

Australian Karting Association Inc

Technical Committee

AGENDA



Venue: Crowne Plaza, Cnr Arden & Carr Streets, Coogee, NSW

Date: 5/6 June 2010

Time: 9am

Item 1 – AKA Qld Tech Item 1

25.13 Number Plates

- (i) Front and rear numbers must be a minimum of 130mm high and a minimum of 20mm thick, and be of plain or italic font similar to the sample below. They must be of the appropriate colour, and be placed on a full rectangular background of the appropriate colour, and have a minimum of 15mm to all edges of the background. For double digit numbers, there must be a minimum of 15mm spacing between numbers. The background colour must be a continuous unbroken rectangle, without highlight lines or contoured borders.
- (ii) Side numbers are required to be mounted on both sides of the kart on the outside surface of the side pods. They must be a minimum of 100mm high and a minimum of 15mm thick, and be of plain or italic font similar to the sample below. They must be of the appropriate colour, and be placed on a full rectangular background of the appropriate colour, and have a minimum of 15mm to all edges of the background. For double digit numbers, there must be a minimum of 15mm spacing between numbers. The background colour must be a continuous unbroken rectangle, without highlight lines or contoured borders. Where a hole is required in the outer surface of the side pod for external starters, the hole must not break into the rectangular background.
- (iii) The Chief Lap Scorer and/or Clerk of Course decision as to legibility of numbers is final.

Reason:

Numbers of all styles and thickness, and with elaborate background designs are proving difficult to read. Contoured backgrounds, and backgrounds with highlight borders and lines detract from the clear legibility of the numbers. This rewording allows for fonts similar to the style illustrated in the current manual that are also quite legible.

Item 2 – AKA Qld Tech Item 2

25.22.2 (e) Muffler damage

Discussion required to clarify whether accidental damage to AKA14 and AKA39 mufflers applies only to the event where the damage occurred, or whether accidental damage is acceptable beyond that event (i.e. for the life of the muffler). If accidental damage is acceptable beyond the event where it occurs, define a maximum size and/or occurrence of damage. For example, it may be that one large dent of 50 Sq.cm is acceptable provided it is no more than 5mm deep, or several smaller dents of no more than 50 Sq.cm total area and no more than 3mm deep is acceptable.

Reason:

A significant number of mufflers have sustained minor accidental damage, and are still in use. Do we really require competitors to dump them?

Item 3 – AKA Qld Tech Item 3

Cameras on karts

Finalise requirements for acceptable type and mounting.

Item 4 – AKA Qld Tech Item 4

26.01 Cylinder Head Volume Measurement

Allow the use of digital A grade burettes, and their use is to be compulsory for State and National Championship technical inspections.

Reason:

Accuracy, repeatability, speed of dispensing fluid, with no argument for time taken, leakage past piston ring, hang up in burette etc.

Item 5 – AKA Qld Tech Item 5

25.11 (iii) Skid plates or guards

The fitting of skid plates or guards to prevent the brake disc or axle sprocket and chain from contacting the track is prohibited.

A clear resolution on whether the devices currently fitted to some European karts as purchased contravenes this rule, and if not, under what circumstances they may contravene this rule.

Reason:

These devices are clearly designed to protect the disc brake rotor in particular. A typical style has a plastic wear block attached to a metal plate. Once the wear block is worn down, the metal plate may contact the track, and develop sharp edges capable of inflicting serious injury to a competitor in the event of an accident.

Item 6 – AKA Qld Tech Item 6

25.17 (k) and Addendum 3 – Clutch and Engine Table

Addendum 3 redressed the absence of the Zedtec ZD1 clutch. It specified the following classes where the clutch can be used:

- Formula Australia 31.20
- Clubman 34.11
- Senior National 36.09
- Yamaha 100 TAG 43.13

Clarification is required as to whether this clutch can be used in the following classes, as the amended table contained in Addendum 3 would suggest so, although the accompanying text has not included them:

- Junior Clubman 38.09
- Junior National 39.10
- Rookies 40.10
- Midgets 41.31

Item 7 – AKA Qld Tech Item 7

Tyre Treatment

A program is required to identify substances that are available in the market place today, and a means to identify their presence. Some substances claim to soften tyres, in some cases, quite dramatically. Some substances claim to be non-detectable, even though they also claim to reduce tyre hardness by significant amounts.

