



## Sooner State Dwarf Car Rules 2024

**(UPDATED 6/3/24 – UPDATED RULES IN RED) - UPDATED 17a REGARDING FIRE SAFETY**

**PLEASE KEEP THIS SET OF RULES AND CURRENT WESTERN STATES ENGINE RULES IN YOUR PIT**

**Some rules have been adjusted/added to be more in line with Western States.**

NOTE: Legend race cars are allowed but must remove fenders and running boards.

NOTE: Mod-Lites are NOT allowed.

NOTE: WESTHOLD TRANSPONDER LOCATION:

Transponder to be located along right rear frame rail from behind axle around to rear frame rail, not exceeding the centerline of the chassis. Must be mounted correctly and unobstructed. Track has final say on mounting location.

### **1. ENGINE – 1000cc (fuel injected) or 1250cc (carbureted)**

SSDC will follow current Western States Dwarf Car Engine Rules (Section 8) with emphasis on:

**8L.** Any car that is discovered to have any other electronic devices other than those outlined above, or who has made any modifications to these allowed boxes or any part of the fuel injection, may be disqualified.

**8O.** No other electronic devices that plug into engine or wiring harness are allowed.

#### **SSDC EXCEPTIONS TO WS ENGINE RULES:**

- a. Upper butterflies may be removed from injection (Re: WS Rule 8J)
- b. DynaJet Auto Tune is allowed (Re: WS Rule 8K)

### **2. WHEELS AND TIRES**

- a. Any 13" Hoosier tire ONLY. Maximum 8" tread.
- b. Tire sizes allowed: 205/60R13, 215/60R13, 235/60R13, 23/7.0-13, 23/8.0-13
- c. Soft, medium or hard compounds allowed.
- d. Grooving and siping allowed.
- e. 13" Steel wheels only, minimum wall thickness .090"
- f. **7" maximum wheel width.**
- g. Bead lock rims are allowed on both sides.

### **3. BODY STYLE, REQUIREMENTS & SPECIFICATIONS**

Any car specifications not covered in these body specs are subject to SSDC interpretation.

Any significant performance advantage will be addressed on an individual basis.

SSDC reserves the right to determine what constitutes an unfair advantage.

- a. 1928-1948 American-made production vehicles only.
- b. 5/8 scale, stock appearing two-door sedans, coupes, sedan delivery, wagon or pickup trucks.
- c. Must have grill shell or simulated open radiator matching original bod style, any material.
- d. Doors, windows, and cowlings must retain stock appearance.
- e. Hood louvers allowed for cooling but must maintain stock contours.
- f. Engine compartment must conform to scale and match contour of body.
- g. Hole may be cut for breather clearance only.
- h. Must have closed trunk lid or fully enclosed trunk access panel conforming to original bodylines.
- i. Louvers allowed in trunk lid, no holes.
- j. All body panels (doors, trunk, hood etc.) must be in place when taking the first green flag of the night.
  - Includes hot laps
- k. No fenders, wings, or spoilers allowed.
- l. Ram air induction system prohibited.
- m. Car parts can be grandfathered in.
- n. Body will be metal construction, 26-gauge steel or .040" aluminum minimum.
- o. Body contour must follow frame and roll cage.
- p. Frame ride height must not let car bottom out on track.
- q. Drivers door must be operational and equipped with secure latch.
- r. Fasteners on hood, trunk, or panels must be positive, locking type.
- s. Fiberglass or plastic grill shells allowed.
- t. No lips or spoilers of any kind.
- u. No open top cars (roadsters, convertibles).
- v. Roof must start at top of cowl at front of cab and extend over the top of cab ending at top of trunk
- w. Roof hatch entrance allowed.

#### **4. OVERALL DIMENSIONS**

- a. Maximum outside tire width: 61"
- b. Minimum wheelbase 72", maximum wheelbase 74"
- c. Maximum height 52" from the ground
- d. Body height maximum 44", from bottom of frame rail highest point on body
- e. Body width: 38" Maximum
- f. Maximum total length, bumper to bumper = 124"
- g. Kick outs or side nerf bars must be mounted at three points.
- h. Roof slope may not exceed 3 ½" (WS Rule 2D)
  - Measured from the highest point in the rear to the lowest point in front, just before down radius begins.

