

# UKRRA

## UK Retro Racing Association

### Can-Am Cars

#### Technical Regulations

##### A. General Specifications.

1. **Maximum Overall Car Width: 3.250" (82.55mm)** with the body fitted ready to race.
2. **Maximum Overall Chassis Width: 3.125" (79.38mm)**, measured across any part of the chassis including the front and rear axles, wheels and tyres.
3. **Wheelbase: No maximum or minimum is specified** (but see rules A15 & D1A).
4. **Rear Wheels and Tyres:**
  - A. **Maximum Rear Tyre Width: 0.810" (20.57mm).**
  - B. **Minimum Rear Tyre Diameter: 0.8125" (20.64mm).**
  - C. **Wheels can be made from any material and be of any diameter.**
  - D. **Rear Tyre Material: Free choice** but must be **black** and **not be made from, contain, or be coated with silicone.**
  - E. **Speed rubber is prohibited.**
5. **Front Wheels and Tyres:**
  - A. **Minimum Front Tyre Width: 0.225" (5.72mm).**
  - B. **Minimum Front Tyre Diameter: 0.750" (19.05mm).**
  - C. **Must be made of two pieces, i.e. a Wheel and a Tyre.**
  - D. **Wheels can be made from any material and be of any diameter.**
  - E. **Tyres must be glued to the wheels and be made of black rubber.**  
Only SBR, Wonder, and natural rubber type materials are acceptable.
  - F. **Tyres made from, containing, or coated with, silicone, urethane or other similar compounds must not be used.**
  - G. **Tyres may be coated with cyanoacrylate adhesive ("Super Glue") or nail polish.**
  - H. **Wheels with O-ring 'tyres' are prohibited.**
  - I. **Tyre contact patch must touch the track across the full width of the tyre. Coning, angling or knife-edging is not allowed.**
  - J. **Tyre edges may be rounded to a maximum 1/16" (1.6mm) radius.**
6. **Minimum Chassis Clearance:**

Measured with the car sitting on its tyres on a flat tech block and without the guide.

  - A. **Rear: 0.050" (1.27mm).** The entire motor bracket, gear, and all parts of the chassis, including pans, aft of the motor mounting face of the motor bracket must meet this clearance.
  - B. **Front: 0.015" (0.38mm),** measured under the most forward part of the chassis.
  - C. **The bottom surface of the whole chassis** (including the motor, but excluding the guide flag) **must be flat and straight in all directions**, with no bowing or drooping of any parts below the plane defined by the front and rear clearance specifications. This will be checked by applying a straight edge to the underside of the car both across the frame and along the length of the frame.
7. **Axles (Front & Rear):**
  - A. **Minimum diameter 3/32" (2.36mm).**
  - B. **Both axles must be straight, one piece and made from solid steel.**

- C. **Hollow axles are not permitted.**
- D. **Front axles do not have to rotate** but **both front wheels** must be **mounted** onto the **same axle**.
- E. **Front wheels may rotate independently.**
- F. **Maximum front axle side play: 0.125" (3.18mm)** as part of the **maximum front track**. **At no time** can the **front wheels** or **tyres extend out past the body**.
- G. **Axles must not protrude** beyond the **outer face** of any **wheel** or **tyre**.
- H. **Axles may only be flattened** in the **areas** where the **wheels** and **gear** are **secured**.
- 8. **Bushings and Bearings: Free Choice.**
- 9. **Drive Type:**
  - A. **'Inline' only**, with the motor shaft at 90° to the rear axle.
  - B. **Offset motors are not permitted**, i.e. the armature shaft of the motor must be located on the longitudinal centre line of the chassis.
- 10. **Drive Gears: Free choice.**
- 11. **Minimum Weight: 100 grams ready to race.**
- 12. **Rear Body Height:**

Measured with the car **sitting on its tyres** on a **flat tech block** and **without the guide**.

  - A. **Maximum: 1.375" (34.93mm)** measured from the **tech block surface** to the **top of the highest point** of the rear of the **body**, **excluding any add-on spoiler**.
  - B. **Severe raking of the body for aerodynamic effect is not allowed.**
- 13. **Guide lead:** No **maximum** is **specified** but the **guide flag** must be **covered** by the **unmodified body** when **viewed from above**.
- 14. **All chassis parts, including the guide flag, wheels, tyres and all other running gear** must be **covered** by the **unmodified body** when **viewed from above**.
- 15. **All wheels** must be **located centrally** in relation to the **wheel arches** in the **body**.

## **B. Chassis.**

- 1. **Chassis Type:**

Any **chassis**, built from **scratch** or from a **commercially available kit** or **parts**, and **conforming** to these **specifications** is **allowed**.
- 2. **Chassis Materials:**

**Brass: sheet, rod, and tube.**  
**Steel: wire, pin tubing, and commercial guide tongues.**  
**Solder and Glues: may only be used for assembly of components.**  
**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 board, glass fibre and carbon fibre are not permitted.
- 3. **Chassis Construction:**
  - A. **Each car must have a one-piece 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 **0.200" (5.08mm)**.
  - B. **The motor bracket** must **support the motor** and **extend to touch the rear axle tube**.
  - C. **The rear axle tube** does **not need** to **travel through** the **motor bracket**.
  - D. **The motor** can be **fixed** to the **motor bracket** with **screws** and/or **solder**.
  - E. **Wire or tubing rails** must **connect** the **front** and **rear** sections of the **chassis**. Using **metal strip** for this purpose is **not permitted**. A **rail** is **defined** as **that which connects the motor bracket to the front of the chassis**.

