cradle bolts. Measured from the center of the bolt.
  - d. You may use any automotive or fabricated spring bucket but it must not strengthen the frame in any way. Bucket cannot be larger than necessary to hold the coil spring. Again, It must be mounted off 2 existing cradle bolts. Do Not weld frame in any way.
  - e. No pinning of frame
  - f. To mount steering box, You may weld a tube to the top and bottom of frame. Do not weld excessively. Do not pin frame to mount the steering box.
  - g. Do not weld any seams behind the A-arm, even if the factory skip weld the seam, Do not weld!
  - h. You may cut the excess frame off the front rails, but you may not move the front body mount. All body mounts must remain in the stock location.

#### **D. Brakes**

- 1. All cars must be able to demonstrate the ability to stop at any time. If your brakes do not work, you will not compete

#### **E. Tires and Wheels**

- 1. Any tire allowed. Dot, Forklift, Skidsteer etc.
- 2. Any passenger car wheel may be used. May have up to 3/8" full weld in centers and 1 ½" MAX lip gaurds.
- 3. No beadlocks
- 4. No studded tires
- 5. No duals

#### **F. Bumpers and Bumper Brackets**

- 1. Bumper swaps are aloud. You may use any OEM car bumper on any car **OR** a piece of box tube, maximum of 5" x 5" x 3/16" box tubing allowed. No modifications allowed to tube bumpers.
- 2. Box tubing bumper must have open ends and cannot have anything inside. No Points.
- 3. No Spikes or protruding items.

4. Bumpers may be reinforced, must be inside original bumper skin and frame structure. No "skinning". You may weld outer skin to inner structure of OEM bumpers.
5. Bumper may not be welded to the body.
6. Bumper brackets you have 2 options:
  - A. Use factory shock/bracket in the factory location for the car you are running. Shocks may be collapsed and welded.
  - B. May use a 12" piece of 4"x3/8" flat bar. Welded to the bumper and outside of the frame only. 12" will be measured from the back of your bumper.
7. Rear bumper brackets must follow front bracket rules.
8. Bumper height measured from the ground to the bottom of the bumper must be a minimum of 16" and a maximum of 22". Both front and rear

### **G. Body Bolts**

1. Body Bushings may be removed
2. OEM bolts may be replaced with 1/2" or smaller bolts.
3. You may add a 3" x 3" plate or 3" washer (maximum size) on the body side of the bolt.
4. You may add a 1" washer (maximum size) on the frame side of the bolt
5. You may put your 1" all thread through the core support on the front, **bolts must run through factory core support body mount hole and frame hole. If your frame has a bracket to mount core support body mounts, you may weld the bolts to the side of the frame.**
6. You may (2) extra body mounts in the position of your choice. MAX 1/2" bolts and 4"x4" washer. Extra bolts must be painted bright orange

### **H. Hoods**

1. Hoods must be bolted or chained shut only. May use (16) bolts with a 3/8" maximum diameter to re-bolt hood skin.
2. You may use (6) bolts to hold the hood down. Maximum of 1" all thread. No pipe
3. 2 of your hood bolts may replace the 2 core support body bolts. The other 4 must be sheet metal to sheet metal
4. If you use chain, you may weld 6" (maximum size) washers to the hood. If bolting, the 6" washers must be free floating
5. No welding of cut outs allowed.
6. You must have a minimum 10" hole in hood for fire protection
7. Hoods must be able to be opened at the request of the Technical Inspector
8. Hood must be in stock location

### **I. Doors and Windows**

1. Doors may be welded on the outside only. 2" x 1/8" strap maximum
2. Doors that are not welded shut must chain them closed in at least (2) spots
3. You may smash the inner and outer skin together and weld them solid. You may use a maximum strap size of 2" x 1/8" strap to fill the gap. This includes wagon tailgates
4. Wagon tailgates **will be treated as a trunk lid.**
5. You must have a front windshield bar. Must meet the following criteria
  - a. 3/8" thick x 3" wide flat bar only extending from roof to firewall
  - b. May not extend more than 6" onto the roof or firewall.
  - c. Must be attached to sheet metal only.
  - d. Must be a minimum of 16" from either pillar.
  - e. (2) bars maximum
6. One rear window bar is allowed. Must meet the following criteria
  - a. 3/8" thick x 3" wide flat bar
  - b. Must be welded to the roof sheet metal on top and to the sheet metal below the rear window on the bottom. May not attached to the trunk lid.
  - c. May not extend more than 6" onto the sheet metal at either end