#### **5. FRAME AND ROLL CAGE**

- a. Main frame members will be minimum of 1" X 2" x .120" wall rectangular steel tubing only.
- b. 1"x 2" frame rails must go from the centerline of front spindles to rear bumper mount.
- c. No aluminum allowed in cage or frame.
- d. Main frames will have a minimum of 3 cross members between firewall and back of seat
- e. Cross members to be fabricated of same material as frame rails.
- f. Alternate material may be steel angle .125" X 1.5" X 2" minimum.
- g. Cross-bracing in floor under driver strongly recommended.
- h. Rear frame rails at rear roll bar must be 34" max and 30" minimum outside dimension.
- i. Rear roll bar must meet same dimension as the frame it is mounted to.
- j. Frame may taper forward of driver seat area.
- k. Front engine area frame width: 24" max, 20" min outside dimension.
- l. Left and right frame rails must be the same + or - ½".
- m. Roll cage must be DOM steel minimum 1.25" x .083" (.095 recommended) in all cars from 12/98 on.
- n. May grandfather older cars with 1" x .065" tubing.
- o. Cross-brace or diagonal strongly recommended in hoop over driver's head.
- p. All cars must have cage bars installed across door openings on both sides.
- q. Bars should be welded in place as part of roll cage.
  - 1" x .065" minimum (1.25" x .095" recommended)

- r. Cars with bars mounted on doors should have full doorframe and minimum of 2 horizontal cross bars.
  - Minimum 1" x .083".
- s. Cars with bars mounted on doors must have 1/4" x 2" steel stops welded in on each side of opening, totaling a minimum of 4" on each end of door.
- t. Must have a steel bar with a minimum size of 1" X .065" from doorpost to doorpost, under the dash.
- u. Steel plate on driver's door bars recommended
- v. It is recommended that, if using rivets, body panels attach to tabs welded onto cage instead of drilling multiple holes into cage bars.
- w. No down tube frame cars allowed.
- x. Any bars going from cowl area to snout must remain below the upper line of hood.
- y. Classic pickups may have two (2) bars going from upper rear roll cage down to rear clip.
- z. Underslung rear-end only.

## **6. BUMPER DIMENSIONS**

- a. Front: maximum width 36", height 6" to 8" with 2-bar loop.
- b. Ground to top of bumper: 12" minimum, 16" maximum.
- c. May not extend more than 12" forward of front tires.
- d. Rear: maximum width 56" with 3 vertical bars, height 6" to 8" with 2-bar configuration.
- e. Ground to top of bumper: 12" minimum, 18" maximum.
- f. May not extend more than 8" behind rear body panels.
- g. Bumpers must be hollow with max wall thickness of .125

## **7. NERF BARS**

- a. Maximum outside diameter of 1.25" and .125 maximum thicknesses
- b. Must be hollow and may not extend out beyond tread width more than 1" at the rear only. (MAX = 61")

## **8. FIREWALL**

- a. Firewall must be metal and must completely separate engine compartment from cockpit.
- b. Engine protruding into cockpit must be enclosed.

## **9. WINDSHIELD**

- a. Windshield must be Lexan, wire mesh, or protection bars. No glass.
- b. All other cockpit areas must remain open.
- c. Deflectors may be used in front of driver. May be no wider than roll bar area.

## **10. SEAT**

- a. High-backed aluminum racing seat required. **Right and left seat head supports are required.**
  - Full containment seat HIGHLY recommended. (SFI 39.2)
- b. All cars will have a permanent bar located behind top of seat at shoulder level.
- c. Bottom of seat not to be more than 68" back from centerline of front spindles to rear of seat base.
- d. Seat may be tilted back for added head clearance
- e. No portion of the seat to be more than 74" back from centerline of front spindles.

## **11. DRIVE TRAIN**

- a. Must use steel drive shaft from transmission to automotive rear end.
  - Minimum 2.50" x .083" or 2" x .120".
- b. Toyota 8 bolt, Toyota 10 bolt & Quick change rear ends allowed with steel tubes only.
- c. Drive shaft tunnel must have minimum of 2 (3 recommended) 360 deg. hoops between firewall and seat back.
  - Must be fabricated of minimum .1875" x 1.5" steel bar. 1" x .095" steel tube highly recommended.
- d. Rear must be locked or have a solid spool.

## **12. SUSPENSION**

- a. Front suspension must not extend rearward past the most forward panel of the firewall.
- b. Aluminum spindles allowed.
- c. Rear trailing arm/radius rod maximum length = 30".

