

Retro Stock Car



General Specifications

1. **Wheelbase:** 4.50" (114.3mm).
2. **Guide Lead:** Maximum of .750" (19.05mm) measured from the center of the front axle or 5.25" (133.35mm) when measured from the center of the rear wheels.
3. **Maximum Overall Chassis Width:** 3.00" (76.02mm), measured across any part of the chassis, as well as across the front and rear axles).
4. **Maximum Body Width:** 3.125" (79.38mm), measured at the front and rear wheel arches.
5. **Maximum Rear Tire Width:** 0.810" (20.57mm).
6. **Minimum Rear Tire Diameter:** 0.8125" (20.64mm).
7. **Minimum Front Tire Width:** 0.375" (9.53mm). Wheels with O-ring "tires" are prohibited. The front tire contact patch must touch the track across the full width of the tire (i.e. no coning/angling or knife-edging is allowed). Tire edges may be rounded to a maximum 1/16" radius.
8. **Minimum Front Tire Diameter:** 0.8125" (20.64mm).
9. **Minimum Rear Chassis Clearance:** 0.050" (1.27mm). The entire motor bracket, rear chassis section, and gear must meet this clearance. Clearance will be measured with front and rear tires sitting flat on the test block without the guide.
10. **Minimum Front Chassis Clearance:** 0.050" (1.27mm), measured at the most forward part of the chassis. Clearance will be measured with front and rear tires sitting flat on the test block without the guide.
11. **Axles (Front & Rear):** 3/32" (2.38mm) minimum diameter, solid steel. Hollow axles are not allowed. Axles may only be flattened in the areas where the wheels and gear are secured.
12. **Bushings/Bearings:** Oilite/bronze bushings or ball bearings may be used in the front and/or the rear.
13. **Minimum Weight:** 120 grams ready to race.
14. **Drive Type:** Inline drive only, with the motor shaft at 90° to the rear axle.
15. **Drive Gears:** Only production gears are allowed. The only modification allowed is the addition of a 1/8" reducing sleeve for use with a 3/32" axle.
16. **Maximum Front Axle Play:** 0.125" (3.18mm), as part of the maximum front track width. At no time can tires extend out past the body.
17. **Minimum Body Height:** Body may not be trimmed above the lower door lines. Severe raking of the body for aerodynamic effect is not allowed.
18. All chassis parts must be covered by the unmodified body.
19. The wheels shall be located in relation to the wheel arches in the body.
20. **Tires – Rear:** Any commercially-available black natural rubber tire, chemically-treated or untreated, on any size hub.
21. **Tires – Front:** Must be made of two pieces, i.e. a wheel and a tire. Front wheels may be made of any material and can have any size hub (as long as the front wheel and tire dimensions listed elsewhere in these rules are observed). Front tires must be glued to the wheels and be made of black rubber; only SBR, Wonder, and natural rubber type materials are acceptable. Front tires may be coated with cyanoacrylate adhesive ("Super Glue") or nail polish.

