

Australian Karting Association Inc

Technical Committee Meeting Minutes



Venue: Crowne Plaza, Cnr Arden & Carr Streets, Coogee, NSW
Date: 25th / 26th June 2011

ATTENDANCE:

State Technical Coordinators

QUEENSLAND	Terry Sheedy
NEW SOUTH WALES	Ian Saville
VICTORIA	Harold Arnett
TASMANIA	Mark Close
SOUTH AUSTRALIA	Geoff Hall
WESTERN AUSTRALIA	Ken Seeber
NORTHERN TERRITORY	Les Allen

National Technical Coordinator: Les Allen
Chairperson: David Murray National Vice President

Item 1 – Qld Tech Item 1

Rule 25.31

Remove limit to number of cameras. Lightweight cameras are 20 grams, about the size of a matchbox. Drivers perceive a requirement to fit several to film different parts of the kart during practice and racing to analyse handling.

Method of securing, it is near to impossible to secure with tethers. We don't even specify these restraints for significantly larger Alfano and other such instruments, or lead weights.

Committee's recommendation to the NKC:

Alter rule to read

25.31 Cameras on karts:

Cameras are permitted on karts providing they conform to the following:

1. A camera(s) or self contained camera unit cannot weigh more than 300gm (including any associated mounting bracketry), but if a camera with a separate recorder is used, then the camera (and any integrated cabling) itself cannot weigh more than 200gm and the recorder (including any other cabling, batteries, etc) cannot weigh more than 1kg. Should there be any question on the weights, the competitor must be able to supply evidence that the maximum weights have not been exceeded.
2. The camera must be mounted to the kart with a "fit for purpose" mounting system that, in itself, does not pose a hazard to other karts or karters under any circumstances. **Camera cannot be fitted to any movable component of the kart chassis.**
3. No more than one camera can be mounted on the nassau panel at any one time. attachment must not be dependent on any tension in the tether cable. **The camera must not obscure the number.**
4. The camera (**if over 100gms**) itself must be secured to the kart using a multi strand tether wire or cable ties securely attached to the camera and an adjacent tie point on the kart **chassis** (~~this does not include any plastics or seat~~).
5. If a separate recorder is used, it must be mounted on either the chassis or the seat only and cannot be mounted on the Nassau panel.
6. If a separate recorder is used, this must be securely mounted in a "fit for purpose" cradle.

Any connecting cable between the recorder & camera must be routed in such a way that it will not interfere with a driver entering or exiting the kart.

7. The camera or recorder cannot be mounted on the helmet or any safety apparel.
8. The camera cannot be mounted any higher than the top of the steering wheel.
9. The direction the camera faces is free.
10. No optical flashing function is allowed.
11. Maximum of TWO cameras to be used at one time **and the total weight of all cameras and associated equipment cannot weigh more than 300 gm**

Item 2 – Qld Tech Item 2

Parity – KT100SEC

This would be an alternate to the KT100J. Run the KT100SEC at 160Kg, and the J at a weight around 140-150 Kg for parity? Would work with one Senior class only.

Committee's recommendation to the NKC:

Recommendation: Refer to future planning committees.

Item 3 – Qld Tech Item 3

Yamaha TAG100

Engine serial numbers have moved on from those in the rule book. Clutch has changed.

Has Yamaha applied for an homologation evolution change on the clutch? The clutches listed in the table in R25.17 will not fit the crankshaft.

Committee's recommendation to the NKC:

NTC to check homologation & evolution history of clutch and crankshaft with a report from the Techs by end July.

Item 4 – Qld Tech Item 4

Ch 37 Restricted 125 Class

Rule 37.02.6

Note:

- Parilla Leopard RL125 - The Selletra 4 pole **/push button** and Selletra digital K ignition **(with the black module)** systems must use the exhaust restrictor marked AKAL1 with a max 23.00mm hole.

This would imply absolutely that the old push button ignition is able to be used in this class. This needs to be made clear. Some people believe that the old push button ignition can be used in Restricted TAG 125, others believe that it cannot. The rule would appear to support its use.

Committee's recommendation to the NKC:

Rule altered to read as above

Item 5 – Qld Tech Item 5

Rotax

Electrosil aftermarket plating, requires guidelines on its detection, as its use to repair engines is not permitted.