- d. Torque-absorbing devices permitted.
- e. Maximum 3 radius rods or 3 link suspension
- f. Wheel offsets are allowed.
- g. Coil-over shocks are the only allowable means of supporting the chassis.
- h. One shock and spring per wheel only.
- i. Shock and spring must remain as one unit.
- j. Shocks must be non-adjustable type.
- k. Rebuildable and aluminum shocks allowed.
- l. No driver shall have the ability to adjust suspension from inside car.
- m. Straight front axles are prohibited.
- n. No leaf springs.
- o. No birdcage type rear linkage.
- p. NO Travel Limiting devices allowed – Includes anti-roll (sway) bars (front or rear), bump stops, tie-down chains
- q. No torsion bar suspension system of any type allowed.
- r. The use of carbon fiber or titanium in any way is prohibited.

### **13. STEERING**

- a. All steering components must have safety fasteners such as cotter pins or self- locking nuts.
- b. Manufactured quick-release steering wheel hubs mandatory.
- c. Rack and pinion steering is mandatory.

### **14. BRAKES**

- a. At least one front and one rear brake required.
- b. Steel rotors mandatory, .250 minimum thickness.
- c. Steel OEM calipers or aluminum calipers.
- d. Cutting & scalloping of rotors will be allowed with no rotor surface being less than 3/4" in width.
- e. Drilling of rotors is permitted.
- f. Adjustable brake bias and wheel shut offs allowed.
- g. Competition-type master cylinders allowed.

### **15. BATTERY, FUEL SYSTEM**

- (a) Battery and fuel pump must be mounted outside driver compartment.
- (b) Battery must be secure and held with non-rubber strap.
- (c) Electric fuel pump allowed.
- (d) Fuel cell mandatory, maximum 5 gallons, located in trunk.
- (e) Gasoline only, no fuel additives allowed.
- (f) Reinforced or steel braided line must be used in all high-pressure areas.
- (g) A direct manual cutoff switch wired to ground circuit is mandatory.
  - Emergency electrical cut off switch will be clearly located and marked.

### **16. WEIGHT**

- a. All cars must weigh a minimum of 1200 lbs. with driver at any time.
- b. Max of 75 pounds of ballast. Ballast must be painted white with car number.
- c. All ballast must be mounted inside body lines.

### **17. SAFETY EQUIPMENT - It is drivers' responsibility to ensure safety equipment is installed and used properly!**

- a. Fire bottle system HIGHLY RECOMMENDED.  
~ SSDC is adopting WS rule 13E - All cars are required to have a fire extinguisher. 5 Lb. Halon on board fire system with a minimum of 2 nozzles installed is highly recommended. If a portable type fire extinguisher is used, it must be mounted inside the car easily removable by driver with one hand while in belted position. All pits must have a minimum of a 2 lbs. fire extinguisher accessible in their pits.
- b. Head and neck restraint system MANDATORY. (SFI 38.1)
- c. Window net (TFI/SFI 27.1) or arm restraints (TFI/SFI 3.3) recommended.
- d. Must have fire resistant driving suit:
  - Single layer minimum (TFI/SFI 3.2A1) or 2 layer (SFI 3.2A5)

- One or two piece allowed
- e. Fireproof gloves required. (TFI/SFI 3.3/1 or 3.3/5)
- f. Fireproof shoes required. (TFI/SFI 3.3)
- g. Approved helmet with Snell 2015 or higher.
- h. Full-face helmet only.
- i. Must have 5-point safety harness with quick release.
  - No more than 3 years old
  - Minimum of 3-inch belts (2" shoulder belts for head and neck restraints allowed)
- j. NO two-way radios.
- k. One-way communication from officials only is allowed.
- l. NO mirrors allowed.

## **18. NUMBERS AND GRAPHICS**

- a. Car number must be minimum 12" in height and 2" stroke.
- b. Must be displayed on each door and roof or trunk.
- c. 4" number front and rear to aid in line-up.
- d. Mark outside of car to locate door handles for safety crews.

## **19. DRIVER QUALIFICATIONS**

- a. All drivers must be minimum of sixteen (16) years of age.
- b. Any drivers under 16 years of age may be considered.

## **20. PROTEST PROCEDURE AND FEES**

### **IN ORDER TO FILE A PROTEST, THE FOLLOWING CRITERIA MUST BE MET:**

- a. Person filing protest must be a driver who has competed in a minimum of 5 races.
- b. Protesting driver must have competed in the 2 races preceding the current event.
- c. Protesting driver must have finished behind the driver being protested in current event.
- d. Protesting driver must have finished on lead lap of current event.
- e. Protest form must be presented to any TOP 5 finisher within 10 minutes of the checkered flag.  
(excludes the protesting and protested drivers, TOP 5 finishers shall be available to perform protest)
- f. Protest form must be filled out completely with appropriate fees attached in cash.
- g. (1) Protest per driver, per calendar year
- h. (1) Protest per race night. Earliest completed form will be recognized as that night's protest.

