

# **2012**

## **Riverside Speedway Dwarf Cars Competition Rules**

2011 Dwarf car Engine rule that you may run more than a 1000cc motor, must be approved by Director of Competition.

Riverside Speedway Dwarf Cars shall hereafter be referred to as RSDC throughout the rules and descriptions. These Adopted rules and/or regulations set forth herein are designed to provide for the orderly conduct of racing events and to establish minimum acceptable requirements for such events. These Adopted rules shall govern the condition of all events, and by participating in these events, all participants are deemed to have complied with these rules. No expressed or implied warranty of safety shall result from publications of or compliance with these rules and/or regulations. They 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 or official. The race car owners who are at the track that day (by majority vote) shall be empowered to permit reasonable and appropriate deviation from any of the specifications herein or impose any further restrictions that in their opinions do not alter the minimum acceptable requirements. No expressed or implied warranty of safety shall result from such alteration of specifications. Any interpretation or deviation of these rules is left to the discretion of the car owners or track promoters. Their decision is final. Majority rules, tiebreaker determined by race promoter.

### **A. GENERAL RULES**

1. All RSDC vehicles are subject to inspection at any time.
2. Approval of a RSDC vehicle by the inspector shall mean only that the vehicle is approved for participation in a competitive event and shall not be construed in any way to mean that the inspected RSDC vehicle is guaranteed mechanically sound. Be it further declared that the inspector shall not be liable, nor shall the sanctioning body, for any mechanical failure not for any loss, injuries or death resulting from same.
3. All RSDC Drivers shall be liable for his or her personal safety equipment. Such approved safety equipment pertaining to vehicle safety or driver equipment is highly recommended to prevent injury, bodily harm or loss of life due to the nature of the sport.

### **B. BODY STYLES**

1. 1928-1948 American-made production vehicles only. 5/8 scale, two-door sedans, coupes, or pickup trucks. These are to be known as Classic Modified or Dwarf body styles.
2. Modified appearing body styles such as IMCA or DIRT Modifieds are NOT ALLOWED.

### **C. BODY REQUIREMENTS AND SPECIFICATIONS**

1. Body must be 5/8 scale, stock appearing. Maximum outside tire width 60 1/2" measured from outside of rim on first inner bead. Maximum height 50". 73" wheelbase plus or minus 1".
2. Must have grill shell or simulated open radiator matching original body style, any material.
3. Doors, windows, and cowlings must retain stock appearance. Hood louvers allowed for cooling, but must maintain stock contours.

4. Engine compartment must conform to scale and match contour of body. Hole may be cut for breather clearance only. Ram air induction system prohibited.
5. Must have closed trunk lid or fully enclosed trunk access panel conforming to original bodylines. Louvers allowed no holes.
6. No fenders.
7. No wings or spoilers.
8. Forward facing air ducts are allowed.
9. Body will be metal construction, 26-gauge steel or .040" aluminum minimum. Fiberglass or plastic shells allowed. All exposed edges must be folded or trimmed over. Legends cars may be allowed under local rules. No lips or spoilers of any kind.
10. NO open top cars (roadsters, convertibles). No panel trucks, station wagons, or specialty cars.
11. NO car over 50" tall, top to ground. Body height maximum 44"; bottom edge to top (including frame rail).
12. Maximum body width: 40", Maximum frame width 34", Min 30". Driver's door post may be modified to allow for the use of a full containment seat.
13. Body contour must be formed by frame and roll cage. Roof hatch entrance allowed.
14. Frame ride height must not let car bottom out on track.
15. Drivers' door must be operational and equipped with secure latch.
16. Fasteners on hood, trunk, or panels must be positive, locking type.
17. 124" maximum total length, bumper to bumper.
18. Kick outs or side nerf bars must be mounted at three points and run full length between tires. 1 ¼" max .125 wall thickness. Cannot stick out beyond 1" from the side of the tire.
19. All cars will weigh minimum 1240# with driver, after race. Empty car weight minimum 950#. (no ballast, no fuel)
20. No weight outside of car body, i.e. on nerf bars. ( all weight must be inside frame rails)
21. Front maximum width 30". Bumper height 6" to 8" with 2-bar loop. Ground to top of bumper: 12" minimum, 16" maximum. Bumper may not extend more than 12" forward of front tires.
22. Rear maximum width 56" with 3 vertical bars. Bumper height 6" to 8" with 2-bar configuration. Ground to top of bumper: 12" minimum, 24" maximum (push bar hoop) no wider than the body. May not extend more than 8" behind rear body panels.
23. Bumpers must be hollow with max wall thickness of .125