Committee's recommendation to the NKC:

Leave current rules "as is"

Item 6 – Qld Tech Item 6

New J's

What level of machining cleanup or grinding is allowed?

Comments from conversations with MG. Ken Mitchell and Harold Arnett (need Pictures or diagrams). There is some evidence that new engines may be supplied with excessive grinding.

Committee's recommendation to the NKC:

Leave current rule "as is".

Item 7 – Qld Tech Item 7

How to deal with non-compliant, non repairable components

What can we do to ensure that they never re-appear in competition?

Committee's recommendation to the NKC:

Withdrawn.

Item 8 – Qld Tech Item 8

Exhaust Flex with Swaged End

R25.22.2 (h) ***For Classes subject to AKA 14 & AKA 39 Control exhaust pipes. The exhaust header pipe and muffler can be joined by a pipe or flexible tube with a parallel bore in the section through which the exhaust gases pass and be of constant wall thickness and must have substantially square, flat and functional sealing end faces with a minimum 36mm ID maximum 46.5mm OD. Exhaust spacers are allowed and must be of material equal to the permitted size of the joining exhaust flex or pipe, be of parallel bore, and must have substantially square, flat and functional sealing end faces.***

Clarification required as to whether the exhaust flex with a reduced diameter bore fitted into the header pipe socket complies.

Committee's recommendation to the NKC:

Leave rule "as is".

Item 9 – Qld Tech Item 9
TAG 125 PTG's

Complete dimensional re-vamp for all 125cc engines.

Several engine builders are advising that some TAG 125 engines when sold new do not comply with the PTG offsets as per R26.04. A preliminary review of the homologation documents confirms that this is quite possible. Queensland will provide a set of revised PTG offsets for discussion.

Committee's recommendation to the NKC:

Rotax. Continue with the PTG system to show a 14.6 split with new rods to be supplied by IKD. Another option (not preferred by the techs) which was been discussed at NKC level, consider using Rotax world rules and removal of use of PTG system (with IKD to supplying all appropriate gauges to all clubs)

Item 10 – Qld Tech Item 10
Ceramic Coatings

There are rumours that ceramic coatings are being employed in engines. Identify the process, and investigate detection methods.

Committee's recommendation to the NKC:

Various methods of detection of coatings are being investigated & tested by the tech committee.

Item 11 – Qld Tech Item 11
Grind to Line

Discussion - Pros and Cons?

Committee's recommendation to the NKC:

Understand results of current "grind to the line" testing that is underway before making any decisions.

Item 12 – Qld Tech Item 12
PID

Discussion and review experience to date with the new PID's.

Committee's recommendation to the NKC:

AKA Tyre testing procedure (P145) to be deleted

Reword current addendum (#4) to remove the requirement to impound tyres between heats and, instead, record tyre numbers and claim tyres after racing for further analysis should the STO not

be present at the meeting. Should the competitor not present tyres at end of meeting as requested then the penalty would be the same as having treated tyres

Alter Rule 23.03 (f) to read

“f) If chemical treatment of tyres is detected or suspected, the tyres will have their barcode numbers recorded and the competitor must present the tyres, still fitted to the rims, at the end of the race meeting when the tyres will be impounded, bagged, sealed and tagged and sent to the State Technical Officer/Coordinator for final testing. The competitor or their representative has the right to be present for final testing with the State Technical Officer/Coordinator

If chemical treatment of tyres is established as per rule 23.03 c d & e above, competitor will be excluded from the race meeting and their licence fully suspended for 12 months. This decision and penalty is non-appealable.”

Item 13 – NSW Tech Item 1

Tomar Clutch Test Kit

NSW would like to request a test kit be introduced to check for illegal adjustments to the Tomar Clutch.

Committee’s recommendation to the NKC:

Withdrawn

Item 14 – TAS Tech Item 1

25.22.2 (g) Exhaust Mufflers : Aka Controlled Mufflers

‘With the exception of repair to fixing points, any attempt to repair damage by cutting, welding or fabrication will automatically remove eligibility of the exhaust unit’

Change to allow a repair on the flex end

Reason:

As this is where they break and render the muffler useless. Also why is it legal to repair a ROTAX muffler and not a AKA14 or a AKA39 muffler?

