

AKA TECHNICAL COMMITTEE MINUTES
The Sebel, 28 Albion Street, Surry Hills, Sydney. NSW
Date: 23/24th June 2012

Australian Karting Association Inc

Technical Committee

MINUTES



Venue: The Sebel, 28 Albion Street, Surry Hills, Sydney. NSW
Date: 23rd / 24th June 2012

Commence: 9.00am

Attendance:

Les Allan – AKA National Technical Coordinator

Minute secretary: Terry Sheedy

Chairperson: David Kissock

VIC: Harold Arnett

WA: Gary Light

TAS: Mark Close

NT: David Smith

SA: Geoff Hall

QLD: Terry Sheedy

Item 1 – SA

Rule 1.30.10.b

Standard method of issue of engine seals/tags.

- a) All engines must have provision for sealing in accordance with rule 1.30.9
- b) AKA bar coded engine 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 after each event.
- d) Competitor shall be deemed no to have fulfilled their duty to manage their seals/tags should there be a loss or damage to after leaving the in – grid / scales area after each event, or failure to produce the correct seals/tags when requested.
- e) Tails on plastic seals to be left as full length.

Wording change for 1.30 [10] b

b) There are two options of how the AKA bar coded seals are given to the competitor, Option 1, AKA bar coded engine seals and chassis tags to be supplied, fitted and recorded by officials of the meeting prior to commencement of competition.

Option 2, AKA bar coded engine seals and chassis tags are to be recorded prior to the commencement of the meeting and supplied to the competitor.

REASONS FOR THIS:

- 1) Is that it eliminates competitors receiving more than 2 engine seals.
- 2) Allows techs more time during qualifying to check for anything illegal and not be seal fitters.

Recommendation

Alter Rule 1.30.10(b) from

b) AKA bar coded engine seals and chassis tags to be supplied, fitted and recorded by officials of the meeting prior to commencement of competition.

To now read

b) For National and State Championships, AKA bar coded engine seals and chassis tags to be supplied, fitted and recorded by officials of the meeting prior to commencement of competition. At other events, AKA bar coded engine seals and chassis tags are to be recorded prior to the commencement of the meeting and may be supplied to the competitor for fitting. Tampering and failure to fit correctly the engine seal by the competitor will be deemed as non-compliant.

Recommendations to Rule 6.04 Suggested Penalties for non-conformance of an engine or part

Rule 1.30.10(b) Engine Seals Exclusion from the meeting

Further recommendation:

Photographs of Sealing Nut positions to be added to the Engine Tech Specs on AKA web site.
National Tech to arrange for suitable photographs at NT State & National Championships.

Item 2 – SA

KTS 1.03 (4) NEW RULE

To allow the height of the main transfer parts to be changed (grand 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 barrel

Height adjustment machining and gaskets, but do not allow transfer port timing to be changed. (exhaust/trans split) (blow down). Engine have been spark exuded etc, without being detected.

NEW RULE:

KTS 1.03(4)

It is permissible to change the height of the two main transfer parts by grinding/machining up the minimum engine o transfer split of 9.8 mm (checked and measured by the same methods used currently)

The chord width of transfers cannot be altered. Any grinding of the aluminium must be a smooth transition from the intersection point of the cast liner and the aluminium casting to a point no further than 8mm from the cylinder wall (to be measured by a no-go gauge, to be made)

COST

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

Recommendation:

For SA, WA

Against Qld, NT, NSW, TAS, VIC

Concept not supported. No action required.

Item 3 – SA

Rule 25.19 Weights, part 2)

Current wording –

Maximum Kart weights at time of weighing for all Junior Heavyweight, Senior Heavyweight and Senior Super Heavyweight Classes to be 88kgs except where: a) noted in class technical detail e.g. all heavy 125 classes maximum kart weights of 100kg or b) when a lighter weight division of a class is not being run at a race meeting.

Proposed wording –

Maximum Kart weights at time of weighing for all Junior Heavyweight and Senior Heavyweight Classes to be 88kgs except where: a) noted in class technical detail e.g. all heavy 125 classes maximum kart weights of 100kg or b) when a lighter weight division of a class is not being run at a race meeting.

In conjunction with this change, Rule 34.03 Weights, part c) would also be changed.

Current wording –

(c) Clubman Super Heavy 180 kg maximum kart weight 88kg as per rule 25.19.2

Proposed wording –

(c) Clubman Super Heavy 180 kg maximum kart weight 100kg as per rule 25.19.2

Reason – This would increase the number of drivers eligible to run in the Clubman Super Heavy class. It would appear that the current weight limit has been arbitrarily set since the 125cc classes which often use the same chassis are alnow ready eligible to run with a maximum kart weight of 100kg and there is no maximum kart weight for the clubman over 40 class.

Recommendation

Concept not supported. No action required.

Item 4- SA

KTS 1.03 (4) NEW RULE

To allow the height of the main transfer parts to be changed (grand 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 barrel

Height adjustment machining and gaskets, but do not allow transfer port timing to be changed. (exhaust/trans split) (blow down).

Engine have been spark exuded etc, without being detected.

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The chord width of transfers cannot be altered. Any grinding of the aluminium must be a smooth transition from the intersection point of the cast liner and the aluminium casting to a point no further than 8mm from the cylinder wall (to be measured by a no-go gauge, to be made)

COST

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

Refer Item 2

Item 5 - NSW

Registration of Official Technical Business

There are many important matters which are not followed up and dealt with in a timely manner e.g.

- The Mini ROK motor has still not been sent to me (as at 3rd May 2012).
- The Yamaha S barrel grinding issue is still ongoing and a huge area of concern.
- The Coatings issue...NKC has stopped testing but it is still going on and yet nothing has been done.

A register of important business will start, follow up and action items which will at least improve the way we go about our activities. It may highlight difficulties being encountered and reasons for delays but also put a lot of minor issues into recommendation / action / finalisation.

There appears to be a lot of items which are discussed at the NKC which don't get forwarded to the state techs. The NKC minutes indicate decisions which should be passed on or drawn to our attention but simply are not. Giving items a formal registration will improve the handling of important matters.

All too often we are asked to comment or action matters at short notice and because of 3 and sometimes 4 day race events the urgent response date has passed before we even get home to the computer. If it's registered business it can be processed in a timely and profession manner.

Recommendation

Chair and National Tech to develop procedure to manage issues such as these to keep them on track. To include outstanding issues from Item 11 also.

Techs to supply action list to National Tech.

Item 6 - NSW

Chapter 22 Fuel

During the past year a lot of results have been passed on amongst Techs about the variance between fuels. Most significant is the DIFFERENCE between the main suppliers (e.g. Shell, BP, Caltex, Mobil) and the discount United, Independents etc. Testing procedures require final analysis by Gas Chromatograph (GC). This process was abandoned for testing tyres due to the difficulty in getting timely and cost effective results in favour of "Judge of Fact"

Fuel samples are now compromised by lack of testing facilities and those facilities carrying out the work in the required timeframe of 21 days.

I now recommend fuel testing be changed to "Jude of Fact" provided control fuel is used OR clubs nominate the fuel brand/s allowed. This means supplementary regulations would include say for example: Shell, BP or Caltex PULP 98 (where the local fuels are tested to be similar) only at club shows OR United, whatever with 20% or more ethanol only. If the clubs opt not to do this then fuel

testing would not be relevant. The competitors generally don't want to race against fuel cheats and will not support meetings where it is Rafety Rules.

