



## **HRA SULKY WHEEL APPROVAL POLICY**

### **COMMENCEMENT DATE**

This policy comes into effect on 1 February 2009 (updated 1 July 2014)

### **PURPOSE**

The maintenance and improvement of the safety standards during harness racing has required Harness Racing Australia (HRA) to implement a national risk prevention program. A critical part of this program has been the maintenance of the system of approved gear for use in racing. This system ensures that in a period of rapid development of technology, only soundly designed and safe equipment is used in racing.

### **POLICY STATEMENT**

#### Existing equipment

It is acknowledged that prior to the introduction of the HRA Sulky Wheel Approval Policy; a number of sulky wheels had been approved under then existing criteria and in most cases those wheels have been used effectively and without incident for a number of years.

While these sulky wheels remain approved gear, should malfunction, failure or any other safety issue be identified HRA reserves the right to take any and all action deemed necessary in the interests of safety including banning a wheel from further use or suspending the approved gear status pending the results of compliance tests ordered by the HRA.

In the event of a previously approved sulky wheel being removed from the list of approved gear such removal shall not result in any entitlement to compensation.

#### New Equipment

One area where developments have been particularly far reaching has been the introduction of new materials for sulkies including sulky wheels. Wheel design has changed with the use of composite materials, such as carbon fibre and resin, aimed at giving higher performance and lower weight.

There is a direct cost to the introduction of this equipment both in terms of the increased monetary cost of the new wheels but also in decreased durability with increased likelihood of failure under racing conditions, when not maintained and/or if mistreated.

For these reasons the Sulky Wheel Approval Policy has been developed as a key plank of the approved gear program. The test procedures ensure that any new wheel introduced into harness racing in Australia have adequate durability and reduce premature in-race failures.

To gain approval for a specific wheel design, manufacturers will need to successfully fulfil each of the following criteria:

1. Durability Tests conducted by independent consultants and test engineers, Human Impact Engineering (HIE), on behalf of HRA
2. Performance Tests conducted under the direction of a State Controlling Body Chairman of Stewards, chosen by and acting on behalf of HRA
3. Approved, externally visible, tamper proof identification inclusive of:
  - a. Manufacturer
  - b. Wheel Model
  - c. Date of Manufacture
  - d. Unique Serial Number
  - e. Type of Material
4. The product liability risk rests with the manufacturer and they should have their own liability cover as it is not picked up by the HRA policy. The HRA policy will cover drivers, trainers and clubs for any vicarious liability they may have due to a wheel failure however most if not all of the exposure is the manufacturers.

## **APPROVAL CRITERIA**

1. Durability Tests

HRA has engaged the services of Human Impact Engineering (HIE), independent Consulting and Test Engineers, who have the equipment required to carry out durability testing on sulky wheels. HIE have designed two tests, Dynamic Fatigue and Lateral Load tests against an international quality specification. HIE also maintain the testing equipment.

To meet the Approval Criteria, the wheel manufacturer must supply two sample wheels for testing directly to HIE marked:

Harness Racing Australia Sulky Wheel Approval  
Attn: Mr Tom Gibson  
Human Impact Engineering  
40 Broderick Road  
Corio Vic 3214  
Australia

One of the wheels will be subjected to a simple lateral load test. The second wheel will be subjected to a test duty cycle based on in-service measurements of an Australian sulky on the track.

The testing is to ensure that the new wheels have a similar strength and service life to the current approved spoked metal wheels. The duty cycle requires approximately 24 hours of total testing on a specially designed test rig that applies a rotating load to the wheel.

Due to the handmade nature of these wheels, some variation in test life for wheels of the same design is to be expected. If the test wheel fails before the required life is reached, then the manufacturer will be required to supply two further wheels for testing. The extra wheels will be subjected to the same test procedure to determine an average test life for the design.

The results of these two tests will be used to determine the suitability of the wheel for use in harness racing in Australia.

If and when the testing is completed, a report, including photos, will be forwarded to HRA detailing the test results.

**The sample wheels will be kept by HIE for future reference.**

The cost of testing each wheel type (two wheel tests) will be AU\$2,003 (including GST) including test consumables and will be payable directly to Harness Racing Australia to cover the test set up and running costs.

Note:

1. If there is any change in the wheel design then it is the obligation of the wheel manufacturer to resubmit the modified wheel in order to maintain the HRA approval.
2. The manufacturer is to provide the engineering specification of its production wheels.
3. Testing information from the manufacturer will be useful to HRA and if provided, may lead to a rebate on testing fees if it is possible to reduce the testing as a consequence.
4. A copy of the test results will be provided to the manufacturer as part of the testing fee.

## 2. Performance Tests

Following the conclusion of HIE testing, performance testing will take place under the direction of a State Controlling Body Chairman of Stewards, chosen by and acting on behalf of HRA, or a person authorised on his / her behalf.

Testing will take the form of simulated racing or trialling conditions, with a report being provided to HRA following the tests which details the observations, track conditions and simulation details as well as anecdotal driver and trainer feedback.

This Performance Test takes into account a number of practical and safety concerns in terms of wheel use in a racing environment.

## 3. Identification

Evidence of externally visible, tamper proof identification inclusive of:

- a. Manufacturer
- b. Wheel Model
- c. Date of Manufacture
- d. Unique Serial Number
- e. Type of Material

are mandatory. Failure to have these may result in the testing not being undertaken. Approved identification will usually take the form of engraving. Labels or plates which can be removed may not be approved.

### **APPROVAL NOTICE**

An Approval Notice will be issued to the manufacturer and distributed to each State Controlling Body upon the satisfactory completion of the HRA Sulky Wheel Approval Policy. The newly approved gear will also be published in HRA's Approved Gear List on the national harness racing website.