### **ANY AND ALL PROTEST TECHNICAL PROCEDURES/ACTIONS WILL APPLY TO BOTH DRIVERS INVOLVED.**

(protesting driver must prove legality on same part/rule before proceeding to protested driver)

### **PROTEST PROCEDURE**

When a protest is filed, the results for the nights race will be placed on hold. The protest will be carried out by the top 5 finishing drivers of that night's race. This group of top 5 drivers will exclude the protester and protested. They form the Tech Group for this night, consisting of 3-5 drivers depending on race results. The Tech Group will check the protesting driver's car first for the protested rule ONLY. If the protesting driver is deemed legal, the Tech Group will then check the protested driver's car in the same manner. If the protesting driver's car is found to be illegal, the protest fee goes straight to the protested without being checked. If the protested car is found legal after being checked, protested driver will receive the protest money. If the protested driver's car is found to be illegal, the protester will be returned the protest fee. If there are 4 in the group, and they are deadlocked at 2-2, the highest finishing driver will determine the outcome, essentially having 2 votes. This decision is final for this protest. In this case of a deadlocked vote, SSDC will address the tech issue and clarify the rule in question to make it more definitive going forward. Rule infractions shall be determined by the group within 30 minutes of the announcement of the protest. Tech Group shall provide findings to track ASAP so results can be updated.

### **PROTEST FEES**

\$200 PER SSDC GENERAL RULE PROTESTED – MUST INCLUDE SECTION AND LETTER OF RULE (EX: 4A)

\$500 PER WS ENGINE RULE PROTESTED – MUST INCLUDE SSDC SECTION 1, WS SECTION 8, AND LETTER. (EX: 1-8T)

NOTE: Rule 8Q (bore/stroke) cannot be teched due to lack of instrumentation at this time.

### **PENALTIES FOR SUCCESSFUL PROTEST**

SSDC GENERAL RULE INFRACTION = LOSS OF PAY AND TRACK/NOW600 POINTS FOR CURRENT RACE NIGHT  
 SSDC/WS ENGINE RULE INFRACTION = LOSS OF PAY AND TRACK/NOW600 POINTS FOR CURRENT RACE NIGHT  
 LOSS OF NOW600 SEASON POINTS UP TO CURRENT RACE NIGHT  
 DRIVER WILL NOT BE ALLOWED TO RACE THE REMAINDER OF THE SCHEDULE

## 2024 SOONER STATE DWARF CARS – PROTEST FORM

|   |  |
|---|--|
| <p><b><u>PROTESTER</u></b><br/>         NAME: _____<br/> <br/>         CAR NUMBER: _____<br/> <br/>         DATE OF RACE: _____<br/> <br/>         FINISHING POSITION: _____<br/> <br/> <input type="checkbox"/> COMPETED IN A MINIMUM OF 5 RACES?<br/> <br/> <input type="checkbox"/> COMPETED IN PREVIOUS 2 RACES?<br/> <br/> <input type="checkbox"/> FINISHED ON LEAD LAP?<br/> <br/> <input type="checkbox"/> GENERAL RULE: (SECTION AND LETTER) _____<br/> <input type="checkbox"/> \$200 FEE ATTACHED<br/> <br/> <input type="checkbox"/> MOTOR RULE: SSDC SECTION 1, WS SECTION 8: _____<br/> <input type="checkbox"/> \$500 FEE ATTACHED<br/> <br/>         COMMENTS: _____<br/>         _____<br/>         _____<br/>         _____</p> | <p><b><u>PROTESTED</u></b><br/>         NAME: _____<br/> <br/>         CAR NUMBER: _____<br/> <br/>         DATE OF RACE: _____<br/> <br/>         FINISHING POSITION: _____<br/> <br/> <b><u>TECH TEAM:</u></b><br/>         NAME: _____<br/> <br/>         FINISHING POSITION: _____<br/> <br/>         NAME: _____<br/> <br/>         FINISHING POSITION: _____<br/> <br/>         NAME: _____<br/> <br/>         FINISHING POSITION: _____<br/> <br/>         NAME: _____<br/> <br/>         FINISHING POSITION: _____<br/> <br/>         NAME: _____<br/> <br/>         FINISHING POSITION: _____</p> |
| <p>TECH GROUP: <input type="checkbox"/> PASS    <input type="checkbox"/> FAIL</p>   | <p>TECH GROUP: <input type="checkbox"/> PASS    <input type="checkbox"/> FAIL</p>  |
|   |  |