

# Vintage Racing Club of BC

## 2007 Competition Rules

(effective July 1, 2007)



### Mailing Address:

VRCBC c/o Evan Williams  
968-240<sup>th</sup>. Street.  
Langley, BC V2Z 2Y3  
Email: [evanwilliams@shaw.ca](mailto:evanwilliams@shaw.ca)

### 1. General

Vintage auto racing, though similar in many respects to other forms of motorsports, is sufficiently different to warrant it's own competition rules. The goal of the Vintage Racing Club of British Columbia (VRCBC) is to restore, race and exchange information concerning vintage sports and racing automobiles. VRCBC supports the philosophy of racing competition and encourages participation, sportsmanship and display of the vehicle in its natural state – on the

track. The “Spirit of Vintage Racing” embodies authenticity, appearance and integrity in vehicle preparation, and good sportsmanship in competition. While vintage racers strive to exercise their cars under competitive conditions, common sense, good judgement and safety are paramount. There are no prizes for placing in a race; neither is there any incentive or recognition for improving racing position. Emphasis is placed on participation and completion of the event.

It is recognized that there is risk in any form of motorsports. There are, therefore, rules and regulations which are helpful in making participation in vintage auto racing both enjoyable and safe.

As an overview, safety is divided into two categories: Car and Driver. An old car cannot be made as safe as a modern car. The driver of an old car is subjected to more possible injury due to car construction, seating position and inability to use selected modern safety devices to best advantage. Making a car safe is one approach to safety. Making a driver safe is another. If the car is in good order, then the driver must go wrong to be involved in an incident. A very high emphasis is placed on the driver who is responsible for the preparation of the car (either directly or indirectly) and operates it. Participants are expected to understand the purpose of vintage racing events as stated and conduct themselves accordingly. In addition to the safety rules, the VRCBC applies race regulations to its race events that are designed to promote safety and control vintage races to ensure that unsafe practices are not tolerated.

### 1.1 Driver Requirements

#### A. Helmet - Racing

- i. Open or closed face. (Note: Full-face helmets are strongly recommended in all cars).
- ii. Acceptable helmets: Snell SA2005 or approved equal.

#### B. Helmet – Demonstration

- i. Vintage Demonstration must wear helmets with Snell 2000 or equivalent as a minimum.

#### C. Clothing - Racing

- i. Drivers must wear a single piece driving suit. It is recommended that all suits comply with SFI standard 3.2.A/5 or the 1986 FIA standard. All fire-resistant suits must fit properly effectively covering the body including neck, ankle and wrists. Fire resistant underwear is required except with suits meeting SFI standard 3.2.A/5 or the 1986 FIA standard.
- ii. Socks made of fire-resistant material are mandatory. Shoes or gloves made of leather or any approved fire-resistant material containing no holes are mandatory. Shoes may have synthetic rubber soles.
- iii. A balaclava made of fire-resistant material must be worn and must cover the neck and head except where required for proper vision and respiration.
- iv. Gloves and shoes must have a layer of fire-resistant material next to the skin or comply with the FIA 1986 standards.

#### D. Clothing - Demonstration

- i. Vintage Demonstration must wear full coverage clothes tight at the extremities and of natural fibre. Clothing of nylon material is not permitted.

#### E. License - Racing

- i. All drivers in competition must hold an ASN Canada FIA, CACC, SCCA, ICSCC, or VMC vintage license, or a racing licence granted by another recognised racing club or organisation. Drivers must have a valid driver's licence and a valid membership in an FIA, VMC, or SCCA affiliated club. Novice racing drivers must have completed a recognized racing program and also be successfully observed in three competition events before being approved by the Club President or the Club Race Director for a "senior" license.

#### F. License – Demonstration

- i. Vintage racing Demonstration requires a valid and current driver's licence of North America or a current and valid international driver's licence.

#### 1.2 Driver Rules

- i. At each event sanctioned by CACC, a qualified Steward must be appointed by CACC. The Clerk of the course and the Event Steward shall have final jurisdiction of conduct and sportsmanship of every driver and crew. The Event Steward shall assess any racing infraction and award any necessary penalties with serious

infractions referred to the host club's executive committee, CACC and/or VMC.

#### A. Racing

- i. In all passing situations, the primary responsibility of overtaking safely is on the passing driver.
- ii. It is the responsibility of every driver, including the driver(s) being overtaken, to avoid a racing accident.
- iii. Blocking is not allowed.
- iv. In deference to the "Spirit of Vintage Racing", extra caution must be exhibited at all times.

