

SUPERKART WEIGHT – SKA REVIEW OF CHAMPIONSHIP CLASS WEIGHTS.

Intent of Review:

Superkart weights are subject to discussion after many years due to a number of factors:

- Evolution of class equipment and addition of safety features
- Review of weight records taken at race events over extended periods
- Competitor attitude to participation in classes due to weight factors
- Comparison to overseas weights by class when comparative to equipment/capacity
- Superkart Technical Regulation(STR) weights correctness to Class ie Improve Competition Parity

Scope of Review:

Superkarts Australia over the past eight years has run the Australian Superkart Championships and has appointed various Licensed Cams Officials to conduct scrutineering aspects which have included the gathering of Class Weight data for the three Gearbox Classes – 250cc International, 250cc National and 125cc National.

The two former mentioned **250cc classes** are replicated in CIK Long Circuit racing, and maintaining parity with these international formula classes in relation to weight is seen as appropriate and a general attitude held by owners and competitors. The CIK make regular reviews of Div 1/ Div 2 (250Inter/250Nat) weights and Cams Superkart weights for these classes have been reviewed to generally reflect these CIK weights. [CIK D1-208, D2-218 – CAMS 250N-205, 250I-215] Consequently, no change to current CAMS weights for the 250cc classes is recommended.

125cc National weight is a subject for assessment as it has not been subject to review for weight correctness for over ten years. The class weight review revealed that significant attention is required to assess a new correct mean weight for this class, as explained in the review analysis below. CIK do not run a directly comparative class to 125Nat, however in UK superkarting a somewhat similar 125 Open formula runs at a designated 190kg driver/kart combination weight. Without a direct comparative, overseas classes carry a low review influence in a comparison due to disparity of class specification.

SKA has not reviewed the 125 Stock Honda sub-class or Non-Gearbox Classes as they have not been available at ASKC events and it is understood that separate monitoring of aspects that affect those classes would be carried out by others. Additionally, it is understood that there is a desire among participants of these classes to main parity with similar AKA class demographics. This review does not intend to include these classes in assessment or recommended outcome.

125cc Gearbox National Minimum Weight - Review.

Over the past ten years evolution of this class has seen the advent of additional safety requirements such as rear wheel protection bars and central fuel tanks, use of high back seats with head restraints, manufacturer's improvements in design and chassis strength and bodywork, competitor use of on-board data acquisition devices, and introduction of grand prix motorcycle engines for use. European CIK mandated side-intrusion is a likely introduction in the foreseeable future. All of these elements garner some weight addition. With the above factors present, Class participants and manufacturers have requested a review of the STR 10 - 125Nat class minimum weight requirement.

SKA retains some years of weight data for 125National class collected by independent Cams scrutineers at championship events, which indicates a distinct disparity between the current STR minimum weight and the average mean weights recorded in competition.

The most recent survey in 2014 was taken in the climate of competitors' prior requesting review as many felt the STR minimum combined driver/kart weight at 180kg is too low currently, not currently appropriate, and reduces internal class parity and for some may become a disincentive for participation. Significantly, scrutineers revealed that attempts by competitors at weight reduction strategies such as material reduction in components were bordering on un-safe practice, resulting in premature fatigue and failure of components and were likely to add a possible safety risk.

Review Accuracy: To ensure correctness, the 2014 survey also was performed to ascertain if driver weight as a separate aspect had any disproportionate effect, or whether there was a great disparity of kart weight between competitors, so as to further refine the data for accuracy. Driver weight was checked separately in 2014 and found to not be subject to significant deviation to cause a disproportionate effect on combined weight according to the data.

In assessing a requirement for a new 125cc National weight, calculations were made of direct averaging of driver and kart weight separately, and also an averaging analysis that removed the heaviest and lightest out of calculations to verify more accurate mean averages. The mean average remained consistent for both methods. Scrutineers were also required to check if competitors were carrying ballast weights to make minimum weight – in 2014 checks, all competitors checked were not carrying additional ballast. Although the checks were carried out at two prominent race circuits a thousand kilometers apart, and some months apart on certified circuit weighbridges, the closeness of the records supports the methods for accuracy.

Consultation: During consultation with competitors, those few running at less than 190kg indicated that should a weight increase be implemented after this review they would be easily able to comply and not feel at disadvantage as some had undertaken significant weight reduction strategies which they were happy to dispense with. This group indicated that the current weight 180kg was unrealistic for the class. It was also revealed there are a few 125Nat competitors not competing at club and higher level because they feel un-competitive while the min weight is 180kg. Virtually all class competitors consulted indicated that minimum weight was overdue for review, and expected that an increase would be a likely outcome. Class competitors also indicated a strong preference for an increased 125National minimum weight to be introduced well in advance of the first Round of the 2015 Australian Superkart Championships in early July 2015.

Outcomes: SKA believes that a new more appropriate-to-class 125cc National class weight should be mandated for 2015 year as soon as practically possible so that internal class parity is improved, safer attitudes to weight control are maintained, and growth in competitor participation is encouraged.

Conclusion for the SKA 125 National Weight Submission:

The data analysis of attached records determined that by both methods of calculation in 2014 year, the mean average weight for 125Nat class is 191kg. Analyzed over further time period, the mean average weight for this class over the past four years is 193kg.

RECOMMENDATION:

This analysis supports a recommendation for a 125cc Gearbox National class minimum weight to be increased to 190kg at the earliest time possible.

Attachments: 125 gearbox Weight data sheets for the period 2010 to 2014 are provided, and must be read in conjunction with this review.