24. Firewall must be metal and must completely separate engine compartment from cockpit. Engine protruding into cockpit must be enclosed.
25. Windshield must be Lexan, wire mesh, or protection bars. Lexan highly recommended when running asphalt. No Glass. All other cockpit areas must remain open. Deflectors may be used in front of driver. May be no wider than roll bar area.
26. Full-length nerf bars between front and rear tires mandatory. Maximum outside diameter of 1.25" and .125 maximum thickness. Must be hollow. May not extend out beyond tread width more than 1" at the rear only.
27. Seat must be high-backed aluminum, racing type. All cars will have a permanent bar located behind top of seat at shoulder level. Bottom of seat will not be more than 63" back measured from upper ball joint. Seat may be tilted back for added driver head clearance; however, no portion of the seat may be back more than 70" as measured above.
28. Car number must be minimum 12" in height and 2" stroke. Must be displayed on each door and roof or trunk. Numbers in 4" size should be on front and rear of car to help with line-ups.

#### **D. WHEELS AND TIRES**

1. Steel wheels only, minimum wall thickness .090", 13" only. Wheel width max. 8". Track tire is mandatory, must be purchased from the track. A tire stamping fee of \$10.00 for each used tire.
2. A minimum durometer of 50 before the race will be required.

**If you are unable to adhere to the 2012 engine rule , you may request an extension of the 2009 engine rules . This will be at the discretion of Riverside Speedway and the RS Dwarf Car board.**

#### **E. ENGINE SPECIFICATIONS**

a. Displacement maximum:

1. Stock 1000cc O.E.M
2. Down draft motors limited to 1000cc maximum with no variance
3. Water-cooled engines 1000cc and below can run carburetors or fuel injection systems.
4. Down draft engine must run gasoline only.
5. Effective January 1, 2010 no engine can be modified to be less than original stock configuration OEM specifications.
6. Engine must be in production for two years before deemed legal for use. Any major changes to existing engine by the manufacturer must be reviewed by RSDC before approval.
7. Four cycle, four cylinders maximum only. Must have working transmission, clutch, and starter with all parts in place. Complete Clutch assembly must remain in engine. External reverse boxes allowed. No air controlled shifting devices.

8. Charging system optional. Battery powered ignition system only. Alternator cover allowed.
9. No auxiliary starters.
10. Engines must be front mounted in engine compartment.
11. Engine setback: The “square of the engine” (rear fins of the jugs) may not extend rearward more than 17” from the center of front spindle. No part of the engine or transmission may extend rearward more than 21 inches from center of front spindle.
12. No after market fuel injection, and no turbos. No nitro, or nitrous oxide. OEM fuel injection must remain stock. Air box modification allowed or after market.
13. Engine must be cooled by original intent. May use extra fan or oil cooler.
14. Porting, grinding, polishing or changing stock configuration of intake or exhaust ports allowed for oil & air cooled motors. Carburetor/Fuel injection boot must fasten directly to head in the stock intake port location.
15. No porting, grinding, polishing or changing stock configuration of intake or exhaust ports allowed on water-cooled motors. Casting part lines must be visible upon inspection. Intake port area may be altered to match intake boot. Alteration not to exceed 3/8” into intake port location
16. Header must attach directly to head in stock exhaust port location
17. Oiling system may not include a dry sump system. Oil pan modification for clearance allowed.
18. No increasing or decreasing of motor stock stroke in any way.
19. Engine exhaust must include muffler and exit rearward. Muffler must be a minimum of 98 decibels at 100 feet or meet local track regulations
20. Cylinder cranking compression – minimum 100 p.s.i., Maximum 220 p.s.i. per cylinder average of 4 cylinders, no variance, measured with a Snap-On compression gauge, part number EEPV303A, with adapters EEPV304A, EEPV306A, or MT26J200, after ten (10) compression revolutions of cranking, 15-45 minutes following feature event. Tools provided by RSDC.
21. Carburetors or Fuel Injection may be removed or held in the full open position to allow for full air flow. All four (4) spark plugs must be removed before checking compression. A booster pack will be allowed to assist with engine cranking if the engine appears to crank at a slow rate.
22. After market engine management systems, allowed on 2004 and older engines.
23. Unaltered factory ECM must remain.