#### B. Demonstration/Test & Tune

- i. A pace car shall be used in all demonstration sessions, unless the Clerk of the Course and/or the Event Steward waives such a requirement in consultation with the VRCBC Competition Chairman. The pace car will not be passed and a minimum of twenty (20) feet will be maintained between the pace car and the first vehicle in the group.
- ii. Demonstration cars will not pass each other except as permitted by the Clerk of the Course and/or Event Steward.
- iii. When a dedicated grid of cars and drivers meeting all "Racing" requirements contained in these Competition Rules is included in an event operated under this section, a pace car is not required and passing is permitted on sections of the track designated by the Clerk of the Course and/or the Event Steward.

#### C. Penalties - Race

- i. The Vintage Racing Club of BC will establish and maintain a procedure for penalising or otherwise disciplining any competitor whether such penalties or discipline arise from an on-track incident or an infraction referred to the Club by the Event Steward, or by conduct considered to be unacceptable by the Club, in light of the "Spirit of Vintage Racing" and safety.

#### ii. Infraction Schedule

Offences	Points
Failure to respond to a flag	3
Unsportsmanlike conduct	5
Vehicle damage due to a racing incident	5
<u>Dangerous driving</u>	
- No damage	5
- Minor damage	8
- Major damage or injury	15

#### iii. Penalties

- 3 to 7 points: Probation for two consecutive VRCBC events immediately following the infraction.
- 8 to 14 points: Probation for thirteen (13) months and suspension for one VRCBC event at which the sanctioned party will work under the direction of the Competition Director.
- 15 or more points: Suspension for

thirteen (13) months and probation for thirteen (13) months following the suspension.

Points will also be assessed from confirmed infractions at vintage racing events by other sanctioning bodies such as SOVREN, SCCA, VARAC, VARA, HMSA, etc.

#### D. Penalties - Demonstration

- i. All of the above apply.

### 1.3 Vehicles – Racing

#### A. Rollover Protection

Rollover protection is required on all vehicles except those in the Demonstration/Test & Tune classification, and vehicles manufactured prior to December 31, 1949

##### Basic Rollover Protection Structures:

Full Cockpit width (two seat) roll bar hoops must have a minimum of two fore or aft braces with the minimum dimension of at least that required for the main hoop. Diagonal lateral bracing of equal dimensioned tubing must be installed to prevent lateral distortion of the main hoop. It is highly **RECOMMENDED** that at least one brace opposite the two required fore/aft braces be installed.

Partial or Single Seat Width roll bar hoops shall not be less than fifteen (15) inches apart, inside dimension. It is

**RECOMMENDED** that the roll bar extend the full width of the cockpit to provide maximum bearing area. The vertical members on Formula cars must not be less than fifteen (15) inches apart, inside dimension, at their attachment points to the uppermost main chassis member. Bracing must consist of either one fore or aft brace with a minimum dimension equal to the tubing required for the main hoop, or two fore / aft braces with minimum dimensions of one (1) inch diameter.

Additional Requirements: In addition to the foregoing, acceptable rollover protection will be governed by Appendix II of the CACC GCR's.

Alternative forms of rollover protection will be considered in situations where standard roll cage / roll bar designs cannot be readily adapted due to unusual vehicle construction.

#### B. Harnesses

- i. All drivers must utilize either a five (5) or six (6) point harness meeting FIA/ISO standard No. 8853 or SFI standard 3.2 (either Type 1 or Type 1A) at all times during practice, qualifying and the race. The restraint system installation is subject to approval of the Scrutineer.
- ii. Item i. above does not apply to Demonstration or Pre-war group (2 point belts). Pre-war cars require a minimum of 75mm (3 inch) lap belts.
- iii. A window net or arm restraint is required in all closed roof cars. Arm restraints are required in all open cars. At the discretion of the Event Steward and/or Chief Scrutineer, cars with

external brake actuation may be allowed to compete without the appropriate arm restraint.

#### C. Interior - Racing

- i. Interior is free allowing for no loose objects, proper seating, neatly finished, and must be equipped with a rear view mirror.
- ii. A 5 BC type fire extinguisher is mandatory, except in Demonstration, and must be firmly attached with metal clasps (not plastic) within easy reach of the driver. A fire suppression system may be installed in lieu of the fire extinguisher. Where a fire suppression system is installed, it shall be clearly marked with the international decal.

### 1.4 Engines - Racing

#### A. Carburetors

- i. One return spring per carburetor plus a return spring for the linkage.

#### B. Catch Tanks

- i. A catch tank, reservoir, or return system (of suitable size compared to the engine's oil and water capacity) is mandatory for water and oil systems.

