

Australian Karting Association Inc

Technical Committee



Venue: Crowne Plaza, Cnr Arden & Carr Streets, Coogee, Sydney
Date: 21/22 June 2008
Time: 9am

Conference Timetable

Saturday:

9am – Welcome address

9.15am - Conference commences

10.30am – 10.45am Morning tea

1pm – 1.40pm Lunch

3.30pm – 3.45pm Afternoon tea

5pm –5.30pm Finish (please remove any valuables from conference room)

Dinner - own arrangements

Sunday:

9am - Conference commences

10.30am – 10.45am Morning tea

1pm – 1.40pm Lunch

4.30pm Finish

Item 1 (AKAQld Item 6)

Revision of rule 25.17 in particular 25.17(g) to give consideration to exemptions where drive sprockets (9T) are the norm for use on smaller circuits in heavier class categories.

Reason:

The manufacture of 9T sprockets for use with clutches in mainstream Yamaha classes has not been fully investigated or advised nor available on current registered AKA clutches as permitted in these categories.

Item 2 (AKAQld Item 7)

Chapter 41.

Comers to be phased out by the year 2010.

Reason:

Parity.

Item 3 (AKAQld Item 8)

Chapter 22 – DT14 Tester

Review.

Reason: Update.

Item 3 (AKAQld Item 9)

National Seal for Engines at Championships and other events.

Reason:

Increased security.

Item 4 (AKAQld Item 10)

Rule 25.06 – Nose Cone

Fixing of same to Chassis.

Reason:

Safety.

Item 5 (AKAQld Item 11)

Rule 19.33/34 Change of Motors – Seal regulation/Chassis Seal and Trye change.

Reason:

Increased security.

Item 6 (AKAQld Item 12)

Rule 45.20 – Ignition System and “brain box” identification.

Reason:

Review ability to inspect and control this item.

Item 7 (AKAQld Item 13)

Rule 45.19 – Induction Silencer

Review number of silencers eligible.

Reason:

Uniformity with main stream classes

Item 8 (AKAQld Item 14)

Rule 25.17 – Transmissions.

Clutches – Review application and testing procedure and 9T availability for classes.

Include Inspection checks in Chapter 26.

Reason:

Consistency and evaluation of product prior to approval.

Item 8 (AKAQld Item 15)

Review Chapter.

Reason:

Further improve processes.

Item 9 (AKAQld Item 16)

Address – Resolve and recommend other Technical matters from meeting discussions.

Item 10 (AKA NSW Item 3)

Rule 25.17 Engines and Transmissions or Rule 25.27 Batteries

Add to rule - External starters to have dry or gel CEL batteries only.

Reason: Safety issue if wet battery is leaking drivers may get acid in eyes on out grid sitting in kart when someone walks by holding starter.

Item 11 (AKA NSW Item 4)

Rule 23.02 Bead Retention

Add to rule – Bead retention must be used in the following classes:

Open

All 125cc classes

Reason: As all these classes are using soft compound tyres at 10PSI or less (safety issue).

Item 12 (AKA NSW Item 5)

Rule 26.01 CC Plugs

Add to rule – As per type 1, 2, 3, 4 to be stamped on plug.

Reason: Having CC plugs stamped 1, 2, 3, 4 makes it easy for admin to deliver correct plug to customers.

Item 13 (VKA Item 1)

An increase in the piston size of the Yamaha engines due to age of engines for J engine maximum piston size 51.20 and S engine maximum piston size 53.20.

Item 14 (VKA Item 2)

Exhaust safety wire not to be attached to rear crash bar, should be to chassis or bearing carrier.

Item 15 (VKA Item 3)

Yamaha J black box should only be allowed to have the lead repaired.

Item 16 (VKA Item 4)

SUGGESTION PENALTY'S FOR NON-CONFORMANCE

Change recommended penalty for the Tampering of Ports.

Change to:

Tampering of Ports. Exclusion Plus. 6 Month Suspension.

REASON:

The penalty for a Machined Part that does not meet Specs is an, Exclusion Plus 3 Month Suspension. In this case a minor error in alteration of a part which is allowed to be altered is 3 month suspension. Therefore when Tampering with the Ports, an action that is not allowed in any way, should carry a greater penalty than an error with something that is allowable.

Item 16 (VKA Item 5)

SUGGESTED PENALTY'S FOR NON-CONFORMANCE.