Chassis

1. **Chassis Type:** Any personally-built or commercially-available scratchbuilt chassis in kit form or built conforming to these specifications is allowed.
2. **Chassis Materials:** Brass: sheet, rod, and tube; steel: wire, pin tubing, and commercial guide tongues are allowed. Steel pieces used for guide tongues are limited to a maximum 1" (25.4mm) width and 1.50" (38.1mm) length to include the guide holder. No other materials are allowed. Chassis parts, such as pans, brackets, guide tongues, etc., that are made using EDM, laser, or water-cutting techniques are allowed only if they are individual commercially-available components or components of chassis kits (i. e. these techniques may not be used in the private manufacture of one-off components). Materials such as printed circuit boards are not legal. Each car must have a brass rear bracket consisting of at least three sides (vertical or horizontal), with each connected side having a minimum width or height of at least .200". The motor bracket must support the motor and extend to touch the rear axle tube. The axle tube does not need to travel through the motor bracket. The motor can be screwed to the motor bracket and it can also be soldered in. Floating pin tubes inside another tube are NOT allowed.
3. **Hinged Movements:** Other than a drop arm, all hinged movements must be oriented in only one direction on any individual chassis. A chassis may have transverse hinges (examples: Iso-fulcrum hinges and plumber hinges) **OR** it may have longitudinal hinges (example: side pan hinges) but the chassis may not have both types. The number of individual hinges is not restricted. Centerline hinges are NOT allowed.
4. **Tape/Lead:** Lead weight may be added to a chassis but may only be affixed to the top side of the chassis. Strapping or other tape to control or restrict movements is allowed but may only be affixed to the top side of the chassis.
5. **Front axle:** A single straight, 3/32" (2.38mm) minimum diameter, one-piece front axle is required, carrying both front wheels. The axle may be fixed or in a tube. NO hinged front wheel movements are allowed (i.e. no "L" arms). Front wheels may rotate independently.
6. **Guide:** A single guide flag is allowed, centered on the longitudinal axis of the chassis (i.e. no sideways "free float" or offset) and with a blade no larger than .086" (2.20mm) wide x 1.060" (27.18mm) long.
7. No part of the chassis, motor, gear, or other component may hang below the main chassis rail(s), which may not be bent or bowed vertically for the purpose of lowering the midsection of the frame below the level dictated by the clearance specifications.

Motor

1. **Motor types:** May use any one of the following motors, which must remain unopened and unmodified:
 - **Falcon 7**
 - **Pro Slot Euro Mk 1 4002, Sealed** with Chinese arm. May be refurbished by an approved IRRRA Refurbishing Center
 - **TSR D3**
2. **Note:** No other motors will be allowed unless approved by the IRRRA and added to the approved motor list.
3. **Exclusion Clause:** Clear violation of the motor-tampering rule will result in permanent exclusion from future IRRRA events of any kind. Racers will be required to sign a tech sheet giving permission for the Race Director, at his discretion, to tear their motors down for inspection to prove legality. If a motor is deemed illegal due to unapproved modifications (including, but not limited to, incorrect armature, bushing alterations, magnet shimming, magnet change, timed brush hoods, etc.), the racer will be disqualified from the event and future events until reinstated by IRRRA officials. If the motor is legal and can be refurbished, it will be sent to an approved IRRRA refurbishing program at no cost to the racer. Non-refurbishable motors found legal will be replaced at no cost to the racer. Racers wishing to have their motor refurbished for continued use can participate in the IRRRA Motor Refurbishing Program.
4. A motor may not be changed after tech inspection at any time unless it fails during the race. A motor change between heats is NOT allowed unless the motor change was begun during an active heat. Motor changes must be approved and re-inspected by the Tech Director.

Body

1. All approved Retro StockCar bodies are listed in "Approved Body Lists" section. All bodies must be representative of pre-1970 cars and be 1/24 scale bodies with a wheelbase of 4.50 inches.
2. **Minimum Thickness:** .015".
3. **Body style, Appearance and Trim:** Racers are encouraged to present cars with scale realism. Front and rear wheel arches must be cut out and not exceed the molded wheel opening. Bodies must be presentably painted

and carry at least three racing numbers, one on each side, and one (large one) on the roof, as in standard NASCAR practice. No part of the chassis may be seen when looking on the car from its top. Bodies cannot be trimmed above the lower door lines. The full bumper must remain intact except for trimming to provide clearance for the guide flag. All bodies must be fully opaque on all sides except for those areas deemed to be windows. Windows may be tinted. The term opaque means covered with paint, tape, or other suitable material such that a finger is not visible through the paint or other covering under normal lighting. No part of the chassis may be seen when viewing the car from above.

4. **Spoilers and Air Control:** No add-on spoilers are allowed.
5. **Cockpit:** All bodies must carry a painted (at least two colors), fully-molded three-dimensional interior comprising a driver (helmet, shoulders, roll bar, and arms), a steering wheel, and cockpit representation. No paper interiors.