#### C. Battery

- i. Battery may be located within the engine compartment, in the trunk area, or on the passenger area floor only and must be securely fastened. If mounted on the interior floor, it must be contained in a marine-type, acid safe container. Exceptions are in

formula cars only, where the original mounting point must be used. Battery terminals must be insulated.

**1.5 Electrical - Racing**

**A. Cut-out**

- i. An external battery cut-out mounted, and clearly marked is recommended.
- ii. This rule does not apply to Demonstration runs.

**1.6 Body - Racing**

**A. Glass**

- i. Windshield must be of laminated safety glass, Lexan or plexiglass. All other windows can be of original safety glass, with no damage.

**B. Body**

- i. Hood and trunk lid shall be securely fastened.

**C. Tow Hooks / Lights**

- i. One (1) eyebolt or tow hook to the front and rear recommended for towing.
- ii. One (1) rear brake light mandatory on all cars with the exception of formula cars. All lights must be in place and in working condition with the exception of headlights, which if removed, must have an acceptable cover unless documented.
- iii. All lighting glass, front and rear, must be taped during racing events. Rear brake lenses cannot be obstructed.

- iv. All cars must have one operational rear running light to be used in poor visibility. The decision for the use of running lights is at the discretion of the Event Steward.

**1.7 Fuel Systems - Racing**

**A. Fuel Cells / Tanks**

- i. Fuel cells meeting CACC requirements are strongly RECOMMENDED
- ii. If a cell is used within the body structure a flameproof metal shield or container must separate it from the driver's compartment.
- iii. A metal firewall must separate the cockpit from the stock fuel tank.

**B. Fuel Feed**

- i. All gravity fed fuel systems must have a clearly marked fuel cut-off switch.
- ii. All fuel lines passing through the cockpit must be covered with a braided metal or metal line.
- iii. No form of nitrous oxide may be used, or any oxygen bearing additives.

**1.8 Vintage Race Car Eligibility Groups**

There are six race car groups eligible for participation in VRCBC events. The eligibility groups, respective time periods and applicable rules are tabulated below:

<u>GROUP</u>	<u>TIME PERIOD</u>	<u>APPLICABLE RULES</u>
pre-1950	pre-1950	actual; documented; authentic

Vintage 1/1/50to31/12/63 1963 SCCA or FIA or actual

Historic 1/1/64to31/12/69 1969 SCCA or FIA or actual

Classic 1/1/70 to 31/12/74 1974 SCCA or FIA or actual

Monoposto various years current  
Monoposto Rules

Exhibition pre-1980 actual;  
documented;  
authentic

It is suggested that participants refer to the VRCBC "Guide to Eligibility of Vintage Race Cars – 2004 Competition Year" for eligibility details, enforcement philosophy and preparation guidelines. The guide is available from the VRCBC Eligibility Committee.

The burden of proof of eligibility is on the participant. VRCBC may, at its discretion, grant dispensation to specific race cars which do not meet the eligibility requirements described in the guide; and VRCBC may alter eligibility group descriptions from time to time at its own discretion.

**1.9 Safety Inspection – Racing, Demonstration and Test & Tune**

- i. Prior to participation in any CACC sanctioned event, each vintage race car will be required to pass a safety inspection based upon these rules and general mechanical condition.

## Appendix A: Roll Bar Specifications

### 1. General

- A. Where specified by the regulations of a series or event, roll bars meeting the following specifications shall be fitted to all cars
- B. It is highly RECOMMENDED that roll cages meeting the specifications outlined in this Appendix A be fitted to all cars competing in events where roll over protection is required.
- C. The top of the roll bar shall be at least 5 cm (2") above the top of the driver's helmet or as close to the roof as possible. The top of the roll bar shall be no more than 25 cm (10") behind the driver's helmet when the driver is in the normal driving position.
- D. It is highly RECOMMENDED that any part of the roll bar or of the car's structure which may be struck by the driver's helmet in a serious impact be covered with a flame-retardant energy absorbing material. Padding meeting SFI spec 45.1 is highly RECOMMENDED.

