CHAPTER 27 - OPEN PERFORMANCE CLASS

27.01 Engine Eligibility:

1. Must be series Production Engine
2. Must be AKA OR CIK - Homologated and/or Registered.
3. Two stroke or Four Stroke engines.
4. Single or Twin Engines.
5. Engines may be air or water-cooled.
6. Clutches and electric starters are permissible.
7. Reverse gear is forbidden.
8. Further restrictions on engines eligible for specific events may be specified in the events supplementary regulations.

27.02 Maximum Engine Capacity:

1. Two Stroke engines – 206cc total cylinder volume.
2. Four Stroke engines – 250cc total cylinder volume.

27.03 Carburettor:

One single throat carburettor per cylinder.

27.04 Ignition System:

Digital ignition systems are allowed if fitted to the engine originally by the manufacturer and are of the same type and style as originally fitted, otherwise only analogue type ignition systems are permitted.

27.05 Tyres:

1. The tyres to be used will be specified in the event supplementary regulations.
2. No modifications permitted, tyre treatment is illegal (refer rule 23.03).
3. Dry Weather Tyres – any AKA approved 5" slick - 1 x set plus 1 replacement tyre per meeting.
4. Wet Weather Tyres – any AKA approved wet - 1 x set plus 1 replacement tyre per meeting.

27.06 Braking:

Front wheel brakes may be used.

27.07 Weights:

Refer to the event supplementary regulations for class weights.
Different weights may be specified to equalise different engines within the one event.

27.08 Limitations on Drivers:

To be eligible to compete in this class, a competitor must hold a minimum of an AKA B Grade licence.

27.09 Equipment Homologated to this Class only include:

1. PRD 125wc
2. PRD RK125
3. PRD RK125ec
4. BRP-Rotax DD2 engine
5. RM-1 Kart (no reverse gear)
6. BRP-Rotax Junior Max engine

27.10 Fuel:

Refer to CHAPTER 22.
Elf CIK 102 may be used if listed in Supplementary Regulations

CHAPTER 28 - FORMULA ROTAX 125

28.01 Preamble:

It is expected that this class will continue to evolve during its early life and the promoters of the class reserve the right to alter the technical regulations with AKA approval at short notice to ensure the safety of drivers, fairness of competition, economy and wishes of the competitors.

Spirit & Intent:

BRP-Rotax's goals for the Formula Rotax class worldwide are:

a) To provide a class with low running cost and low noise emissions compared to conventional 100cc racing karts.

b) To eliminate some of the variables within the class. The intention of this is to reduce the amount of testing and technical expertise required to be competitive, placing the emphasis on driver skill.

c) To have the rules for Formula Rotax alike in all countries using the Rotax Max engine.

Warranty:

It is strongly recommended that no modifications whatsoever be performed to Rotax Max engines, as this may render the warranty null or void.

28.02 Engine:

1. BRP-Rotax FR125 Max. Only.
2. To assist in the long-term stability of Formula Rotax, the AKA has signed a five (5) year contract to the class, beginning 1st January 2005, guaranteeing the only eligible engine is the Rotax Max FR 125 manufactured by BRP-Rotax Gmbh.
3. Only genuine Rotax components that are specifically designed and supplied for the FR125 engine are legal, unless otherwise specified.
4. For use in Australian racing every engine must have the official Formula Rotax Australia stamp on the crankcase and also on the reed block face of the cylinder.
5. Neither the engine nor any of its ancillaries may be modified in any way likely to improve performance, unless specifically authorised within these rules. "Modified" is defined as **'any change in form, content or function that represents a condition of difference from that originally designed'**. This is to include the addition and/or omission of parts and or material from the engine package assembly unless specifically authorised within these rules. The adjustment of elements specifically designed for that purpose should not be classified as modifications. e.g. carburettor and exhaust adjustment screws.
6. For sealing purposes the engine must have a minimum of 1.5mm hole drilled in a rear cylinder hold down stud, the front water jacket cap screw and the upper reed block valve cover cap screw.

28.03 Chassis:

- **Comply to existing AKA formula with the following and additional restrictions.**

1 Frame - round tubing only or maximum of one main rail not round. Maximum diameter for frame tubing is 35.5mm, (inclusive of paint).

2 Composite Materials are banned, except for the seat, Nassau panel and floor tray.

3 Maximum Axle diameter of 50.0mm.

28.04 Brakes:

Front wheel brakes are not permitted

Important Notice – see Formula Rotax 125 brake recommendations.

28.05 Fuel:

Refer to CHAPTER 22

28.06 Tyres

1 No modifications permitted, tyre treatment is illegal (refer rule 23.03)

2 **Dry weather tyres** Bridgestone YJC (1 set + 1 replacement tyre / meeting)

3 **Wet weather tyres** Dunlop KT6SWL1 (1 set + 1 replacement tyre / meeting)

4 Refer chapter 23, for AKA contracted prices

28.07 Drivers:

a) Seniors only: Holding a provisional AKA C grade licence or better.

b) Drivers will be gridded by licence grade within field, A/B mixed then C.

28.08 Weights:

(a) Rotax Light 160kg

(b) Rotax Heavy 180kg

Other weight divisions at the discretion of the event organizers.

Maximum kart weight for Rotax Heavy – 100 kg.

(Class weights are as raced at time of weigh measuring). (Refer Rule 25.19).

TECHNICAL SPECIFICATIONS

28.09 Internal and External Additions

No additional material may be added except in the case of engine repairs and shall only restore the engine or components to original specifications.

- The use of thermal barrier coatings / ceramic coatings on or in the engine and on or in the exhaust system is prohibited.
- The use of anti-friction coatings in or on the engine / engine components is prohibited.
- The only exceptions to this are the gilnisil coating of the cylinder bore and the coating to the piston skirt.

28.10 Legal Additions

Chainguard, motor mount, radiator mount, temperature gauge and tachometer/hour meter.

Modifications to fit an exhaust probe are permissible. Refer Rule 25.09.

28.11 Non Tech items

1 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.

2 No alteration from the original manufacturers specification is permitted to fit a non-tech item.

3 Additional fasteners or securing devices are non tech items and may be fitted/added.

28.12 Cylinder Head Volume

Minimum of 11.0cc using AKA method 22.03.

28.13 Displacement

125.0cm³ (maximum)

28.14 Combustion Chamber Insert

1. Identification code has to be 223 389 or 223 389 1 or 223 389 2 (illustration 1, (4).
2. No material may be added except to repair the spark plug thread and or spark plug sealing surface.
   All machined surfaces may be re-machined. Cylinder head insert must retain both the squish band and a visually spherical combustion chamber. O ring must be fitted.
3. The combustion chamber/squish area shall not protrude beyond the sealing face of the cylinder head insert.

28.15 Spark plug thread length

Maximum spark plug thread length shall be 20mm.

28.16 Piston

1 OEM only, uncoated or coated, aluminium, cast piston with one 1.0mm rectangular piston ring.

2 Machined areas are: top end of piston, outside diameter, one groove for the piston ring, bore for the piston pin, inside diameter at bottom end of piston. All other surfaces are not machined and have cast surface.

28.17 Gudgeon Pin

No special alloys, must be OEM and as per illustration 8.

28.18 Cylinder

1 Light alloy cylinder with GILNISIL plating, configuration with one main exhaust port and pneumatic adjusted valve. Any replating is not allowed.

2 Maximum bore: 54,035mm (measured 10 mm above the exhaust port).

3 Cylinder has to be marked with ROTAX logo, (illustration 2, (1)).

4 Cylinder has to be marked with identification code: 223 997, (illustration 2, (2)).

5 All ports and passages are cast finish except some pre-existing factory removal of flashing.

All ports have chamfered edges to prevent ring snagging. Any additional machining is not permitted

6 Cylinder must have the official Formula Rotax Australia stamp on the inlet face.

7. Refer to Rule 26.04, Steps 1,2,3 and 5 for compliance checking procedure.

8. The cylinder base surface may be re-machined must remain perpendicular to the cylinder bore.

9. Due to manufacturing procedures some cylinders may have been machined on the exhaust flange.

28.19 Cylinder Base Gaskets

1 Must be dimensionally the same size and shape as original and cannot be designed to decrease the size of the transfer ports.

28.20 Inlet System

1 Intake manifold is marked with the name ROTAX and the identification code 267 915. No grinding or machining is permitted. However some factory flash removal may be present at the junction of the inside contour and the carburettor stop mounting face. This is a manual trimming operation consisting of a small corner break of less than 1mm in width.

2 Reed valve assembly is marked with the name ROTAX and the identification code 224387. No grinding or machining is permitted

3 The reed valve assembly is equipped with 2 petal stops and 2 reeds, each having 3 petals.

4 The thickness of the reeds is 0.6mm +/- 0.08mm

5 Maximum reed block gasket/spacer thickness is 4.0mm

6 The addition of one Rotax reed block gasket, maximum of 1.0mm between the carburettor manifold and the reed block is permitted.

28.21 Exhaust Power valve

As supplied by the manufacturer with no modifications allowed. Original spring must be fitted. Any external adjustment or blocking to this once the engine is running is illegal. Maximum thickness of power valve gasket/s is 2.0mm. Additional fasteners or securing devices may be fitted/added.

28.22 Crankshaft

1 As supplied by the manufacturer with no modifications permissible.

2 Stroke 54.5mm +/-0.02mm

28.23 Balance Shaft

1. No modification Allowed. Must be installed and operational.
2. Either part number / type 237945 or 237949 is acceptable.
3. Minimum weight of the dry balance shaft must not be lower than 355 grams for balance shaft, Rotax part number 237 945 AND 255 grams for balance shaft, Rotax part number 237 949.

28.24 Conrod

1 As supplied by the manufacturer. Any grinding / polishing or modifications is not permitted.

2 Conrod has to be marked with “213” or “365” or “367” on shaft, (see illustration 4, (7)).

28.25 Crankcase

1 As supplied by the manufacturer. No grinding / polishing in the two main transfer passages.

2 Must have the official Formula Rotax Australia stamp on crankcase deck.

3 Either sandcast gearbox cover (part no.211870) or pressure die cast gearbox cover (part no. 211871) is permitted.

28.26 Ignition

1 DENSO digital ignition only, no adjustment permitted or possible.

2 Ignition coil has the following marks close to the outlet of the high-tension cable, cast in the case: Denso and 129000.

3 The only allowable Spark Plug Cap is NGK type TBO5EMA.

4 Any modification to any part of the ignition system and/or crankshaft to alter the ignition timing or rev limiter is illegal.

5 The ignition coil must have 3 pins at the terminal.

28.27 Carburettor: DELL'ORTO carburettor

1 The carburettor body, slide, needle, atomiser tube and atomiser (either spec 1 or spec 2 is permissible) to remain as originally supplied and cannot be subject to any modification. No additions or additional machining filing, drilling, or polishing etc is permitted to these items, this includes the bore /throat

2 "VHSB 34" cast in the housing of the carburettor

3 "QD" or "QS" stamped in the housing of the carburettor.

4 Atomiser tube stamped with "266 FN"

5 Needle stamped with "K54" or "K27" and "K98" or others as nominated in the future.

6 Slide marked #40 only.

7 The size of any hole in any of the following is unregulated: main jet, needle and seat, pilot jet, pilot jet emulsion insert, choke jet. The position of the float/float arms and the weight of the floats are unregulated. All items (jets, needles etc) referred to in Rule 28.27 must be present and operational.

8 With the exception of the choke, no changes or adjustments can be made to the carburettor once the engine is running.

28.28 Fuel Pump

MIKUNI diaphragm pump only. Place of fixing is free.

28.29 Radiator

1 Genuine single aluminium radiator as shown in illustration 5.

2 Cooling area: Height = 290mm, width = 133mm

3 Thickness of radiator = 32mm

4 12 only water cores are permissible.

5 Placement of the radiator is free, however for the warranty to exist, the radiator must be mounted in its original position, on the right side of the engine.

6 Additional cooling devices are not permitted.

28.30 Radiator Coolant

As glycol coolants are not permitted, a mixture of distilled water and aluminium compatible anti-freeze has to be used. An example of a product that does not contain glycol is Valvoline Pyroil Radiator Corrosion inhibitor.

28.31 Clutch

Dry centrifugal clutch – using genuine components only. Whilst on level ground the kart (with driver in kart) must start to move under its own power, when the engine speed reaches 3000 R.P.M. or less. The use of the Clutch Pin support plate is permitted.

28.32 Intake Silencer

1 Intake silencer with integrated, washable air cleaner as shown in illustration 6, must be fitted.

2 No modifications allowed. Air filter must be in place as per illustration 6. Either fine type or coarse 030 filter is permitted.

3 It is permissible to drill a single 5 mm hole in the lower part of the intake silencer (in the centre of the plastic injection mark)

4 Either type airbox as shown in Illustration 6 or Evolution type (part numbers 225025 and 225 015, which incorporates a 8mm drain hole) is permitted.

28.33 Exhaust System

1 Must be as supplied by Rotax and cannot be modified except for, a) the replacement of the silencer absorption material and /or b) Modifications to fit an exhaust probe are permissible. Refer Rule 25.09

2 Standard engine / pipe coupling must be used.

3 Exhaust pipe with after muffler as shown in illustration 7.

4 Length of inlet cone: Type A and B: 592mm +/- 5mm (measured along the body of the exhaust pipe, not the seam, from the beginning of the exhaust to the start of the cylindrical part).

5 Length of cylindrical part of exhaust pipe: Type A and B: 125mm +/- 5mm.

6 Length of end cone: Type A: 250mm +/- 5mm, Type B: 225mm +/- 5mm (measurement see illustration 7).

7 Outside diameter of 180º bent tube: Type A: 30mm, +/- 3mm, Type B: 41mm + 1,5mm / - 1,0mm (measured at beginning and end of bend).

8 Hole diameter of end cap of silencer (illustration 7,) 21mm + 0,2mm – 0,5mm.

9 Painting / plating of the exhaust muffler is permitted with the exception of thermal barriers / coatings / paint. (See internal and external additions)

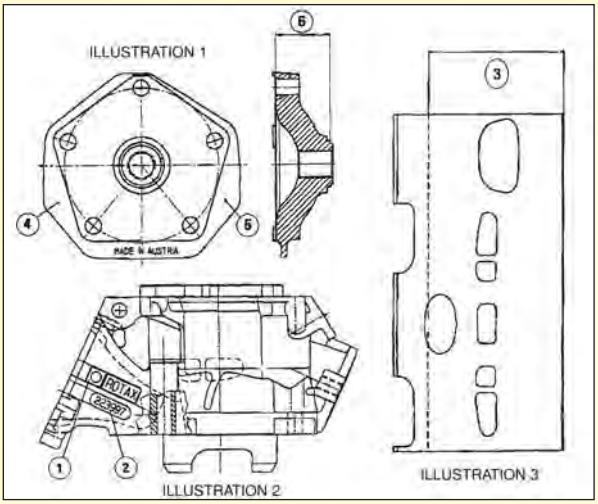
10 Note : Any accidental damage to the unit will not incur a technical breach of these rules, however any attempt to modify/alter the exhaust system by cutting, or fabrication will automatically remove eligibility of the exhaust system. Welding of the exhaust system to repair a crack, hole or to fit a patch etc. is permitted.

11 Only one exhaust gasket is permitted, maximum thickness of 2mm.

28.34 Exhaust Muffler

1 Noise isolating mat (illustration 7, pos. 2 & 5) can only be replaced by an original ROTAX spare part.

2 End cap rivets may be replaced with bolts / capscrews etc.



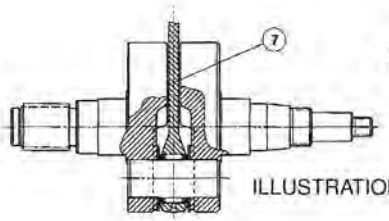
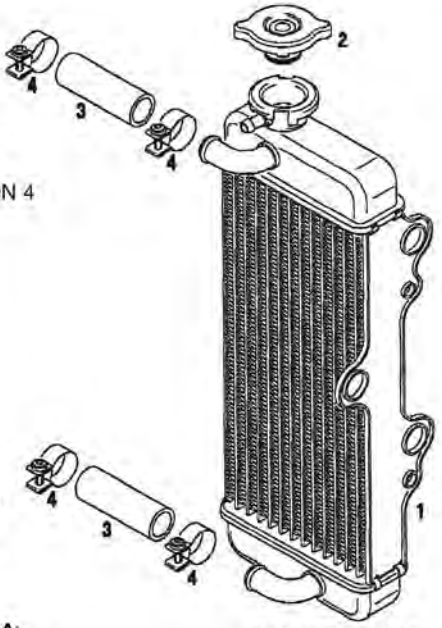


ILLUSTRATION 4



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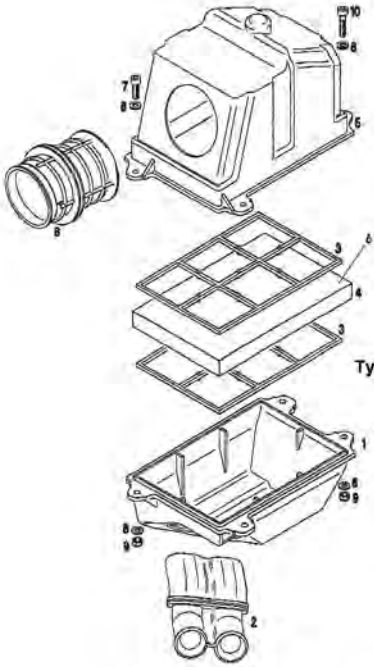

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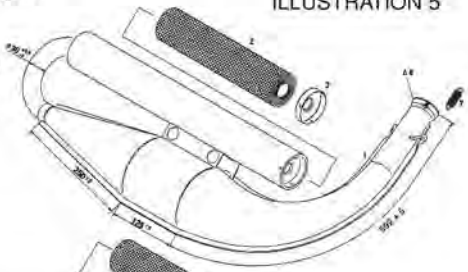
ILLUSTRATION 6



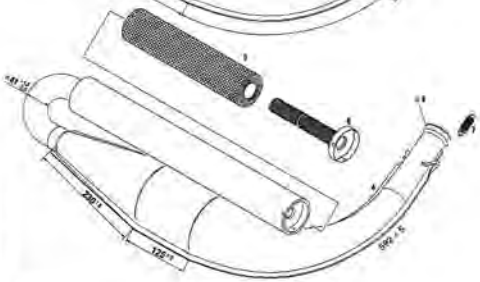


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ILLUSTRATION 7

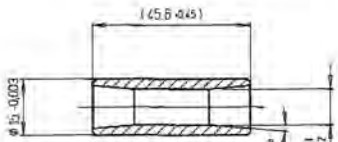


ILLUSTRATION 8

CHAPTER 29 - FORMULA 100

Preamble
This class exists as an intermediate step for those senior karters wishing to compete in the CIK classes at national championships level and for karters being too heavy for the CIK weights. It is intended that the costs of competition in this class should be controlled however the technical requirements for engines will be the same as the CIK classes to allow easy exchange of equipment and easy transition through classes.