#### **J. Trunk Lids**

1. May be chained, bolted OR welded in 8 spots in any combination.
2. Bolts: 1" diameter (max) with 6" diameter 1/4" thick (max) washer.
3. Chains: MAX 3/8" thick and 3' in length.
4. Welds: MAX 6" in length. May use 2"x1/8" or 1/2" round bar for filler.
5. 2 of the 8 spots may be 1" all thread from the trunk lid to the frame. May go through factory body mount hole or be welded to the side of frame, MAX 4" weld. **(Excluding wagon tailgates)**

#### **K. Body**

1. Body creasing, enhancing of existing body lines and addition of body lines is allowed to the sides of the car only.
2. Trunk lid seams must be clearly visible and accessible
3. No doubling of body panels allowed. No added metal. Any spot with 4 layers of sheet metal or more will be required to be torched out completely.
4. Quarter panels must remain vertical
5. Core support seam welding or re-bolting is not allowed.
6. Holes may be cut in the floor and firewall to accommodate the shifter, fuel lines and transmission lines.
7. You may cut a hole in the firewall to accommodate the engine, within reason.
8. You may have up to (5) 3/8" (max) bolts in each wheel opening. They may not be higher than 5" above the stock lip location of the wheel opening

#### **L. Radiator & Radiator Supports**

1. Radiator must be in the stock position in front of the engine.
2. Radiator supports (core support) must remain in the stock location
3. OEM style radiators only. No homemade allowed
4. No homemade expansion tanks
5. No added cooling capacity. No supplemental cooling devices allowed.

#### **M. Batteries**

1. Batteries must be re-located inside the cab
2. Your battery box must be of metal Construction full enclosed, and securely fastened to the floor. The lid must be securely fastened shut using 5/16" bolts or 2" straps. (I.e. seat belts).
3. NO RATCHET STRAPS OR BUNGEE CORDS OF ANY TYPE.

#### **N. Fuel Delivery Systems**

1. No plastic tanks or Boat tanks allowed. Metal fuel tanks only.
2. 8 gallon tank max.
3. Original gas tanks must be removed from the car
4. You must have the gas tank securely mounted
5. Gas tank must be bolted in the center of car
6. It may not be bolted through the frame in any way, may NOT be used as a kicker of any kind.
7. You may use a gas tank protector. It must be a maximum of 36" x 36" AND have a minimum clearance of 8" from the interior door skins on the sides and a 4" minimum clearance from all other sheet metal.
8. Gas tanks may be bolted to rear seat bar.
9. Fuel lines may be run inside the car. If you use rubber gas line, you must run the line through a larger hose such as a garden hose or electrical conduit. \*\*NO Metal fuel lines in car\*\* hydraulic hose highly recommended
10. Fuel lines must be secured to the floor and kept from pinch points
11. Automotive pump gas only, NO ALCOHOL.
12. Electric fuel pumps are allowed. They must be covered and have an on/off switch clearly marked in large letters.
13. All lines must be double clamped.

#### **O. Engines**

1. Any engine may be used in any car.
2. Engine cradles are aloud.
3. IF YOU ARE NOT RUNNING AN ENGINE CRADLE. You may chain the motor, but you must use an existing bolt. Chains may not be higher than the top of the stock engine mount cup. Chains may not be attached to the cylinder heads, header flanges of engine plates. 1 Chain per side, 3/8 max OR you may weld a 6x3" inch plate for the factory engine side mount to frame.
4. No engine oil coolers are allowed.
5. You must have an air cleaner over the carburetor at all times.
6. No starting fluid is allowed.
7. Mopars are allowed to secure K member in the following ways:
  - A. Remove pucks and bolt tight to frame, stock size bolts only.
  - B. Or Leave pucks in between and weld 4 - 3 inch welds, total (not per side) of 12 inches only.