Secondly the Digitron range of now readings (0 to 40) needs adjusting from the old days of Yamaha and castor based oil mixed fuels. It is possible to see now readings on control fuel and synthetic oils (mainly Rotax) where the di-electric strength will give a slightly negative value. I would recommend the scale be changed to minus 5 to plus 35 against the control fuel.

Recommendation:

1. Fuel Tester to be nominated on Supp Regs when control fuel is specified.
2. Fuel Tester to be a Judge of Fact. (Rule 4.01)
3. 22.01.2a(e) and 22.01.2b(d) change Digitron range from 0 to +40 to -5 to +40.
4. Delete reference to Gas Chromatograph. The DT15 and DT 47 and specific gravity tests will be the determining method.

Rules to be changed as below:

Rule 4.17(a) was

4.17 Duties of Judges:

(a) The Judges of Fact at each race meeting are the Starter, Chief Lap Scorer, Chief Timing Officer, Weigh in Marshal, GC Analyst, Grid Marshall, and Noise Control Marshal and Chief Scrutineer.

Alter to now read

4.17 Duties of Judges:

(a) The Judges of Fact at each race meeting are the Starter, Chief Lap Scorer, Chief Timing Officer, Weigh in Marshal, **Fuel Tester**, Grid Marshall, Noise Control Marshal and Chief Scrutineer.

Rule 7.04(o) was

7.04

(o) a decision regarding non-conforming fuel as the result of a test by a Gas Chromatograph. Refer to chapter 22.

Alter to now be deleted

Refer to Rule 22.03.6 Illegal Fuel Penalty as revised below

Rule 11.5 was

Officials of the Meeting (These are the minimum official's names to insert)

Stewards:

Clerk/s of Course:

Starter

Chief Timing Officer

Chief Lap Scorer

Grid Marshal

Chief Scrutineer

Scrutineer/s Technical inspector/s

Scales Marshall

Race / Competition Secretary of the meeting

Judges of Fact

Officials Secretary

Tyre Tester/s

Noise Control Marshall

Alter to read

11.5. Officials of the Meeting (These are the minimum officials names to insert)

Stewards:

Clerk/s of Course:

Starter

Chief Timing Officer
Chief Lap Scorer
Grid Marshal
Chief Scrutineer
Scrutineer/s Technical inspector/s
Scales Marshall
Race / Competition Secretary of the meeting
Fuel Tester/s
Judges of Fact
Officials Secretary
Tyre Tester/s
Noise Control Marshall

Rule 22.01 Fuel Testing Was

22.01 Fuel Testing:

1. The Digatron DT15 or DT47 series fuel testing kit will be the official preliminary fuel testing method to be used by the AKA and the State Karting Councils.

Prior to any test conducted, competitors must acknowledge if they are using PULP and Testers must ensure the Digatron is not contaminated from any test on ELF fuels. This applied vice versa.

Alter to now read

22.01 Fuel Testing:

1. The Digatron DT15 or DT47 series fuel testing kit will be the official fuel testing method to be used by the AKA and the State Karting Councils.

Prior to any test conducted, competitors must acknowledge **the type of fuel (i.e. PULP, E10 PULP, ELF BFK07) and Testers must ensure the Digatron is not contaminated from any test on other types of fuels.**

Rules 22.01.2(a) and 22.01.2(b) were

2a. Method (for competitors using PULP)

- a) Rinse Digatron in Fresh Premium Unleaded Fuel before use.
- b) Set Digatron Meter to .000 in a sample of fresh Premium Unleaded Petrol.
- c) Conduct test on competitor's fuel either in the fuel tank or on a sample removed from the fuel tank.
- d) Should the first test fail, a second test to be conducted on a sample removed from the competitor's fuel tank. The temperature of the zero sample and the competitor's sample to be adjusted so that the temperature difference between the two does not exceed 3 degree Celsius.
- e) If the results from the second test from the Digatron DT14 AND OR DT47 Series Meter be less than zero or greater than +40 units then it will require a sample to be taken for laboratory analysis.

2b. Method (for competitors using ELF BFK 07)

- a) Set Digatron Meter to .000 in a sample of fresh ELF BFK 07 fuel.
 - b) Conduct test on competitor's fuel either in the fuel tank or on a sample removed from the fuel tank.
 - c) Should the first test fail, a second test to be conducted on a sample removed from the competitor's fuel tank. The temperature of the zero sample and the competitor's sample to be adjusted so that the temperature difference between the two does not exceed 3 degree Celsius.
 - d) If the results from the second test from the Digatron DT15 AND OR DT47 Series Meter be less than zero or greater than +40 units then it will require a sample to be taken for laboratory analysis.
3. The AKA/SKC retains the option to use any other fuel testing method.
4. In the event of an Appeal against the above Fuel Testing procedure, fuel samples may be tested by an independent laboratory, with the total cost to the Appellant.

Alter to now read

22.01.2 Method

a) Rinse the Digatron probe in a reference sample of un-mixed fuel of the type being used by the competitor.

(i) Where the competitor is using ELF BFK07, then un-mixed ELF BFK07 must be used as the reference sample.

- (ii) Where the competitor is using E10 PULP, then un-mixed E10 PULP of the same brand must be used as the reference sample.
- (iii) Where the competitor is using non ethanol blended PULP, then non ethanol blended PULP from any of the major fuel suppliers may be used as a reference sample.
- b) Set the Digatron Meter to .000 in an un-mixed sample of the appropriate reference fuel.
- c) Conduct the test on competitor's fuel either in the fuel tank or on a sample removed from the fuel tank.
- d) Should the first test fail, a second test is to be conducted on a sample removed from the competitor's fuel tank. The temperature of the zero sample and the competitor's sample is to be adjusted so that the temperature difference between the two does not exceed 3° Celsius (5.4° Fahrenheit).
- e) If the results from the second test from the Digatron DT14 AND OR DT47 Series Meter be less than -5 or greater than +40 units then it will be deemed to not comply.

22.02 Random Samples was

Randomly selected competitor(s) may have a sample of their fuel or lubricant taken and sealed for later laboratory analysis. If the fuel is found not to comply a complaint shall be made to the State Tribunal Registrar by the Fuel Tester under Rule 7.04(o) and the competitor(s) shall be subsequently charged with an offence under Rule 5.01(q). The cost of such testing shall be borne by the promoting club or otherwise agreed.

22.02 to be deleted, and left blank

22.03.3 Permitted Fuels was

3. Permitted Fuels:

d) Test methods for permitted fuels will be as recommended to the AKA from time to time by the National Fuel Tester.

Alter to now read

22.03.3. Permitted Fuels:

d) Test methods for permitted fuels will be as recommended to the AKA from time to time by the National **Technical Committee, and approved by the NKC.**

22.03.5 Fuel Testing & Sampling: was

b) All samples will be taken in accordance with a detailed procedure for fuel testers that is issued and updated from time to time by the National Fuel Tester.

Alter to now read

22.03.5 Fuel Testing & Sampling

b) All samples will be taken in accordance with a detailed procedure for fuel testers that is issued and updated from time to time by the National **Technical Committee, and approved by the NKC.**

22.03.6 Illegal Fuel Penalty: was

The non-compliance to these fuel Rules is punishable by a Penalty of up to five (5) years suspension.

Alter to now read

22.03.6 Illegal Fuel Penalty

The non-compliance to these fuel Rules as determined by the Fuel Tester is established as per Rule 22.01, the competitor will be excluded from the race meeting and their licence fully suspended for 12 months.

This decision and penalty is non-appealable.