FAIL CC TEST (26.01)	EXCLUSION PLUS 1 MTHS SUSPENSION.
MACHINED PART THAT DOES NOT MEET SPECS	EXCLUSION PLUS 3 MTHS SUSPENSION.
TAMPERING OF PORTS	EXCLUSION PLUS 6 MTHS SUSPENSION
AIRBOX INFRINGEMENT (TAMPERING)	EXCLUSION FROM MEETING. – 1 MTH SUSPENSION
TAMPERING WITH EXHAUST	EXCLUSION FROM MEETING. – 1 MTH SUSPENSION

RESTRICTOR INFRINGEMENT EXCLUSION FROM MEETING – 6 MTHS
TOTAL EXHAUST LENGTH (ROOKIE/MIDG)

AIRBOX MISSING	EXCLUDED FROM THAT SECTION OF EVENT
EXHAUST MISSING	EXCLUDED FROM THAT SECTION OF EVENT
WEIGHT INFRINGEMENT	EXCLUDED FROM THAT SECTION OF EVENT
KART FORMULA	EXCLUDED FROM THAT SECTION OF EVENT

REASON:

TO ASSIST STEWARDS THAT NEED TO GIVE A PENALTY - MANY STEWARDS ARE NOT TECHNICALLY MINDED AND MAY NEED GUIDANCE WITH THIS.

Item 17 (VKA Item 6)

Rule 19.34

Add following to the end of Rule 19.34 (iv)

‘, of comparable worn condition as approved by the Tyre Representative and/or Chief Scrutineer.’

‘A complaint/appeal cannot be lodged against this action.’

REASON: This allows the competitor the option of having a replacement. Tyre without disadvantaging his position. However it does not allow a competitor to obtain an unfair advantage by using a used tyre of better condition than the worn tyre it is to replace.

Item 18 (AKAWA Item 3)

All Control Classes

Cylinder Head

- a) It is not permissible to fit separately machined inserts into the cylinder head.
- b) Any material replacement as part of a cylinder head repair is to be done by welding only. The only exception is to use a readily available commercial thread insert (eg Helicoil, Keensert etc) that is nominally parallel and is not flanged to form the spark plug seat.

REASON –

(a) There are lots of varying interpretations about inserted heads as to their legality, as they do represent a departure from the original cylinder head. Need a guiding decision on acceptance or not

(b) Some engine builders have sometimes used less than permanent “fixes”, sometimes failing during measurement, leading to engines being disqualified. A permanent repair, such as welding, would alleviate any such issues.

Item 19 (AKAWA Item 4)

Experimental Classes

It is not permissible to sell engines when the class is experimental.

REASON – The experimental class is just that, experimental and as such, could be cancelled so therefore no competitor should be left in a situation where they buy an engine in good faith, only to find out later that it is deemed inappropriate or unsuitable.

Item 20 (AKAWA Item 5)

Rule 25.03

Nassau Panels to be made compulsory.

REASON – Currently they are not mandatory, making attachment of the AKA sticker to the Nassau panel difficult if the panel is not there.

Item 21 (AKAWA Item 7)

Chapter 41

Requires a decent cylinder drawing for the Comer SW80 cylinder.

REASON – The current drawing is not clear enough.

Item 22 (AKAWA Item 9)

Chapter 21

Why after all the work that was put into this chapter is it not in the rulebook?

Item 23 (AKAWA Item 10)

Chapter 34

For the nth time, include ARC engines into Clubman.

REASON – There are lots of ARCs out there, but people do not use them much as Formula Australia effectively does not run, therefore making these engines ineligible to run in any State or National Championships. If it's ok for Junior Clubman, then why not Senior Clubman? The combined Sportsman class has been running successfully for years in various states, so why not acknowledge this and allow ARCs into Clubman.

Item 24 (AKAWA Item 11)

Rule 27.27

Include these as non-tech items. (Obviously they would have to satisfy R27.27.)

REASON - In some classes it could be construed that the 'as supplied' batteries are the only ones permissible, whereas in reality most karters are, quite successfully and economically, using another brand or type.

Item 25 (AKAWA Item 12)

Rule 25.22 & 25.23

AKA14 & 39 Exhausts – Allow the entry tube to the muffler to be repaired (typically slit and re-welding in situ, not to be removed from muffler).

REASON - To overcome belling out at open end, making the flex a loose fit, saving the competitor the cost of a new exhaust.

Item 26 (AKAWA Item 13)

All Classes – Wiring Looms/Harnesses

Allow these to be repaired (inc wire replacement), not just the plastic connectors (as in R45.20).

REASON – Cost saving in that it will allow repairs to be made.

Item 27 (AKAWA Item 14)

PTG System

Right or wrong, there seemingly is a situation that the PTG rod allows greater engine modification freedom than the Dial Indicator measurements. This logically is the opposite of what the situation should be in that the PTG test should be "safer" than the final indicator measurement method. Suggest that this area be revisited and if it is shown to be the case, then alter the indicator measurements (not replace the PTG rods) to reflect this.