**F. Main chassis rails** constructed of **round** steel or brass **wire** maybe ground or sanded **flat on the bottom**, but **no more** than **20%** of the **rail diameter** may be **removed**.

**G. Pieces of steel** used for **guide tongues** are limited to a **maximum 1.00” (25.4mm)** total **width** and **1.50” (38.1mm)** total **length**. Steel tongues cut from a flexi or wing car chassis are not considered "commercial guide tongues" and are not allowed

**H. Floating pin tubes** inside another tube **are allowed**.

**I. Tape** is **not** allowed on the **bottom** of the **chassis** at **any point**, **except** as a **temporary repair during a race** (see also rule **B6C**).

**4. Hinged Movements:**

**A. Other than a drop arm**, all **hinged movements** must be **oriented** in only **one direction** on any individual chassis.

**B. A chassis may have transverse hinges** (examples: Iso-fulcrum hinges and plumber hinges) **OR it may have longitudinal hinges** (example: side pan hinges) but a **chassis may not have both** types.

**C. The total number of individual hinges** is **not restricted**.

**D. Centre line hinges** are **NOT allowed**.

**E. NO hinged front wheel movements** are allowed (i.e. no “L” arms).

**5. Guide:**

**A. A single guide flag** only is allowed.

**B. The guide** must be **centred** on the **longitudinal axis** of the **chassis**. (i.e. no sideways “free float” or offset).

**C. The guide blade** must be **no larger** than **0.086” (2.20mm)** wide and **1.060” (27.18mm)** long.

**6. Tape/Lead:**

**A. Lead Weight** may **only** be **added** to the **top side** of a **chassis** and must be **securely attached**.

**B. Strapping or other tape** to **control** or **restrict movements** is **allowed** but may **only** be **affixed** to the **top side** of the **chassis**.

**C. Taping a damaged body** to a pan to **finish a heat** is **permitted** but the **body** must be **repaired**, and the **tape removed**, **before the start** of the competitor’s **next heat**.

**C. Motor.**

**1. Eligible Motors:**

**A. All cars** must be powered by **one of the following motors**:  
**Falcon 7: TSR D3: Slick 7 Mini Brute: JK Hawk 7.**

**2. Modifications:**

**A. The Armature Shaft** may be **shortened** to **clear** the **crown gear boss**.

**B. All motors** must remain **unopened** and **unmodified** in **any other way**.

**D. Body.**

**1. Body Type:**

**A. Any vac’ formed** (Lexan, PETG etc) **1/24<sup>th</sup> scale replica** of a **real, two seat, open cockpit, Sports Car** built and raced **before the end of 1969** can be used.

**B. No “flattened” or “aerodynamically-improved”** bodies are allowed.

(i.e. no moulded-in spoilers, wings, etc., that were not on the original full-size car or original mould). **Note:** moulded-in spoilers may not exceed the allowed specification governing the maximum width of the body.

**C. Bodies** may **not** be any **less than .007” thick on the sides**. Any body found to be flimsy or a detriment to marshalling will need to be corrected by the racer. Tape or body armour may be used to achieve the required side thickness.

**Important Note: We do not wish to get into approved body lists but if competitors push the boundaries too far this is what we will have to do.**

**2. *Body Finishing:***

**A. Racers are encouraged to present cars with scale realism.**

**B. Front wheel arches must be cut out to reveal the whole of the front wheel and tyre or to match the shape of the full-size car.**

**C. Rear wheel arches must be cut out to reveal the whole of the rear wheel and tyre or to match the shape of the full-size car but may be left closed if the original full-size car ran with closed wheel arches.**

**D. There should be a minimum 1/16" (1.59mm) vertical component and/or part of the grill along the front edge of the body unless this element was not on the original car (example: Ti22).**

**E. Bodies must be presentably-painted and carry at least three racing numbers, one on each side, and one on the front.**

To further clarify this regulation, all bodies must be fully opaque on all sides except for those areas deemed to be windscreens or windows.

The term 'opaque' means: Covered by paint, tape, or other suitable material, so that a finger is not visible through the paint, or other covering, under normal lighting.

**F. Openings, such as air vents and intakes, must be cut out or painted to look realistic.**

**G. Windscreens and windows must remain transparent but may be tinted.**

**H. All cars must have the cockpit opening fully cut out along the upper edge of the windscreen and cockpit sides.**

**I. All bodies must carry a fully-moulded three-dimensional cockpit interior which includes a correctly positioned driver comprising of at least a helmet, shoulders, arms, hands and the upper part of a steering wheel.**

**J. Interiors must be presentably painted and realistically detailed.**

**K. Paper interiors are not permitted.**

**L. No part of the chassis, including the tyres, guide and all other running gear, may be seen when looking down on the car from above, either outside the body or through the cockpit opening or engine bay.**

**3. *Add on Spoilers and Air Control:***

**A. A single, flat, plastic spoiler set at any angle may be added to the rear of the body only.**

**B. The spoiler's height is limited to a maximum of 1/2" (12.7mm) above the top rear edge of the body and must be no wider than the outer edges of the body.**

**C. No additional bends are allowed except for the one used to set the initial angle.**

**D. Side dams of any type are not allowed.**

**E. Notches cannot be cut in the spoiler above the bend line.**

**F. Front diaphanes (splitters) are not allowed.**

**G. High-mounted wings are allowed only if they were used on the original full-size car. Such wings must be securely attached to the body and/or chassis.**