Item 7 -NSW

Yamaha J Repairs

The attached documents are indicative of the competitors and trade comments made to me during this past year. Given that any repair can be tested simply and reliably with an ohms meter on the kart or bench without having to remove the flywheel there is no justifiable reason to disallow the repair of stators. The cost of a complete replacement ignition system due to the current rule (no pun intended) is not helping competitors. I recommend that stator repair be allowed to OEM specification for the Yamaha J.

Recommendation

Alter Current Rule

KTJ 1.09 Ignition:

- (i) Must be external rotor type and OEM supply.
- (ii) Both CDI and TCI ignition units and Stator Coils as supplied by Yamaha are eligible.
- (iii) No modifications or internal repairs to the "black box/control module" or stator coils on the TCI and CDI ignition system with the exception of the spark plug lead, which can be repaired externally only.

Remove "Stator Coils" to now read

KTJ 1.09 Ignition:

- (i) Must be external rotor type and OEM supply.
- (ii) Both CDI and TCI ignition units and Stator Coils as supplied by Yamaha are eligible.
- (iii) **No modifications or internal repairs to the "black box/control module" on the TCI and CDI ignition system with the exception of the spark plug lead, which can be repaired externally only.**

Item 8 - NSW

Ceramic and Thermal Barrier Coating

Tests have been submitted to National Office without reply. Given the importance of this subject I am expecting that this subject will be addressed at the conference by the NKC and testing procedures and equipment ratified.

NSW reported on investigation and progress to date. Still work in progress.

Item 9 - NSW

Yamaha Head Inserts

This is an issue that has to be addressed. The former National Tech Ken Mitchell is 100% certain that during his time at the top job he never signed a letter authorizing the use of inserts. His only recollection of this subject was a discussion at the time but it was not an approved process. We have subsequently inspected inserts which form a complete combustion chamber and held in place by the remains of an original cylinder head. There is no specification for this work and needs to be if it is to be continued. An insert repair should not be any greater than 20% of the combustion chamber and not in any dissimilar material. This would prohibit beryllium copper or the like from being used. The head could be welded up to restore damaged or excessively machined chamber area OR helicoiled / time sert thnow read repaired on the plug hole. In the event that a spark plug repair needed an insert it should be no more than 8mm bigger in radius than the spark plug radius of 7mm (total 15 radius from centreline). Allowing a replacement head insert also opens up the door for this to be done on a water cooled motor for example using original dimensional specs but in exotic materials etc.

Recommendation:

After a lengthy discussion where it was resolved that inserts covering the gasket face, combustion chamber and spark plug area only are permitted, it was resolved to alter the following rules by the addition of the sentence shown in red for additional clarity.

KTS 1.04 Cylinder Head:

1. Must be an original Yamaha casting.
2. The welding and re-machining of the combustion area, gasket face is allowable. Additions/repairs must be permanent and non-adjustable. **This may include an aluminium insert.**

KTJ 1.04 Cylinder Head:

1. Must be original Yamaha casting.
2. The welding and remachining of the combustion area, gasket face and spark plug surface is allowable. Additions/repairs must be permanent and non-adjustable. **This may include an aluminium insert.**

Item 10 - NSW

Bar Code System

The barcode scanning system has been nothing short of a disaster for NSW. Before my time the system failed on numerous occasions and has resulted in a lot of expense in buying laptop computer and equipment maintenance. Is it possible that the barcode system could work with the CMS ?? It would be great if the race secretary could simply load the now readers with the entry list and all relevant details after the close of entries and away we go. I have not been to a meeting yet where the system works flawlessly and furthermore we should not have to be a programming genius to make it work. All too often the good work people assigned to the task is wasted when the system crashes and we revert back to the paper scrutineering forms. Is there a solution ???

Recommendation:

CM:S and bar code software to be integrated for better function.

Item 11 - NSW

Clarification of issues raised this year by the techs

Rear plastic bumpers wider than the rules permit in wet? Is it time to adjust the rule?

Quality control of restrictors sold by AKA. Reports of undersized?

PTG rods not correct. Discussed at last year's conference but no action as yet.

Rotax World rules and supply of gauges to measure the components.

Yamaha cylinders from factory being ground without satisfactory explanation.

Yamaha S pistons changed design without homologation or approval.

Yamaha J cranks reported being too wide from new?

Discussion of lished / polished crank from Qld title S motor.

Yamaha exhaust pipes being sold without numbers stamped on them??

Define the fixing of side pods with 6mm bolt or spring. Importer of new karts with no front fixed point arguing 25.02 vi is ambiguous. Needs to now read AT BOTH ENDS OF THE BAR.

Cowling of the Comer SW80 motor to be OEM. Carbon fibre after market unit not legal.

Remove Biland motor from the rulebook. It is no longer available.

Can we simplify tech rules?? E.g. apply the Walbro rule to all pumper cabbies i.e. no need to open it up simply inspect airstream size and number holes to speed up tech shed work.

Can we devise a system to register port damage cylinders.

Recommendation

Refer to Item 5 for action on this list, except for

Alter Rule 25.02 from

(vi) Side pod mounting bars must be pinned or bolted using minimum 6mm diameter (steel) fixing. Open ends to be radiused. Drilling of metal components for lightness is not permissible. Tube diameter must not exceed 30mm.

To now read

(vi) Side pod mounting bars must be pinned or bolted using minimum 6mm diameter (steel) fixing **at both ends of the bar**. Open ends to be radiused. Drilling of metal components for lightness is not permissible. Tube diameter must not exceed 30mm.

Item 12 - NSW Transponders

The rule for transponder position be reviewed.

Recent rule changes has allowed the transponder to be mounted on either the side pod or behind the front nose cone.

It is requested that the rule for position be changed to reflect the world CIK rules and the manufactures recommendation, and the transponder be mounted behind the seat. This position creates a universal fair timing of karts and a safe protected place for the transponder. Example international wording:

"The transponder must be mounted in an approximately upright position (i.e. the "R" clip at the top) on the back of the seat. It should be secured at a height of 25cm \pm 5cm. This height can be measured from the ground to any part of the transponder. "

Recommendations:

TEKA be allowed to fit on the back of the seat. For TEKA only, Reword Rule 46.07 from

6. Timing and Lap Scoring

All timing and lap scoring will be computerised using an electronic transponder system. Any driver, team member or pit crew attempting to interfere or tamper with this equipment, will along with the entire team, be excluded from the event and all entry fees will be forfeited. Apart from the designated official(s) no person is to touch the race computer.

It is the responsibility of the team to securely attach the transponder to the kart. If the transponder is dislocated or dislodged during the race, it is the team's responsibility to replace it.

At the discretion of the Clerk of Course, and taking into account the circumstances, time lost may be adjusted on the electronic timing system.

Transponders must be mounted on the inside of the left hand side pod with the leading edge of the transponder 250mm to the rear of the centre line of the front left hand stub axle measured when the front wheels are pointing straight ahead.

to now read

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It is the responsibility of the team to securely attach the transponder to the kart. If the transponder is dislocated or dislodged during the race, it is the team's responsibility to replace it.

At the discretion of the Clerk of Course, and taking into account the circumstances, time lost may be adjusted on the electronic timing system.

The transponder must be mounted in an approximately upright position (i.e. the "R" clip at the top) on the back of the seat. It should be secured at a height of 25cm \pm 5cm. This height can be measured from the ground to any part of the transponder.

AKA rule to remain unchanged.

Item 13 - NSW

25.16 Communication and Telemetry

The Endurance Karting Association would like to introduce the use of radio communication between drivers and pit crews in our form of racing only. As you are all now ready aware, our racing is completely different from the two stroke sprint format, the teams have a minimum of 2 drivers and sometimes up to five drivers, race durations range from 3 to 12 hours with up to 20 compulsory pit stops including driver changes and fuel stops.