Reason:

There is a strong suspicion that tyre treatment substances are in use.

Item 8 – AKA Qld Tech Item 8
Chapter 43 – Yamaha 100 TAG Class

Specify a set of technical inspection dimension to limit modifications to this engine. Typically, to include transfer port width in crankcase, crankshaft width, distance from crankcase deck to crankshaft, barrel height.

While no modifications at all are permitted, there is no way of determining conclusively whether modifications have been made. No dimensional checks are available. While a set of specifications may not eliminate modifications, it would severely limit the potential to make modifications.

Reason:

There are reports that owners are being told that their engine builders can make these engines more competitive than they are out of the box. Where there is smoke, there may well be fire.

Item 9 – AKA Qld Tech Item 9
14.01.2 (a) Helmets

Review current standards for currency, and consider whether helmets approved to the DOT (US Department of Transport) helmet standard comply with acceptable minimum standards for karting.

Reason:

Helmets complying with DOT only are available in Australia.

Item 10 – AKA Qld Tech Item 10
45.21 Leopard RL 125 Exhaust and 45.38 Leopard X 30 Exhaust

Replace the drawing attached to 45.21 and add a drawing to 45.38 to define simple expedient inspection dimensions to identify the respective mufflers.

Reason: It is a breach of the technical rules to use the X 30 muffler with the RL 125 and vice versa. Dynamometer testing has demonstrated that the X 30 pipe allows an RL 125 to developed approximately 0.8 additional horsepower. The X 30 pipe dimensions are not immediately available in the manual, and the homologation drawings do not provide adequate simple dimensional checks on critical features of these pipes. The only distinguishing feature mentioned is the 'IAME' logo on the X 30 pipe. There is some concern that this could be disguised.

Item 11 - NSW Admin Agenda Item 2

Rule Changes: "EFFECTIVE IMMEDIATELY". There are too many technical changes - freeze rules for a period of time (2 years) – give stability to classes.

Item 12 – AKANSW Tech Item 1

The following items have been omitted from the 2010 manual

Rule 25.24 Noise Induction Silencer Diagram of the noise induction silencer needs to be added back into the manual.

Rule 25.26 Carburetor Diagram of the carburetor needs to be added back into the manual.

Rule 28.02 Addendum required for Rotax Engine Seals.

Item 13 – AKANSW Tech Item 2

Rule 25.11 Guards

Should Read

1/ Chain Guards: a chain guard is compulsory and must be designed to protect the driver in the event of a chain breakage and shall be of sufficient strength to withstand the impact of a flailing chain. All chain guards must be securely fixed at both ends. Sprockets not forming a part of the train must be removed.

2/ Engine Sprocket Guards: An engine sprocket guard is compulsory for all classes and must give sufficient front, top and side protection to prevent the driver from trapping his/her fingers in the chain.

The engine sprocket guard must be fixed to the engine with a minimum of two retaining bolts.

2a/ The OEM engine sprocket guard for the Parilla Leopard and the SQ Cheetah 125 may be modified as per the following diagram. The corners may be radiused to a maximum of 10mm.

3/ the fitting of skid plates or guards to prevent the brake disc or axle sprocket and chain from contacting the track is prohibited.

Reason:

We needed to rewrite the rule because the current rule has too many grey areas. The request is based on safety.

Item 14 – AKANSW Tech Item 3

Rule 25.30 Transponder Fitting Instructions

Add to rule 25.30 after the wording vertical / **horizontal** position.

Could you please forward these to the officials panel for ratification so we can send it to the Conference.

1. The wording in rule 25.30 transponders is very open and ambiguous.

I think the wording needs to be discussed at the Tech level and not be rushed like this was.