Committee’s recommendation to the NKC:

Alter to read”

(g) With the exception of repair to fixing points, any attempt to repair damage by cutting, welding or fabrication will automatically remove eligibility of the exhaust unit, however the flex end tube may be replaced or repaired, but the muffler must remain within specification

Item 15 – TAS Tech Item 2

Ban the use of magnesium rims and only use ball bearing type front rims in the MIDGET / ROOKIE and ~~JUNIOR~~ classes as suggested in the KIAA document.

Reason:

Beginner and low budget class an expense not needed

Committee's recommendation to the NKC:

Withdrawn

Item 16 – TAS Tech Item 3

25.31 – Cameras On Karts

Add number 12. Cameras to be turned off once stopping on the in grid.

Reason:

To stop filming when being weighed (scale marshal JUDGE OF FACT) also girls commonly lift the front of karts being the lighter end. We do not want to see a set of these girls breasts on you tube from a kart meeting.

Committee's recommendation to the NKC:

Motion lost.

Withdrawn

Item 17 – SA Tech Item 1

NEW RULE

KTS 1.03(4)

To allow the height of the main transfer ports to be changed ("grind to the line")

Reason:

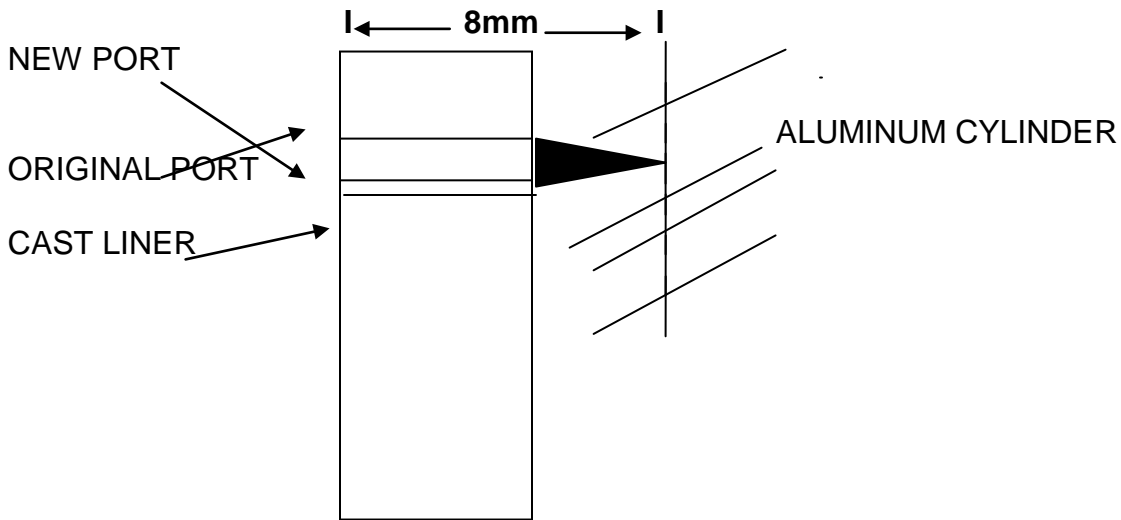
To allow engines to be closer in performance. We allow inlet timing to be changed by machining the piston, we allow exhaust timing to be changed by barrel height adjustment machining and gaskets, but do not allow transfer ports timing to be changed. (exhaust/trans split), (blow down). Engines have been spark eroded etc, without being detected.

NEW RULE

KTS 1.03(4)

It is permissible to change the height of the two main transfer ports by grinding/machining up to the minimum exhaust to transfer split of 9.5mm (checked and measured by the same methods used currently) The chord width of transfers cannot be altered, Any grinding of the aluminum must be smooth transition from the intersection point of the cast liner and the aluminum casting to a Point no further than 8 mm from the cylinder wall (to be measured by a no go gauge, to be made)

Cost Engine builders have estimated 2-3 hours labour for this modification.



Committee's recommendation to the NKC:
Motion lost

Item 18 – WA Tech Item 1
New Rule
R25.31.12

“The top of a Nassau mounted cameras can be no higher than the bottom of the front number plate when viewed horizontally”

Committee's recommendation to the NKC:
Covered in Item #1

Item 19 – WA Tech Item 2
Rule 25.31.7

Add “If the camera in total weighs less than 50 gm, then it can be taped to the helmet in a “fit for purpose manner””. Reason: Some of these are becoming quite small, to the point that it would be reasonable to allow them to be taped to the side of the helmet, no less safe than a rock or a nose cone being thrown up from the track.

