

CAMS National Superkart Association submits for CAMS Approval;

STR 1.4 – BUMPERS – 2016 SUBMISSION - EXPLANATORY NOTES

The European CIK Technical Regulations - Long Circuit (Superkart) have in the recent year or two introduced provision for increased Side Intrusion Protection bumpers following some racing incidents at events of CIK governance. It is considered that CAMS Superkart Technical Regulations should also include these provisions for the improved safety of competitors.

While the CIK Technical Regulations were reviewed for referenced specifications, CAMS Superkart Category is regulated by CAMS Superkart Technical Regulations formulated by taking into account both the overseas and local superkart manufacturing and other necessary aspects that may apply in the Australian Superkart category.

CAMS STR 1.4 currently has no provision for 'CIK Style' multiple bar side bumpers. STR 1.4 is currently also absent of specification for superkart front bumpers. With many CIK compliant superkarts of various origins now in use in Australian superkarting, it is appropriate that locally manufactured race vehicles also replicate the European CIK standard for improved safety overall. **The Intention of the submission is to introduce over a reasonable phasing-in period mandatory Side Intrusion Protection, and include specifications for Front Bumpers for Superkart Category in Australia.**

Any necessary additions to the existing STR 1.4 Bumpers regulation are shown on the submission as highlighted in **yellow**. Any STR1.4 deletions are shown as ~~struckthrough~~. A **new Diagram 1.4.10** has been developed for inclusion which explains the dimensional and fixing point requirements.

The NSA STR 1.4 Bumpers submission accompanying these notes introduces regulation guidelines and considerations that:

- Details the location of mountings and tolerance dimensions for sizing that will achieve the intended methods for protection
- A new STR 1.4 will allow local manufacturers to achieve compliant Side Intrusion protection as new fitment or retro-fit assemblies in a method economical for manufacturers and current owners
- Ensures local superkarts can also comply with a standard reflective of the CIK Regulations
- Allows a choice of comparable strength and sized materials in common use in both European and Australian superkarts. Many chassis manufacturers and owners will produce Side Intrusion protection and Bumpers compliant to the introduced regulation with materials in common use in the category. It is appropriate to allow the choice of 16mm x 1.5wall Cr-Mo tube or CDS Steel tube as they are of similar strength and tensile ability.
- Considers that non-rectangular side pod styles are in use in various classes, and provides a specification for compliance that is 'shape flexible' while meeting the intent of the side intrusion regulation.
- Introduces new guidelines for Front Bumpers where none currently exist within STR 1.4, which also provides eligibility specification for owners, manufacturers and race meeting officials
- Other aspects of the current STR 1.4 Bumpers regulation remain unchanged, including the Rear Bumper and Rear Wheel Protection provisions which are reflective of CIK regulations.
- Non-Gearbox classes are free to continue the use of CIK Side Bumpers and Front Bumpers, or Side Bumpers and Front Bumpers while complying with the new STR1.4
- Includes **a Weight Submission** to bring 250cc Classes into parity with CIK 250cc Classes
- A reasonable phase-in period is proposed, that sees newly log-booked vehicles in mandatory compliance from 01/01/2017, with all remaining superkarts requiring mandatory compliance to the new STR1.4 by the start of 2019. These dates will be dependent upon the length of time taken for approval or otherwise of the submission, and may need to be varied by CAMS with final approval considerations.

References:

CAMS Superkart Technical Regulations - STR 1.4 – <http://docs.cams.com.au/Manual/Race/RA08-Superkart-TechRegs-2016-1.pdf>

CIK Technical Regulations 2016

http://www.cikfia.com/fileadmin/content/REGULATIONS/Technical/Technical%20Regulations/2016/Web_RT_2016.pdf

NSA Submission for Amendment to Superkart Technical Regulation 1.4 (STR 1.4)

Redefinition of Superkart Bumpers and Introduction of Side Intrusion Protections

Proposed changes to the current regulation are shown as strikethrough and the additions are shown as highlighted, other remaining wording is unchanged and is currently included in STR1.4 . This Amendment proposal is to be read in conjunction with an Addendum submission concerning STR 10 Class Weights, proposed for 250cc Classes to align with CIK Weights if this Amendment is approved.

1.4 BUMPERS: Each kart must be fitted with bumpers to **both sides, the front, and the rear**. No component of the kart (other than the front fairing) may extend past either the front or rear bumpers, but may be mounted on or attached to the bumpers.

Side Bumpers: The fitment of Side Bumpers (“nerf bars”) is compulsory ~~where side pods are not fitted~~.