29.01 Engines

1 Any homologated single cylinder series production air or water cooled engine complying to CIK Formula A or Intercontinental A regulations is eligible. **Maximum exhaust port timing for Intercontinental A engines does not apply for this class**.
2 It must be possible to identify an homologated engine or its parts (cylinder head, cylinder, crank cases and crank shaft) by the technical descriptions (photos, technical drawings and the like) on the homologation forms.
3 Maximum capacity 101cc, except for pre 1998 engines which may be maximum 103cc.
4 All systems of powervalve are forbidden
5 In addition to any currently approved engines for the Formula 100 Class, newly homologated CIK engines will become eligible from 01 January in the year in which they are homologated by CIK and following registration with the AKA.
6 Unless otherwise specified all parts are to be by the original engine manufacturer.

29.02 Exhaust Port Height Check for pre 1998 homologated engines:

Stroke	Rod Length centre distance	Piston allowable travel
52.0	100	30.1
51.0	100	29.5
50.6	100	29.2
50.5	100	29.1
50.0	100	28.8
48.5	98	27.9
46.0	96	26.4

29.03 Modifications:

1 Modifications to homologated engines are permitted,
EXCEPT to the following:
- Stroke
- Bore (outside maximum limits)
- Number of transfer passages and inlet ports in the cylinder and crankcase.
- Number of exhaust ports and passages.(the creation of new exhaust ports or passages is forbidden.)
- Connecting Rod centre distance. (magnetic material compulsory)

2 It must always be possible to identify the original parts of the homologated engine.

29.04 Ignition:

Only group 2 CIK homologated ignition system is permitted

29.05 Non Tech Items:

Unless otherwise specified, non tech items include – bearings and cages, crank pin, fasteners, gaskets, piston and rings, seals, piston pin, spacers, washers, spark plug. (refer Rule 25.21)

29.06 Exhaust System:

For reed valve engines (Intercontinental A) in this class it is not compulsory to use the CIK homologated exhaust pipe.

29.07 Carburettor:

1 Carburettor to be Formula A type:

A = 24.0mm	OR	A = 25.5mm
B = 27.8mm		B = 25.5mm

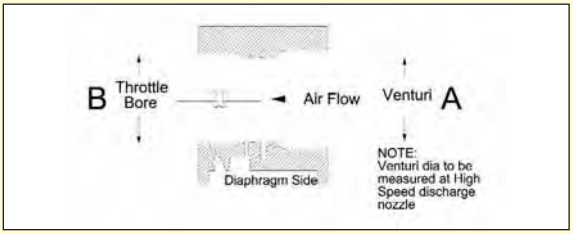


DIAGRAM IS FOR DIMENSIONAL REFERENCE ONLY

2 Carburettor may be either two or three jet - 25.4mm or 27mm.

3 All systems of injection and/or spraying of products other than fuel are forbidden.

29.08 Fuel:

Refer to CHAPTER 22.

29.09 Tyres:

1 No modifications permitted, tyre treatment is illegal. (refer rule 23.03).

2 Dry weather tyres — MG Yellow (1 set + 1 replacement tyre/meeting).

3 Wet weather tyres — Any CIK group 2 wet - chapter 23. (1 set + one 1 replacement tyre/meeting).

4 Refer chapter 23, for AKA contracted prices.

29.10 Weight:

150 kg

29.11 Limitations on Drivers:

1) To be eligible to compete in this class, a competitor must hold an AKA A or B Grade licence.

2) Drivers entering this class from junior classes who have not competed in junior piston port must complete a minimum of three (3) meetings displaying P plates to be removed through an endorsement to the licence, on the satisfaction of the stewards.

CHAPTER 30 - PISTON PORT

Preamble

This section covers AKA approved Piston Port engines for Senior competition, Rules 30.01 to 30.18 Deleted 1997.

30.19 Engines:

1 Engines must be CIK approved for Intercontinental A Junior with AKA approval for direct drive crankshaft. The exception is for AKA homologated engines.

2 In addition to any currently approved engines for the Piston Port Class, newly homologated CIK engines will become eligible from 01 January in the year in which they are homologated by CIK and following registration with the AKA.

3 Unless otherwise specified all major parts are to be original engine manufacture.

30.20 Exhaust Port Height Check:

Mandatory Exhaust Port Height Check for 177o maximum duration.

30.21 Exhaust Muffler:

Piston Port Engines are permitted to use the exhaust muffler homologated for use with that engine by the CIK or be the homologated muffler for a later model Piston Port engine from that engine manufacturer. If the homologated exhaust muffler is not used then the exhaust muffler used must comply with Rule 25.26.(a),(b),(c) and (e).

30.22 Tyres:

1 No modifications permitted. tyre treatment is illegal. (refer rule 23.03)

2 **Dry weather tyres** MG Yellow (1 set + one 1 replacement tyre/meeting)

3 **Wet weather tyres** Any CIK group 2 wet - chapter 23 (1 set + one 1 replacement tyre/meeting)

4 Refer chapter 23, for AKA contracted prices.

30.23 Fuel:

Refer to CHAPTER 22.

30.24 Weight:

140 Kg

30.25 External Modifications:

External modifications which do not in any way affect a performance gain are legal.

30.26 Internal Additions:

(i) No additional material may be added except in the case of engine repairs and shall only restore engine or components to original specifications.

(ii) The use of thermal barrier coatings / ceramic coatings on or in exhaust components is prohibited.

30.27 Interchange of Parts:

Legal between engines of like dimensions (bore, stroke) as long as no removal or addition of material is required to interchange said parts.

30.28 Legal Additions:

Legal additions shall be limited to the following: Carburettor return springs, chain guard, direct drive sprocket, extension of carburettor jet needles, exhaust header, motor mount,

muffler, starter nut and pulley, tachometer, temperature gauge, third bearing and adaptor shaft.

30.29 Limitations on Drivers:
To be eligible to compete in this class, a competitor must hold an AKA A or B Grade licence.

30.30 Non-Tech. Items:
Unless otherwise specified, non-tech. items include bearings and cages, crankpin, fasteners, gaskets, piston and rings, seals, piston pin, spacers, washers and spark plug. (Refer Rule 25.21).

30.31 Displacement:
The maximum capacity will be 105cc.

30.32 Exhaust, Intake and Transfer Ports:
Modifications are permitted, except:
(i) Number of transfer passages and inlet ports in the cylinder and crankcase.
(ii) Number of exhaust ports and passages.
(iii) Port surface finish is a non-tech item.

30.33 OEM combustion chamber insert is permitted.

30.34 Connecting Rod:
Must be the same length as original and made of magnetic material.

30.35 Crankshaft:
Must be by original engine Manufacturer with no change of stroke permitted.

30.36 Ignition:
The only permissible ignition system is either of the following :
Group 2 CIK homologated or Yamaha.
1. The fitting of the module YAMAHA, VICTA, ATOM or DELTA/WEI SHIEH is permissible.

30.37 Carburettor:
Any butterfly type carburettor providing it comes within the following specifications:
(i) Maximum two adjustable jets permitted
(ii) No fixed jets permitted.
(iii) All fuel to the engine must pass through the high and low speed fuel metering jets and passages.

Maximum size combination as follows:

1	A = 25.5mm	B = 25.5mm
2	A = 24.0mm	B = 27.8mm

For Walbro WB Carburettor

3	A = 25.4mm	B = 25.7mm
4	A = 24.0mm	B = 27.8mm

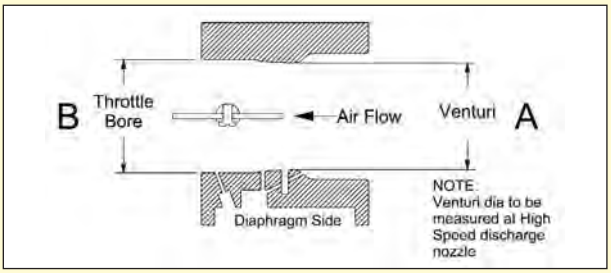


DIAGRAM IS FOR DIMENSIONAL PURPOSES ONLY

30.38 AKA Piston Port Chart

AKA Homologated Engines	Stroke	Conrod Length	Piston Travel	Homologated Exhaust No.
ARC PP 50 A7 or W7	50.54	100	29.1	ARC PP52
ARC PP 52 A7 or W7	46.10	100	26.3	ARC PP52
ATOMIC AKP 92.	50.46	100	29.1	141E/92/ATO
CMP 92/142	46.00	96	26.4	
COMER MIK P50	51.50	100	29.1	
COMER MIK P52	52.00	100	30.1	
CRG S30-TI	50.50	100	29.1	
DAP T50	48.50	100	27.8	125E/92/DAP
DAP T51	46.00	100	26.2	125E/92/DAP
DINO M3	50.00	100	28.8	
DINO 500PP	50.00			
DINO 502 PP	50.00	100	28.8	110E/92/DIN
FOX MC30P	50.60	100	29.2	
ITAL SISTEM MA1	48.50	98	27.9	132E/92/ITA
ITALSISTEM MA21	50.50	100	29.1	260E/95/ITA
ITALSISTEM MA31	50.65	100		168/E/06 or 166/E/06
KOMET K71	46.00		26.4	129E - 130E/92/IAME
ROTAX R100PP92	50.50	100	29.1	501M/89149/150M/92/ROT
PARILLA PV92,	50.00	100	28.8	129 - 130E/92/IAME
PARILLA PV95	50.00	100	28.8	245E/95/IAME
PCR PV95	50.50	98	29.2	280E/95/PCR
PCR PV50	50.00	96	28.9	
PCR PV100	49.95	100	28.8	145E/92/PCR
PCR RESAW				
PRD RK100	50.00	100	28.83	9037/95A/PRD
PRD RK100ec				
SOLO PP98	50.00	100	28.8	225E/95/DAR
TITAN PP95	50.50	100	29.1	
TKM B 95	50.50	100	29.1	
VORTEX VA95	50.50	100	29.1	288E/95/VOR
YAMAHA KT100S	46.10	100	26.2	

All measurements are in mm

CHAPTER 31 – FORMULA AUSTRALIA

31.01 Engines:

(a) ARC SPEC 100A
(b) ARC SPEC 100W
(c) ARC SPEC 100W / YAMAHA KT100S Hybrid–Watercooled

These engines are based on a Yamaha KT100S below the cylinder base gasket and a Formula Australia water-cooled top end above the cylinder base gasket.

This section covers the above engines that must be maintained within the specifications approved by the AKA as outlined below.

31.02 Reserved

31.03 Weights:

(a) Formula Aust Light - 145 kg – watercooled, 140kg - aircooled
(b) Formula Aust Heavy – 165 kg watercooled, 160kg - aircooled
(c) Formula Aust Super Heavy – 185 kg watercooled, 180kg aircooled
(d) Formula Aust Over 40's – 165 kg watercooled, 160kg aircooled
(Maximum kart weight for Heavy and Super Heavy – 88 kg refer Rule 25.19)

31.04 Driver Limitations:

Minimum level is C Grade AKA licence

31.05 Tyres:

1 No modifications permitted, tyre treatment is illegal. (Refer Rule 23.03)
2 **Dry weather tyres** MG AZ Red (1 set + 1 replacement tyre / meeting)
3 **Wet weather tyres** Dunlop KT6SLW1 (1 set + 1 replacement tyre / meeting)
4 Refer chapter 23, for AKA contracted prices

31.06 Braking:

Front wheel brakes are not permitted. Refer Rule 25.07 (i)

31.07 Fuel:

Refer to CHAPTER 22

31.08 Pressurised Fuel System:

Fuel pump or pressurised fuel systems are forbidden. Squeeze type pump between fuel tank and carburettor is permitted.

31.09 Carburettor:

Refer rule 25.26

31.10 Inlet Tract Length:

69mm minimum (measured along the port floor from the aluminium carburettor adaptor outer face to piston skirt).

31.11 Insulating Spacer:
Hole size 26.42mm max.

31.12 Aluminium Carburettor Mount Plate:
Hole size 26.29mm max

31.13 Exhaust Pipe Header:
Refer to rule 25.08 for exhaust pipe header.
Refer to Rule 25.09.7 for exhaust probe.

31.14 Exhaust Muffler:
AKA Registered Silencer: It is mandatory to use an AKA registered silencer in conjunction with an exhaust muffler in Formula Australia Classes.

	Part	Description	Design
1	End cap / Adaptor	Replaces exhausts pipe end plate or cap and stinger, made to fit specific exhaust muffler	Free
2	Return pipe	Parallel tube welded to cap or body	Registered
3	Silencer body	Cylindrical with fixing point / unit	Registered
4	Silencer fill or packing	Replaceable sound absorbing material	Free

The AKA39 Muffler does not require an AKA Registered Silencer and is optional for use in Formula Australia. The AKA39 is not compulsory.

31.15 Ignition:

a) Ignition must be that supplied by the original engine manufacturer which is approved by the AKA. Any optional unit must be approved and registered with the AKA for this class.
The use of the following AKA approved TCI module is permissible:
YAMAHA, VICTA, ATOM, DELTA/WEI SHIEH, PRD, PRD with coil.
No modifications or repairs to any of the listed AKA approved modules is permitted.
The fitting of a PRD ignition coil and a PRD ignition rotor (flywheel) is permissible (this includes the Oppama ignition system).

b) Ignition timing may be adjusted by the removal of the locating key or part thereof and/or by the ignition plate.

c) All engines must rotate in a clockwise direction when viewed from the drive side.

d) Ignition/rotor cover is optional.

e) It is permissible to repair/replace the connector on the TCI module and mating wiring

31.16 External Modifications:
External modifications which do not in any way affect a performance gain are legal.

31.17 External Identification
The ARC Spec 100 water cooled must have “Mod 2” cast into the rectangular boss on the cylinder barrel above the drive side of the engine.

31.18 Internal Additions:

No additional material may be added except in the case of engine repairs and shall only restore engine or components to original specifications. The cylinder may NOT be repaired in any of the port or passage as cast or machined areas.

(a) The use of thermal barrier coatings / ceramic coatings on or in the engine / engine components and on or in exhaust components is prohibited.

(b) The use of anti friction coatings on or in the engine/engine components is prohibited.

31.19 Legal Additions:

Legal additions shall be limited to the following: Chain guard, motor mount, direct drive gear, extension of carburettor jet needles, carburettor return springs, third bearing and adaptor, temperature gauge and tachometer.

31.20 Clutch:

The permissible AKA registered clutches that may be used in this class are the ARC OEM clutch and the SSS clutch (AKA Registration Number 45)

31.21 Waterpump.

Drive, type and mounting is optional

31.22 Non-Tech Items:

Refer Rule 25.21

31.23 Cylinder Head:

1 Must be an original ARC casting.
The welding and re-machining of the combustion area, gasket face and spark plug surface is allowable. Any additions/repairs must be non-adjustable and of aluminium material.

2 The combustion chamber style is required to have a squish band and chamber which are visually concentric to the spark plug.

3 The combustion chamber volume shall be a minimum of 11cc. (Ref rule 26.01)

4 The combustion chamber/squish area shall not protrude beyond the combustion gasket sealing face of the cylinder head.
The spark plug thread may be repaired and shall retain its original position in relation to crankshaft axis. Helicoils and similar are permitted.

5 OEM combustion chamber insert is permitted.

31.24 Displacement:

The maximum piston and stroke are:
Piston 53.00mm Stroke 46.13mm

31.25 Head Gasket/s:

Must be retained.

31.26 Piston:

1. Piston must be AKA approved ARC (forged or cast) and stock in appearance.
2. Approved aftermarket pistons form 2000 include YAMAHA, KSI, KSI MK II,

JDP/Vertex and Strike.

3. 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.