Committee's recommendation to the NKC:
Withdrawn

Item 20 – WA Tech Item 3

New Rule

Rule 34.24 e)

“The external side face of the ignition rotor can be machined on outer face as long as a witness of some of the writing still remains”

Committee’s recommendation to the NKC:

New rule KTS 1.10 f)

f) The external side face of the ignition rotor can be machined on outer face as long as a witness of some of the writing or lugs still remains

Item 21 – WA Tech Item 4

New Rule

R25.32.

“Mirrors or any alternative/substitute reflective surface or device for rearward vision are not allowed, whether either kart or helmet mounted”

Committee’s recommendation to the NKC:

New rule 25.32

25.32. Mirrors or any alternative/substitute reflective surface or device for rearward vision are not allowed, whether either kart or helmet mounted

Item 22 – WA Tech Item 5

Rules 34.19 & 33.15.

Piston skirt internal chamfer. Unfinished business from last year. Write to read “At no point on the inside of the skirt can the chamfer be greater than that allowed on the outside of the skirt.”

Committee’s recommendation to the NKC:

Accepted and to be introduced from 1 Jan, 2013.

Alter KTS to read:

KTS 1.06 Piston:

Piston must be approved and stock appearing.

AKA approved/registered pistons are YAMAHA, KSI, KSI MK 11, JDP/Vertex and ARC (forged and cast) and Strike.

Bottom of piston should be 90 degrees to sides. It is permissible to notch the piston to allow the removal of circlip. The piston skirt length may be machined, providing it conforms to the current specifications as laid down in these Rules.

At no point on the inside of the skirt (of a shortened piston) can the chamfer be greater than that allowed on the outside of the skirt. Compulsory from 1 Jan, 2013

DIAGRAM IS FOR DIMENSIONAL REFERENCE ONLY

Note: Skirt length must be equal distance on both sides

Alter KTJ to read:

KTJ 1.05 Piston:

1. Piston must be approved and 'stock'.
2. Legal pistons are YAMAHA, KSI or Strike with cast piston crowns or "Strike evolution 1" with machined piston crown.
3. All piston crowns to be as manufactured with 100mm radius.
4. Minimum 25.9mm from the top of the gudgeon pin to outer edge of the piston crown.
5. Chamfer on skirt of piston to be not more than 0.9mm maximum.
6. It is permissible to notch the piston to accept earless circlips.
7. The piston skirt length may be machined, providing it conforms with the current specifications as laid down in these rules.

Note: Skirt length must be equal distance on both sides

8. At no point on the inside of the skirt (of a shortened piston) can the chamfer be greater than that allowed on the outside of the skirt. Compulsory from 1 Jan, 2013

Item 23 – WA Tech Item 6

Rule 25.30.

Transponder mounting. With some new side pods, in conjunction with the "approximately" 300 mm setback rule, it can become very difficult/impossible to mount as per recommend as per the rule. Suggest opening up rule to allow mounting from a separate bracket that could come off the side pod, the side pod bars or even the master cylinder mounting. Subject to scrutineer as to fit for purpose. Even reconsider the mounting on the plastic front bumper vertical clamp.

Committee's recommendation to the NKC:

Re-submit mounting on the plastic front bumper vertical clamp as per previous year.

Add to Rule 25.30

Transponders may also be mounted on the plastic front bumper vertical clamp

Item 24 – WA Tech Item 7

New Rule

Rule 26.02. AS in R25.30, the term approximately is used. This is vague and open to all sorts of interpretations, so needs defining. Suggest +/- 10% to the centre (or other nominated point of reference of whatever is under question.

Committee's recommendation to the NKC:

Withdraw on basis of above

Item 25 – WA Tech Item 8

R 23.11.6

Clarify should a 5th dry tyre be allowed that the competitor must start at the rear of the grid if the next competition is wet or vice versa.

Committee's recommendation to the NKC:
Refer for clarification by the NKC

Item 26 – WA Tech Item 9

Midgets and Rookies

Restrict to Aluminium Rims and Hubs only.