## **F. BATTERY, FUEL SYSTEM**

1. Battery and fuel pump must be mounted outside driver compartment. Battery must be secure and held with non-rubber strap. Electric fuel pump allowed.
2. Fuel cell mandatory, maximum 5 gallons, located in trunk.
3. GASOLINE ONLY, no fuel additives allowed. NO ALCOHOL ALLOWED
4. Reinforced or steel braided line must be used in all high-pressure areas.
5. A direct manual cutoff switch wired to ground circuit will be installed on the front dash within 6" of the corner formed by the front of the right door and the dashboard. The emergency electrical cut off switch will be clearly marked.

## **G. DRIVE TRAIN**

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

## **H. FRAME AND ROLL CAGE**

1. Main frame members will be minimum of 1" X 2" X .120" wall rectangular steel tubing only. Mainframe rail consist of the length between the front lower a-arm cross member and the rear main roll bar upright. No aluminum allowed in cage or frame.
2. Main frames will have a minimum of three (3) cross members between firewall and back of seat fabricated of same material as frame rails. Alternate material may be steel angle, min. .125" X 1.5" X 2". Cross-bracing in floor under driver strongly recommended. Rear frame rails at rear roll bar must be 34" max and 30" minimum outside dimension. Rear roll bar must meet same dimension as the frame it is mounted to. Frame may taper forward of driver seat area. Front engine area frame width minimum 20", max 24" outside dimension. Left and right frame rails must be the same +/- 1/2 inch.
3. Roll cage must be DOM steel minimum 1.25" x .083" (.095 recommended) in all cars manufactured from 12/98 on. Clubs may grandfather older cars with 1" x .065" tubing. Cross-brace or diagonal strongly recommended in hoop over drivers' head.
4. All cars must have cage bars installed across door openings on both sides. Bars should be welded in place as part of roll cage. Minimum size 1" x .065". (1.25" x .095" recommended) cars with bars mounted on doors should have full doorframe and minimum of two (2) horizontal crossbars. Minimum 1" x .083". Cars with bats 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.

5. It is required to have a steel bar with a minimum size of 1" x .065" from doorpost to doorpost, under the dash. Steel plate on drivers' door bars recommended
6. It is recommended that, if using rivets, body panels attach to tabs welded onto cage instead of drilling multiple holes into cage bars.
7. No down tube frame cars allowed. Any bars going from cowl area to snout must remain below the upper line of hood.
8. Classic pickups may have two (2) bars going from upper rear roll cage down to rear clip.

## **I. SUSPENSION**

1. Front suspension must not extend rearward past the most forward panel of the firewall.
2. Rear trailing arm/radius rod specifications:
  - a. Arms may have a maximum length of 30".
  - b. Torque-absorbing devices are permitted.
  - c. Maximum 3 radius rods or 3 link suspension
3. Wheel offsets are allowed.
4. Hub offsets are NOT allowed. Hubs front and rear must be within 1/2" distance from mainframe rail on either side of car, measured from center of rotor to vertical plane of frame rail.
5. Coil-over shocks are the only allowable means of supporting the chassis. One shock and spring per wheel only. Shock and Spring may be rocker arm actuated with one push rod per shock and spring. Shock and spring must remain as one unit. Springs must be mounted over the body of the shock.
6. Shocks must be of all-steel construction, no exterior dampening adjusters allowed. May not be of a type that allows disassembly. Carrera shock model 3363 will be allowed for competition.
7. No driver shall have the ability to adjust suspension from inside car.
8. Straight front axles are prohibited. Local clubs may grandfather existing cars for competition.
9. No leaf springs.
10. No birdcage type rear linkage.
11. Anti-roll (sway) bars permitted front or rear. Must be connected without adjustments to arm location.
12. No torsion bar suspension system of any type allowed.

## **J. STEERING**

1. All steering components must have safety fasteners such as cotter pins or self-locking nuts.
2. Manufactured quick-release steering wheel hubs mandatory.

3. Rack and pinion steering is mandatory.

## **K. BRAKES**

1. All four wheels must have working calipers and rotors.
2. Rotors and calipers:
  - a. Steel rotors mandatory, .250 minimum thickness.
  - b. Steel OEM calipers or aluminum calipers.
  - c. Cutting & scalloping of rotors will be allowed with no rotor surface being less than  $\frac{3}{4}$ " in width.
  - d. Drilling of rotors is permitted.
3. Adjustable brake bias and wheel shut-offs allowed.
4. Competition-type master cylinders allowed.