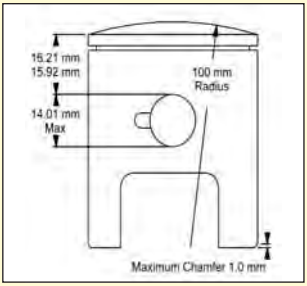


DIAGRAM IS FOR DIMENSIONAL REFERENCE ONLY
Note: Skirt length must be equal distance on both sides

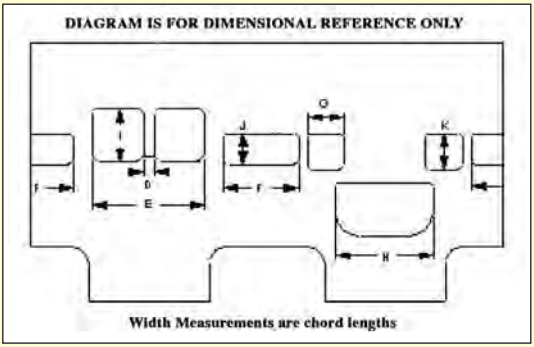
31.27 Gudgeon Pin:

Refer rule 25.25 - non-tech items

31.28 Cylinder Ports:

Cylinder and liner

1. All ports in the liner to be “as machined” condition NO grinding is permitted.
2. All passages must remain in as cast condition; sandblasting, glass beading, peening, etc. are NOT a substitute for “as cast” condition.
3. Port map



CODE	DIMENSION	CODE	DIMENSION
C	3.70 mm min	G	34.10 mm max
D	39.10 mm max	H	21.65 mm max
E	23.60 mm max	I	11.80 mm max
F	12.95 mm max	J	13.80 mm max

Port Split 9.80mm minimum, exhaust to transfer.

Cylinder Machining:
All machined surfaces may be re-machined as long as engine is within any other specifications within the rules.

31.29 Connecting Rod:

(a) Connecting rod must have either ARC or 213 forged into the side of the rod.
(b) Minimum/Maximum rod length, centre to centre 99.87mm – 100.13mm.
(c) Conrod alignment may be either top or bottom.
Bearings and spacers are non-tech items.

31.30 Crankshaft:

Must be of original engine manufacturer.

(a) Crank Pin to be hollow pin 18mm (Crank Pin plugs Optional)
(b) Crank Pin length 44.80mm min, 45.00mm max
(c) Crank Pin bore diameter measurement: 10.25 mm min, 10.45 mm max.
(d) It is permissible to recondition the crankshaft main shaft by plating
(e) Crank Shaft outside diameter measurement: 86.60mm min., 87.25mm max.

Note: If the crank assembly is outside the min/max dimensions, then disassemble engine to inspect further. Crankshaft width (measured across shoulder for the main bearings) to be 45.59 mm min.

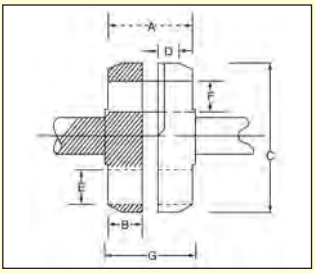


DIAGRAM IS FOR DIMENSIONAL REFERENCE ONLY

CODE	DIMENSION mm	CODE	DIMENSION mm
A	44.5 min	E	22.0 +/-.15
B	17.5 +/- .1	F	Crankpin 18.0
C	86.60min - 87.25max	G	45.59 min
D	10.8 min		

31.31 Crankcase:

The crankcase ports will remain as cast. The minimum chordal distance measured with a vernier caliper across the widest section of the transfer ports shall be 97.5mm minimum. (Refer diagram Rule 34.46). All machined surfaces may be re-machined as long as engine is within any other specifications within the rules. It is permissible to repair crankcase main bearing recesses by welding or with metal inserts.
NOTE: Existing crankcases that are narrow may be spaced with a thicker gasket.

THE FOLLOWING SECTION COVERS HYBRID ENGINES WHERE ALTERNATE CONNECTING ROD, CRANKSHAFT AND CRANKCASE MAY BE USED AS PER RULE 31.01C

31.32 Connecting Rod:

Can be either of the following and must be stock:

(a) Yamaha or KSI.

(b) Minimum/Maximum rod length, centre to centre 99.87mm – 100.13mm.

(c) Conrod alignment may be either top or bottom.

(d) 50W-11651-00 Yamaha "J" rod is not eligible

(e) Bearings and spacers are non-tech items.

31.33 Crankshaft:

Legal crankshafts are Yamaha, or KSI

(a) Outside diameter measurement: 86.60mm min., 87.25mm max.

(b) Crank Pin to be standard hollow pin.

Note: If the crank assembly is outside the min/max dimensions, then disassemble engine to inspect further. Crankshaft width (measured across shoulder for the main bearings) to be 45.59 mm min.

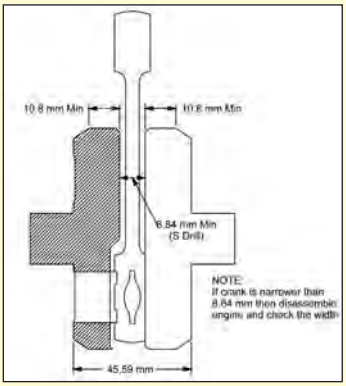


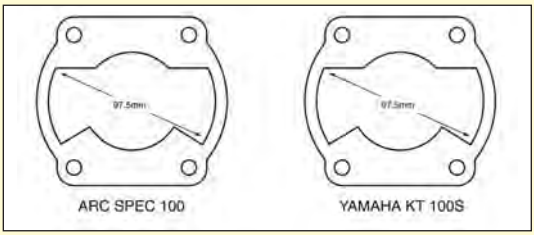
DIAGRAM IS FOR DIMENSIONAL REFERENCE ONLY

31.34 Crankcase:

The crankcase ports will remain as cast. The minimum chordal distance measured with a vernier caliper across the widest section of the transfer ports shall be 97.5mm minimum. (Refer diagram below). All machined surfaces may be re-machined as long as engine is within any other specifications within the rules. It is permissible to repair crankcase main bearing recesses by welding or with metal inserts.

It is permissible to use ARC electric start crankcase on Yamaha KT100S if clutch and starter motor is fitted.

NOTE: Existing crankcases that are narrow may be spaced with a thicker gasket.



DIAGRAMS ARE FOR DIMENSIONAL REFERENCE ONLY

31.35 ARC Spec100 A, ARCSpec100 W and Hybrid Engine Compliance
Refer to rule 26.04 for procedure

CHAPTER 32 - PRD RK100 ENGINE CLASS

32.01 Engine Eligibility:

1. PRD RK100. All parts to be the Original Engine Manufacture (OEM).
2. PRD RK100ec. All parts to be Original Engine Manufacturer (OEM).

32.02 Tyres

1. No modifications permitted, tyre treatment is illegal (refer rule 23.03)
2. **Dry Weather Tyres** Maxxis HG3 (1 set + 1 replacement tyre / meeting)
3. **Wet Weather Tyres** Dunlop KT6SLW1 (1 set + 1 replacement tyre / meeting)
4. Refer chapter 23, for AKA contracted prices

32.03 Braking:

Front wheel brakes are not permitted. Refer Rule 25.07(iv).

32.04 Fuel:

Refer to CHAPTER 22

32.05 Weights:

To be determined on a State by State basis.

32.06 Cylinder Head:

A squish area must remain, but combustion chamber shape free.

32.07 Exhaust Port Height:

As per cylinder drawing and equal to 176 degree maximum exhaust duration.
Measuring Procedure:

1) Use a 50mm stroke dial gauge.
2) Select top dead centre and zero gauge.
3) Turn engine in direction of rotation.
4) Lower Piston 29.0mm.
5) The exhaust should be closed when viewed through the exhaust port from outside of the engine.

32.08 Inlet Port Timing:

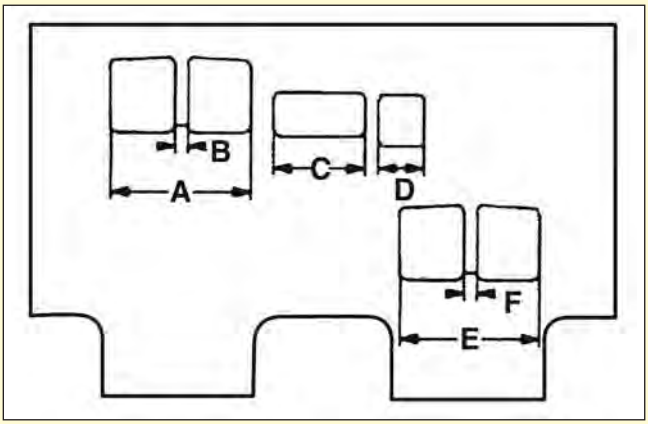
As per cylinder drawing and equal to 165 degree duration.
Measuring Procedure:

1) Select top dead centre.
2) Place 5mm AKA gauge rod in the inlet port hole.
3) Rotate the engine until piston contacts 5mm gauge.
4) This measurement should not exceed 19.5mm from TDC.

The method may also be employed using a Vernier Calliper.
Inspection must allow for the distance that the piston ring is below the cylinder liner when using the Vernier Calliper system.

32.09 Exhaust, Inlet and Transfer Ports:

To be controlled by cord measurement as per cylinder drawing. No extra ports allowed.



CODE	DIMENSION	CODE	DIMENSION
A	41mm max	D	16mm max
B	3.0mm min	E	41mm max
C	22mm max	F	3.0mm min

DIAGRAM IS FOR DIMENSIONAL REFERENCE ONLY
No Go Gauges for the port measurements are available from your State Secretary.

32.10 Piston:
Original Engine Manufacture

32.11 Conrod:
As supplied by manufacturer. No modifications permitted.

32.12 Crankshaft:
As supplied by manufacturer. No modifications permitted.

32.13 Ignition System:
As supplied by manufacturer. No modifications permitted except repair of hi-tension lead. Both Internal and External Coil / TCI Unit accepted.

32.14 Exhaust Muffler:
The homologated muffler PRD 9037/95 A or PRD 9037/EVO 99A only.

32.15 Carburettor:
Refer rule 25.30

32.16 Carburettor Spacer Block:
As supplied by the manufacturer but thickness is free.

32.17 Airbox and Carburettor Adaptor: As per Rule 25.25

32.18 Internal Additions:
No additional material of any kind may be added except in the case of engine repair and shall only restore engine or components to original specification.

32.19 Removal of Material:
Removal of material from inside of engine is free on parts designated as non-tech to specifications found in these regulations.

32.20 External Appearance:
All casting and components must be as supplied and appear as manufactured. Except for minor accident damage which may be repaired (ie. fins).

32.21 Port Finish:
Finish of all ports and passages are free however shape and style must remain as supplied.

32.22 Non-Tech Items:
The following items are considered non-tech items and are free : Piston pin, piston pin circlips, gaskets, crankpin, spacers and washers, seals, drive sprocket, fasteners, exhaust header length, exhaust flex, fin dampeners, spark plug and plug cap, carburettor diaphragms, gaskets and bearings.

32.23 Limitations on drivers:
To be eligible to complete a driver must hold a minimum provisional AKA C grade Licence.

32.24 Fin Dampeners
To effectively reduce noise all PRD engines must be fitted with fin dampeners to cylinder and head fins.

CHAPTER 33 - RESA CLASS

Preamble

This class has National and State Championship status, however it is not eligible to run at the National Championships (R20.21(i))

The regulations of the ReSa National Championship will be published by the NKC on an annual basis.

33.01 Engine Eligibility:

(a) PCR PV50, ReSa PV50 and ReSa W engines only.
All parts must be by the original manufacturer where those parts are identified by PCR marking. Markings must not be altered or removed. Parts not identified, as PCR parts are free. All engines must be run as homologated unless specified elsewhere.

(b) Crank Halves are not to be modified from the original homologation and are to be 43mm across the width of both halves for both ReSa aircooled engine and the ReSa water cooled engine with a tolerance of +0.1mm and –0.3mm.

(c) Conrod for both Air-cooled and Water-cooled engines must be either stamped or laser engraved with the PCR logo, and is not to be modified in any way from the original homologation.

(d) Barrell sleeves can be replaced with original PCR sleeves only.

(e) No external modifications allowed except for attachment of springs & seals.

(f) Engine measuring system will as per the new AKA Registered piston travel gauges. Removal of the head and barrel for inspection to certify the piston and conrod being run may be required to confirm PCR original parts have been used (parts will be labelled accordingly).

33.02 Non Technical Items

All Bearings, Piston Circlips, Seals, Fasteners, Fin Dampeners, Gaskets, Piston Pin, Crank Pin, Spacers and washers, Drive Sprocket, Exhaust Flex, Spark Plug, Spark Cap and Lead, All Port Surfaces.

Internal Modifications

No additional material may be added except in the case of engine repairs and can only restore the engine or components to original specifications.

All forms of standard tuning are permitted, including polishing and reshaping ports, polishing and rebalancing reciprocating or rotating parts. In all these cases these modifications cannot disguise the origin of the engine parts.

33.03 Ignition - Group 2 CIK ignitions are approved.

33.04 Port Duration:

(a) max exhaust port duration for PCR/ReSa PV50 (air-cooled) is 177 (+/- 2) degrees.

(b) max exhaust port duration for PCR/ReSa W (water cooled) is 177 degrees

33.05 Piston Size:

(a) Maximum piston diameter 50 .35 mm

(b) PCR Pistons can be either black coated or silver and can be centre peg, or offset peg and must have the original PCR marking.

(c) Air-cooled engines ONLY. Maximum piston diameter 51.00mm. Piston diameter above 50.35mm ONLY may be non-original.

33.06 Carburettor:

(a) Phenolic or Alloy spacers must be used with Walbro Carburettors and must have a minimum thickness of 6mm.

1 Walbro WB series as per KT 100S:
Venturi - 24.13mm, Throttle Bore - 25.7mm,

2 Walbro WB as per CIK Inter A Junior:
Venturi - 24.00mm, Throttle Bore - 27.8mm

3 PCR BF24A
Venturi – 24mm, Throttle Bore – 27.7mm

4 PCR BF24 K4
ICAJ Homologation No.32/C/09

33.07 Exhaust Muffler:

Exhaust muffler must be either CIK192-E-06 (PCR) or CIK 195-E-06 (PCR). Or 278 E/95 PCR or 144 E/92 PCR, or 320/M/09.

33.08 Chassis & Body Work:

1 Any chassis approved for general competition

2 Race Numbers - Black on Yellow background.

33.09 Tyres:

1. No modifications permitted, tyre treatment is illegal (refer rule 23.03)
2. Dry Weather Tyres MG Yellow (1 set + 1 replacement tyre / meeting
3. Wet Weather Tyres Dunlop KT6SLW1 (1 set + 1 replacement tyre / meeting
4. Refer chapter 23, for AKA contracted prices

33.10 Braking:

Front wheel brakes are not permitted. (Refer Rule 25.07)

33.11 Fuel:

Refer to CHAPTER 22

33.12 Weights: Kart and driver as raced.

(a) ReSa Light – Air Cooled - 140 Kg

(b) ReSa Light – Water Cooled - 145 Kg

(c) ReSa Heavy – Air Cooled – 160 Kg

(d) ReSa Heavy – Water Cooled – 165 Kg

(e) Clubs, Race Organiser or Class promoter may vary the weights for club days and/or series events.

33.13 Limitations on Drivers

a) To be eligible to compete in this class a competitor must hold a minimum provisional AKA “C” grade licence.

b) A grade and B grade licence holders will run together. C Grade licence holders will start behind A & B grade. Provisional licence holders will start behind C Grade.

c) Provisional licence holders will not be able to compete in the ReSa National title or State Title event.

d) C grade licence holders can run together and mixed at any level of racing when time trials are being held. International licence holders can also compete at any level of racing.

CHAPTER 34 – CLUBMAN 100cc

34.01 **Engine: Yamaha KT100SE, KT100SD & KT100SEC**
This section covers the Yamaha KT100S engine which must be maintained within the specifications approved by the AKA as outlined below.

NOTE. There can be NO interchange of all major components between the KT100SEC engine and the KT100SE & KT100SD engines. The major components are as follows:

- Crankshaft halves
- Cylinder
- Crankcases
- Ignition rotor
- Ignition stator
- Ignition stator carrier plate

The KT100SEC must run with a clutch and a complete KT100SEC engine starting system.

34.02 **Tyres:**

1 No modifications permitted, and tyre treatment is illegal. (refer rule 23.03)
2 **Dry weather tyres** MG AZ Red (1 set + 1 replacement tyre / meeting)
3 **Wet weather tyres** Dunlop KT6SLW1 (1 set + 1 replacement tyre / meeting)
4 Refer chapter 23, for AKA contracted prices.

34.03 **Braking:**
Front wheel brakes are not permitted. Refer Rule 25.07 (iv)

34.04 **Fuel:**
Refer to CHAPTER 22

34.05 **Weights:**

(a) Clubman Light 140 kg
(b) Clubman Heavy – 160 kg
(c) Clubman Super Heavy – 180 kg
(d) Clubman over 40 (yrs) – 160 kg

Maximum kart weight for Clubman Heavy and Super Heavy Class – 88 kgs.
(Refer Rule 25.19).

34.06 **Muffler:**
Refer rules 25.23. The AKA39 controlled muffler is mandatory.

34.07 **Exhaust Pipe Header:**
Refer to rule 25.08 for exhaust pipe header.
Refer to Rule 25.09 (8) for exhaust probe.

34.08 **External Modifications:**
External modifications, which do not in any way affect a performance gain, are legal.

34.09 Internal Additions:

No additional material may be added except in the case of engine repairs and shall only restore engine or components to original specifications. The cylinder may NOT be repaired in any of the port or passage as cast areas.

(a) The use of thermal barrier coatings / ceramic coatings on or in the engine / engine components and on or in exhaust components is prohibited.

(b) The use of anti friction coatings on or in the engine / engine components is prohibited.

34.10 Legal Additions:

Legal additions shall be limited to the following: Chain guard, motor mount, direct drive gear, extension of carburettor jet needles, carburettor return springs, third bearing and adapter (for ARC clutch only), temperature gauge and tachometer.