Radio communication has been a hot topic at our last few AGM's with the members this year taking a vote and with the majority easily voting in favour.

TEKA would like to apply for a rule change to allow this to happen.

With all of our officials now only using secured channel radios during each and every event there is no chance of cross communication between competitors and officials, this was the reason that we had not approached the AKA for approval in previous years.

The TEKA committee along with its members believe that there are many advantages to our category that would come with the introduction of radio communication with one of the biggest benefits being safety.

- For teams to be able to communicate directly to the drivers and the officials directly to our safety kart during a full course yellow will definitely bring the field under control in minimal time and stop any confusion.
- Many of our tracks do not cater for the use of pit boards that well, making it very difficult for the drivers to see and then react to the board.
- Teams that compete with only the two drivers find it very difficult to communicate during a race as they simply do not see each other until the race has finished, a team with three or more drivers have a big advantage as they are can relay messages to each other at any given time, the use of radios would allow all competitors to be on a level playing field.

- The other karting endurance series run throughout NSW permits the use of radios, TEKA feels that teams would be more inclined to race with us with the introduction of radios, boosting numbers and profit for the club.
- TEKA feels that radio communication is a large part of any endurance motorsport event and believes that their introduction will only boost both TEKA and the AKA's profile.
- We believe it will bring a whole new aspect to our events which will add yet another element of excitement.

Recommendation:

Place under TEKA chapter, with trial introduction for 12 months. TEKA to report in writing back to Technical Conference in 2013. TEKA to supply rule wording.

Item 14 – WA

Rule. 25.07.6 Change “brake pad mounting bolts” to “brake pad retaining bolts”.

Recommendation:

Alter Rule 25.07 from

6. All brake pad mounting bolts must be of high tensile material and fitted with a sleeve.
Shoulder type bolts are not permitted.

to now read

6. All brake pad **retaining** bolts must be of high tensile material and fitted with a sleeve.
Shoulder type bolts are not permitted.

Item 15 - WA Rule 25.01 (e) Mention nuts on stub axles to match scrutineering form.

Recommendation:

Alter rule 25.01 from

(e) **Wheels/Axle:** Front wheels shall revolve on ball or roller type bearings as separately mounted wheels. Rear wheels to be driven by a one-piece axle shaft. Rear axle must be of steel and the maximum external diameter is 50mm the minimum will be 25mm.

to now read

(e) **Wheels/Axle:** Front wheels shall revolve on ball or roller type bearings as separately mounted wheels **on stub axles and retained by a nyloc nut on each stub axle**. Rear wheels to be driven by a one-piece axle shaft. Rear axle must be of steel and the maximum external diameter is 50mm the minimum will be 25mm.

Item 16 – WA

Rule 25.04 & 25.05 Mention cracks to match scrutineering forms.

Recommendation:

Covered by Chapter 12.

On Scrutineering form, change Steering Wheel to Steering Components.

Item 17 – WA Rule 25.21.11 This rule appears to be in conflict with typical engine chapter rules where the engine must “as supplied”. Suggest rule is removed.

Recommendation:

Request not supported. No action required.

Item 18 – WA Rule X30.1.11 X30 carburettor. Suggests referring to homologation documents. Where are they accessible to the karter?

Recommendation:

No action required – now in documents on AKA website under Rules.

Item 19 - WA

Restrictor Plates. Add to the general words about these that the actual restrictor hole “must retain its square edge on both sides”.

Applies to Cadet, Rookie and all Restricted 125 engines.

Recommendation:

National Tech to review drawings to ensure correct specification.

Restrictors in National Office have been inspected – restrictors with significant chamfers have been isolated and destroyed.

Item 20 – WA Rule 42.03.2 Change engine batteries to now read “engine battery/batteries”.
Twin engined karts running in Open Performance require two batteries.

Recommendation:

Change current rule 42.03.2 Dot point 4 from
Engine batteries are free, but must conform to Rule 25.27

to now read

Engine **battery**/batteries are free, but must conform to Rule 25.27

Item 21 – WA Rule 25.02 (vii) (a) & 25.01 (g) One states rear tyres can be inside side pods when wet and the other states rear tyres cannot be inside rear bumper when wet.
This is confusing and is at odds with many of the plastic bumpers being fitted to karts. Suggest that tyres can be inside of either when wet conditions declared and this applies equally to both wet and dry tyres. Why do karters with dry tyres get doubly penalised?

Recommendation:

Change Rule 25.02(vii)(a) from

(vii) Dimensions: Side pods: The side pods must not;

(a) Be outside the plane passing through the outer edge of the rear wheels, (ref. illustration). This rule does not apply when wet weather tyres are fitted.

to now read

(vii) Dimensions: Side pods: The side pods must not;

(a) Be outside the plane passing through the outer edge of the rear wheels, (ref. illustration). This rule does not apply when **the track is declared wet**.

Rule 25.01(g) (bumper bar) is unchanged and applies to both wet or dry tracks.

Item 22 - WA SW 1.13 Comer Cowl Add words, eg "It is permissible to increase size or alter shape of spark plug hole in cowl for improved access for socket spanner and spark plug temperature probe." Deferred to Sunday am together with sticker.

Also, it might be time to specify a ruling on colour of cowl, given some recent event.

Recommendation:

Colour must remain as supplied.

WA to supply drawings and wording on rule change.

Item 23 - WA

Rule 22.03 Add new rule 22.03.2 (a) (iii). E10 fuel may be used if it is indicated in the Supplementary Regulations.

It is understood that this is the only fuel available in certain areas (this needs to be questioned though). R21.1.1 and R22.03 would need to be altered if rule is adopted.

Recommendation:

Refer Item 6

Item 24 – WA

Rule 22.05 Add after flooding "and the vent lines must be clipped at the carburetor, must be continuous with no other fitting between carburetor and catch tank, and cannot be slit, cut or broken in any way along their length."

Recommendation:

Alter Rule 22.05 from

The fitting of overflow bottle/s is compulsory. (150ml minimum total.) All flexible fuel line connections are to be wired or clipped to the satisfaction of the Scrutineer. Fuel taps are optional. Karts fitted with float carburetors must have a catch tank included in the carburetor vent system to catch surplus fuel in the event of the carburetor flooding.

To now read

22.05 Overflow Bottles:

The fitting of overflow bottle/s is compulsory. (150ml minimum total.) All flexible fuel line connections are to be wired or clipped to the satisfaction of the Scrutineer. Fuel taps are optional. Karts fitted with float carburetors must have a catch tank included in the carburetor vent system to catch surplus fuel in the event of the carburetor flooding **and the vent lines must be secured at the carburetor, must be continuous with no other fitting between carburetor and catch tank, and the breather slit must remain within the catch tank.**

Item 25 - VKA

Rule 26.01 Cylinder Head Volume Measurement:

Method:

3. The CC test plug to be withdrawn two turns

Change to now read:

3. The CC test plug to be withdrawn **three (3)** turns

8). To clean out measuring fluid after failure of the first test and before commencement of second test, unleaded petrol to be poured into cylinder, motor to be rinsed and blown out by inserting air hose into spark plug recess and turning the piston to open exhaust, therefore, expelling excess fluid. Cylinder Head and engine seal is not to be removed prior to any C. C test.

Recommendation:

Alter Rule 26.01.8 from

To clean out measuring fluid after failure of first test and before commencement of second test, unleaded petrol to be poured into cylinder, motor to be rinsed and blown out by inserting air hose into spark plug recess and turning piston to open exhaust, therefore, expelling excess fluid. Cylinder Head and Engine Seal is not to be removed prior to any CC test.

