

# Rules and Regulations for Building and Racing Billycarts

Ratified 10/2016 To be reviewed 7/2018

## **1. Vehicle Dimensions**

- 1.1 Wheel Base is not to exceed 6ft (1.830m)
- 1.2 Track not to exceed 4ft (1.220)
- 1.3 Weight not to exceed 250kg (without driver)

## **2. Officials**

- 2.1 The organising body will make a decision in any case not covered by these specifications
- 2.2 The organising body are empowered to make a decision to judge a drivers condition and ability to drive and may disqualify the driver
- 2.3 The organising body are empowered to disqualify a driver displaying bad sportsmanship as judges by the organising body

## **3. Specification Appliance/Construction**

- 3.1 No vehicle will be allowed to practice or start on the track until it has passed scrutineering.
- 3.2 Vehicles must maintain compliance with specifications throughout the event.
- 3.3 The organising body and/or their representative reserve the right to stop and inspect any vehicle during an Event.
- 3.4 Vehicles may be required for inspection at the conclusion of an Event.
- 3.5 Drivers and constructors are reminded that they have a particular responsibility and duty of care to their Construction. During construction and use of the vehicle, the Team driver(s) must monitor that -  
(A) Driver protection structures are able to fulfil their purpose. (B) The vehicle is adjusted so they can effectively and safely operate it (particularly if there are two different size drivers sharing a cart).
- 3.6 All carts must have provision for towing front and rear. Only official tow vehicles will be used for the recovery of carts from the finish line to the start line.

## **4. Driving**

- 4.1 The driver may must be seated but may lay back providing his/her eye level is a minimum of 18" (475mm) from the bottom of the cart
- 4.2 No part of the drivers body may protrude outside of the body work
- 4.3 Ballast must be welded or bolted securely to the cart. Weight must not be changed once scrutineered for this competition. Ballast may be moved within the confines of the cart. Place getters may be reweighed.
- 4.4 Drivers are not allowed to carry extra ballast such as lead weight belts or pockets full of rocks!
- 4.5 Windscreen by be Lexon only. Glass or Perspex will not be permitted.
- 4.6 All drivers must wear motorcycle safety helmets (Australian Standard), robust clothing (padded motorcycle jackets & trousers or heavy overalls, jeans etc.), gloves and robust footwear.

## **5. Drive System**

- 5.1 No mechanically driven, electronically driven, or wind assisted carts are allowed.
- 5.2 Only gravity carts allowed
- 5.3 Organising body is allowed to remove any attachment/s which in their opinion would prove dangerous to competitors and/or spectators

## **6. Wheels, Track and Wheel Base**

6.1 There is no restriction on wheel size or bearing type.

6.2 All carts must have either 3 wheels in triangle formation (2 wheels at front, one wheel at back) OR 3 wheels in a box formation (2 front, 2 back)

## **7. Protection-Rollover Bar**

7.1 The roll bar must be constructed from min 25mm square or round tube.

7.2 Must be bolted or welded to the chassis

7.3 Sufficient height to prevent drivers head from coming into contact with the ground should the cart overturn

7.4 Not to be positioned in front of the drivers head

## **8. Protection-Seatbelts**

8.1 Must restrict the lap (lap belt) and torso (over shoulder or chest strap)

8.2 Must be fastened to the chassis of the cart

8.3 Must be worn when racing

8.4 Belts must be in good condition (not frayed, cut or re-stitched)

## **9. Steering**

9.1 Automotive components or drag link (go kart type) are required

9.2 Acker man principle to prevail with caster for high speed stability

## **10. Brake System**

10.1 All carts must be fitted with brakes capable of stopping the cart within the designated breaking area (200m pull up zone)

10.2 Drop down brakes are illegal

## **11. Bodywork and Driver Vision**

11.1 All carts must be constructed with at least sufficient body panels to fully enclose the drivers torso, hips and legs

11.2 The driver may must be seated but may lay back providing his/her eye level is a minimum of 18" (475mm) from the bottom of the cart

## **12. Competition**

12.1 Adult drivers (16 Years & over) must, prior to racing, sign the declaration which removes the organising body from any responsibility for injuries to drivers or damage to property during the competition

12.2 Each cart has three runs

12.3 In the event of a false start or missed timing a re-run will be given.

12.4 Drivers can drive in only one division on competition day, which is to be nominated on their entry form

12.5 Competition consists of the following divisions: Open (250kg & U); Open (150kg & U); Ladies (250kg & U); Junior (Under 16 Yrs.)

12.6 Only one driver per cart in a division is allowed

12.7 Carts registered in the Open division cannot be used in the Junior Division

12.8 \$5000 prize to the cart to record a time under one minute. In the case of two or more carts breaking the minute on the same day, the cart to record a time under the one minute marker by the

greatest margin wins \$5000 (for division-Open 250kg; Open 150kg & Ladies –Juniors are unable to compete for this prize).

12.9 Entry form and fee of \$30 can be sent to the Secretary at the address below (cheques payable to 'Harrow National Bush Billycart Association Inc.) OR direct deposit (BSB083-440 Acct No: 02-594-2758), use surname and first initial as the reference

### **13. Junior Participant**

Junior carts must meet all the above standards in additional to the following:

13.1 Driver: must be under 16 years of age on the day of the race

13.2 Wheel base: All carts must have 4 wheels in box formation (2 front, 2 rear)

13.3 Competition: Parent/guardian must sign a declaration which removes the organising body from any responsibility for injuries to drivers or damage to property during the competition

13.4 Entry form and fee of \$5 can be sent to the Secretary at the address below (cheques payable to 'Harrow National Bush Billycart Association Inc.) OR direct deposit (BSB083-440 Acct No: 02-594-2758), use surname and first initial as the reference

### **Reference:**

Organising Body: Any person who is registered with the Harrow National Bush Billycart Association Inc. Committee

Acker man principle: The intention of Ackermann geometry is to avoid the need for tyres to slip sideways when following the path around a curve. The geometrical solution to this is for all wheels to have their axles arranged as radii of circles with a common centre point.