34.11 Clutch:

The only permissible clutches are AKA registered clutches which are the Yamaha Freeline (AKA Registration Number 44) and the SSS (AKA Registration Number 45) and also the ARC clutch for engines with an ARC lower end assembly as per R34.23

34.12 Non-Tech Items:

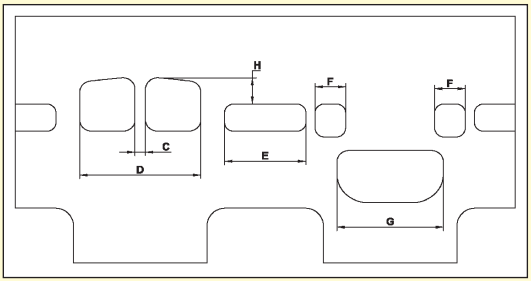
Refer Rule 25.21

34.13 Displacement:

The maximum piston and stroke are:
Piston 53.00mm Stroke 46.13mm

34.14 Cylinder Ports:

All ports are to be in an "as cast" condition Refer to 34.16



CODE	DIMENSION	CODE	DIMENSION
D	39.60 max	E	26.15 max
C	3.40 min	F	1`3.34 max
G	34.80 max	H	9.50 min

Cylinder Machining:
All machined surfaces may be re-machined as long as engine is within any other specifications within the rules.

34.15 Yamaha KT100S Engine Compliance

Refer to rule 26.04 for procedure.

34.16 Yamaha KT100S cylinder:

1. All ports are to be in "as cast" condition except at the junction of the cast iron sleeve and aluminium jacket. Grinding is permitted to remove casting irregularities at the junction ONLY. No chamfer on port edges is permitted.
   This Rule DOES NOT allow grinding or alternations by any method to:
   (a) change the roof angle;
   (b) alter port height, width or angle;
   (c) change the shape or size of the passages from the cylinder base to the port;
   (d) match the cases to the port passages.
2. Sandblasting, glass beading, peening, etc. are NOT a substitute for "as cast" condition.
3. Due to manufacturing procedures, it is possible that some engines may have slightly "broken" port edges. When this exists it is uniform on all port edges (tops, bottoms and sides) of all ports in the cylinder. The intersection of the port edges and the cylinder wall must still be within the technical measurements. As the bore size increases the amount of "break" diminishes. If the cylinder bore is 52.45mm or larger, no "broken" edges are allowed.
4. Due to manufacturing procedures, some cylinders have some minor grinding on the transfer divider bridges and some evidence of casting irregularities removed in transfer passages, this includes the transfer area in the crankcase.

34.17 Cylinder Head:

1 Must be an original Yamaha casting.
2 The welding and re-machining of the combustion area, gasket face and spark plug surface is allowable. Any additions/repairs must be non-adjustable and of aluminium material.
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 thread 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.

34.18 Head Gasket(s):

Must be retained.

34.19 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.

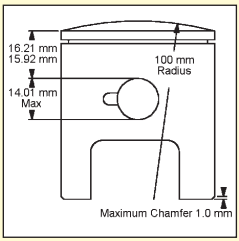


DIAGRAM IS FOR DIMENSIONAL REFERENCE ONLY
Note: Skirt length must be equal distance on both sides

34.20 Gudgeon Pin:
Refer rule 25.21 - non - tech items.

34.21 Connecting Rod:
Can be either of the following and must be stock:
(a) Yamaha or KSI.
(b) Minimum/Maximum rod length, centre to centre 99.87mm – 100.13mm.
(c) Conrod alignment may be either top or bottom.
(d) Bearings and spacers are non-tech items
(e) 50W –11651-00 Yamaha "J" rod is not eligible

34.22 Crankshaft:
Legal crankshafts are Yamaha or KSI
(a) Outside diameter measurement: 86.60mm min., 87.25mm max.
(b) Crank Pin to be standard hollow pin.
(c) It is permissible to recondition the crankshaft main shaft by plating

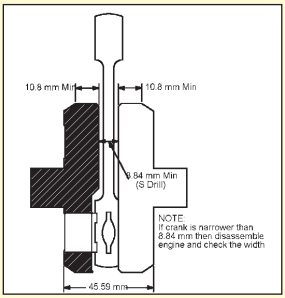


DIAGRAM IS FOR DIMENSIONAL REFERENCE ONLY

34.23 Crankcase:
The crankcase ports will remain as cast. The minimum chordal distance measured with a vernier caliper across the widest section of the transfer ports shall be 97.5mm minimum. (Refer diagram below). All machined surfaces may be re-machined as long as engine is within any other

specifications within the rules. It is permissible to repair crankcase main bearing recesses by welding or with metal inserts.

It is permissible to use ARC electric start crankcase & crankshaft on Yamaha KT100SE & KT100SD if the clutch, starter motor, starter motor battery and electrical system is fitted.

NOTE: Existing crankcases that are narrow may be spaced with a thicker gasket.

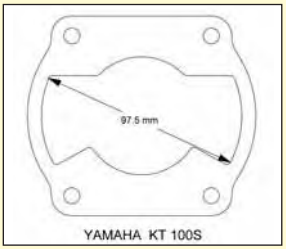


DIAGRAM IS FOR DIMENSIONAL REFERENCE ONLY

34.24 Ignition:

a) Ignition must be that supplied by the original engine manufacturer which is approved by the AKA. Any optional unit must be approved and registered with the AKA for this class. The use of the following AKA approved TCI module is permissible on KT100SE and KT100SD engines only:
YAMAHA, VICTA, ATOM, DELTA/WEI SHIEH, PRD, PRD with coil.
No modifications or repairs to any of the listed AKA approved modules is permitted.
The fitting of a PRD ignition coils and a PRD ignition rotors (flywheel) is permissible (this includes the Oppama ignition system) on KT100SE and KT100SD engines only.

b) Ignition timing may be adjusted by the removal of the locating key or part thereof on KT100SE and KT100SD engines only.

c) All engines must rotate in a clockwise direction when viewed from the drive side.

d) Ignition/rotor cover optional.

e) It is permissible to repair/replace the connector on the TCI module and mating wiring.

34.25 Carburettor:
Refer rule 25.26

34.26 Pressurised Fuel System:
Fuel pump or pressurised fuel systems are forbidden. Squeeze type pump between fuel tank and carburettor is permitted.

34.27 Inlet Tract Length:
65mm minimum. The inlet tract is to be measured from aluminium carburettor adaptor outer face to skirt of piston.

34.28 Phenolic Spacer:
Hole size 26.42mm max.

34.29 Aluminium Carburettor Mount Plate:
Hole size 26.29mm max.

34.30 Fin Dampeners:
To effectively reduce noise, it is compulsory that the Yamaha KT100S Series Engine be fitted with:

(a) A minimum of four rows of fin dampeners on the cylinder. Fin dampeners must make contact with all fins.

(b) Two rows of fin dampeners are to be fitted to the cylinder head. Fin dampeners must make contact with all fins.

CHAPTER 35 – FORMULA JMA

EXPERIMENTAL CLASS
Experimental Classes have been sanctioned by the National Karting Council.
The following specifications have been provided by the AKA for the conduct of this class as non-championship events/series.

35.1. Kart:

1.1 Chassis: Complying to Rule 28.03
1.2 Brakes: Front wheel brakes are not permitted, Rule 28.04.
1.3 Bodywork: Refer to Chapter 25
1.4 Tyres: The only tyres allowed are:
Dry weather tyres: MG Red
Front: 4.5 x 10.0 – 5 Rear: 7.1 x 11.0 - 5
Wet weather tyres: Dunlop, Type KT6SWL1
Front: 4.0 x 10.0 –5 Rear: 6.5 x 11.0 –5
Refer to Chapter 23 of the 2007 AKA Karting Manual.

1.5 Composite materials: Refer to Chapter 25.20 of the 2007 AKA Karting Manual.
1.6 Petrol: Refer to Chapter 22

35.2 Drivers:

2.1 Age: 13 -16 years
2.2 License limitations: Only those holding an AKA A and B grade license are eligible.
2.3 Weight: 145 kg. (Maximum kart weight 100kg)

35.3 Safety Equipment:
Refer to Chapter 14

35.4 Engines
The only eligible engine is the BRP-Rotax Junior Max.
For use in Australian racing, every engine must have the Official Formula Rotax Australia Stamp on the crankcase and also on the reed block face of the cylinder.

Each engine is delivered with its own engine IDENTITY CARD Only “Authorised Distributors for ROTAX kart products” and “Authorized Service Centers for ROTAX kart products” are allowed to seal engines after carefully checking the engine according to the „Technical Specification for the ROTAX engine type 125 Junior MAX.
Special ROTAX seals (black anodized aluminium seal with “ROTAX” logo and a 6 digit serial number) with a steel cable must be used.
At scrutineering, the driver has to present the engine with an undamaged seal and the engine IDENTITY CARD, showing the matching engine serial number, seal number, stamp and signature of the company which sealed the engine.

This procedure helps to reduce scrutineering times at races, nevertheless in the case of a protest, it is possible for the scrutineers to open and check the engines before or after the race. After

checking the engines step by step to ensure it is in accordance with the "Technical Specifications", it is possible for the AKA Technical team and in conjunction with the staff of the "Authorised ROTAX Service Center or Distributor" to reseal the engine.

1. Technical specification for the ROTAX kart engines:
   Rotax 125 Junior MAX (config. no: 30.0125.130 / configuration 15 kW)

This technical specification should enable the technical inspector to verify the original condition of the ROTAX engine type 125 Junior MAX with configuration 15 kW. By checking of these figures, step by step, the uniformity of the technical basis of the engine can be confirmed.

Only genuine ROTAX components that are specifically designed and supplied for the Rotax 125 Junior MAX engine are legal, unless otherwise specified.

Neither the engine nor any of its ancillaries may be modified in any way. "Modified" is defined as any change in form, content or function that represents a condition of difference from that originally designed. This is to include the addition and/or omission of parts and/or material from the engine package assembly unless specifically allowed within these rules. The adjustment of elements specifically designed for that purpose shall not be classified as modifications, i.e. carburettor and exhaust adjustment screws.

Internal additions: no additional material may be added except in the case of engine repairs and shall only restore the engine or components to original specifications.

- The use of thermal barrier coatings/ceramic coatings on or in the engine and on or in the exhaust system is prohibited.
- The use of anti-friction coatings in or on the engine/engine components is prohibited.

Legal additions: Chain guard, engine mount, temperature gauge and tachometer/hour meter, inline fuel filter, catch can mounting brackets and supplemental ignition coil mounting brackets, within the limits specified in this document.

"Non-tech items: non-original fasteners, circlips, washers, bearings, throttle cable and housing, fuel and pulse line (type and size) are allowed unless otherwise specified."

35.5 Squish Gap

Minimum 1.20mm – Maximum 1.80mm

35.6 Combustion Chamber Insert.

1. Identification code has to be 223 389 (4) or 223 389 1 or 223 389 2 (4A)
2. Name ROTAX (5) or "MADE IN AUSTRIA" (5A) has to be cast.
3. Height of combustion chamber insert have to be 27,55 mm with a tolerance of +0,0/-0,1 mm (6) and 28,80 mm with a tolerance of +/-0,2 mm (8), see illustration 1.
4. The profile of the combustion chamber insert has to be checked with the combustion chamber insert template (ROTAX part no. 277 390). The crack of light between the template and the profile of the combustion chamber insert has to be the same over the whole profile.

35.7 Piston

1. Original, coated or uncoated, aluminium, cast piston only with one, original, magnetic, 1mm-rectangular-piston ring, with 'E CRY K' marked on the ring. The piston has to show on the inside the words 'ELKO' and 'MADE IN AUSTRIA' in casting."
2. Machined areas are: Top end of piston, outside diameter, groove for the piston ring, bore for piston pin, inside diameter at bottom end of piston. All other surfaces are not machined and have cast surface.

35.8 Gudgeon pin

1. Gudgeon pin has to be made out of magnetic steel.
2. Must be as per illustration 4.1

35.9 Cylinder.

1. Light-alloy-cylinder with GILNISIL-plating, configuration with one main exhaust port. Any re-plating is not allowed.
2. Maximum bore: 54,035 mm (measured 10 mm above the exhaust port).
3. Cylinder has to be marked with ROTAX-Logo (1), see illustration 2 or 2.1.
4. **125 Junior MAX:**
5. Cylinder has to be marked with identification code. 223 999 (2), see illustration 2 or 2.1.
6. Height of cylinder has to be 87 mm with a tolerance of –0,05/+0,1 mm (3), see illustration 3.
7. All transfer ports and passages are cast finish except some pre-existing, factory removal of flashing from inlet and exhaust port and passages. All ports have chamfered edges to prevent ring snagging. Any additional machining is not permitted."
8. The "exhaust port timing" (distance from the top of the cylinder to the top of the exhaust port) has to be checked by means of a template (ROTAX part no. 277 395). Insert the template into the cylinder bore (until it stops at the top of the cylinder). Align the template in centreline from inlet to exhaust port and move the template towards the exhaust port until it stops at the cylinder wall.
   Attention: Take care to use the corresponding side of the template to check the exhaust port timing of a MAX or Junior/Mini MAX cylinder. The groove in the template must align with the grove for the o-ring in the cylinder.
9. The official Formula Rotax Australia stamp must be present on the reed block face.
10. Due to manufacturing procedures, some cylinders may have been machined on the exhaust flange.

35.10 Inlet system

1. Intake manifold is marked with the name ROTAX and the identification code 267 915. Some factory flash removal may be present at the junction of the inside contour and the carburettor stop mounting face. This is a manual trimming operation consisting of a small corner break of less than 1 mm in width. No additional grinding or machining is permitted.
2. The reed valve assy is equipped with 2 petal stops and 2 reeds, each having 3 petals.
3. The thickness of the reeds is 0,6 mm, +/- 0,08 mm.
4. The addition of one Rotax reed block gasket, maximum thickness 1.0mm between the carburettor manifold and the reed block is permitted.

35.11 Crankshaft

1. Stroke: 54,5mm +/- 0,1 mm.
2. Conrod (7) has to show forged number “213” “365” or “367” on shaft (see ill. no. 4)
3. Shaft of con rod is not machined (copper plated). Grinding or polishing of shaft of con rod is not permitted.

35.12 Balance shaft

1. Balance shaft must be installed and operational.
2. Different configurations of part no. 237 945 and 237 949 are legal (see ill. no. 4.2)
3. Surface (1) is not machined and must be cast surface (see ill. no. 4.2)
4. Measurement from centre of balance shaft to outer diameter of flyweight of balance shaft at a defined length must not be lower than specified (see ill. no. 4.2).
5. The minimum weight of the dry balance shaft must not be lower than 355 grams for balance shaft ROTAX part no. 237 945 and 255 grams for balance shaft ROTAX part no. 237 949.

35.13 Crankcase

1. As supplied by the manufacturer. No grinding/polishing is permitted in the two main transfer passages.
2. The official Formula Rotax Australia stamp must be present on the crankcase.
3. Either sand-cast gearbox cover (part no. 211870) or pressure diecast gearbox cover (part no. 211871) is permitted.

35.14 Ignition Unit

1. DENSO digital battery ignition, variable ignition timing, no adjustment necessary and possible.
2. Race officials may request at any time that the competitor replace the ignition coil with a new unit, provided by race administration.
3. The casing of the ignition coil has to show following castings “129000 -” and “DENSO”. Ignition coil must show 3 pins at the terminal.
4. The ignition coil has to be fixed by means of 2 original silent blocks to the gearbox cover. Only in cases of chassis component interference with the original mounting location of the ignition coil, a supplemental extension bracket, rigidly constructed and fabricated of solid metal, of minimum dimensions and attached to the original case mounting holes, is permitted for mounting of the coil.
5. Spark plug. Maximum spark plug thread length shall be 20mm.
6. Spark plug cap must be marked with “NGK TB05EMA”.

35.15 Carburettor

1. DELL’ORTO carburettor.
2. “VHSB 34” cast in the housing of the carburettor
3. “QD” or “QS” stamped in the housing of the carburettor.
4. The complete inlet bore in the casing of the carburettor must show cast surface
5. Jet needle housing/atomiser tube stamped with FN 266
6. The carburettor slide must show with size “40” in casting and the bottom end of the slide must show cast surface.
7. Jet needle stamped with K27 or K98

8. The size of any hole in any of the following is unregulated. Main jet, needle and seat, pilot jet, pilot jet emulsion insert, choke jet. The position of the float/float arms and the weight of the floats are unregulated. All items (jets, needles, etc) referred to above must be present and operational.
9. Settings of the carburettor adjustment screws are free.
10. Main jets smaller than size 160 or bigger than 200 are not recommended by ROTAX
11. Main jets smaller than size 160 and bigger than size 200 are legal also if they are not available from ROTAX
12. A minimum required size of main jet may be determined for each race event by a "Supplementary Regulation".

35.16 Fuel Pump

MIKUNI diaphragm pump, must be placed on bottom of support bracket for intake silencer

35.17 Radiator

1. Single aluminium radiator as shown in illustration 5.
2. Cooling area: Height = 290 mm, width = 133 mm
3. Thickness of radiator = 32 mm
4. Place of fixing the radiator is on right side of engine.
5. Radiator must be mounted with all components shown either like in illustration 5 or like in illustration 5.1
6. No additional cooling device is allowed. Tape applied to the face of the radiator only is allowed as an air flow control means. All other means of air flow control through the radiator are prohibited.

35.18 Radiator Coolant

Refer to rules 25.18 B and 25.18 C.

35.19 Clutch

1. Dry centrifugal clutch, engagement r.p.m. maximum at 3.000 r.p.m.
2. That means, that the kart (with driver in kart) has to start to move when the engine speed reaches 3.000 r.p.m. or less
3. The use of the Rotax clutch pin support plate is permitted.