#### **P. Distributor Protectors/Cradles**

1. If you run a DP do not mount any cage material closer than 5 inches to the rear most point of the firewall and/or the back of the DP, YOU WILL NOT RUN.
2. Distributor protectors allowed, back side must be no wider than 12 inches, must not contact cage before, during or after the

event. It may not be welded, bolted or connected to body, hood or frame. Forward supports must be inside normally positioned headers and not extend past the water pump.

3. Distributer protector may NOT be welded to the transmission bell housing. May only use factory transmission mounting bolts that bolt the transmission to the engine.
4. Aftermarket Distributer protectors, cradles and pulley protectors are allowed. Cradles must be bolted in the car at or near the OEM engine mounting points using fasteners similar in size to OEM. If you use a front plate it may not be gusseted to header flanges or other components in any manner.
5. You may beat flat the engine side of the firewall only, do not weld or bolt firewall. Do not re-enforce the firewall/cowl. Do not beat, paint, bolt, weld on, weld to or modify the driver's side of the firewall/cowl in any way.
6. STACK PROTECTORS ARE ALLOWED. May not be connected to any sheet metal.

## **Q. Transmissions**

1. Transmissions must be of passenger car origin
2. Transmission coolers may be used, but they must be secured in such a way to prevent injury. May not bolt through frame or act as a kicker. Metal or braided lines must be used.
3. Steel tail shafts may be used.
4. Skid plates may be used, must be bolted and no bigger than the factory pan.
5. 1 of the 2 options may be used but not both:
  - a. Any aftermarket steel or aluminum bell.
  - b. 3 Bar style transmission protector. (call if you have questions)

## **R. Suspension**

- a. No coil to leaf conversions.
- b. Leaf springs must be in the factory position.
- c. You may change coil springs.
- d. Suspension must be original factory suspension for that car.
- e. You may not remove the shocks and put pipe or all thread in their place.
- f. You may not plate, reconfigure or re-enforce front A-arms
- g. You are allowed to weld A arms down using a maximum of **2ea 2"x4" (1/8") flat bar** per side of the car.
- h. You may reinforce your tie rods, but you must use the OEM style tie rod ends.
- i. Pipe Tie Rods are allowed but you must use the stock style ends, no aftermarket heims.
- j. Steering wheel to Steering gearbox may be modified.
- k. Aftermarket steering columns allowed.
- l. **Rear shocks may be replaced with Max 1" allthread. Must be bolted to frame only (not through sheet metal).**
- m. Leaf Springs Specifics

- i. No leaf conversions. These rules only apply to factory leaf sprung cars
- ii. You may clamp leaf springs 4 clamps per leaf, 2in x ¼' strap. Max 2 3/8 bolts per clamp
- iii. No homemade mounting plates or oversized U-bolts will be allowed.
- iv. No welding on the spring pack
- v. No flat stacking springs

## S. Rear Ends

- a. Must be 5 lugs only
- b. No part of rear end may strengthen the car's frame or body in any way.
- c. You may use any type of rear end (Ford / Mopar / GM / Hybrid).
- d. Rear end control arms can be reinforced. They must have a bolt and be able to pivot, arms must be unobstructed and travel freely. They may be shortened or made longer. They must attach in stock configuration for the suspension setup you are using. Rear end must remain in the stock location within the original mounting location. Do not move rear end forward or backwards to support the frame
- e. Rear end braces are allowed, but they may serve no purpose other than to strengthen the rear end housing. They may not extend more than 6" off of any part of the original housing and may not be higher than the top of the axle housing.