Change to now read:

26.01.8). To clean out measuring fluid after failure of the first test and before commencement of second test, **PULP to be poured into cylinder, Rinsed out twice then left for a minimum of 10 minutes with the piston turned to open exhaust, therefore expelling excess fluid.** Cylinder Head and engine seal is not to be removed prior to any CC test.

Item 26 - VKA

Rule 25.31 2

This is the rule in the rule book about brackets for the camera's.

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.

Interpretation on the brackets would be that they could pose a hazard to other karters if the 2 karts collided.

See attached photos.

Item for discussion.

Interpretation on the brackets would be that they could pose a hazard to other karters if the 2 karts collided.

Recommendation:

Alter Rule 25.31.2 from

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.

Change to now read: 25.31 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. **This to be determined by the Chief Scrutineer.**

Camera cannot be fitted to any movable component of the kart chassis.

Item 27 – VKA

Rule 25.17 f

All clutches must engage sufficiently to allow front wheels to climb test bar at less than 4800rpm.

Checking the movement of the kart at the set rpm will take place on either the dummy grid or on the track before time trials/ qualifying and /or races. A strip of metal (10mm high by 75mm wide by 1300mm long) will be placed on the ground immediately in front of both front wheels. The engine will be started, the Technical Officer will pinch the cable of the revolution counter to the spark plug cable to now read the number of revolutions. The driver must obey the orders given by the Technical Officer.

The bold underlined area changed to,

Checking the movement of the kart at the set rpm will take place on either the

dummy grid or on the track before or after time trials/ qualifying and /or races or any time.

Recommendation

Change Rule 25.17(f) from

All clutches must engage sufficiently to allow front wheels to climb test bar at less than 4800rpm. Checking the movement of the kart at the set rpm will take place on either the dummy grid or on the track before time trials/ qualifying and /or races. A strip of metal (10mm high by 75mm wide by 1300mm long) will be placed on the ground immediately in front of both front wheels. The engine will be started, the Technical Officer will pinch the cable of the revolution counter to the spark plug cable to now read the number of revolutions. The driver must obey the orders given by the Technical Officer.

to now read

25.17(f) All clutches must engage sufficiently to allow front wheels to climb test bar at less than 4800rpm. **Checking the movement of the kart at the set rpm will take place on either the dummy grid, in grid, or on the track before or after time trials/ qualifying and /or races or any time.** A strip of metal (10mm high by 75mm wide by 1300mm long) will be placed on the ground immediately in front of both front wheels. The engine will be started, the Technical Officer will pinch the cable of the revolution counter to the spark plug cable to now read the number of revolutions. The driver must obey the orders given by the Technical Officer.

Item 28 - VKA

25.19 Weights:

1. Class Weights are as raced at the time of weight measuring, and are detailed in technical pages of the classes. **Weight that is more than 5kg must be retained by a minimum of two 8mm high tensile bolts with lock nuts.**

The bold underlined area changed to,

Weight that is more than 4kg must be retained by a minimum of two 8mm high tensile bolts with lock nuts.

Recommendation

Change Rule 25.19.1 from

Class Weights are as raced at the time of weight measuring, and are detailed in technical pages of the classes. **Weight that is more than 5kg must be retained by a minimum of two 8mm high tensile bolts with lock nuts.**

to now read

25.19.1 Class Weights are as raced at the time of weight measuring, and are detailed in technical pages of the classes. Weight that is more than **4kg** must be retained by a minimum of two 8mm high tensile bolts with lock nuts.

Item 29 - VKA

25.11 Guards:

(i) Chain Guards: A chain guard is compulsory and must give sufficient front and side protection to prevent the driver trapping his/her fingers in the chain.

(ii) Engine Sprocket Guards: An engine sprocket guard is compulsory and must give sufficient front and side protection to prevent the driver trapping his/her fingers in the chain.

With the first part of this rule there is a lot of chain guards that only give top protection should we change this part of the rule?

The bold underlined area changed to,

Recommendation

Alter Rule 25.11(i) from

Chain Guards: A chain guard is compulsory and must give sufficient front and side protection to prevent the driver trapping his/her fingers in the chain.

to now read

25.11(i) Chain Guards: A chain guard is compulsory and must give sufficient protection **above the chain** to prevent the driver trapping his/her fingers in the chain.

Item 30 – VKA

25.09 Exhaust System:

5. Muffler must be securely fastened with springs to a mounting bracket cradle and to the header pipe of the engine. **A secondary fastening system, comprising a multi-strand wire (as used in throttle cables) to be secured through a fixing lug or a similar attachment (e.g. hose clamp) on the muffler and fixed to the chassis, excluding rear bumper bar to prevent the exhaust system detaching from the kart.**

The bold underlined area changed to,

A secondary fastening system, comprising a multi-strand wire (as used in throttle cables) to be secured through a fixing lug or a similar attachment (e.g. hose clamp) on the muffler and end cap and fixed to the chassis, excluding rear bumper bar to prevent the exhaust system detaching from the kart.

Recommendation:

Alter Rule 25.09.5 from

Muffler must be securely fastened with springs to a mounting bracket cradle and to the header pipe of the engine. A secondary fastening system, comprising a multi-strand wire (as used in throttle cables) to be secured through a fixing lug or a similar attachment (e.g. hose clamp) on the muffler and fixed to the chassis, excluding rear bumper bar to prevent the exhaust system detaching from the kart.

to now read

Muffler must be securely fastened with springs to a mounting bracket cradle and to the header pipe of the engine. A secondary fastening system, comprising a multi-strand wire (as used in throttle cables) to be secured through a fixing lug or a similar attachment (e.g. hose clamp) on the muffler **and end cap** and fixed to the chassis, excluding rear bumper bar to prevent the exhaust system detaching from the kart.

AND

Alter Rule 25.22 (f) from

It is permissible to weld a fixing lug to the external surface of the AKA 14 or AKA 39 body.

to now read

It is permissible to weld a fixing lug to the external surface of the AKA 14 or AKA 39 body **and end cap**.

Item 31 – WA

Scrutineering Forms Are these forms now required?

Reason: Are they still required for insurance purposes or can we do away with them like we have entry forms?

Recommendation:

Still required as driver must sign off for insurance.

Item 32 - Correspondence from Qld

Rule 35.08 Gauges

Tacho and timing gauges allowed only. No temperature probes or sensors on head or exhaust.

The majority of tacho / lap timers commercially available have as standard a cylinder head temperature (C.H.T.) sensor between the spark plug and the cylinder head. Since we are aiming this class at new comers, Use of a CHT sensor could save an engine and still keep the class to the

preamble of 'an out of the box, low maintenance class for the club driver. The club requests the rule be changed to the suggested following wording.

Recommendation

Alter Rule 35.08 Gauges from

Gauges:

Tacho and timing gauges allowed only. No temperature probes or sensors on head or exhaust.

to now read

35.08 Gauges:

Tacho, lap timer, and temperature gauges only are allowed.

Item 33 - Correspondence from Qld

Motion:

That the current regulation 25.31 imposing restrictions on the use of on-kart cameras during official practice / competition be amended to remove paragraph (11) relating to the limitation on the total number of cameras fitted to a kart.

Discussion:

If the limit was removed then ultimately the amount of equipment in use is limited by the existing camera weight restrictions.

Currently the number restriction precludes the use of multiple small devices for kart chassis setup analysis. The units have proven themselves to be useful for analysis of setup issues and pose no safety hazard when mounted in accordance with the existing guidelines. The Units referred to are commonly available low cost MP4 devices which are smaller than a box of matches and weigh 20g complete.