Rule 25.30 Transponder fitting Instructions

AMB TranX transponders must be mounted in an appropriate bracket on the side pod of the kart in a vertical position some side pods are too thin of material to allow this and if they are mounted this way, if the side pod gets hit and the transponder becomes a missile, no more than 30cm above the track surface and approximately 30cm behind the king pin line of the front of the kart where is the measurement taken to the front edge , centre or the outside edge of the transponder There must be no metal or carbon fibre between the bottom of the transponder and the track surface. It is permissible to use additional cable ties to secure the transponder.

2. Rule 28.33.2

This rule should be the same as for the rookie and midget classes.

That all restricted classes have a separate header pipe and restrictor.

"Each engine must have its own restrictor and header pipe for sealing. No changing of header pipes or restrictor is allowed".

Item 15 – AKANSW Tech Item 4

Rule 25.13(i) Number Plates

Number plates and numbers add to the wording in rule 25.13(i) the front to be Arial.

Item 16 – AKANSW Tech Item 5

Race numbers and backgrounds – at recent meetings competitors have been spoken to or charged with infringement of the rules in relations to numbers and backgrounds. With the advent of transponders, this is not as important as previously when required for lap scoring.

Item 17 – AKANSW Tech Item 6

Rear Crash Bars – make a larger target – non contact sport – plastic bar bars to be introduced over a 2-3 year period as mandatory.

Item 18 – AKANSW Tech Item 7

National Standards for Scrutineer levels to be added to the Committee Conference agenda items.

Item 19 – VKA Tech Item 1

Chapter 32

Rule 32 .06 AKA Restrictor plates add:
..... 2.1 mm maximum thickness.

Reason:

These restrictors have no thickness measurement listed.

Item 20 – VKA Tech Item 2

Ban the use of Elf fuel.

Item 21 – AKATAS Item 12

Rule 25.11(iii) Australian Kart Formula

Reword to read “Skid Plates or pads are permissible, but must be of non ferrous material. Skid Plates and/or guards that pass under the brake disc or engine sprocket and chain are prohibited. Any brackets that support such skid plates or pads cannot be lower than the skid plate or pads. Side plates or discs that are attached to the sprocket or carrier and are larger than the outside of the chain are also prohibited.

Reason:

Skid plates are now common on European karts and subjectively it would be better to have a skid pad touching the track surface than a brake disc or sprocket and chain.

Item 22 – AKATAS Item 13

Include reference to R25.21 (A). 6 to allow comer base gaskets to be of any material.

Reason: to fall into line with S and J engines and not is a performance item.

Item 23 – AKATAS Item 14

41.11 Midgets

Add, “Fasteners securing clutch drum are free to facilitate the use of an external starter as long as components are no bigger than 19mm hexagon.”

Reason:

Comer starting ropes have a propensity to fail, leaving the kart inoperative. By allowing a simple fastener system, that overcomes the issue of the left hand thread, an external starter can be used to get the kart started.

Item 24 – AKATAS Item 15
19.33.10 General Standing Regulations

Include “Tails on plastic seals to be left at full length”

Reason:

This was dropped from last years rule book with the advent of the bar-coded heavy metal cabled seals, however the plastic seals are still being used, particularly with chassis, so the above wording is still applicable.

Item 25 – AKATAS Item 16
Rule 25.22 (e) Australian Kart Formula

Clarify if this pertains to accidental damage, say for example in a previous heat or accidental damage from some time earlier than that actual heat or event, Eg 6 months ago.

Reason:

Ambiguous or not clear.

Item 26 – AKATAS Item 17
Rule 34.19(& 31.26 & 36.15 & possibly 41.18)

Specify that the chamfer on the inside of the bottom of the piston skirt can be no greater than the specified outer chamfer and that the bottom face of the skirt to be flat.

Reason:

To tidy up the loose area. Note that there should be some timed window for this. Suggest an addendum ASAP stating this will be a rule for the start of 2011.