## T. Cages & Door Bars

- a. You may use channel door bars. They must be a minimum of 8" wide ¼" thick iron, wide NO guard rail or grader blade. Total length is not to exceed 78" max. This bar may not be more than 6" past front door seam. Must be mounted in at least 3 places and extend through the inner panels with washers and plates. The ends of the side iron must be cut at a 45-degree angle.
- b. Dash bar may not exceed 5" diameter. Must go from window post to window post in the former position of the dashboard. May not be welding in, must be bolted, may NOT be mounted or touch the fire wall, floorboard or frame in any way.
- c. Dash bars must be mounted above the steering column 5" from the fire wall
- d. A rear cross bar must be installed behind the seat from door skin to door skin as close to the B-pillar as possible and at least half way up from the floor, must be a minimum of 3" pipe or square tubing with plates welded on the ends. The plates may not extend more than 6" past cross bar toward rear of car, the cross brace must be mounted with a minimum of 2 bolts on each side extending the side Iron.
- e. **4 down bars made up of MAX 2"x3" tube may go from the cage to the frame. Bars must be vertical. 2 must be directly under the rear cross bar and the other 2 must be between the inner door seams of the front doors.**
- f. If you choose to run an internal cage All horizontal cage components must be at least 8" off the floor of the car, side bars measured at the body bolt elevation. Interior door bars may not extend more than 8" behind the seat bar.
- g. You may use channel or tubing up to 8" OD max for all interior bars.
- h. Seat bar must be no further than 8" behind the seat **and 15" behind inside front door seam**. All bars must be straight pieces no contoured pieces.
- i. All cage components must be in the interior of the car, not inside the door structure with the exception of the driver's side. This door bar MAY be inside the door structure to allow more room for driver's safety.

## U. Halo or Rollover Bars



- a. All cars must a minimum of 1 upright vertical rollover post. Upright must be located directly behind the driver seat. Must be made up of a minimum of 2 inch round or square tubing with 4x4 plates welded on the top and bottom of tube. The upright must extend from the floor to the roof or from the rear cross bar to the roof.
- b. You may add a 2nd roll bar on the passenger side if you choose
- c. You may add a halo bar to the cage components listed above if you choose not to run a vertical roll bar inside the car. It may not exceed 5" in diameter.
- d. This bar must attach to the rear seat cross bar, no exceptions.
- e. Halo bars must be in a direct vertical line with the seat bar.
- f. Halo bars may NOT be angled toward the rear of the car. They must be vertical
- g. You may bolt the halo bar to the roof sheet metal in 2 places.

## **V. Repairing Pre Ran Cars**

- a. When repairing damaged cars, you may use (2) 4"x6"x 3/16" plate per frame section. These plates may not touch each other in any way. Repair plates must have an inspection hole drilled in the center so the Tech official can see thickness of plate.
- b. A frame section is one frame rail in front of or behind the OEM transmission crossmember, 2 plates RR frame, 2 plates LR frame, 2 plates RF frame and 2 plates LF frame rail. You may not add any more plate than this.
- c. Pre ran cars may get 1 wrap of #9 wire on each side of the car (1 passenger and 1 driver), made of 4 strands of wire from any window opening to the frame. CAGE CANNOT SUPPORT WIRE! 1" washer may be welded to sheet metal to keep from tearing. No other wire may go around the frame, in window openings, or attached to the cage. If using wire to repair sheet metal please call tech first.

## **W. Inspection Procedures.**

- a. Official's decisions are final.
- b. You will be given one (1) opportunity to correct items on your car.
- c. Each car gets a maximum of 2 times thru inspection.
- d. YOUR HOOD MUST BE OPEN FOR INSPECTION--- IT DOES NOT MATTER WHO YOU ARE.
- e. Do not come to the inspection line if you are not done preparing your car.
- f. Any added or welded metal plate/rod or material not specifically covered in the rules, will be removed completely as well as the surrounding metal. Don't do it or your car will be weakened!
- g. It is your responsibility to report to tech. Failure to report to tech or competing in any event with a car that has not been inspected will result in immediate disqualification and a monetary fine
- h. Protests are not allowed. Official's decisions are final

## **X. Safety**

- a. Driver must wear helmet, seat belt and eye protection at all times during competition.
- b. Driver must remain in vehicle with all safety equipment on until directed by a track official to exit the vehicle. (fire is the only exception)
- c. Driver's door hits are illegal. Any driver's door hit deemed intentional will be cause for disqualification. Repeated unintentional or careless driver's door hits will be cause for disqualification. Official's determination is final

- d. Intentional or repeated unintentional use of your driver's door as a defense may result in disqualification.
- e. No hot rodding in the pits
- f. You are allowed 2 fires. The third fire will be cause for disqualification

Please call or text any car building questions to Jeremy Pratt 360-801-9623