The use of the described equipment provides no direct performance advantage and merely supplements normal data gathering operations as provided by existing data logging equipment. The use of the equipment during official practice assists with setting up for away meets at new tracks when no other practice sessions are permitted.

The existing rule performs no valid or necessary function and as such represents the residue from an overreaction to the regulation of the use of cameras on karts.

Argument / Counter argument

Cost to the Karter – **Irrelevant**,

- The use of the item is optional
- The camera may be now sourced for less than \$20 on the net

Unfair Advantage in kart setup – **Irrelevant** Teams are allow ready permitted to use

- Professional mechanics
- Professional coaches
- Professional engine builders

Unfair advantage in monitoring other karts – **Irrelevant** other karts are allow ready able to be monitored

- From the sideline at any point
- From existing kart cameras which fall within the rules

Unfair advantage in gaining track information when access is limited – **Irrelevant** other teams have allow ready accessed the track by

- Having the track within their home area
- Flown in and practiced prior to the exclusion period

Recommendation

Concept not supported. No action required.

To be forwarded to the Committee's Conference.

QLD Item: 20

The purpose of this document is to provide a perspective and a purpose for the Yamaha TaG100 Engine to be included as a class at State level competition.

With the current downturn throughout motorsport in Australia, we seem to have forgotten a class of engine that has the potential to help increase numbers within our karting community, we hear of how many great ideas are coming from down south, but all forget, we already have the TaG100 engine, all it needs is to be moved from so called Introductory class level to its own class and allowed to compete at state level events.

There are more than enough of these engines out there at club level that already attract large fields, so instead of trying to reinvent the wheel, let's push momentum, take the initiative and build on something that already exists within clubs.

The TaG100 class and Senior National classes can still be combined at club level, to create that large class appearance for the audience or potential new member, and can be split as numbers increase.

But by removing just the age limit from the class, this would allow a new younger member to step into karting at a pace and cost that is more achievable, affordable to today's budget conscience, and bring their race craft to a level, that is more achievable, thus retaining them longer, newer younger members who will eventually move onto faster classes, but by then they would be better prepared for the cost, and have competitive driving skills that would have been acquired from starting in TaG100. Recently it is becoming more apparent that TaG100 is being utilised as the support class at major events, because the organisers know that they will get a very healthy field with some very competitive racing put on display, from some very good well known club drivers, with the odd ex National Champion thrown in.

This is the other side of this class is to get those older ex champions you all once were and get out and race in a class that's cheap and more affordable, but also gives the class a pinnacle in which to achieve.

Recommendation

Refer to Admin

Item 34 - Correspondence to Tech Committee

Aluminium Axles

Alter R25.01(e) in part to now read

Aluminium axles can be used for speedway and Dirt only. Axles to be 40mm in diameter and have a 4.85mm minimum wall thickness at all points except in key ways and a maximum taper from each axle end of 25mm in length.

Recommendation:

Alter Rule 25.01(e) sentence commencing " Aluminium axles" from

Aluminium axles can be used for speedway and Dirt only. Axles to be 40mm in diameter and have a 4.85mm minimum wall thickness at all points except in key ways.

to now read

Aluminium axles can be used for speedway and Dirt only. Axles to be 40mm in diameter and have a 4.85mm minimum wall thickness at all points except in key ways **and a maximum internal taper from each axle end of 25mm in length.**

Item 35 - Correspondence to Tech Committee

VP Racing Fuels

Matter raised – **Discussed, no further action required.**

Item 36 - Correspondence to Tech Committee

Reevu helmet (helmet incorporating rear view capability)

Matter raised – **Discussed. Outside helmet spec - not recommended.**

**Item 37 - Correspondence to Tech Committee
Correspondence on Head Inserts.**

Discussed, letter sent re inspection process in NSW to take place Wednesday 27th June.

**Item 38 - Tech Committee
Change to Technical Inspector's Report**

New forms will combine the two functions of the Technical Inspector's Report, and the Form of Complaint (in 4 copies)

Item 39 - Tech Committee

Bag n Tag

12.03 Scrutineering & Technical Inspection

- (a) The Official requesting the inspection may mark any engine part, fuel sample, accessory or apparel and require it to be presented, as directed, at the end of the meeting for further inspection and testing by a person of authority, approved by the AKA Secretariat.
- (b) The item when presented at the end of the meeting must be tagged for identification, then bagged and sealed, and a receipt given to the person presenting it.
- (c) Unless a complaint is made in respect of the item, or the AKA Secretariat specifically directs in a particular case, the item (with exception of a fuel sample) must be returned to the person presenting it within 21 days.

23.03 Tyre Treatment:

(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 and 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.

26.04 Port timing Check with AKA Piston Travel Rods

Step 6.

If the engine fails the field test it is to be sealed and sent to the state technical Officer for second and final verification of compliance using an analogue or digital indicator as in R26.04. 1.

Discussion covering Bag and Tag process.

Recommendation:

No further action required.

Item 40 - Tech Committee

Restrictor Chamfers

Define the maximum allowable chamfer on Restrictors - AS MANUFACTURED.

Some new restrictors have no chamfer. Some have a small visible chamfer.

We find the occasional restrictor that has been modified.

We need to specify the maximum limit of the chamfer applied to remove burrs during manufacture, so as clearly identify what is acceptable, and what is not.

Suggest 0.1mm maximum chamfer.

Covered under Item 19

Item 41 - Tech Committee
When track is declared wet

Change Rule 25.02(vii)(a) to now read

(vii) Dimensions: Side pods: The side pods must not;

(a) Be outside the plane passing through the outer edge of the rear wheels, (ref. illustration). This rule does not apply when **the track is declared wet**.

It simply does not make sense that wet tyres can be moved inboard of the side pods when the track is declared wet, but slick tyres cannot be moved inboard of the side pods when the track is declared wet.

Rule 25.01(g) (rear bumper bar) applies to both wet or dry tracks.

Covered under Item 21

Item 42 - Tech Committee
Return to Full Scrutineering

Current Rule

12.01 Scrutineering:

It is the competitors responsibility to obtain a correct scrutineering form, complete it and return it to the designated meeting official. This signifies that they have checked all listed items and their kart and apparel appear to comply with the relevant AKA Manual rules. All licence holders may be required to present their kart, apparel and scrutineering form to a scrutineer for acceptance prior to the start of the meeting.

(a) All karts entered in any competition must be scrutineered before being permitted to take part in any practice, time trial, qualifying or race.

R12.01(a) applies for all permitted practice and competition. Where did the philosophy that self scrutineering applies to any competitor come from? Certainly not the Karting Manual!

It has become obvious that the level of presentation of karts for compliance with the karting manual has fallen away since the adoption of self scrutineering. Compulsory pre event scrutineering must be re-introduced.

It still remains the competitor's responsibility to ensure that their kart and safety apparel always complies.

Recommendation:

Adequately covered already. No further action required.

Item 43 - Tech Committee
Comer Engine Cowl

Paint colour - does it really matter.

SW1.03 Engine Additions:

Motor Mount, Cylinder/Head Temperature Probe (cover cooling slot may be modified for fitting),
Tachometer.