They must:

- be not higher than the rear axle;
- be of at least 15mm diameter and adequate wall strength;
- cover at least two thirds of the tread width of the rear tyre.

A bumper is not required on the engine side of a 250cc Gearbox Class kart (refer section 9.3).

For 250 International, 250 National, and 125 Gearbox Class Superkarts:

Side Bumpers are compulsory and must comply with the following Technical Specifications (refer diagram 1.4.10)

Side Bumpers must be fitted to both outside faces of the chassis-frame main rail to cover the area behind the front wheel and forward of the rear wheel and must consist in at least 2 steel elements: a steel tube upper bar mounted above a steel tube lower bar, - all with a minimum diameter of 16mm Steel tubing and have a minimum wall thickness of 1.5mm, both bars being connected, with a minimum of at least one additional intermediate support tube, and welded together, and presenting a vertical flat face.

- Minimum length of the bars parallel to ground: 500mm for the lower bar, 400mm for the upper bar.
- Height of the lower bar: 50 +/-20mm from the ground.
- Height of the upper bar: 200 +/-20mm from the ground.
- the upper bar shall return on to and connect to the lower bar generally as follows: at the front the return end is to angle inwards to a point no less than 100mm from the bottom bar outer face line, and at the rear the return end may be angled as per the front, or return to the bottom bar at the face line no less than 120mm forward of the rear wheel tread face.
- Side Bumpers shall have at least one intermediate support between upper and lower bars of the same spec material.
- Each side bumper assembly must be attached to the chassis-frame main rail by 2 points minimum. These 2 attachments must be parallel to the ground and they must be 500mm minimum apart.
- Side Bumpers may be formed to replicate side pod shapes that taper inward behind the front wheels, and shall cover a minimum of two-thirds of the tread width of the dry(slick) rear tyres and front tyres while positioned at the straight ahead position.
- Side bumpers within side pods of non-quadrilateral outer face shape including ‘wedge’ styles must conform to the preceding, save that any portion of the upper bar unable to be placed parallel to ground and below 200 +/- 20mm from the ground must replicate that side pod outer face upper extremity shape.
- Side Bumpers compliant with this Regulation must be fitted to all superkarts log booked after 01/01/17, and be mandatory fitment to all superkarts in competition from 01/01/19

CIK-approved long circuit Side Bumpers are allowed for all Superkart Classes using CIK chassis.

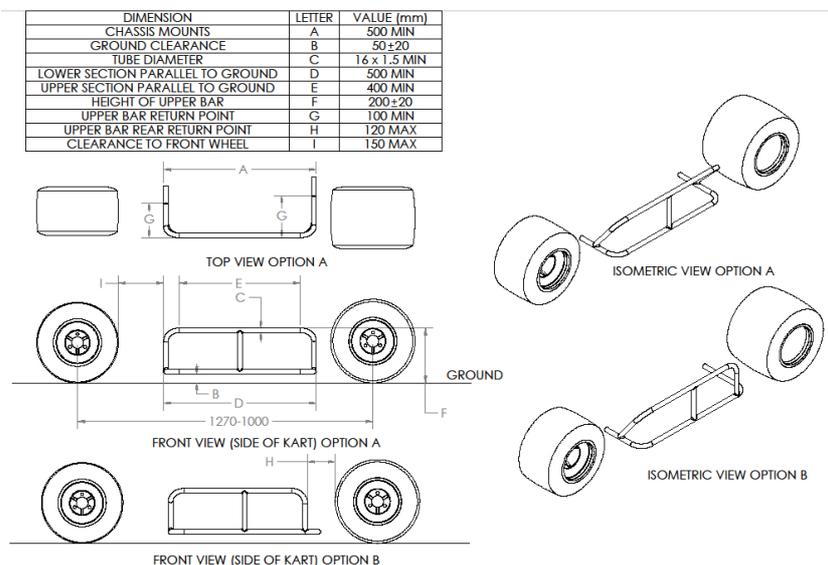


Figure 1.4.10: SIP Diagram

Front Bumpers: Front bumpers must be rigid, positioned forward of the feet and mounted at the line of or forward of the front chassis rail. They may consist of single or parallel tubes, and attached fixings, tabs, brackets and supports for the front fairing are allowed.