Item 28 (AKA SA Item 9)

Re-word to rules **19.33.10**, **20.20** and **20a.12** to reflect the Method of Issue and use of the new bar coded Roto engine seals.

19.33.10. Standard Method of Issue of Engine Seals/Tags.

- 1 Engine tags to be issued to the competitor with passes and entry acknowledgment and detailed against the competitor's entry. Fitting and responsibility notice to be provided with tags and/or displayed in a prominent place / notice boards(s)
- 2 Competitor to fit seal leaving the tail at full length.
- 3 Competitor deemed not to have fulfilled their duty to manage the seals should there be a loss or damage to or failure to produce the correct seals when requested.
- 4 Roto seals to be fitted by officials of the meeting

20.20 Engine and Chassis Sealing (State and National Championships)

- a) All engines must have provision for sealing in accordance with rule 19.33.
- b) A plastic seal in conjunction with a color coded event tag is to be used for identification of engines and chassis at National and State Championships. **Competitor deemed not to have fulfilled their duty to manage the chassis seal should there be a loss or damage to or a failure to produce the correct seal when requested.**
- c) Engine seals will not be distributed prior to event.

20a.12 Engine and Chassis Sealing

All engines must have provision for sealing in accordance with rule 19.33. A plastic seal in conjunction with a color coded event tag is to be used for identification of engines and chassis at National and State Championships. Engine seals will not be distributed prior to event.

Rules to be re-worded as follows;

19.33.10. Standard Method of Issue of Engine Seals/Tags.

1. Engine Roto seals to be **supplied**, fitted **and recorded** by officials of the meeting **prior to commencement of competition.**

2. It is the competitors responsibility to check their engine seals for loss or damage prior to leaving the in grid / scales area.
3. Competitor shall be deemed not to have fulfilled their duty to manage the seals should there be a loss or damage to or failure to produce the correct seals when requested.

20.20 Engine and Chassis Sealing (State and National Championships)

- a) All engines must have provision for sealing in accordance with rule 19.33.
- b) Engine Roto seals and chassis tags to be supplied, fitted and recorded by officials of the meeting prior to commencement of competition.
- c) It is the competitors responsibility to check their engine seals and chassis tags for loss or damage prior to leaving the in grid / scales area.
- d) Competitor shall be deemed not to have fulfilled their duty to manage their seals / tags should there be a loss or damage to or failure to produce the correct seals / tags when requested.

20a.12 Engine and Chassis Sealing

- a) All engines must have provision for sealing in accordance with rule 19.33.
- b) Engine Roto seals and chassis tags to be supplied, fitted and recorded by officials of the meeting prior to commencement of competition.
- c) It is the competitors responsibility to check their engine and chassis seals for loss or damage prior to leaving the in grid / scales area.
- d) Competitor shall be deemed not to have fulfilled their duty to manage the seals / tags should there be a loss or damage to or failure to produce the correct seals / tags when requested.

Item 29 (AKA SA Item 10)

Rule 25.19.2 Weights:

Maximum kart weights at time of weighing for all Junior Heavyweight, Senior Heavyweight and Senior Super Heavyweight Classes to be 88kg except where: a) noted in class technical detail or b) when a lighter weight division of a class is not being run at a race meeting.

Add line to rule to read;

Maximum kart weights at time of weighing for all Junior Heavyweight, Senior Heavyweight and Senior Super Heavyweight Classes to be 88kg except where: a) noted in class

technical detail, e.g. Rotax and Leopard class maximum kart weights of 100kg or b) when a lighter weight division of a class is not being run at a race meeting.

Items 30 (AKA SA Item 11)

Change to rule 25.17(g)

Add Chapter 34 – Clubman 100cc. Until further notice the fitment of a clutch is optional.

Rule 25.17(g)

Compulsory fitting of clutch assembly with a form of starting without pushing, i.e. pull start, external starter (JICA type) or electric will commence on 1st January, 2009 with the exception of engines in Chapters 27-29-30-33-37-47-48 and Historic / Vintage. All future engines for homologation / registration require clutches.

Reason:

There has been a noted increase of crank breakages as more competitors move over to clutches. Even the new purpose built Yamaha SEC has had continuing evolution / changes to overcome the problem. The AKA has a responsibility to ensure that compulsory acquisitions do not negatively impact on the karter. Until a viable clutch package is available, the fitting of the clutch to the clubman motors should continue to be optional.

Amended rule to read;

Compulsory fitting of clutch assembly with a form of starting without pushing, i.e. pull start, external starter (JICA type) or electric will commence on 1st January, 2009 with the exception of engines in Chapters 27-29-30-33-~~34~~-37-47-48 and Historic / Vintage. All future engines for homologation / registration require clutches.

Chapter 34 – Clubman 100cc. Until further notice the fitment of a clutch is optional.