Carburettor jet needle extensions. Carburettor return springs and fasteners. **Engine cover may be any colour, but must remain painted.**

Recommendation:

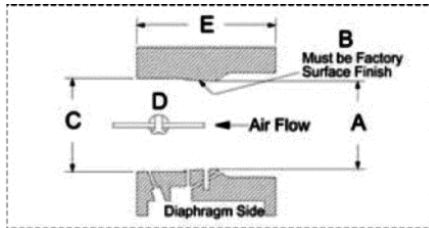
Covered under Item 22

TAG100

Item 44 - Tech Committee

SEC 1.12 - Carburettor Dimensions

Remove diagram and dimensional notes.



A As cast MAX Venturi diameter 24.13mm

B As cast (area will extend from the front of the carburetor to the progression discharge jet which must have all or portion of this jet in the cast area.)

C MAX downstream diameter 25.7mm

D Butterfly shaft must be located at the bore centre.

E MIN carburettor body length of 37.5mm.

Some competitors believe that by having these dimensions displayed, that it is encouraging modifications within these specifications, and have asked that they be removed from the technical specifications, as was the case prior to 2012.

Recommendation:

Remove diagram and Rule SEC 1.12 to now read

SEC 1.12 Carburettor:

Walbro Model WB3A or WB44 as supplied with engine, NO modifications allowed.

- All air must pass through the carburettor throat.
- Allowed to have adjustable (extended) low jet mixture screw, (flex jet).
- Adjustment of carburetor jet needles must be done by manually turning the jet needle (or its extension) only.
- Carburettor throttle cannot be actuated by electro mechanical means.
- 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.

Item 45 - Tech Committee

SEC 1.05 Head Gasket:

A head gasket must be retained; the minimum allowed thickness of the head gasket shall be **0.30mm**.

Aluminium head gaskets compress, and become thinner than 0.4mm after a short period of use.

Aluminium head gaskets slowly crush in use. This change will have minimal impact on combustion chamber volume.

Recommendation

Alter SEC1.05 from

SEC 1.05 Head Gasket:

A head gasket must be retained; the minimum allowed thickness of the head gasket shall be 0.40mm.

to now read

SEC 1.05 Head Gasket:

A head gasket must be retained; the minimum allowed thickness of the head gasket shall be **0.30mm**.

Item 46 - Tech Committee

SEC 1.16 Non-tech Items:

(a) Non-tech items are gaskets, seals, big end roller/cage, little end spacers, rings, washers, cages, fasteners, spark plug and spark plug lead and cap, gudgeon pins, main bearings, engine sprocket and key.

1. Unless specified, non-tech items are to be of the same type and style as the original. No alteration from the original manufacturer's specifications is permitted to fit a non-tech item.
2. Head gasket/s must be retained.
3. Only crankcase half gasket may be formed from liquid gasket compounds
4. Spark plugs must have a maximum engagement length of 20mm without the washer.
- 5. Temperature gauge and probe or tuning lights. The spark plug washer may be removed when using a CHT probe under the spark plug.**

Temperature gauges assist in avoiding engine failures due to poor tuning.

Recommendation:

Alter Rule SEC 1.16 Non-Tech Items by the addition of SEC 1.16.5 to complement Rule 35.08 change recommended above.

Add SEC 1.16

5. Temperature gauge and probe or tuning lights. The spark plug washer may be removed when using a CHT probe under the spark plug.

Item 47 - Tech Committee

SEC 1.17 Header Pipe:

A genuine original equipment standard Yamaha swivel header pipe without modification (as supplied by Yamaha or OE for the KT100J and KT100SE/SD engines maybe used.

Modifications to fit an exhaust probe are permissible. A maximum of one (1) Exhaust probe/fitting is permitted. The maximum diameter of the probe is 6mm. Maximum length of exhaust probe is 25mm

Exhaust temperature probes assist in avoiding engine failures due to poor tuning.

Recommendation:

Alter SEC 1.17 to complement Rule 35.08 above to now read
SEC 1.17 Header Pipe.

A genuine original equipment standard Yamaha swivel header pipe without modification (as supplied by Yamaha or OE for the KT100J and KT100SE/SD engines maybe used.

Modifications to fit an exhaust probe are permissible. A maximum of one (1) Exhaust probe/fitting is permitted. The maximum diameter of the probe is 6mm. Maximum length of exhaust probe is 25mm

Item 48 - Tech Committee

SEC 1.07 Piston:

Maximum allowed piston size is **53.00mm**. **Pistons of 52.75mm or less MUST be genuine Yamaha.** Minimum length 59.2mm and as per drawing, no modifications permitted.

Allowing the use of pistons greater than 52.75mm extends the life of a barrel, and thus can save costs.

Recommendation

Concept not supported. No action required.

Item 49 - Tech Committee

SEC 1.04 Cylinder Head:

Must be of original engine manufacturer and marked with the word YAMAHA and conform to drawings supplied by manufacturer. **Damaged heads may be repaired, but must maintain the same appearance as the original.** The distance from the spark plug sealing surface to combustion chamber sealing face shall be **32.10mm maximum/31.50mm minimum** .

When a head suffers damage due to an engine blow-up, or some object entering the engine, a repair offers a cost effective alternative to a new head.

Recommendation

Concept not supported. No action required.

Item 50 - Tech Committee

PTG Rods

Last year, there were addendums for changes to PTG inspection dimensions for the Leopard X30 and the Cheetah.

Have the PTG rods been re-made to reflect these changes, and to replace club and state rods that are out of date?

Also, in the case of the X30, every single engine that I have inspected with the rod supplied by AKA to AKAQ fails the PTG Exhaust to Transfer split. This is because the exhaust groove is 0.5mm wide, not 0.2mm as per the rule book (now 0.3mm after the 2011 addendum). The rod supplied to AKAQ is in error by 0.29mm. Coincidentally about the extra width of the groove.

The 37.00mm dimension is correct on the AKA rod, but the 36.70mm is incorrectly manufactured to approximately 36.50mm.)

A minor change is required to the exhaust to transfer split, as engines when inspected with a dial gauge for conformance barely meet the 10.30mm criteria.

Also, rods are required for inspection of TAG 100 motors. A suggested dimension set is included.

Engine	Maximum stroke	TDC to exhaust opening	Exhaust open to inlet open	Exhaust open to transfer open (using rod with 5 grooves)	Exhaust open to transfer open (using rod with 4 grooves)
PARILLA X30	54.00	36.70 min/ 37.00 max	N/A	N/A	10.25 min
CHEETAH CNC	54.00	37.75 min / 38.70 max	N/A	N/A	9.80 min
KT100SEC	46.13	31.25 min / 32.25 max	15.73 min	9.50 min	N/A

Recommendation: WA and Qld to investigate further.

Item 51 - Tech Committee

Helmets

Add recent Snell standards. Delete obsolete Snell standards no longer applicable.

14.01.2. STANDARDS

a) Helmets bearing the following marks are approved for use on AKA circuits

- ~~Snell M90, Snell SA90, Snell M95, Snell SA95~~, Snell SA2000, Snell M2000, Snell K98, Snell SA2005, Snell M2005, Snell K2005, Snell SA2010, Snell M2010, Snell K2010, **Snell CMR/CMS2007 (for children to 15 years only)**

Helmets to older standards will be 10 or more years old. The CM standards cover children up to 15 years of age, and are not suitable for adult use.