Item 27 – AKATAS Item 18
Chapter 28 & Chapter 35

Sealing nuts as supplied by IKD be compulsory for Rotax engines.

Reason:

To simplify sealing the engines.

Item 28 – AKATAS Item 19
Chapter 28, 35 & 45

At the moment, we seal Rotax reed valves and not Leopard. Why?

Reason:

I suggest we seal neither as they are no different to other unsealed engine components. Ie; Carby

Item 29 – AKATAS Item 20

Rule 25.03 Australian Kart Formula.

Add “In a straight ahead position.”

Reason:

With common steering wheels, they have a flat top. When the competitor is questioned with the Nassau panel height they simply turn the steering wheel to the side and the height conforms.

Item 30 – AKASA Tech Item 1

Rule 41.01 Engine Eligibility for Midgets

The tech committee investigates the parity issues between good and bad comer engines with a review to either phasing out the comer and replacing it with a new engine or resorting to the J. The Comer engine is fantastic in its lightweight, practical ease of use but the parity between engines is shocking. DPE reviewed the cost of having CNC ports, which the NKC rejected. One option may be to allow a grind to a line on specific critical port edges eg top of the ex port and transfer ports. From experience in the class 4 to five tenths between good engines is common. Competitors are buying 10 at a time to try and find a good one.

Item 31 – AKASA Tech Item 2

Rule 41.11 Engine Additions:

Rule reads, “Engine must be run with supplied clutch
(Part No. S80 390 01)”

Change to read;

“Engine must be run with supplied clutch

(Part No. S80 390 01). **Clutch retaining nut/adaptor nut is non tech”**

This then allows for the fitting of a double nut to allow for external starting of these engines in the advent of a recoil failure. Maybe a maximum weight/size needs to be implemented.

Item 32 – AKASA Tech Item 3

The Tech Committee review the appropriate weights for the 125 classes as there are many karts running in the lightweight class with kart weights in excess of 100kg. For some reason we have a max kart weight in Heavies of 100kg but it is OK for the lightweight class to have kart weights in excess of this.

Item 33 – AKASA Tech Item 4

Rule 45.40

Remove the wording

“The only permissible radiator is the one as supplied by IAME SPA and must carry an IAME identification.”

This then allows for the use of the smaller RL radiator, which was always the intent of the wording in Rule 45.23.

Item 34 – WA Tech Item 1

ARC Engines

That the ARC engine be retained as an eligible AKA engine.

Reason:

There are many engines accepted as eligible, why not this one?

Item 35 – WA Tech Item 2

Chapter 37

Junior Performance

That there is a greater parity testing done on the Junior Performance Class before it is run in 2011.

Reason:

There are many discrepancies on the structure of this class. It needs to be tested correctly in 2010 before there is any consideration of implementing it in whatever form in 2011.

Item 36 – WA Tech Item 3

Chapter 41

Rule 41.18

Add:

5. The second piston ring must be freely removable from its groove and must be able to support its own weight when fitted to the cylinder that is held in a vertical position. The piston and ring must not be modified in any way that could possibly prevent the ring from moving freely in its groove.

Reason:

To clarify the uncertainty about this rule.

Item 37 – WA Tech Item 4

Chapter 41

Rule 41.20

Change the word “broken” to “missing or not completely intact”.

Reason:

It could be a performance advantage to cut off fins instead of breaking them off.

Item 38 – WA Tech Item 5

Chapter 41

Rule 41.12.1

Add:

“Gasket & Diaphragm kits are free”.

Reason:

To allow longer lasting and cheaper alternatives, that are currently being used.

Item 39 – WA Tech Item 6

Chapter 27

Allow the inclusion of twin current 125 engines. The engines would need to meet their individual class rules. The weights to be determined by the individual states to provide parity with the other engine/weight configurations in place.

Reason:

To allow more engines into this class. A watercooled 100cc reed engine is of approximately the same power level as the 125cc's, so that argument that they will be too powerful does not really hold.