35.20 Intake silencer

1. Intake silencer with integrated, washable air cleaner has to be used with all parts as shown at illustration 6 and has to be mounted on the support bracket with two screws (in dry and wet race condition).
2. Air filter must be installed as shown in illustration 6.
3. It is permissible to drill a 5mm hole in the airbox to allow the draining of water in wet conditions
4. Either type of airbox as shown in Illustration 6 or Evolution type (part numbers 225025 and 225015, which incorporates a 8mm drain hole) is permitted.

35.21 Exhaust system

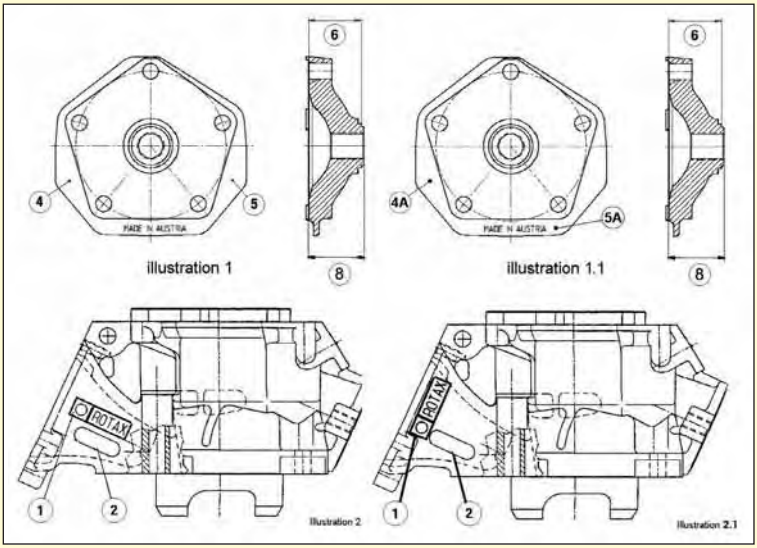
1. Must be as supplied by ROTAX and cannot be modified except for the replacement of

the silencer absorption material and the use of threaded fasteners in place of the rivets for securing the silencer end cap.

2. Standard exhaust socket must be used.
3. Exhaust pipe with after muffler as shown in illustration 7:
4. Length of inlet cone: 592 mm +/-5 mm (measured on outside from beginning of exhaust pipe until beginning of cylindrical part).
5. Length of cylindrical part of exhaust pipe: 125 mm +/-5 mm.
6. Length of end cone: 225 mm, +/-5 mm (measurement, see illustration 8).
7. Outside diameter of 180º bent tube: 41mm +1,5 mm/–1,0 mm (measured at beginning and end of bend).
8. Diameter of hole of end cap of (illustration 7, pos. 3 or 6): 21 mm +/-0,2 mm.
9. The expansion chamber and silencer supplied with the engine may not be modified, except for the addition of extra elements to further reduce noise levels.
10. A welded on socket (for exhaust temperature measurement) on top of the exhaust in the position 50 mm from the flange of the exhaust is allowed.
11. The use of maximum 4 pieces of original ROTAX exhaust springs to fix the exhaust to the cylinder is allowed
12. Only one exhaust gasket is permitted, maximum thickness of 2mm

35.22 Noise emissions

1. Noise isolating mat (illustration 7, pos. 5) has to be replaced by the original ROTAX spare part.
2. Refer Rule 24.2.1



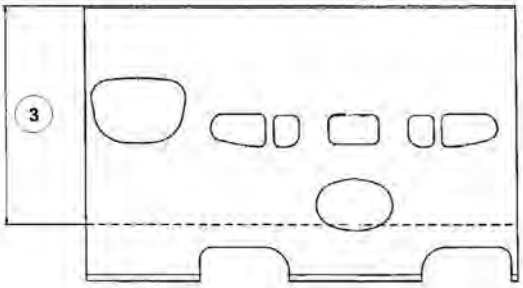


Illustration 3

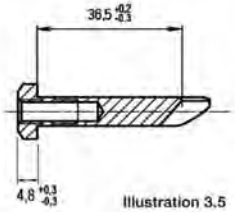


Illustration 3.5

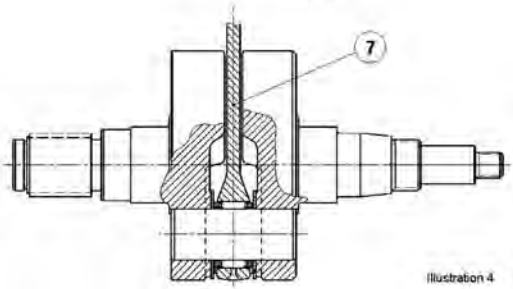


Illustration 4

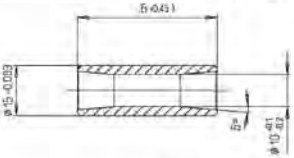


Illustration 4.1

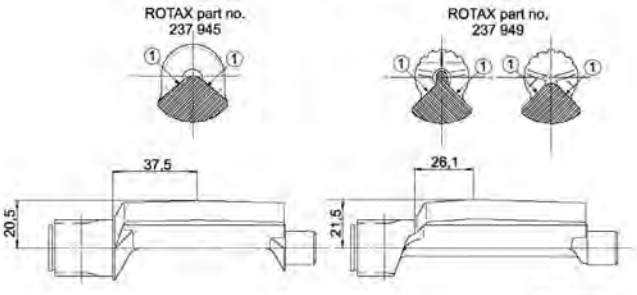


Illustration 4.2

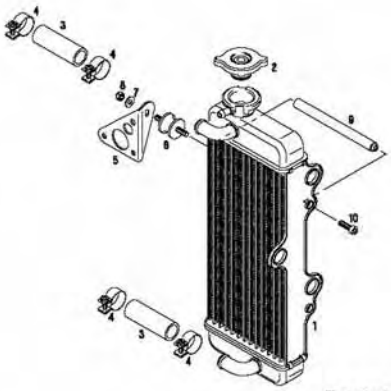


Illustration 5

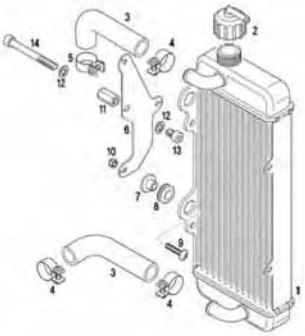


Illustration 5.1

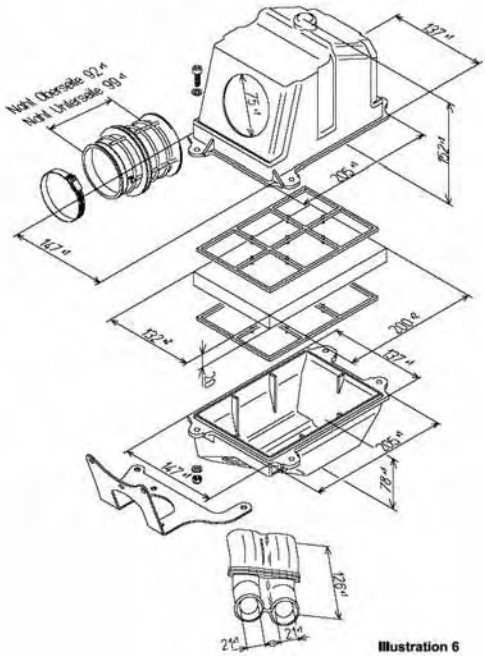


Illustration 6

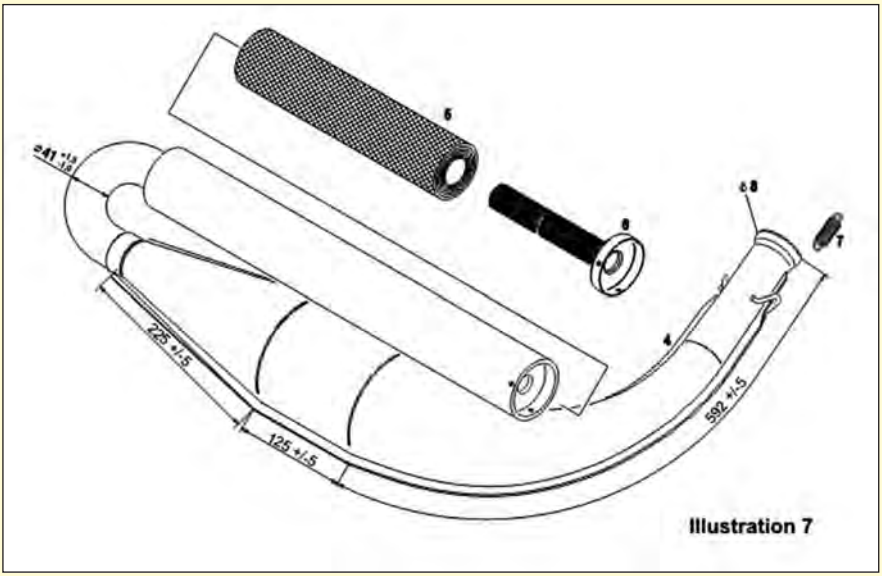


Illustration 7

CHAPTER 36 - NATIONAL 100CC

36.01 **Engine:** YAMAHA KT100J
This section covers the KT100J series engines which conforms to the Yamaha Specifications as approved by the AKA. Any alterations / modifications are strictly prohibited except as specifically authorised within these rules.

36.02 **Tyres**
1 No modifications permitted, tyre treatment is illegal (refer rule 23.03)
2 **Dry Weather Tyres** Dunlop SL1 (1 set + 1 replacement tyre / meeting)
3 **Wet Weather Tyres** Dunlop KT6SLW1 (1 set + 1 replacement tyres / meeting)
4 Refer chapter 23, for AKA contracted prices

36.03 **Braking**
Front wheel brakes are not permitted. Refer Rule 25.07 (iv).

36.04 **Fuel:**
Refer to CHAPTER 22

36.05 **Weight:**
(a) National 100cc Light – 140kg
(b) National 100cc Heavy – 155kg
MAXIMUM KART WEIGHT FOR NATIONAL 100cc HEAVY CLASS - 88 kgs. (Refer Rule 25.19).

36.06 **External Modifications:**
External modifications which do not in any way affect a performance gain are legal.

36.07 **Internal Additions:**
No additional material may be added except in the case of engine repairs and shall only restore engine or components to original specifications. The cylinder may NOT be repaired in any of the port or passage as cast areas.
(1) The use of thermal barrier coatings / ceramic coatings on or in the engine / engine components and on or in exhaust components is prohibited.
(2) The use of anti friction coatings on or in the engine / engine components is prohibited.

36.08 **Legal Additions:**
Shall be limited to the following: Chain guard, motor mount, direct drive gear, carburettor return springs, extension of carburettor jet needles, third bearing and adaptor, temperature gauge and tachometer.

36.09 **Clutch:**
AKA registered clutch for this class is the SSS (AKA registration number 38) only

36.10 **Non-Tech Items:**
Refer Rule 25.21.

36.11 Displacement:

The maximum piston and stroke are:-

Piston	Stroke
51.00 mm	50.05 mm

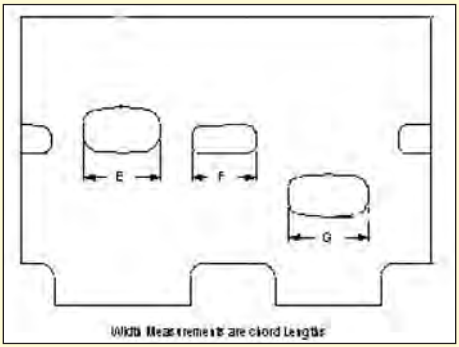
36.12 Cylinder Ports:

1 All cylinder ports must be in as cast conditions.

2 No chamfer on port edges is permitted.

3 Maximum diameter of inlet port to be measured with a 19.2mm plug gauge.

4 Inlet tract length including gaskets from cylinder wall to carburettor gasket face to be 53.00mm minimum to 56.00mm maximum including gaskets in front and behind phenolic spacer



CODE	DIMENSION
E	29.60mm max
F	24.45mm max
G	30.60mm max

Port Split 6.00mm minimum High Point, exhaust to transfer.

Port Split 7.00mm minimum Low Point, exhaust to transfer.

Cylinder machining:

All machined surfaces may be re- machined as long as engine is within any other specifications within the rules.

36.13 Engine Compliance

Refer to rule 26.04 for procedure.

36.14 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 thread 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.

36.15 Piston:

Piston must be approved and stock appearing.
Legal pistons are YAMAHA, KSI or Strike. Piston crown to be as cast. Chamfer on skirt of piston to be not more than 0.9mm maximum. It is permissible to notch the piston to accept earless circlips. 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

36.16 Gudgeon Pin:

Refer rule 25.21 – non-tech items

36.17 Connecting Rod:

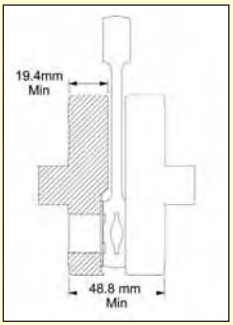
Can be either of the following:

(i) Yamaha (P/N 50W-11651-00, P/N 397-11651-00, P/N 787-11651-01 or P/N 7F6-11651-02), or

(ii) KSI - No polishing or shot peening allowed.
Minimum/Maximum rod length, centre-to-centre - 99.87mm - 100.13mm.

36.18 Crankshaft:

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



36.19 Crankcase:

The crankcase ports will remain as cast. The minimum chordal distance measured with a vernier calliper across the widest section of the transfer ports shall be 81.5mm minimum. (Refer diagram below).

NOTE: Existing crankcases that are narrow may be spaced with a thicker gasket.

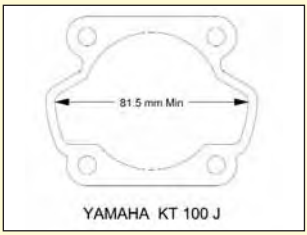


DIAGRAM IS FOR DIMENSIONAL REFERENCE ONLY

36.20 Ignition:

(i) Must be external rotor type and OEM supply.

(ii) Both CDI and TCI ignition units as supplied by Yamaha are eligible.

(iii) No modifications or internal repairs to the TCI unit are permissible.

(iv) No CDI unit shall vary more than one (1) degree from the maximum advance to the advance found at 10,000 rpm.

(v) It is permissible to repair/replace the connector for both CDI and TCI modules and mating wire.

(vi) Maximum inside diameter measurement of the ignition rotor to be 62.00mm

IGNITION ROTOR

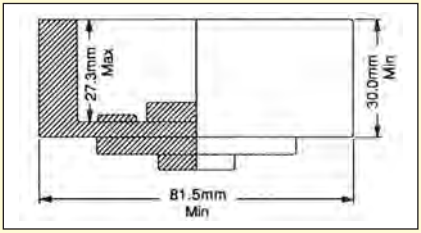


DIAGRAM IS FOR DIMENSIONAL REFERENCE ONLY

36.21 Carburettor:

Refer rule 25.26

36.22 Pressurised Fuel Systems:

Fuel pump or pressurised fuel systems are forbidden. Squeeze type pump between fuel tank and carburettor is permitted.

36.23 Phenolic Spacer:
To remain as moulded by Yamaha Factory and conform to diagram below. Drilling of the phenolic spacer mounting holes permitted. Sealing face may be re-faced.

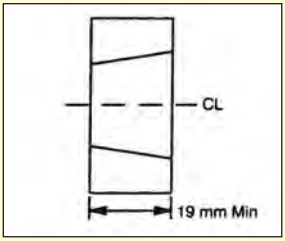


DIAGRAM IS FOR DIMENSIONAL REFERENCE ONLY

36.24 Exhaust Muffler:
Must be Control Exhaust Muffler AKA 14.
Refer Rule 25.22 for technical specification.

36.25 Exhaust Header Pipe:
Refer to rule 25.08 for exhaust pipe header.
Refer to Rule 25.09.7 for exhaust probe.

36.26 Exhaust Header Studs:
Must remain in their original position.

36.27 Internal Parts:
Must be finished as per Yamaha Factory specifications.

CHAPTER 37 - JUNIOR PISTON PORT

37.01 Engines:

Junior Piston Port engines are restricted to CIK homologated engines and AKA homologated engines conforming to CIK specifications and Australian manufactured and/or designed engines homologated to Piston Port Class.

37.02 Tyres:

1. No modifications permitted, tyre treatment is illegal (refer rule 23.03)
2. **Dry Weather Tyres** MG Yellow (1 set + 1 replacement tyre / meeting)
3. **Wet Weather Tyres** Any CIK group 2 wet – chapter 23 (1 set + 1 replacement tyre / meeting)
4. Refer chapter 23, for AKA contracted prices

37.03 Fuel:

Refer to CHAPTER 22

37.04 Weight:

100cc Piston Port - 135 Kg

37.05 Driver Limitations:

To be eligible for Intercontinental A Junior and Junior Piston Port at club and open meetings, a driver must have a minimum B Grade Junior Licence with endorsements from three (3) open meetings in either Junior National or Junior Clubman Class as having reached a satisfactory standard for advancement. Refer Chapter 13

37.06 Engine Eligibility; Specifications; Tolerances:

Engines:

1. Current CIK Homologated JICA Engines
2. Piston Port Engines listed in Chapter 30

Specifications / Tolerances

1. CIK Homologated JICA Engines specifications as per 50.6.2 (Refer CIK Technical Regulations, Article 11/2002)
2. The use of an 18mm restrictor with 3mm thickness is waived for this class.
3. Inlet and Exhaust specifications as per 50.6.2 (Refer also CIK Technical Regulations, Article 11/2002) applies to all eligible engines for this class.
4. Pre 2001 CIK Homologated JICA engines permitted a 2% cubic capacity tolerance.
5. Clutch is optional – if used must be CIK homologated and as per 50.6.2 (Refer CIK Technical Regulations, Article 11/2002)
6. CIK Homologated Engines Technical reference Article 11 CIK 2002.
7. All engines must use Homologated exhaust that has been homologated for that particular engine and as listed in Chapter 30 for the engine used.
8. carburettor as per 50.6.2 (Refer CIK Technical Regulations, Article 11/2002 including Article 42 Tolerance)

37.07 Junior Facing Stewards:

Any Junior called before a Steward/s or Official must be accompanied by a Parent/Guardian. (Refer Rule 7.29).