## **L. SAFETY EQUIPMENT**

1. Fire bottle system HIGHLY recommended.
2. Driver uniform will consist of:
  - a. Fire suit (single layer minimum, one or two-piece).
  - b. Fireproof gloves.
  - c. Fireproof shoes.
  - d. Approved helmet with Snell 95 or higher.
  - e. Full-face helmet, open face helmet permitted if you run a full lexan windshield.
  - f. Head and neck restraint systems recommended.
3. Car must be equipped with 5-point safety harness, no more than 3 years old, with minimum of 3-inch belts.
4. Aluminum, high-backed racing seat mandatory.
5. Window nets mandatory both sides, arm restraints and head & neck restraints HIGHLY recommended.
6. NO two-way radios. One-way communication from officials only is MANDATORY.  
Scanners mandatory
7. Mirrors will be allowed. If any race official feels a driver is using their mirrors to block or impede a drivers' progress, they will be black flagged immediately and required to remove their mirror before the next event.

## **M. DRIVER QUALIFICATIONS**

1. All drivers must be a minimum of sixteen (16) years of age. All drivers under 16 years of age must go before the Contest Board for driving approval and must have a signed waiver from parent and/or guardian.

## **N. GENERAL REGULATIONS**

1. The rules and/or regulations set forth herein are designed to provide for the orderly conduct of racing events and to establish the minimum acceptable requirements for such events. These rules shall govern the condition of all events, and, by participating in these events, all participants are deemed to have accepted and complied with these rules. **NO EXPRESSED OR IMPLIED WARRANTY OF SAFETY SHALL RESULT FROM PUBLICATION OF OR COMPLIANCE WITH THESE RULES AND REGULATIONS.** They are intended solely as a guide for the conduct of the sport and are in no way a guarantee against injury or death to a participant, spectator, or official. Any interpretation or deviation of these rules is left to the discretion of TUSA and the decision is final. **NO EXPRESSED OR IMPLIED WARRANTY OF SAFETY SHALL RESULT FROM SUCH DEVIATION OF SPECIFICATIONS.**
2. If these rules don't specifically say what you can do, you can't do it!!! Always contact technical inspectors when rules or parts are in question!
3. All rules are subject to change by the Tech team. It is the responsibility of the competitor to obtain, and become familiar with the current general rules pertaining to the division in which he/she chooses to participate in. Any item not covered in the Riverside Speedway rules section must be stock or approved in writing by the Director of Competition or Technical Official. If any item being considered for use in this division is not addressed in these rules, competitors are required to contact Riverside Speedway for a judgment as to acceptability. The rules and/or regulations set forth herein are designed to provide for the orderly conduct of racing events, and to establish minimum acceptable requirements for such events. All participants are deemed to have obtained, read and understood a copy of the current rules, and complied with these rules. No express or implied warranty of safety shall result from publications of, or compliance with these rules, and/or regulations. They 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, or an official. All rule clarification letters from the previous seasons are void, and can not be used in the 2012 race season. It is highly recommended that you carefully read your rulebook, and knowing what it contains. You are responsible for know the rules.

### **2009 Dwarf Car Engine Rules**

1. Displacement maximum: Side draft motors 1250cc (+1%) Down draft motors limited to 1200cc maximum with no variance.
2. ZX12 – Must remain stock bore, stroke, rod length, and be stock appearing. Rod length rule in effect January 1, 2006. Stock OEM fuel injection only. All head components must be OEM stock with the exception of cam sprockets. OEM stock ignition box only to control engine functions. Power commanders or fuel monitoring devices permitted but may not include any additional boxes modules or devices to alter motor functions.
3. Water-cooled engines 1100cc and below can run carburetors or fuel injection systems. Engines above 1100cc OEM must remain in their original stock configuration of carburetors or fuel injection.
4. Down draft engine must run gasoline only.