Bearing Front rims only

Reason:

To help reduce the cost by reducing the variables the fathers think they need.

Committee's recommendation to the NKC:
Withdrawn as per Item #15

Item 27 – WA Tech Item 10

Rule 1.30.10 Bar coding/sealing

Extend the use of this in 2 areas: Instead of using the troublesome plastic chassis tags, replace these with a barcoded sticker that is fixed to the chassis at some convenient, but non damageable location (eg on top of rear cross bar behind the seat, top of chassis rail etc). This could also contain the kart chassis, kart class and kart number, therefore the barcoder would recognise this when scanning the kart without having to manually enter the class and kart number. Further to this, enhance the coloured class sticker (used for Nationals) on Nassau panel with the same information.

Committee's recommendation to the NKC:

Accepted that may be good for States, Nationals & major events on an event only basis, but needs to be investigated further to ensure that suitable stickers can be found and that the barcode software can accommodate this. The tech committee to continue investigation so a final presentation can be made to the NKC in August.

Item 28 – WA Tech Item 11

Rulebook.

While it seemed to be a good idea at the time, it is a nuisance to not have the technical information included in each chapter. Suggest that it be included as per previous rulebooks.

Committee's recommendation to the NKC:

Recommend that the complete technical chapters be in the rulebook.

Item 29 – WA Tech Item 12

R 25.06 (d). Nose cones

While one of the intentions of the nose cones might be to prevent karters bashing into other karts, the nose cone can be very easily dislodged/fragile mounted from certain angles, leading to disqualification. It is doubtful that a competitor says to themselves; "I won't hit the guy in front because I might lose my nosecone". In fact, a direct front on "bash" doesn't strain the mounting and the nose cone remains on. Suggest that it be allowed to securely fixed as are the side pods. If not, a manufacturer could come up with a nose cone held on with, for example, 10 off M10 screws that would never, ever come off.

Committee's recommendation to the NKC:

Motion lost

Item 30 – WA Tech Item 13

R 25.09.7

Exhaust probes on mufflers. Current rule is not clear. Suggest that we state these "can be only fitted to the header pipe only and not the muffler" Also suggest to read "2 off sensors are allowed one for the temperature and another for the oxygen sensor"

Committee's recommendation to the NKC:

Modify Rule

7. A maximum of **two (2)** sensors are permitted. The maximum diameter of the probe is 6mm. Maximum length of an exhaust probe is 25mm.

New rule 25.09.8

25.09.8. Sensors, if used, must be fitted to the header pipe in KT100S, KT100J, Fireball, Cheetah & Leopard classes, but can be fitted to the muffler in TEKA, Comer & Rotax classes

Item 31 – WA Tech Item 14

New Rule. R 25.02 (XI)

Separate air ducts to the brake or engine. These are a rule dilemma as to their eligibility so suggest that these be disallowed. Reason. For an engine they can be construed as a performance enhancer and as a brake cooling device can have no real benefit.

Committee's recommendation to the NKC:

New rule:

R25.17 (I). No additional engine cooling devices are permitted and separate air ducts to the engine are not permitted.

Item 32 – WA Tech Item 15

R 25.11.(ii) Chain finger guards.

There is the practice of folding back the leading panel of commercial finger guards to funnel air to the engine crankcase and subsequently providing finger access to the chain. Suggest that this be clearly prohibited.

Committee's recommendation to the NKC:

Withdrawn as it is adequately covered in rule

Item 33 – WA Tech Item 16

R1.29 Chassis damage.

Rewrite to read "damaged at that event"

Committee's recommendation to the NKC:

Withdrawn

Item 34 – WA Tech Item 17

R A 14.

At the tech conference, suggest that we have a brief (say 0.5 hr) session with each current engine representative (eg Comer, Rotax, Leopard, Yamaha, Fireball & Cheetah), should they request it.'

Committee's recommendation to the NKC:

Do on an "as needed" basis.

Item 35 – WA Tech Item 18

R A 14.

At the tech conference, actively discuss the concept of the previously discussed “photo gallery” whereby pictures of what is allowed/not allowed in certain areas where the written word is inadequate, eg minor grinding of port edges, port edge damage etc . This would be on the AKA website under the rules section.