37.08 Restarting Before Race:

In the event of a spin or collision during the rolling laps, prior to the Start, Juniors are permitted to be restarted with assistance by delegated persons and at the discretion of the Starter and/or Clerk of Course.

Delegated persons must retire to a safe position once the race has commenced. (Refer Rule 16.08).

CHAPTER 38 - JUNIOR CLUBMAN

38.01 **Engines:**
YAMAHA KT100S, ARC SPEC 100A, ARC SPEC 100W, HYBRID/Hybrid, ARC SPEC 100A – Air-Cooled/Hybrid. (Refer Rule 31.01)

38.02 **Tyres:**
1 No modifications permitted, tyre treatment is illegal (refer rule 23.03)
2 **Dry Weather Tyres** MG AZ Red (1 set + 1 replacement tyre / meeting)
3 **Wet Weather Tyres** Dunlop KT6SLW1 (1 set + 1 replacement tyre / meeting
4 Refer Chapter 23, for AKA contracted prices

38.03 **Braking:**
Front wheel brakes are not permitted. (Refer Rule 25.07)

38.04 **Fuel:**
Refer to CHAPTER 22

38.05 **Engine Specifications:**
100cc Yamaha KT100s Engines as per Chapter 34.
100cc ARC Spec 100A, ARC Spec100W Engines as per chapter 31.

38.06 **Exhaust Muffler:** Refer Rule 25.22 and 25.23 for technical specification

38.07 **Engine Fin Dampening:**
It is COMPULSORY that the Engine used be fitted with a fin dampening system that effectively reduces noise. (Refer appropriate engine in chapter 34).

38.09 **Clutch:** AKA registered clutches may be used in this class.

38.10 **Weight:** Aircooled – 135kg, Watercooled – 140 kg

38.11 **Driver Limitations:**
To be eligible for Junior Clubman, a driver must hold a B grade Junior licence.

38.12 **Junior Facing Stewards:**
Any Junior called before a Steward/s or Official must be accompanied by a Parent/Guardian. (Refer Rule 7.29).

38.13 **Restarting Before Race:**
In the event of a spin or collision during the rolling laps, or to the Start, Juniors are permitted to be restarted with assistance by delegated persons and at the discretion of the Starter and/or Clerk of Course. Delegated persons must retire to a safe position once the race has commenced. (Refer Rule 16.08).

CHAPTER 39 - JUNIOR NATIONAL

39.01 **Engine:** YAMAHA KT100J
This section covers the KT100J series engines which conforms to the Yamaha Specifications as approved by the AKA. Any alterations/modifications are strictly prohibited except as specifically authorised within these rules.

39.02 **Tyres**

1 No modifications permitted, tyre treatment is illegal (refer rule 23.03)
2 **Dry Weather Tyres** Dunlop SL1 (1 set + 1 replacement tyre / meeting)
3 **Wet Weather Tyres** Dunlop KT6SLW1 (1 set + 1 replacement tyre / meeting)
4 Refer chapter 23, for AKA contracted prices

39.03 **Braking:**
Front wheel brakes are not permitted. (Refer Rule 25.07)

39.04 **Fuel:**
Refer to CHAPTER 22

39.05 **Weight:**

(a) Junior National Light - 120kg.
(b) Junior National Heavy - 140kg.

MAXIMUM KART WEIGHT FOR JUNIOR NATIONAL HEAVY CLASS - 88kgs.
(Refer Rule 25.19).

39.06 **Driver Limitations:**

1 Age 12 until 16th Birthday (for new drivers entering the sport). The driver must produce a birth certificate to the State Secretary before a licence will be issued.
2 Options exist for competitors to advance from Rookies and to Seniors Divisions (Refer Chapter 13.)

39.07 **Engine Specifications:**

(i) 100cc National engines as per Chapter 36.
(ii) Exhaust Muffler : Refer Rule 25.22 for detail.

39.08 **Junior Facing Stewards:**
Any Junior called before a Steward/s or Official must be accompanied by a Parent/Guardian. (Refer Rule 7.29).

39.09 **Restarting Before Race:**
In the event of a spin or collision during the rolling laps, prior to the Start, Juniors are permitted to be restarted with assistance by delegated persons and at the discretion of the Starter and/or Clerk of Course.
Delegated persons must retire to a safe position once the race has commenced. (Refer Rule 16.08).

39.10 **Clutch:**
AKA registered clutches may be used in this class.

CHAPTER 40 - ROOKIES

Spirit and Intent
The purpose of this Class is to teach young people to drive karts of restricted performance at limited cost.

40.01 **Engine:** YAMAHA KT100J Only

40.02 **Tyres:**

1 No modifications permitted, tyre treatment is illegal (refer rule 23.03)

2 **Dry Weather Tyres** Dunlop SL1 (1 set + 1 replacement tyre / meeting)
Optional to use either 10 x 4.5 – 5 **OR** 11 x 7.1 – 5 tyres on the rear

3 **Wet Weather Tyres** Dunlop KT6SLW1 (1 set + 1 replacement tyre / meeting)
Optional to use either 10 x 4.5 – 5 **OR** 11 x 6.00 – 5 tyres on the rear

4 Refer chapter 23, for AKA contracted prices

40.03 **Braking:**
Front wheel brakes are not permitted. (Refer Rule 25.07)

40.04 **Fuel:**
Refer to CHAPTER 22

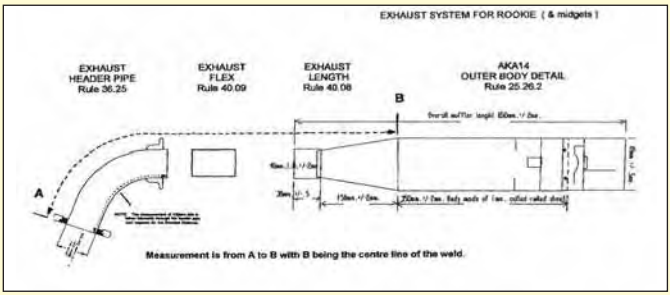
40.05 **The YAMAHA KT100J ENGINE** must conform to Chapter 36.
The specifications and tolerances are to be strictly adhered to in accordance with the National 100cc Class regulations, but with the INCLUSION of an exhaust restrictor plate with a 16.00 mm maximum diameter hole and of 2.1 mm maximum thickness. Restrictor plate must be fitted between the cylinder and exhaust header pipe with a gasket on both sides of the restrictor plate and be located on both exhaust header studs. All exhaust gases must pass through the 16.00mm max restrictor plate. The exhaust restrictor plates will be supplied by the AKA and identifiable as such - marked "AKA2A".
NO MODIFICATIONS ARE PERMITTED.

40.06 **Restrictor Plate Sealing:**
It is COMPULSORY that sealable nuts be fitted to both the engine exhaust studs on the Yamaha KT100J engine for restrictor plate sealing.
Restrictor plates to be measured and sealed before competition for State Championships and approved major competitions.

40.07 **Exhaust Muffler:**
Refer Rule 25.22 for technical specification.

40.08 **Exhaust Gaskets / Length:**

1. A maximum of two gaskets is permissible and shall be as per the original Manufacturer's specification.
2. Maximum exhaust length from the exhaust mounting flange (aluminium face) to the end of the divergence cone of the AKA 14 muffler is 445mm. (measurement as per diagram).



40.09 **Exhaust Header Pipe and Muffler:**
As per R25.08, R25.09, R25.22 (1) & (2)

40.10 **Clutch:** AKA registered clutches may be used in this class.

40.11 **Weight:** 105 kg

40.12 **Driver Limitations:**

1 Age from their tenth (10) birthday until their twelfth (12) birthday. (For drivers entering the sport)
2 The driver must produce a birth certificate to the State Secretary before a licence will be issued
3 Options exist for competitors to change divisions at different ages. (Refer Chapter 13)

40.13 **Combining Classes**
Refer to Rule 13.20 and R19.14

40.14 **Rookie facing Stewards**
Any Rookie called before a Steward/s or Official must be accompanied by a Parent/Guardian. (Refer Rule 7.29 and also R1.05).

40.15 **Restarting before race**
In the event of a spin or collision during the rolling laps, prior to the Start, Rookies are permitted to be restarted with assistance by delegated persons and at the discretion of the Starter and/or Clerk of Course.
Delegated persons must retire to a safe position once the race has commenced. (Refer Rule 16.08).

CHAPTER 41 - MIDGETS

Spirit and Intent. The purpose of this Class is to teach young people to drive karts of restricted performance at limited cost.

41.01 **Engines:** COMER S80, SW80 and/ OR Yamaha KT100J. This section covers the Yamaha KT100J, Comer S80 and Comer SW80 engines that must be maintained within the specifications approved by the AKA as outlined below.

Note: In the SW80, the cylinder and the cylinder head are two separate components, whereas the Comer S80 has a one-piece cylinder/cylinder head. This is the only major difference between the two engines.

The AKA reserves the right to adjust the specification of the SW80 in order to achieve parity between it and the S80 engine and also the KT100J engine as per R41.26.

41.02 **Tyres:**

1 No modifications permitted, tyre treatment is illegal (refer rule 23.03)

2 **Dry Weather Tyres** Dunlop SL1 (1 set + 1 replacement tyre / meeting)
Optional to use either 10 x 4.5 – 5 **OR** 11 x 7.1 – 5 tyres on the rear

3 **Wet Weather Tyres** Dunlop KT6SLW1 (1 set + 1 replacement tyre / meeting)
Optional to use either 10 x 4.5 -5 **OR** 11 x 6.00 - 5 tyres on the rear
Refer chapter 23, for AKA contracted prices

41.03 **Braking:** Front wheel brakes are not permitted. (Refer Rule 25.07)

41.04 **Fuel:** Refer to CHAPTER 22

41.05 **Weight:** 90 kgs

41.06 **Driver Limitations:**

1 Age from their seventh (7) birthday until their eleventh (11) birthday (for drivers entering the sport)

2 The driver must produce a birth certificate to the State Secretary before a licence is issued

3 Options exist for competitors to advance to Rookie Division. Refer Chapter 13.

41.07 **Combining Classes**
Refer to Rule 13.20 and also R19.14

41.08 **Midget facing Stewards**
Any Midget called before a Steward/s or Official must be accompanied by a Parent/Guardian. (Refer Rule 7.29 and also R1.05).

41.09 **Restarting before race**
In the event of a spin or collision during the rolling laps, prior to the Start, Midgets are

permitted to be restarted with assistance by delegated persons and at the discretion of the Starter and/or Clerk of Course.

Delegated persons must retire to a safe position once the race has commenced. (Refer Rule 16.08)

41.10 THIS SECTION COVERS THE COMER S80 AND COMER SW80 ENGINES, WHICH CONFORMS TO THE COMER SPECIFICATIONS AS APPROVED BY THE AKA. ANY ALTERATIONS/MODIFICATIONS ARE STRICTLY PROHIBITED EXCEPT AS SPECIFICALLY AUTHORISED WITHIN THESE RULES.

41.11 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 must be run with supplied clutch (Part No. S60 3950 05 or S80 3950 01).

All components must be as supplied with engine and are all subject to technical specifications.

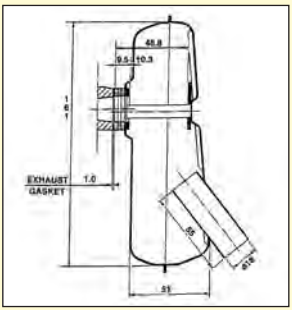
Exhaust

1 Engine must be run with muffler (Part No. S60 5500 07)

2 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.

3 The exhaust stinger will have a maximum tube internal diameter 18.5mm.

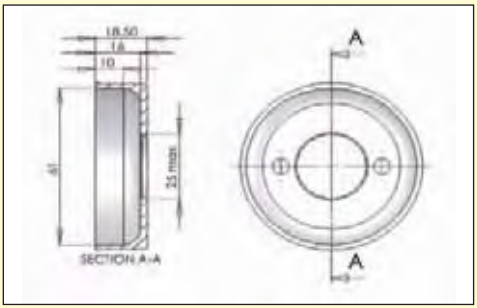
4 A maximum of one (1) Exhaust probe/fitting is permitted. The maximum diameter of the probe is 6mm.



41.12 Carburettor:

1. Tillotson HL 326A or HL 166B with a Venturi of 15.87 mm. maximum. Carburettor to be stock as supplied by COMER and the choke is to remain attached. No additional machining or polishing of any cast surface. This includes throat, venturi, etc. of carburettor. All screws, etc. to remain as supplied by Manufacturer.

2. The airbox adaptor shall be stock as supplied by COMER, or a replica manufactured to original Comer specifications. **Refer Diagram below**



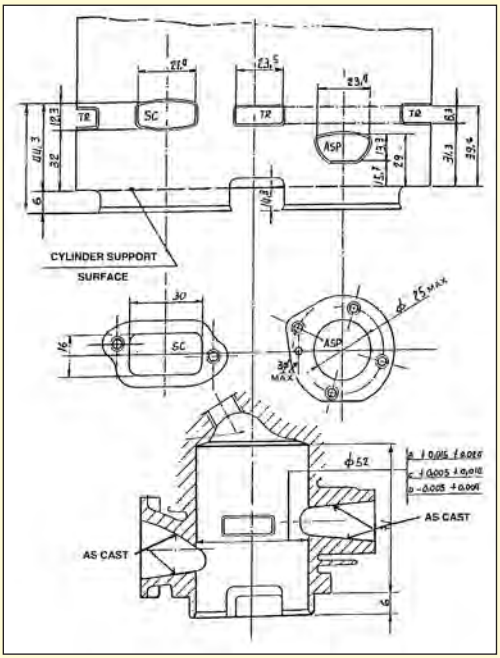
41.13 Pressurised Fuel Systems:
Fuel pump or pressurised fuel systems are forbidden. Squeeze type pump between fuel tank and carburettor is permitted.

41.14 Engine:

CHROME BORE	Bore	Stroke
	52.1mm.	38.1mm. Maximum.

41.15 Exhaust, Intake and Transfer Ports:
Comer S80 - Check port heights and widths per following diagrams. The dimensions of the intake, exhaust and transfer ports must be within the tolerance field plus or minus 0.3mm.

41.16 Exhaust Gasket and Inlet Manifold Gasket:
Specifications and Tolerances.
As per diagram otherwise where no tolerance specified then +/- 0.15mm applies.



41.17 Head Volume:

1. Comer S80 - Cylinder head volume measurement to be 9.2cc using the AKA Comer S80 cc plug gauge type 3. Refer to Rule 26.01 for procedure.
2. Comer SW80 - Cylinder head volume measurement to be 11.0cc using the AKA Comer SW80 cc plug gauge (Type 4). Refer to Rule 26.01 for procedure

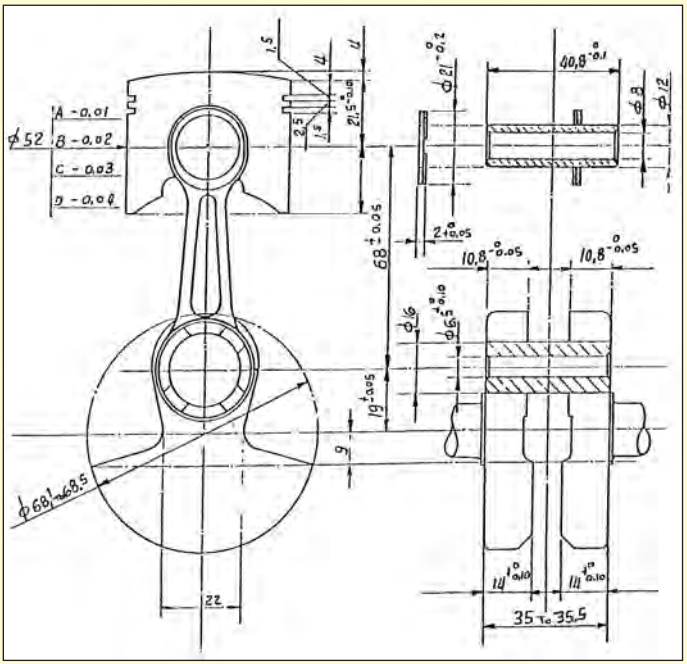
41.18 Crankshaft, Conrod, Piston, Piston Rings, Piston Pin and Piston Pin Bearing: Specifications and Tolerances:

1 The piston skirt will carry a maximum chamfer of 0.5mm
Note: skirt length must be equal distance on both sides.

2 Piston pin bore is 8.0mm +/- 0.1mm

3 Cast surfaces to have a tolerance of +/- 0.3mm

4 Compliance checks: Refer to chapter 26, procedure steps 1,2,3 and 5



Drawing to be changed –

WEIGHTS IN GRAMS

Vertex piston (S80) ……88 to 92
Vertex (USA)piston (SW80) ……93 to 98
Piston ring T.C ……2.75 to 2.85
Piston ring ……0.2 to 0.3
Piston pin……19 to 23
Piston pin needle bearing ……7
BEARING ……RIV 6202
Crankshaft + connection rod ……714 to 729
Complete crankshaft + piston (S80) ……840 to 855
Complete crankshaft + piston (SW80) …845 to 861
Flywheel complete ……645 - 665
Cage ……INA KZK 12x17x13
HEAD CAGE ……INA KZK 16x22x12

The engines must be original in all their components according to the Comer drawing(s), any removal, addition or polishing of material is strictly forbidden. This includes sandblasting, bead or fibreglass blasting, acid etching, grinding etc.