Item 40 – WA Tech Item 7

Chapter 25

Rule 25.17(j)

Change from 'All clutches must fully engage at or before 4500rpm of the engine' to '***All clutches must engage sufficiently to allow front wheels to climb test bar at less than 4500rpm***'.

Reason:

Tidy up wording.

Item 41 – WA Tech Item 8

Chapter 25

Rule 25.17(j)

Add:

6. It is not permissible to increase tyre pressures on the out grid after the above test, if the above test was conducted on the out grid prior to that tested class proceeding to their next race heat.

Reason:

A near flat tyre would easily roll over the test bar, giving a false result.

Item 42 – WA Tech Item 9

Chapter 23

Rule 23.11.6 Tyres and Starting at Rear of Grid

Change the word "Competition" to "Race".

Reason:

If the scenario is that if a dry tyre is replaced with a 5th tyre and the next race is declared wet and everyone uses wets, does this mean the driver goes to the rear of the field with the wets or waits for the next dry race? Tidy up of the wording to avoid confusion.

Item 43 – WA Tech Item 10

Chapter 23

Rule 23.11.6

Add:

“If it is deemed that a competitor has intentionally damaged a tyre, that competitor will be eliminated from that race meeting”.

Reason:

Obvious

Item 44 – WA Tech Item 11

Chapter 22

Rule 22.04

Change to read “all flexible fuel line connections (**but not pulse lines**) are to be.

Reason:

The STO considers the need to secure pulse lines is not necessary. If they come off the engine stops, they are not a source of fuel leaks.

Item 45 – WA Tech Item 12

Chapter 25

Rule 25.24 KIAA Airboxes

Add:

“(q) It is permissible to provide a hole in the side flange to facilitate securing the airbox to the seat.

Reason:

Has no effect on performance and allows competitor to make the best installation of the airbox to suit the particular kart.

Item 46 – WA Tech Item 13

Chapter 25

Rule 25.01 (g)

Change “these bars and plastic bumpers must be by the original manufacturer in all respects” to something simple like “Bumpers, either plastic or steel, must be constructed in a manner appropriate for the application in the opinion of the scrutineer”.

Reason:

The STO feels that the current wording is restrictive. Does this mean that if a number plate tab breaks off and a new one is welded the bumper is now illegal? If a kart chassis is made and another manufacturers bumper is used, is it illegal?

Item 47– WA Tech Item 14

Chapter 25

New Rule 25.31

“All overflow bottles (fuel coolant and battery) to be emptied prior to kart entering the out grid”.

Item 48 – WA Tech Item 15

Chapter 25

Rule 25.22

Include new drawing that was omitted for the 2010 rulebook.

Item 49 – WA Tech Item 16

Chapter 40

Rule 40.09

Remove “Each engine must have its own restrictor & header for sealing. No changing or restrictor or header pipes is allowed”.

Reason:

Unnecessary expense. This rule is not applied to the Restricted 125 classes or the Junior Performance Class.

Item 50 – WA Tech Item 17

Chapter 31, 34 and 36

Rule 34.23, Rule 36.19 and Rule 31.31

Replace the crankcase width measurement with a suitable GO gauge (sample to be provided by WA).

Reason:

It is basically impossible to measure/inspect to an edge that is not at 90 degrees to the measuring plane.

Item 51 – WA Tech Item 18

Chapter 25

Rule 25.04

Undertray. Suggest that floor plan screws must face upwards only.

Reason:

Safety

Item 52 – WA Tech Item 19

Chapter 26

Rule 25.04 PTG Procedure

Reword to read:

Step 3 Add: “When checking the exhaust on the Comer SW80, Rotax Max 125, Rotax JMax, Fireball, Leopard, X30 & Cheetah, the exhaust checking groove (3rd groove down from top of rod) is narrow to define maximum and minimum exhaust duration. Hence, when checking the exhaust with the Ø5mm pin in place, the top of the gauge body must lie within the width of this (3rd) groove.”

Step 4 Change “..... Until it lines up with the second mark...” to read “until it lines up with the bottom edge of the groove used for checking the exhaust...” Note that similar changes will be required for the STO section as well.

