HRA SULKY APPROVAL POLICY

COMMENCEMENT DATE

This policy came into effect on 18 October 2010.

PURPOSE

The maintenance and improvement of the safety standards during harness racing have 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 updated HRA Sulky Standard on 18 October 2010, a number of sulkies had been approved under previously existing criteria, and in most cases, those sulkies have been used effectively and without incident for a number of years.

While these sulkies 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 sulky 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 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 sulky designs aimed at giving higher performance.

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

For these reasons, an enhanced Sulky Standard and subsequent Sulky Approval Policy has been developed as a key plank of the approved gear program. The test procedures ensure that any new sulky introduced into harness racing in Australia has adequate durability and reduces premature in-race failures.

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

1. Meet the detailed specifications contained within the HRA Sulky Standard
2. Durability Tests (dynamic and static) conducted by independent consultants and test engineers, Velocity Track Engineering Consultants (VTEC) on behalf of HRA
3. Performance Tests conducted under the direction of a State Controlling Body Chairman of Stewards, chosen by, and acting on behalf of HRA
4. Approved, externally visible, tamper proof identification inclusive of:
    a. Manufacturer
    b. Sulky Model
    c. Date of Manufacture
    d. Unique Serial Number
    e. Type of Material

5. Insurance: 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 sulky failure; however, most if not all of the exposure is the manufacturers.

APPROVAL CRITERIA

1. HRA Sulky Standard

HRA has engaged the services of Velocity Track Engineering Consultants (VTEC), independent Consulting and Test Engineers, to measure and test sulkies against the HRA Sulky Standard, inclusive of:

- Design
- Symmetry and Weight Distribution
- Dimensions
- Attachment to Horse
- Wheels
- Foot Rests
- Fabrication
- Materials
- Markings
- Performance Requirements

To meet the Sulky Approval Criteria, an applicant must complete the HRA Sulky Approval Application, pay the required fee and provide a sample sulky for testing directly to VTEC marked:

Harness Racing Australia Sulky Approval Application
Attn: HRA CEO
Velocity Track Engineering Consultants
40 Broderick Rd
Corio Vic 3214

A copy of the Sulky Approval Application is available at http://www.harness.org.au/hra/sulky-app-form.pdf

Due to the impact and rigours of the approval process, an approved sulky will not be returned after testing – it will be kept by VTEC for reference purposes.

2. Durability Testing

HRA has engaged the services of Velocity Track Engineering Consultants, an independent Consulting and Test Engineer, who has built the equipment required to carry out durability testing on sulkies. VTEC have designed two tests: Dynamic Load and Static Load tests. VTEC also maintain the testing equipment.

Dynamic Load Test:

The tyres shall be inflated to 50 psi.

Should wheels supplied by the manufacturer of the sulky fail, testing will continue on a standardised set of wheels, a heavy-duty StarFire reinforced nylon wheel. If tyre/wheel failure occurs, StarFire wheels are to be inflated to 36-38 psi.

The right-hand sulky wheel shall be placed on a motor-driven steel cleated roller mounted on a horizontal axis. The sulky axle shall be parallel to the roller axis and vertically above it. The outer diameter of the roller shall be 400mm and provided with one cleat. The cleat shall be set parallel to the roller axis. The length and position of the cleat shall ensure that it adequately spans the full width of the tyre contact. The cleat shall be 17.5mm high by 25mm wide with a 6mm by 6mm chamfer to the edges contacting the tyre.

The sulky shafts shall be attached to a fixed support so that the point of attachment is 1420mm vertically above the height of the test rig drum. The method of attachment of shafts to support shall be, as closely as possible, the method used between shafts and horse. The method of

attachment of shafts to support shall include an inward, horizontal deflection of 100mm from the free position, for each shaft, at the point of attachment, i.e. the horizontal distance between the shafts at this point is decreased by 200mm.

Provide a guidance system, which will prevent any significant side movement of the sulky during the test.

A weight of 95kg shall be placed centrally on the seat and secured in position. The centre of gravity of the weight shall be 200mm above the central region of the seat.

The roller shall be rotated so that the sulky wheel is turning in the same direction as for forward motion of the sulky. The surface speed of rotation of the roller shall correspond to a sulky speed of 1 mile (1.61km) in 1 minute 36 seconds, i.e. to a speed of 16.67 m/s, which is achieved by a rotational speed of 755 rev/min of the roller. The test shall run continually for a period of 10 hours on one wheel of the sulky only.

Static Load Test:

The tyres shall be inflated to 50 psi.

The sulky shall be placed on a hard, flat, horizontal floor or test surface. The shafts shall be attached to a fixed support so that the point of attachment is 1420mm vertically above floor level. The method of attachment of shafts to the support shall be, as closely as possible, the method used between shafts and horse. The method of attachment of shafts to the support shall include an inward, horizontal deflection of 100mm from the free position, for each shaft, at the point of attachment, i.e. the horizontal distance between the shafts at this point is decreased by 200mm.

A restraint shall be fastened to the floor or test surface to prevent side movement of the wheels. The height of the restraint shall ensure that contact with the restraint is made only by the tyre of a wheel.

A weight of 95kg shall be placed centrally on the seat and secured in position. The centre of gravity of the weight shall be 200mm above the central region of the seat.

A side force of 540N shall be applied gradually in a horizontal direction, which passes through the centre of the seat and is perpendicular to the vertical central plane of the sulky. This force shall be maintained for a period of 15 seconds.

The side force application shall be performed a total of 10 times.

The position of the restraint shall be changed so that it is in contact with the tyre of the other wheel, the direction of the side force on the seat shall be reversed, and the sequence of the force application shall be repeated.

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

The sample sulky will be kept by HRA for future reference.

The cost of testing each sulky will be AU$7,260 (including GST), including test consumables, and will be payable directly to HRA to cover the test set-up and running costs.

Note:

1. If there is any change in the sulky design, then it is the obligation of the sulky manufacturer to resubmit the modified sulky in order to maintain the HRA approval.
2. The manufacturer is to provide the engineering specification of its sulky.
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.

3. Track Tests

Following the conclusion of VTEC testing, performance testing will also 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 sulky use in a racing environment.

4. Identification

Evidence of externally visible, tamper-proof identification, inclusive of:

a. Manufacturer
b. Silky Model
c. Date of Manufacture
d. Unique Serial Number
e. Type of material

is mandatory.

Approved identification will usually take the form of engraving. Labels or plates that 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 Standard.

The newly approved gear will also be published in HRA's Approved Gear List on the national harness racing website.