The bumper must be; a minimum diameter of 16 mm Steel tubing and have a minimum wall thickness of 1.5 mm, and be mounted horizontally at a line perpendicular to the centre line of the kart and at a height no less than half way up the driver's feet when seated. Front bumpers shall have a minimum of four mountings to the main chassis placed with two either side of the front central point extremities and two at the side return ends. Front Bumper height shall not be adjustable in any way while the vehicle is in motion. Any support arms and struts shall be tubular with minimum 15mm radius edges, and have no sharp or angular points at the extremities.

CIK-approved long circuit Front Bumpers are allowed for all Superkart Classes using CIK chassis.

Rear Bumpers: Each rear bumper shall be composed of at least one bar with a minimum diameter of 18mm and a minimum wall thickness of 1.5mm in the area between the chassis main rails; the lowest bar shall be located at a height to ground not exceeding 150mm \pm 20mm. The rear bumper unit must be fixed to the chassis frame in at least two points.

Rear Wheel Protection is an additional fitment to the rear bumper, and must be incorporated either as an additional unit attached to a central rear bumper, or integrated into a one-piece full width rear bumper. Minimum width shall be 1,080mm. The rear bumper maximum width shall not exceed the dimension between the outer flanges of the rear wheels regardless of the rear track setting.

Rear bumper overhang shall not exceed 400mm behind the rear axle centreline. The outer ends must be located behind the rear wheels, and:

- any support struts or bars shall not have sharp or angular parts at the extremities;
- the outer ends shall comprise a minimum 120° tubular bending with a minimum radius of 50mm that returns back to the mounting leaving no exposed tube end/s;
- may be fitted in an angled, horizontal or vertical plane;
- the rear wheel protection bar/s shall be located within an area between 80mm and 260mm height to ground.

For the Non-Gearbox classes, CIK-approved long circuit rear bumpers are also allowed.

SEE ANNEXED WEIGHT SUBMISSION FOR 250cc CLASSES NEXT PAGE.

**NATIONAL SUPERKART ASSOCIATION
AGENDA SUBMISSION**

TOPIC : Addendum to NSA Submission STR1.4 Bumpers - Change of Minimum Weight for the 250cc Superkart Classes affected, <u>in conjunction</u> with the STR1.4 Bumpers - Side Intrusion Submission		Page 1
SUBMITTED BY : National Superkart Association	GROUP/S CONCERNED : 250cc International, 250cc National class competitors and owners CAMS SUPERKART MEMBERS/OWNERS	
RECOMMENDATION: To amend Superkart Technical Regulation 10 in relation to minimum weight to be changed for the following classes: 250 International , from 215kg to 218kg , 250 National , from 205kg to 208kg , Only if the STR1.4 Bumpers Submission is also approved by CAMS, with an implementation date the same as the STR 1.4 mandatory fitment of side intrusion bars dates.		
BACKGROUND:	The STR Minimum Weight for Australian 250cc Superkart Gearbox Classes that are replicated in CIK Superkart Formula and in European and UK superkart racing is currently 3kg below that run in CIK competitions, mainly due to the non-fitment of side intrusion bars in Australia currently. Should the introduction of a new STR 1.4 that includes fitment of Side Intrusion bars and other specified Bumpers obligations becomes approved, Competitors have indicated that parity should be maintained between Australian 250cc Superkart Classes that replicate those running overseas in the CIK events in Europe and the UK.	
RATIONALE:	The fitment of the compliant Side Intrusion and Bumpers in accordance with the improved safety requirements of the 'new' STR 1.4 Submission will add to the current minimum weight. So that the introduction of the safety initiative of side intrusion etc does not either penalize or advantage certain competitors over others, the proposal is to align the Australian 250cc Gearbox Class weights with the CIK Superkart Div 1 & 2 Class weights. Owners of imported superkarts that currently meet CIK Superkart Side Intrusion regulations report that a large number of them currently run over the current Australian STR Sec10 weights by a 3 to 5 kilogram margin or more. The majority of 250cc competitors will be unaffected by a Weight adjustment in conjunction with STR 1.4 approval.	
ATTACHMENTS:	<p>No Weight increase for other Classes: 125cc Gearbox weights were moved in 2015 and this rise envisaged the introduction of Side Intrusion Protection, so no weight increase is sought or to be considered. Stock Honda and Non-Gearbox Classes already use CIK compliant side intrusion protections, no weight amendment is sought or to be considered.</p> <p>The Submission is to be read as an addendum to the NSA Submission for a 'new' STR1.4, that proposes to introduce CIK style Side Intrusion protection</p>	
COMMENTS : This Addendum Submission is only affective for 250cc International and 250cc National Superkart Classes.		