### 2. Construction Materials

- A. The main hoop and primary bracing should be constructed from round, mild steel, ERW or DOM type tubing. Chrome-moly tubing such as 4130, may be used but is not necessary.
- B. Aluminium and composite materials are prohibited construction materials for roll bar structures.
- C. All bars must have a 5mm (3/16") diameter inspection hole drilled in each main hoop.
- D. Recommended tubing sizes are as follows with vehicle weights including driver:

Under 1500 lbs	3.81 cm X 0.30 cm (1.50" X .120")
Under 2500 lbs	4.45 cm X 0.30 cm (1.75" X .120")
Over 2500 lbs	5.72 cm X 0.30 cm (2.25" X .120")

### 3. Fabrication

- A. One continuous piece of tubing must be used for the main hoop.
- B. All bends must be smooth with no evidence of crimping or wall fracturing. All bars should start as close as possible to the floor of the vehicle and come as close as possible to the sides of the vehicle for maximum driver protection.
- C. In the case of tube frame vehicles, the roll cage structure must be attached to the chassis with suitable webbing or gusseting to distribute loads over as wide an area as possible. In the case of unit body vehicles, it is recommended procedure to attach the ends of the main hoop tubes into L shaped plates at the junction of the floor and rocker panels rather than just to a plate on the floor. Additionally, it is highly recommended that all bars be tabbed into the basic body structure at least every 60 cm (24") or wherever possible.
- D. Gussets or tie-in tubes must be used at main tube junctions of the roll bar members. Gussets should also be used when it is not possible to weld all around a tube because of body interference. Gusset thickness should be at least the same as the tubing wall thickness they are attached to.

### 4. Bracing

- A. Rear stays must attach to the hoop no lower than 20 cm (8") from the top of the hoop and at an angle no steeper than 35 degrees from vertical. These rear stays must be made from a straight piece of tubing and be attached to a suitably stiff or reinforced area.
- B. In order to minimize the distortion of the roll cage in the event of impact on one corner, a diagonal brace is required. This brace must be a straight as possible.
- C. Where a "six point roll bar" is specified by the regulations for a series or event, front stays must attach to the hoop no lower than 20 cm (8") from the top of the hoop and at an angle no steeper than 35 degrees from vertical. These front stays must be made from a straight piece of tubing and be attached to a suitably stiff or reinforced area.
- D. Where a "five point roll bar" is specified by the regulations for a series or event, a single front stay must attach to the hoop on the driver's side of the vehicle centreline at an angle no steeper than 35 degrees from the vertical. This brace must be made from a straight piece of tubing, extend forward to the diagonally opposite side of the car and be attached to a suitably stiff or reinforced area.

### 5. Removable Braces

- A. Removable braces may be fitted to vehicles only if their construction and design allow them to meet the strength requirements of the designs above.
- B. Where tubes join, a double shear type

mating tab may be used. Where such a tab is used, the tube joining this tab shall have a small piece of tubing welded perpendicular to its length for the bolt to pass through to prevent crushing of the main tube. Tabs shall be at least 3.5 cm (1.375") wide and 0.5 cm (0.1875") thick and must be welded to one of the main tubes. When single bolts are used to fasten tubes, they must be of at least 12 mm (7/16") diameter and grade 8 material. Sliding tube type junctions may also be used if they meet the following criteria:

- i. Wall thickness of the joining tube shall be a minimum of 0.30 cm (0.120").
  - ii. Length of this tube shall be a minimum of 7.5 cm (3") on either side of the splice.
- C. Attachment shall be made using two bolts on each side of the splice 90 degrees to each other passing straight through the tubing. Grade 8 bolts of at least 10 mm (3/8") diameter shall be used here. Splicing tubes may be slid either inside the main tubing or over the outside.
- D. Alternate joint designs may be approved at the discretion of the Chief Scrutineer.
- E. Basic design and fabrication of removable braces must conform to the specifications for non-removable designs.

#### 6. Mounting Plates

- A. The lower hoop tubes must be connected to plates welded or bolted

to the frame or floor of the vehicle.

- B. On unit body vehicles, all plates shall be at least 130 square cm (20 square inches) in area. The minimum thickness of these plates shall be 0.20 cm (0.080"). Bolt on types shall have a minimum of three 10 mm (3/8") grade 8 bolts fastening each plate and must have a backup plate of equal size and thickness on the other side of the floor with the bolts passing through both plates and the floor.
- C. Vehicles with frame type construction must use plates of at least 50 square cm (8 square inches) area and 0.2 cm (0.080") thickness regardless of whether they are bolted or welded.

#### 7. Welding

- A. It is essential that all welding be of the highest possible quality. Slag welds, poor arc and gas welds are NOT acceptable. It is highly recommended that only certified people carry out arc welding on roll bars. TIG or MIG are the preferred welding processes. Structures with unacceptable welding will not be approved

#### 8. Alternate Designs

- A. Alternate roll bar / roll cage designs may be approved by the Chief Scrutineer if stress analysis data from a certified engineer is provided stating that the roll over structure is capable of withstanding the following loads applied simultaneously to that structure:
  - 1.5 G lateral;
  - 5.5 G fore / aft;
  - 7.5 G vertical

Calculations shall assume the all up race weight of the vehicle with driver on board and a full fuel load.