Recommendation:

Alter Rule 14.01.2 dot point 4 from

Snell M90, Snell SA90, Snell M95, Snell SA95, Snell SA2000, Snell M2000 Snell K98, Snell SA2005, Snell M2005, Snell K2005, Snell SA2010, Snell M2010, Snell K2010

to now read

- ~~Snell M90, Snell SA90, Snell M95, Snell SA95~~, Snell SA2000, Snell M2000, Snell K98, Snell SA2005, Snell M2005, Snell K2005, Snell SA2010, Snell M2010, Snell K2010, **Snell CMR/CMS2007 (for children to 15 years only)**

Item 52 - Tech Committee

Cylinder head inserts - Yamaha

KTJ 1.04 Cylinder Head:

1. Must be original Yamaha casting.
2. The welding and remachining of the combustion area, gasket face and spark plug surface is allowable. Any additions/repairs must be permanent and non-adjustable.
3. The combustion chamber style is required to have a squish band and chamber which are visually concentric to the spark plug.
4. The combustion chamber volume shall be a minimum of 11cc. Refer Rule 26.01
5. The combustion chamber/squish area shall not protrude beyond the gasket sealing face of the cylinder head.
6. The spark plug throw read may be repaired and shall retain its original position in relation to crankshaft axis.
7. Maximum distance from sealing surface of spark plug to combustion chamber sealing face shall be 33.5mm.
8. Repairs to the spark plug sealing face must be by addition of weld material only and re machining to a flat surface.
- 9. Cylinder head combustion chamber inserts and spark plug throw read inserts other than helicoils or similar are NOT permitted.**

Covered earlier.

KTS 1.04 Cylinder Head:

1. Must be an original Yamaha casting.

2. The welding and re-machining of the combustion area, gasket face is allowable. Additions/repairs must be permanent and non-adjustable.
3. The combustion chamber style is required to have a squish band and chamber which are visually concentric to the spark plug.
4. The combustion chamber volume shall be a minimum of 11cc. (Ref rule 26.01)
5. The combustion chamber/squish area shall not protrude beyond the gasket sealing face of the cylinder head.
6. The spark plug throw read may be repaired and shall retain its original position in relation to crankshaft axis. ~~Helicoils and similar are permitted.~~
7. Maximum distance from sealing surface of spark plug to combustion chamber sealing face shall be 32.5mm.
8. Repairs to the spark plug sealing face must be by addition of weld material only and re machining to a flat surface.
9. The head gasket must be retained.

10. Cylinder head combustion chamber inserts and spark plug throw read inserts other than helicoils or similar are NOT permitted.

Cylinder head inserts are not non-tech by definition. Heads are substantially modified to fit an insert. The current rules are quite clear that welding or helicoils are the only permitted additions when repairs are undertaken.



Recommendation:
~~Covered in Item 9.~~

Item 53 - Tech Committee
Yamaha Crankshaft

KTS 1.08 Crankshaft:

Legal crankshafts are Yamaha or KSI

(a) Outside diameter measurement: 86.60mm min., 87.25mm max. **Crankshaft may be re-machined within this specification.**

(b) Crank Pin to be standard hollow pin.

- (c) It is permissible to recondition the crankshaft main shaft by plating
- (d) It is permissible to repair the drive side crankshaft end, where the throw reared section has broken off by drilling and tapping the centre of the crank to accept an M6 or M8 screw

From the Preamble

Any removal, addition or polishing of material is strictly forbidden.

Is this finish acceptable?



Recommendation:

No further action required.

Item 54 - Tech Committee

Rotax

Rotax Wiring Harness - Rotax Max and Rotax Junior Max

Non-tech items: Battery, Fuel Filter, Radiator Hoses, Clamps, Pulse Line, Switches, Ancillary Mounts, Fasteners, Circlips, Washers, Bearings, Spark Plugs, Gaskets, O-Rings, Piston Pin, Springs, Seals, Clutch Drum, Engine Sprocket, Rings, Starter Motor, Clutch Flywheel, Thermostats and Housings, unless otherwise specified. Clutch Drum Evolution (AKA #48 approved Part ID #659154).

In the event of required repairs the plastic fittings registered and homologated as parts of the electrical looms for the ignition and starter assembly are permitted to be replaced with non-supplied fittings. The earth strap may be fitted with a connector for ease of removal of the engine.

It would appear that competitors have been given verbal approval for these alterations.

Recommendation:

Add to AUST-WORLD-RULES-ROTAX-JUNIOR-MAX

11.10 The earth strap may be fitted with a connector for ease of removal of the engine. Rotax Wiring Harness OEM ONLY NO FITTINGS, NO REPAIRS. THE IGNITION COIL COULD BE RELOCATED FROM THE CRANKCASE AS FAR AS THE OEM HARNESS WOULD PERMIT (Generally a seat stay)

Add to AUST-WORLD-RULES-ROTAX-MAX

11.10 The earth strap may be fitted with a connector for ease of removal of the engine.

Rotax Wiring Harness OEM ONLY NO FITTINGS, NO REPAIRS. THE IGNITION COIL COULD BE RELOCATED FROM THE CRANKCASE AS FAR AS THE OEM HARNESS WOULD PERMIT (Generally a seat stay)

Add to AUST-WORLD-RULES-ROTAX-MAX-DD2

10.10 The earth strap may be fitted with a connector for ease of removal of the engine.

Rotax Wiring Harness OEM ONLY NO FITTINGS, NO REPAIRS. THE IGNITION COIL COULD BE RELOCATED FROM THE CRANKCASE AS FAR AS THE OEM HARNESS WOULD PERMIT (Generally a seat stay)

Item 55 - Tech Committee

Yamaha KT100SEC used in Clubman Classes

Prior to 2011, it was permissible to blue-print the KT100SEC to clubman spec when used in clubman or sportsman classes, provided the interchange restriction on components is observed. That option is no longer available according to the KT100SEC Technical Specifications, although the engine is eligible for competition in Clubman or sportsman classes.

Add new rule:

SEC 1.23

When used in clubman and sportsman classes, the KT100SEC may be blue printed in accordance with the provisions of the KT100S technical specifications which may be found at www.karting.net.au, and in accordance with the provisions of R34.02.

This provision was overlooked when the technical specifications were taken from the manual.

Recommendation:

Add to KT100SEC technical documents on the AKA website

SEC 1.23

When used in clubman and sportsman classes, the KT100SEC may be blue printed in accordance with the provisions of the KT100S technical specifications which may be found at www.karting.net.au, and in accordance with the provisions of R34.02.

Action Items - Not Rule Changes

Item 56 - Tech Committee

Introduction of Rotax Jet Sizes

We must never allow the introduction of new inspection criteria without first having the documentation submitted to AKA, presented to the Technical Committee, and subsequently approved by the NKC for adoption.

Competitors and the trade alike must be accorded this courtesy at least.

Recommendation:

Require Jet Shroud information added into revision to Addendum #17. NSW Tech to provide details to National Tech for correct wording and dimensional diagram.

Jet sizes as most recently distributed are acceptable.

Item 57 - Tech Committee
Bar Code Scanner Software.

The current software is clumsy, and requires strict adherence to procedures only learnt from experience (usually bad) to maintain the integrity of the data base, within the defined parameters. Refer to the attached report, and consider software up-grades. Tasmania seem to have developed the software further, and this could form the basis of software review.

Recommendation

Covered in Item 10. There is an upgrade to be implemented in Darwin, and then passed to each state.

Item 58 - Tech Committee
Restrictor Bore

A competitor rocked up at Ipswich with a Rotax AKA SR2 restrictor which had not been bored out after laser cutting. It was about 1 - 1.5mm undersize.

National office is required to check all restrictors for correct machining.

Recommendation:

Refer to item 19

Item 59 - Tech Committee
CC Plug Burrs

As can be seen, there are significant burrs at the top of these CC plugs. This in my view is shoddy workmanship.

I have since cleaned these 3 up, so as to leave a square edge.

National office stock needs to be inspected, and plugs with burrs are to be rectified.



Meeting Closed: 3.00pm