Committee’s recommendation to the NKC:

Agreed. WA to go ahead with a sample gallery for review by the technical committee.

Item 36 – WA Tech Item 19

R X30 1.14

Add “It is permissible to remove welding projections from inside header”

Committee’s recommendation to the NKC:

Motion lost

Item 37 – WA Tech Item 20

New Rule 19.33.11. Claiming rule.

Could operate as follows: Person feels that another’s engine is good and desires to purchase it, ideally in the in-grid after the last race of the day. A steward is called to oversee the transaction which is cash only and would be based on the new engine price + 50% plus an additional 25% to the club for the duties of overseeing the transaction. The “seller” could not refuse the transaction should the cash be forwarded to the steward. Obviously would need further discussion. Reason: To cut out expensive engines and provide further transparency to the sport. Should a claimed engine prove to be illegal, it would be “too bad, too sad” for the purchaser.

Committee’s recommendation to the NKC:

Motion lost.

Items from the National Technical Coordinator

Item 1 - Chapters 12, 25 & 26

There are too many ambiguities in these chapters.

Committee's recommendation to the NKC:

Chapter 12 to be reviewed by TAS

Chapter 25 to be reviewed by NTC

Chapter 26 to be reviewed by QLD

Item 2 – Homologation Papers for all engines

Committee's recommendation to the NKC:

Complete documents to be circulated by NTC

Item 3 – Fuel Chapter PULP and E10

Committee's recommendation to the NKC:

Different fuels to be reviewed by NSW and any effects on Digitron readings to be advised

Item 4 – No Go Gauges

Discussion on No Go Gauges that have been tested. List of registered gauges.

Committee's recommendation to the NKC:

NTC to collate a listing of all formal AKA gauges including their design & method of use.

Item 5 - Under tray Screws/Bolts

Committee's recommendation to the NKC:

Leave Rule 25.04 "as is"

Item 6 - Rotax CNC Barrel

Committee's recommendation to the NKC:

Refer Item #9

Item 7 – Restrictor Testing (C:MS system procedure)

Committee's recommendation to the NKC:

Withdrawn

Item 8 – Rear bumper bars

Letter from M Bodger VIC

Committee's recommendation to the NKC:

Discussed and refer to Rule A1

Item 9 – Tagging and Seals Chassis etc (NTC to have samples)

Committee's recommendation to the NKC:
Discussed

Item 10 – Steering Column Assembly

Notes:

Committee's recommendation to the NKC:
Discussed

Alter R 26.04 steps to read as below

Step 4.

Maintain the 5mm pin in the exhaust port, adjust the head of the gauge unit until it lines up with the bottom edge of the groove used for checking the exhaust, then remove the pin from the exhaust port. Check exhaust/transfer port split when using a rod with 5 grooves (for rods for KT100S, KT100J, ARC SPEC 100, ARC A1 & Comer SW80 engines) or 4 grooves (for rods for Rotax MAX, JMA, Parilla Leopard, Cheetah SQ & PRD Fireball engines). With the gauge body still set for the exhaust opening position, rotate the motor to allow the 5mm AKA transfer port checking tool to be inserted into one of the main transfer ports.

Bring the piston up to gently hold pressure on the tool at this point the second mark on the piston travel rod must not be visible above the head of the gauge, repeat the process on the opposing transfer port.

Step 5. Check Exhaust /Inlet Port Split

Only applicable to KT100S, KT100J, ARC SPEC 100, ARC A1 & Comer SW80 engines.

Turn the engine to TDC and insert the 5mm pin into the inlet port and turn engine slowly until piston comes in contact with 5mm pin which is to be "rolled" between the bottom of the inlet port and the piston skirt to find the lowest position of the piston, the third line on the rod should be above the head of the gauge body or in line. If it is below the piston is too short and does not conform

New rule;

Rule 25.21.12

"12. It is permissible to fit a mechanical stop to limit the range of carburetor jet needle movement, however no modifications to the carburetor are permitted to mount such a stop"

New rule

Rule 25.33

"33. Adjustment of carburetor jet needles must be done by manually turning the jet needle (or its extension) only"

New rule

Rule 25.35

"35. Carburettor throttle can only be actuated by a cable system from the pedal to the carburettor."