Reason:

Current wording is incorrect.

Item 53 – WA Tech Item 20

Chapter 28

Rule 28.21

Change from Exhaust Power Vale to read Exhaust Power Valve Assembly.

Reason:

To include all parts.

Items from March 2010 NKC meeting

Rule 41.18.5 – New Rule

5. Both piston rings must be fitted and must contact the cylinder bore in all places. Any attempt to reduce friction by artificially restricting either ring is not permitted.

Reason:

Some people have been using methods such as “pop marking” the piston to make the second piston ring ineffective in order to reduce friction, even though the ring is still present.

Comer carby kit – to be a non-tech item – as they believe that the use of other carby kits should be able to be used.

Bumper Bars (is this the same as item above marked

Rule 25.01 g Bumper bars

This rule to be reworded – concerns on wording “original manufacturer” this should be taken out and the NKC would like to see removed.

The current new wording in the manual - delete first sentence and re write second sentence

KIAA Airbox

Clarification on whether the drain hole in the bottom is allowed to be covered? If this is allowed then a re-word of the rule will be required.

KIAA Airbox Flange

This to be reword in regards to the hole in the flange - allow extra holes so that it maybe securely attached. This needs to be re worded to allow for extra holes.

Clarification on Damage ports – there is some concerns with this rule and NTC interpretation. Rule needs to be re worded with the inclusion of - “these are not allowed to be presented at a State and National championships. “ as we did not include this part.

That a memo be sent to the National Technical Committee in regards to Rule 25.26 "No internal inspection required, ie covers will not be removed and only external measurements and visual inspection taken.

Clarification on Rotax overflow bottle/s.

Items from National Technical Coordinator

Discussion Item 1 - Helmets

DOT approved (mandatory for general sale in the US).

DOT only implies a self certification, but a helmet cannot be sold in the US of A without DOT approval. It would seem that many DOT approved helmets are actually certified through independent testing agencies.

Snell 2005 approved (optional for general sale in the US), as well as AS1698 approved (mandatory for general sale in AUS).

Discussion Item 2 – IKD Exhaust

BRP-Rotax have advised IKD of a minor change to the way that the silencer is mounted on the Rotax exhaust system.

To reduce the instances of the exhaust system cracking, in the future, the silencer will be attached by way of 2 springs rather than the current method where it is welded on.

There is no change to any "internals" within the exhaust system it is only a change to the way in which the silencer is attached to the system.

Therefore no official application is required to the AKA and the new exhaust system is fully legal within the rules as they are.

This email is for your notification purposes only so that you are fully informed.

IKD does not expect that we will have engines with this exhaust system or spare parts sales of this exhaust system for at least another 3 or 4 months but obviously they will start to flow through when our current stocks are exhausted.

The official Rotax release is attached

Discussion Item 3 – Chapter 25

Ch 25. Exhaust spacers &/or flexs must have "substantially square, flat and functional sealing end faces" ????

Discussion Item 4 – Home made chassis?

Discussion Item 5 - Yamaha (S&J) Crankcase width

Basically it is impossible to measure the actual edge of an angled face as we are expected to check the 97.5 & 81.5 respectively.

Reason:

As an alternative, that a simple, laser cut, GO gauges that would register on the curvature of the crankcase cut out passages, approx 5mm down from the crankcase/cylinder interface. Should the flat sections not touch the crankcase face then the engine deemed illegal. If a crankcase was machined too low, this would go against the engine, but this would only be a small factor.

Ken Seeber to bring along some samples.

Discussion Item 6 – Strike Products correspondence

Document attached

Discussion Item 7 – Comer 11T Sprocket

From day 1 to the 2006 manual it lists that you must run a 12 tooth sprocket.

Did DPE request that this is not listed in the manual from 2007? – just cannot find an agenda item on it.

There is some different opinions as to whether using an 11T drive sprocket/drum on a Comer is legal or not. As rule 25.21 states engine sprocket is a non tech item – is this correct when applied to Comers or not?