Industry Submissions

St George Kart Centre Submission:

CHAPTER 44 – TaG 125

St George Kart Centre would like to submit the following changes to Chapter 44 TaG 125.

Dry Weather Tyre - Rotax Max: MG Yellow
Iame Leopard: MG Yellow
PRD Fireball: MG Yellow
Biland: MG Yellow, Maxxis HG3

Weight -

Rotax Max:	Light 165kg, Heavy 185kg
Iame Leopard:	Light 160kg, Heavy 180kg
PRD Fireball:	Light 160kg, Heavy 180kg
Biland:	Light 170kg, Heavy 190kg

We are continuing to test to create the best possible parity. I believe this is the most suitable parity however I may ask for further changes by the mini conference.

Clutch - Remove the words 'one piece clutch' as the Fireball has 3 clutch systems.
Can the PRD 1 piece Clutch Drawing be moved to the Clutch Section.
Add Drawing of Horstman Clutch.
Set a phase out period of three shoe clutch for 31st Dec 2009.

Exhaust Muffler - Remove Bubble Muffler. The bubble muffler was fitted to few early engines. Recently it was found to be faster in TaG restricted than the straight muffler. I feel this will upset the parity of the restricted class.

Conrod - Remove Light Weight Conrod.

Rule Numbers - Can rule numbers be added to chapter 44.

Strike Products:

As the manufacturer of the SSS clutch for both KT100J and KT100S engines, we would like to take the opportunity to make some points for the AKA to consider at the forthcoming Technical Meeting in June of this year:

1. That it is permissible to modify the crankcases of existing control class engines to accept an on-board or on-engine starter. STRIKE and possibly others are currently looking into this area and clearly there will be some need to make external changes to accept a starting system, but the actual details are unknown at this time. The benefit of this would be that with a starter, in conjunction with an existing clutch, the engines would then be considered TAG engines, a direction I am sure that the AKA is headed.

2. It is clear that some engines, mainly KT100J, have had the threaded end of the crankshaft break off. This effectively renders the crankshaft unserviceable. However, it is possible to drill and tap (M6 or M8) the open end of the broken crankshaft. It is also possible that this drilling and tapping could be done on the engine without having to remove it from the kart. Whilst this is not strong enough to clamp a direct drive sprocket, it is adequate to secure a clutch retaining nut. Such a repair would not provide any performance gain, but would offer a cost saving to the karter.
3. That the bearing arrangement for clutches be non tech. With time, some people are making some minor changes to the bearing design, with a view to improving the designs that are available. This could be regarded as a good thing, possibly "improving the breed". This might, in some cases, involve modifications to the crankshaft. Again any such minor changes would not provide any performance gain.

Yamaha:

1. **36.18 Crankshaft:**

Must be stock and have a minimum width across top of the crankwheel of 48.8mm. Plugging of the counter- balance recesses, shot peening, polishing ~~or removal of the Yamaha etching~~ is forbidden. Crank pin to be standard solid pin. It is permissible to recondition the crankshaft main shaft plating.

2. **2.5 Crankshaft:**

Must be of original engine manufacturer and conform to drawings supplied by manufacturer – The SEC engine is supplied with two crank types – original with plastic balance weights, the KT100 SE/SD model with alloy balance weights – both cranks are eligible in this class until the conclusion of the phase out period ending 1st Jan 2009.

(i) It is permissible to recondition the crankshaft main shaft by plating.

(ii) No Machining permitted ~~"Yamaha" etching must remain as supplied.~~

I have highlighted the changes required.

These changes are required due to the factory advising that they can no longer etch the word YAMAHA on crankshafts for environmental reasons (please see below advice received from Yamaha Motor Corp.)

"Dear Sir,

We have marked "YAMAHA" on crank of KT100. But it will disappear at the end of this year.

The waste liquid at process of marking "YAMAHA" has a problem environmentally. So, we have decided to give up "YAMAHA" mark.

If you need some information or documents regarding engine homologation or registration for each kart federation, please let me know it.

Best regards,

Setsuko Ehara for T. Higashihara
Kart Division, Yamaha Motor Co., Ltd."

3. The rules for Chapter 43 (Yamaha 100 TAG class) need some minor modifications made.

ENGINE ELIGIBILITY – Yamaha model KT100SEC (pre fix 7YK)

needs to be changed to:

ENGINE ELIGIBILITY – Yamaha model KT100SEC (pre fix 7YK & 7YP)
(the 7YP prefix is for models manufactured in Japan without clutches)

And:

43.2.2 Cylinder:

The engine cylinder must be marked with 7ET.

This entire sentence needs to be removed. The 7ET marking on the cylinder only refers to the moulding for the cylinder – it is not a model code or ID for the cylinder.