41.19 Ignition:

Ducati/Bosch KDT - 1. Is slotted for adjustment. Adjustment slots are cast in and cannot be machined for more adjustment. Spark plug cap is a non-tech item. Refer to Rule 25.21 for Spark Plug dimensions.

41.20 Engine Fan:

The dimensions of the detachable plastic finned rotar fan - Part No. S60 9690 02 - are to be 125mm.dia. by 37.7mm. min width and this finned rotar fan to be replaced if any fins are broken off.

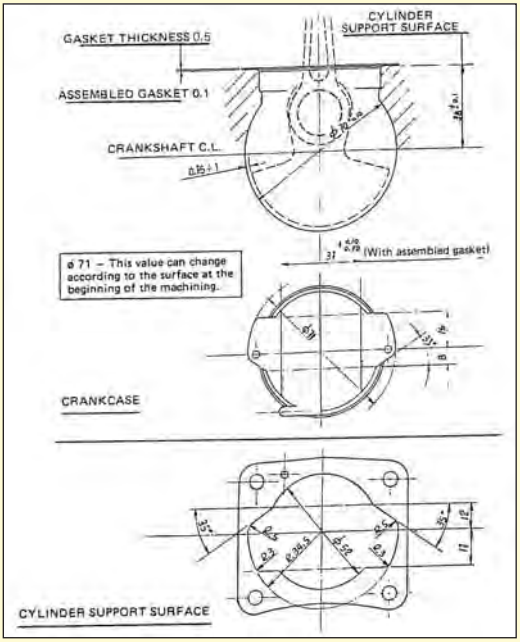
41.21 Crankcase and Cylinder, Surfaces Including Gaskets:

As per specifications and tolerances detailed on following diagrams.

The crankcase ports will remain as cast.

Machining: All machined surfaces may be re-machined as long as engine is within any other specifications within the rules.

It is permissible to repair crankcase main bearing recesses by welding or with metal inserts



41.22 Gaskets:

All gaskets to be used at all times and conform to the measurements on the diagrams, with the exception of the cylinder base gasket, which is dimensionally free but a gasket(s) must be used.

41.23 Cooling Holes:

It is permissible to add extra holes for better cooling efficiency. These holes are to be two rows of five holes, maximum 13 mm. dia. in front panel alongside the ON/OFF switch and one row of five holes, 13 mm. dia. in the opposite rear panel. These holes may be covered or uncovered.

41.24 Clean Holes:
The air holes in the cord start panel are to be kept clean and clear at all times except for normal dirt such as can be accumulated during a normal dirt track type race.

41.25 Pulse Hole:
The maximum pulse hole diameter in the barrel and plastic carburettor adaptor is to be 3mm. diameter.

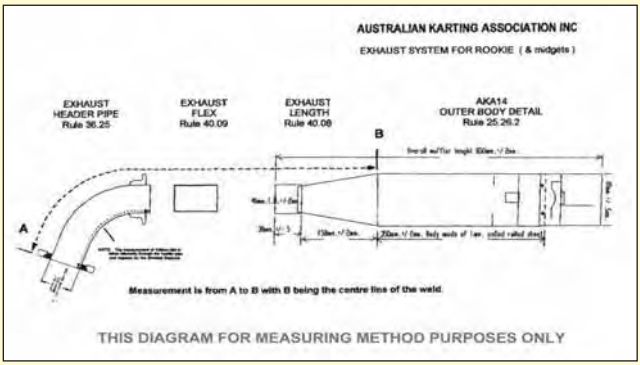
41.26 This section covers the YAMAHA KT100J ENGINE.
The YAMAHA KT100J ENGINE must conform to Chapter 36. The specifications and tolerances are to be strictly adhered to in accordance with the National 100cc Class regulations, but with the INCLUSION of an exhaust restrictor plate with a 13.02 mm maximum diameter hole and of 2.1 mm maximum thickness. Restrictor plate must be fitted between the cylinder and exhaust header pipe with a gasket on both sides of the restrictor plate and be located on both exhaust header studs. All exhaust gases must pass through the 13.02mm max restrictor plate. The exhaust restrictor plates will be supplied by the AKA and identifiable as such - stamped "AKA1".
NO MODIFICATIONS ARE PERMITTED.

41.27 Restrictor Plate Sealing:
It is COMPULSORY that sealable nuts be fitted to the engine exhaust studs on the Yamaha KT100J engine for restrictor plate sealing.
Restrictor plates to be measured and sealed before competition for State Championships and approved major competitions.

41.28 Exhaust Muffler:
Refer Rule 25.22 for technical specification.

41.29 Exhaust Gaskets / Length:
Refer to Rule 25.09

1. A maximum of two gaskets is permissible and shall be as per the original Manufacturer's specification.
2. Maximum exhaust length from the exhaust mounting flange (aluminium face) to the end of the divergence cone of the AKA 14 muffler is 445mm. (measurement as per diagram).



41.30 Exhaust Header Pipe/s and Muffler

As per R25.08, R25.09, R25.22 (1) & (2)

41.31 Clutch:

AKA registered clutches may be used in this class as per R36.09.

This section covers components specific to the Comer SW80 ENGINE.

41.32 Cylinder Head:

1 Must be an original Comer casting.

2 The welding and re-machining of the combustion area, gasket face and spark plug surface is allowable. Any additions/repairs must be non-adjustable and of aluminium material.

3 The combustion chamber style is required to have a squish band and chamber that 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 thread 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 23.50 mm.

41.33 Head O ring:

Must be retained.

41.34 Spark plug:

Spark plug must have a maximum engagement length of 12.70 mm (without the washer)

NON CHAMPIONSHIP CLASS
Non-Championship Classes are conducted in accordance with Rule 19.37.
The following specifications have been provided by the AKA for the conduct of this class.

CHAPTER 42 - SPORTSMANS CLASS

42.01 Engine
As per State Council recommendations.

42.02 Tyres
1. No modifications permitted, tyre treatment is illegal (refer rule 23.03)
2. **Dry weather tyres** As per state council recommendations
3. **Wet weather tyres** Dunlop KT6SLW1 (1set + 1 replacement tyre / meeting)
4. Refer chapter 23, for AKA contracted prices

42.03 Braking
Front wheel brakes not permitted.

42.04 Fuel
Refer to CHAPTER 22

42.05 Driver Limitations
To be eligible to compete in this class, a competitor must hold minimum provisional C Grade licence.

EXPERIMENTAL CLASS

Experimental YAMAHA 100 TAG Class has been sanctioned by the National Karting Council. The following specifications have been provided by the AKA for the conduct of this class as non-championship events/series but may be a support class to a series.

CHAPTER 43 - YAMAHA 100 TAG CLASS

PREAMBLE

This class will be out of the box racing, with no modifications allowed to the engine. The spirit and intent of this class is to provide a class to be used as a stepping-stone to the sport without the pressures of championship racing beyond club and zone level. The motor selected is in the modern idiom of electric start with a centrifugal clutch for ease of operations with limitations and controls. The motor has a low wear factor and is designed for long prolonged low maintenance use, ideal for club use and for the club driver who just wants to race at his local area over long periods.

ENGINE ELIGIBILITY

Yamaha Model KT100SEC 100cc (pre-fix 7YK) Electric Start only. Neither the engine or any of its ancillaries may be modified I any way likely to improve performance unless specifically within these rules.

PART 1

This section covers the KT100SEC series engines which conforms to the Yamaha Specifications as approved by the A.K.A. Any alterations / modifications are strictly prohibited except as specifically authorised within these rules.

DISPLACEMENT

97.6cm^3, BORE 52.00mm, STROKE 46mm.

CYLINDER

The engine Cylinder must be marked with 7ET. No modifications or grinding is permitted.

CYLINDER HEAD

Must be of original engine manufacturer and mark with the word YAMAHA & conform to drawings supplied by manufacturer.

CRANKCASE, CRANKSHAFT & CONROD

Must be of original engine manufacturer and conform to drawings supplied by manufacturer.

CARBURETTOR

Walbro Model WB3A as supplied with engine, NO modifications allowed (no flex jets).

MUFFLER

AKA39 Muffler Powermac (2006 Clubman)

HEADER PIPE

Must be as supplied with engine, NO modifications allowed.

IGNITION
Yamaha TCI as supplied with engine.

PISTON
Piston max size 52.75mm & must be a genuine Yamaha piston, supplied by Yamaha.

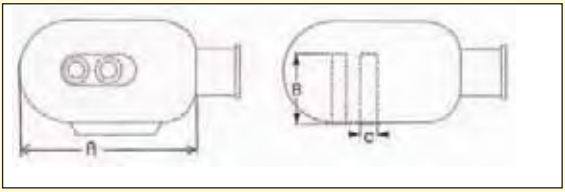
CLUTCH
Yamaha racing clutch 11T, engagement at 3000rpm (marked with CIK/92 YAM).

ELECTRICAL WIRING & STARTER
Must be as supplied with engine and battery.

GAUGES
Tacho and timing only. No temperature probes or sensor.

AIR BOX ADAPTOR
Air box adaptor must be original Yamaha as supplied with the engine.

AIR BOX (NOISE INDUCTION SILENCER DIAGRAM)



Legend

a.	Body	270mm +/ -10mm
b.	Baffle Tube Length	95mm minimum
c.	Baffle Tubes I.D.	23mm max (at the opening).

Note: *A No-Go Gauge to measure Items (c) and (b) on the Noise Induction Silencer is available from any State Office.*

1. The only inlet Silencer for this class must meet all the requirements of above, and registration by AKA is compulsory.
2. All inducted air must pass through the baffle tube/s into the Induction Silencer and to the carburettor via a sealed connection
3. An air filter or filter screen may be fitted to reduce entry of foreign matter. The use of an internal filter is permitted.
4. Air tubes may be partly or completely blocked at the entrance hole only, and the restriction component must be easily removed for inspection
5. No adjustable systems are allowable
6. It is permissible to drill a single 5mm drain hole.

CHASSIS
The kart is to conform to the general kart formula as detailed in chapter 25 of the AKA Karting manual except where specifically mentioned in this chapter.

BRAKING
Front wheel brakes are not permitted. NO ABS allowed.

AXLE
40mm only.

FUEL
Refer to Chapter 22.

TYRES
SL1 approved tyre for this class. If they choose to run in Clubman then the competitor has a choice.

WHEELS
Front: Edward Spoke F117S-5FUT
Rear: Edward Spoke R200-5FUT

HUBS
Alloy only no magnesium.

DRIVER LIMITATION
To be eligible to compete in this class a competitor must hold a C Provisional, C Grade and Over 40yrs B Grade Licence.

WEIGHT
TAG Yamaha 100S – 160kg

NON-TECH ITEMS
Exhaust joint, cable ties, Seals, main bearing, fasteners, washers & spark plugs, Piston Rings and O-Rings.

INTERNAL ADDITIONS
(a) The use of thermal barrier coatings/ceramic coatings on or in the engine/engine components and on or in exhaust components is prohibited.
(b) The use of anti friction coatings on or in the engine/ engine components is prohibited.

CHAPTER 44 - TAG 125

Preamble

This class provides Australian Karting with a category that allows competitors with a variety of engines to compete with each other on even terms. It is expected that this class will continue to evolve during its early life and the promoters of the class reserve the right to alter the technical regulations at short notice to ensure the safety of drivers and the fairness of competition.

It is expected that this class will be the entry point for future TAG engines excluding the future SUPER engines. The following rules are effective 1 January 2007.

Engine

A variety of TAG (Touch and Go) style engines are eligible for use in this category. Engines can be added or removed at any time by the class promoter. Current Eligible engines are:-

1) Biland SA-250
2) PRD Fireball 125cc
3) Rotax Max 125cc
4) Parilla Leopard 125cc

Chassis

1. The kart is to conform to the general kart formula as detailed in chapter 25 of the AKA Karting Manual except where specifically mentioned in this chapter.
2. Nosecone is compulsory
3. Maximum Axle Size 50mm

Brakes

1. Front wheel brakes are not permitted

Fuel

1. Refer to rule 25.14. Fuel as run to comply under rule 22.01

Tyres

Dry Weather Tyres: Rotax Max: Bridgestone YJC
Iame Leopard: MG Yellow
PRD Fireball Choice of: Bridgestone YJC, MG Yellow, Maxxis HG3
Biland SA250 Choice of: Bridgestone YJC, MG Yellow, Maxxis HG3

Wet Weather Tyres: Dunlop KT6 SLW1,

Drivers

1. Seniors only holding a provisional AKA C grade license or better

Weights

Rotax:	Zero weight (i.e. 160kg)
Leopard:	plus 8kg
Fireball:	plus 8kg
Biland SA250:	plus 10kg

Clubs can choose to run a super light class or medium class if this suits their numbers however the split in weight between the engines must stay the same.

Carburettors

As per individual class regulations otherwise,
OEM as supplied from the engine manufacturer. Jetting is open however must be OEM type. Washers may be added to the standard needle jets for the purpose of tuning. carburettor and manifold must be OEM as supplied. Throttle shaft and butterfly must be OEM as supplied. Throttle Slides & components must be OEM as supplied.

Fuel Pump

As per individual class regulations otherwise,
Must be of diaphragm pulse type

Ignition System

As per individual class regulations otherwise,
Must be OEM as supplied

Exhaust System

As per individual class regulations otherwise,
Exhaust and Silencers must be OEM as supplied the engine manufacturer - unless stated differently in an engines class rules.
No plating or ceramic coatings permitted.

Clutch

As per individual class regulations otherwise,
Must be OEM as supplied by the engine manufacturer. Non adjustable and either single disc or shoe type only. Fireball clutch engagement must not exceed 6000rpm. All other engines must not exceed 3000rpm

Cooling System

As per AKA requirements see 25.18

Reed Block and Reed Petals (where applicable)

Must be OEM with no modifications.

Parity

In the interest of parity, the promoter reserves the right to alter class weights and or apply engine restrictors to a particular engine.

Specific Engine Regulations

BILAND SA-250

1. Only genuine Biland components that are specifically designed and supplied for the SA-250 engine are legal, unless otherwise specified.
2. Neither the engine nor any of its ancillaries may be modified in any way likely to improve performance, unless specifically authorised within these rules.
3. Only engines numbers imported by International Karting Distributors will be eligible for use in AKA competition.

BILAND SA-250 Technical Specifications

Nominal Capacity	248.4cm3
Original Bore	58.0mm
Theoretical Maximum Bore	58.01mm
Stroke	47mm
Volume of Combustion Chamber	12cm3 (Repair Limit of 0.6cm3)
Compression Ratio	11.35 : 1
Cooling System	Water

Carburettor

DELL'ORTO carburettor – 1 per cylinder. Carburettor Diameter 22mm.

1) The carburettor body, slide, needle, atomiser tube and atomiser insert is to remain as originally supplied and cannot be subject to any modification. No additions or additional machining, filing, drilling or polishing etc is permitted to these items, this includes the bore/throat.
2) "PHBL 22" cast in the housing of the carburettor
3) "BD" or "BS" stamped in the housing of the carburettor
4) Atomiser Tube stamped with "266DA" or "264DA"
5) Needle Stamped with D31 or others as nominated in the future
6) Slide Marked #30 Only
7) Other settings in the carburettor are free.

Camshaft

Camshaft Drive Type	SOHC Belt
Intake Lift	7.5mm
Intake Opening Duration	268 Degree
Intake Timing	Opens 25 Degree BTDC Closes 63 Degree ABDC
Exhaust Lift	7.5mm
Exhaust Opening Duration	268 Degree
Exhaust Timing	Opens 65 Degree BBDC Closes 23 Degree ATDC

Inlet Valve

- Must be genuine item
- Maximum of 1 per cylinder according to the following specification.

Weight	24 GR
Diameter of Valve Stem	5mm
Diameter of Valve Head	26.5mm
Diameter of Seat	23.5mm
Diameter of Duct	21mm

Exhaust Valve

- Must be genuine item
- Maximum 1 per cylinder according to the following specification.