5. Effective January 1, 2004 no engine can be modified to be less than original stock configuration OEM specifications.
6. Engine must be in production for two years before deemed legal for use. Any major changes to existing engine by the manufacturer must be reviewed by RSDC before approval.
7. OEM Electronic engine components (Power Commanders permitted) will be reviewed annually to insure equality.
8. ZX10 engine to be reviewed for legality for 2007 racing season. We currently do not allow any head modifications, porting, polishing on down draft engines.
9. Four cycle, four cylinders maximum only. Must have working transmission, clutch, and starter with all parts in place. Complete Clutch assembly must remain in engine. External reverse boxes allowed. No air controlled shifting devices.
10. Charging system optional. Battery powered ignition system only. Alternator cover allowed.
11. No auxiliary starters.
12. Engines must be front mounted in engine compartment.
13. Engine setback: The "square of the engine" (rear fins of the jugs) may not extend rearward more than 17" from the center of front spindle. No part of the engine or transmission may extend rearward more than 21 inches from center of front spindle.
14. No after market fuel injection, and no turbos. No nitro, or nitrous oxide. OEM fuel injection must remain stock. Air box modification allowed or after market.
15. Engine must be cooled by original intent. May use extra fan or oil cooler.
16. Carburetors and cams optional. (Except ZX12)
17. After market cylinder & cylinder heads: No after market cylinder & cylinder heads allowed on water-cooled motors. No after market cylinder heads allowed on oil & air-cooled motors, after market cylinders authorized.
18. Porting, grinding, polishing or changing stock configuration of intake or exhaust ports allowed for oil & air cooled motors. Carburetor/Fuel injection boot must fasten directly to head in the stock intake port location.
19. No porting, grinding, polishing or changing stock configuration of intake or exhaust ports allowed on water-cooled motors. Casting part lines must be visible upon inspection. Intake port area may be altered to match intake boot. Alteration not to exceed 3/8" into intake port location
20. Header must attach directly to head in stock exhaust port location
21. Oiling system may not include a dry sump system. Oil pan modification for clearance allowed.
22. No increasing or decreasing of motor stock stroke in any way.

23. Engine exhaust must include muffler and exit rearward. Muffler must be a minimum of 98 decibels at 100 feet or meet local track regulations

24. Cylinder cranking compression – minimum 100 p.s.i., Maximum 220 p.s.i. per cylinder average of 4 cylinders, no variance, measured with a Snap-On compression gauge, part number EEPV303A, with adapters EEPV304A, EEPV306A, or MT26J200, after ten (10) compression revolutions of cranking, 15-45 minutes following feature event. Tools provided by RSDC.

25. Carburetors or Fuel Injection and all four (4) spark plugs must be removed before checking compression.

## Dwarf Car Purse

### 1 Though 12

1 <sup>st</sup>	\$ 125.00
2 <sup>nd</sup>	\$ 85.00
3 <sup>rd</sup>	\$ 60.00
4 <sup>th</sup>	\$ 50.00
5 <sup>th</sup>	\$ 45.00
6 <sup>th</sup>	\$ 40.00
7 <sup>th</sup>	\$ 35.00
8 <sup>th</sup>	\$ 30.00
9 <sup>th</sup>	\$ 25.00
10 <sup>th</sup>	\$ 25.00
11 <sup>th</sup>	\$ 25.00
12 <sup>th</sup>	\$ 25.00

### 13 Though 18

1 <sup>st</sup>	\$150.00
2 <sup>nd</sup>	\$100.00
3 <sup>rd</sup>	\$ 75.00
4 <sup>th</sup>	\$ 60.00
5 <sup>th</sup>	\$ 50.00
6 <sup>th</sup>	\$ 45.00
7 <sup>th</sup>	\$ 40.00
8 <sup>th</sup>	\$ 35.00
9 <sup>th</sup>	\$ 30.00
10 <sup>th</sup>	\$ 25.00
11 <sup>th</sup>	\$ 25.00
12 <sup>th</sup>	\$ 25.00
13 <sup>th</sup>	\$ 20.00
14 <sup>th</sup>	\$ 20.00
15 <sup>th</sup>	\$ 20.00
16 <sup>th</sup>	\$ 20.00
17 <sup>th</sup>	\$ 20.00
18 <sup>th</sup>	\$ 20.00

FOR TECHNICAL INFORMATION CONTACT:

Doug Shannon  
Director of Competition  
603-636-2376

You should retain all written and signed answers to questions in your rulebook for future reference. Rule clarifications or changes will be posted in the pit area and sent to all registered and licensed competitors.

Management reserves the right to impose weight penalties to any car deemed “hurting” the competition.

The Technical Team has the final say in determining the interpretation, construction, or design of the rules.