Weight	21 GR
Diameter of Valve Stem	5mm
Diameter of Valve Head	24mm
Diameter of Seat	21mm
Diameter of Duct	23mm

Crankshaft and Conrods

*** Crankshaft Drawing as per current AKA manual ***

Length between axes of Conrod	84.5mm
Weight of Conrod	185 GR
Diameter of Big End	35mm
Diameter of Small End	16mm
Weight of Crankshaft	1720 GR
A1	93mm
A2	93mm
B1	32mm
B2	32mm
C1	20mm
C2	32mm

Piston

Weight of Piston	145 GR Complete
Number of Rings per Piston	3

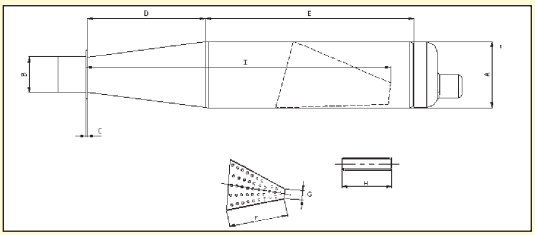
Parilla Leopard

As per Class rules in chapter 45

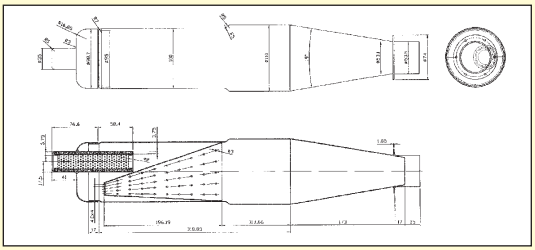
PRD Fireball

CCV	10.0cc min
carburettor	Tillotson 360 A, No modifications
Venturi	0.95 inch
carburettor Bore	1.065 inch
Exhaust Height	174 deg max
Exhaust System	OEM Header only, OEM Straight PRD9037/95A or

Bubble PRD9037/EVO99A Muffler
No Modifications to either
The addition of Exhaust Gas Temperature fitting is acceptable.
Measurements: A: 100mm, B: 54mm, C: 3mm, D: 170mm, E: 315mm, F: 170mm, G: 21mm, H: 135mm, I: 455m ±1.00 mm ON ALL MEASUREMENTS



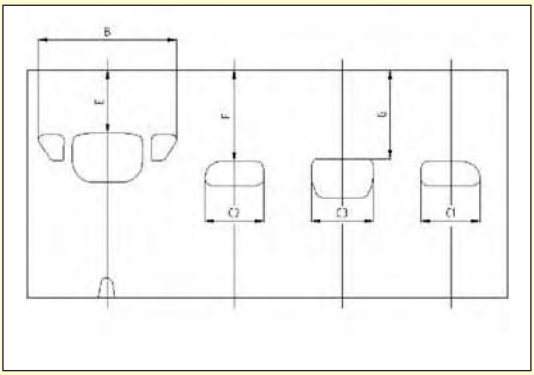
Straight – PRD 9037/95A

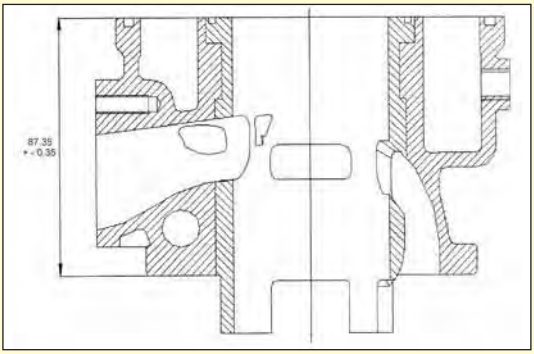


Bubble – 9037 EVO99A

Ignition	PRD or PRD/Opama
Parts	All must be OEM unless specified
Non Tech or Otherwise	
Coatings	No coatings to engine components other than standard are permitted.
Non Tech Items	Switches, Battery, Fasteners, spark plugs,Engine Sprocket, Water Hoses, Water Pump, Axle Pulley & O Rings No alterations from original manufacturers specification is permitted to fit a non tech item
Cylinder	Must be OEM, All ports and passages are cast finish except some pre-existing factory removal of flashing. No modifications to the ports accepted.

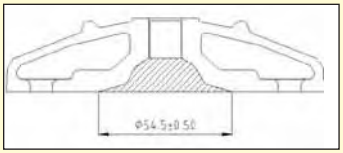
Chord reading	
B	65.3mm +-0.10
C1=C2	26mm +-0.10
C3	29.4mm +-0.10
Angular reading by inserting a 0.2mm gauge	
E	174 deg max
F	127 deg max
G	128 deg max





Cylinder Head

Must be OEM, Modification to the cylinder head to achieve min cc's is acceptable.

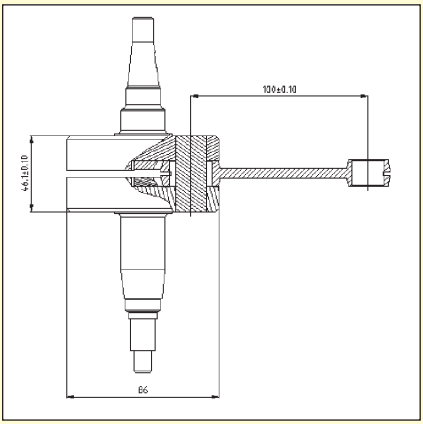


Crankcase

Must be OEM with no modifications.

Crankshaft

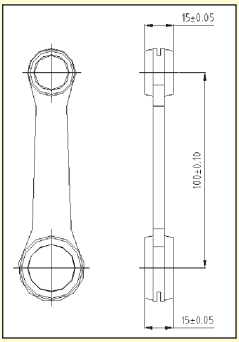
Must be OEM with no modifications.



Conrod

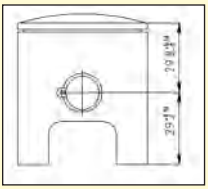
Must Be OEM, PRD Medium Weight 120grams +/- 2, No Modifications

PRD Light Weight 102grams +/-2 – This conrod was fitted to some early engines. This conrod will no longer be able to be used after 01/07/07



Piston

Must be OEM, coated and uncoated pistons allowed as supplied by the manufacturer. No Modifications

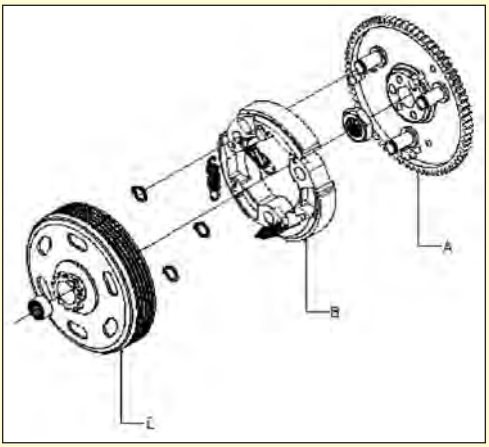


Piston Pin

Must be OEM, 10mm ID & 11mm ID PRD Piston Pins Accepted. 10mm ID piston pin to be fazed out by 01/01/08

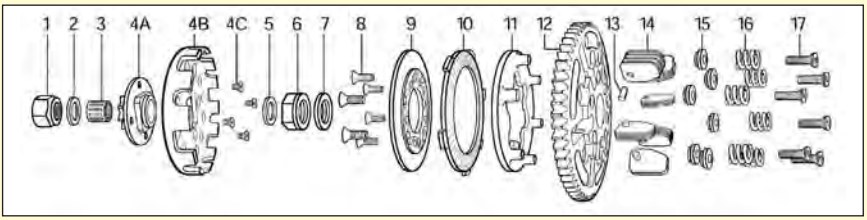
Clutch

PRD Three Shoe Clutch
PRD Light, Medium & Heavy Shoes acceptable.



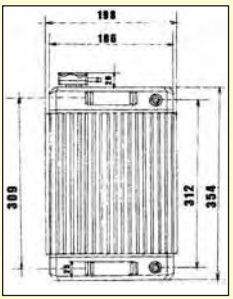
Item	Weight	Tolerance
A	416g	±5g
B-1	38g/1pc	±5g
B-2	48g/1pc	±5g
B-3	65g/1pc	±5g
C	356g	±5g

or PRD/Horstman FX-100 Clutch



Radiator

OEM Recommended. Core and tank size must be within 5mm of the drawing. Curved Radiators not allowed.



Rotax Max

As per class rules in chapter 28

CHAPTER 45 - PARILLA LEOPARD 125CC

Preamble

It is expected that this class will continue to evolve during its early life and the promoters of the class reserve the right to alter the technical regulations at short notice with AKA approval to ensure the safety of drivers, fairness of competition, economy and the wishes of the competitors.

45.01 Spirit & Intent

IAME Spa's goals for the Parilla Leopard 125cc Class worldwide are:

(a) To provide a class with low running cost and low noise emissions compared to conventional 100cc racing karts.

(b) To eliminate some of the variables within the class. The intention of this is to reduce the amount of testing and technical expertise required to be competitive, placing the emphasis on driver skill.

(c) To have the rules for Leopard 125cc alike in all countries using Leopard 125cc engine.

45.02 Warranty

It is strongly recommended that no modifications whatsoever be performed to Leopard 125 engines, as this may render the warranty null or void.

45.03 Engine Eligibility

1. IAME Parilla Leopard 125cc engine. Only.
2. Neither the engine or any of its ancillaries may be modified unless specifically authorised within these rules
3. The engine must be manufactured by IAME and Australian delivered and imported by Remo Racing Pty Ltd to be eligible for competition. Remo Racing Pty Ltd has all engine numbers recorded.
4. Only Genuine IAME components that are specifically designed and supplied for the Parilla Leopard 125cc engine are legal, unless otherwise specified.
5. Markings on engines.

45.04 Chassis

1. The kart is to conform to the general kart formula as detailed in chapter 25 of the AKA Karting Manual except where specifically mentioned in this chapter.

45.05 Braking

Front wheel brakes are not permitted. Refer Rule 25.07 (1),1.(a)

45.06 Fuel

Refer Chapter 22 Fuel, as run, to comply with tests under Chapter 22.01

45.07 Tyres

1. No modification permitted, tyre treatment is illegal (refer rule 23.03)
2. Dry weather tyre MG FZ Yellow (1 set + 1 replacement tyre / meeting)
3. Wet weather tyre MG CIK group 2 wet only.
4. Refer chapter 23, for AKA contracted prices

45.08 Driver Limitation

(a) To be eligible to compete in this class a competitor must hold a minimum provisional AKA C Grade Senior Licence.

(b) Drivers will be gridded by licence grade within field, A/B mixed then C.

45.09 Weight

(a) Parilla Leopard 125cc LIGHT - 160kg

(b) Parilla Leopard 125cc HEAVY - 180kg

(c) Other weight divisions at the discretion of the event organizers.
Maximum kart weight for Parilla Leopard HEAVY – 100 kg.
(Refer Rule 25.19).

TECHNICAL SPECIFICATIONS

45.10 Displacement

123.67cm^3, BORE 54.00mm, STROKE 54.00mm, MAX BORE 54.40mm

45.11 Cylinder

All ports must be of intended design conforming to drawings supplied by the manufacture. No Modifications or grinding is permitted to the ports,. Cylinder length 89.1 +/- 0.1 Refer to Rule 26.04, Steps 1, 2, 3, and 6 for compliance checking procedure.

45.12 Cylinder Head

Aluminium Cylinder Head must be of original engine manufacturer and conform to drawing supplied by manufacturer. No material to be added except for spark plug thread repair. Distance from spark plug sealing face to combustion chamber sealing face 32.8mm+/-0.25mm. The combustion chamber volume shall be a minimum of 10 cc, Refer Rule 26.01

45.13 Crankcase, Crankshaft & Conrod

Must be of original engine manufacturer and conform to drawings supplied by manufacturer.

45.14 Piston

Piston must be of original manufacturer, supplied by IAME Spa with "IAME sud" marking on dome and conform to drawing supplied by manufacturer. No modifications are permitted.

45.15 Gudgeon Pins: No special alloys.

45.16 Clutch

Must be of original manufacturer and conform to manufacturers drawing with part number A-120840A marked. Drive sprocket is a non-tech item. No modifications permitted.

45.17 Reed Block and Reed Valves

Reed Block and Reed valves must be of the same style as original IAME. Reed petal thickness 0.3mm +/- 0.08mm

45.18 Carburettor

(1) The only permissible carburettor is the TILLOTSON MODEL HL-334A and MODEL HL-334

AB. Carburettor Venturi must remain as supplied from manufacturer and conform to drawing supplied by manufacturer. Carburettor manifold must be original IAME. It is permissible to enlarge only existing fuel/air holes, they may not be deleted or relocated.

(2) "B" Carburettor may be machined to "A" specs (not to be machined past the dump tube).

(3) The progression discharge jet to remain in the "as cast area".

45.19 Induction silencer

There are four (4) types of noise induction silencers permitted:

- AKA-KIAA as per R24.25 Part 1(a)
- Square style SOCOREMM
- Previously approved as R25.24 Part 1 (a)
- Righetti Rodolfi K560/22 as per Rule 25.24 Part (b)

All types must conform to R24.25 Part 1(a) with respect to intake tube length and diameter.

45.20 Ignition

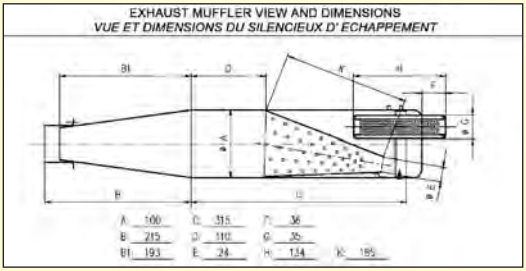
There are 2 types of ignition permitted:

- Selettra 4 pole, incorporating included charging system as supplied by manufacturer (this is the original type).
- IAME S.p.a. Selettra Digital-K Ignition System – This is the later "key start" type

Ignition Key must be retained and no modifying permitted. Spark plug cap is a non-tech item.

45.21 Exhausts

The Only permissible exhausts allowed are those that conform to the drawings in the homologation papers (see 45.25) and comply to Rule 25.22 (1)



45.22 Header Pipe: Original header pipe supplied with engine must be used. is a non-tech item.

45.23 Cooling System

Maximum core size 270mm by 200mm by 35mm thick having no more than 16 tubes.

45.24 Non-Tech Items

Gaskets, Seals, Big & Little End Roller Cages, Fasteners, Washers, Spark Plug, Spark Plug Lead and Cap, Main Bearings, Engine Sprockets, Water hoses, Hose Clamps, Water Pump, Axle O-ring and Axle pulley and thermostats, exhaust Flex

45.25 Homologated Drawings below and are also available on the AKA Website @ www.karting.net.au

IAME

Parilla LEOPARD 125cc RL TaG - AUS

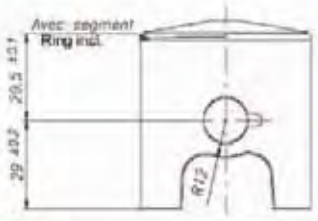
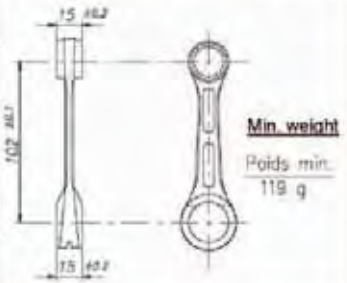
FEATURES - *CARACTERISTIQUES*	
Cylinder volume *Volume du cylindre*	123.67 cm³
Bore *Alésage*	54 mm
Max. theoretical bore *Alésage théorique max.*	54.28 mm
Stroke *Course*	54 mm
Cooling system *Système de refroidissement*	Water *Eau*
Inlet system *Système d' admission*	Reed valve *À clapets*
Number of carbs *Nombre de carburateurs*	1

Tillotson HL Carb. *Carburateur Tillotson HL*	334 A or 334 AB	Cylinder/crankcase transfers n° *N° de canaux cylindre/carter*	3
Number of piston rings *Nombre de segments*	1	Inlet/exhaust ports number *N° lumières admiss./échapp.*	2
Big end conr. ball-bearing diam. *Diamètre palier tête de bielle*	18x24x15	Combustion chamber shape *Forme chambre de combustion*	Spherical *Spherique*
Crankshaft ball-bearing diam. *Diamètre palier du vilebrequin*	25x52x15	Selettra ignition *Allumage Selettra*	4 poles *4 pôles*
Small end conr. ball-bearing diam. *Diamètre palier pied de bielle*	14x18x17.5	Distance between Conrod centers *Longueur (entre axe) de la bielle*	102 mm

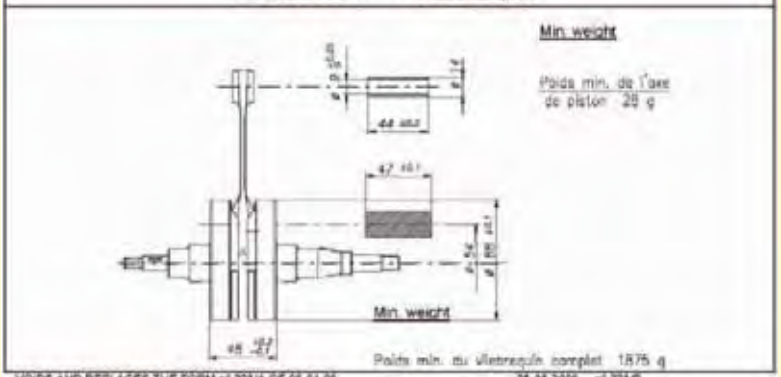
VOIDS AND REPLACES THE FORM n° 228/A OF 06-04-06
ANNULE ET REMPLACE LA FICHE n° 228/A DU 06-04-06

25-06-2006 n° 228/B

IAME S.p.A.
Ing. Paolo Conte

DESCRIPTION OF THE MATERIAL *DESCRIPTION DES MATERIAUX*		PISTON
Conrod material *Matériel de la bielle*	Steel *Acier*	
Crankshaft material *Matériel du vilebrequin*	Steel *Acier*	
Head material *Matériel de la culasse*	Aluminium	
Cylinder material *Matériel du cylindre*	Aluminium	
Liner material *Matériel de la chemise*	Iron *Fonte*	DISTANCE BETWEEN CONROD CENTERS *ENTRE AXE DE LA BIELLE*
Crankcase material *Matériel du carter*	Aluminium	
Piston material *Matériel du piston*	Aluminium	
Piston rings material *Matériel des segments*	Iron *Fonte*	
Exhaust muffler material *Matériel du pot d' échappement*	Sheet-steel *Tôle acier*	
Ball-bearings *Roulements*	6205 type	

CRANKSHAFT - *VILEBREQUIN*

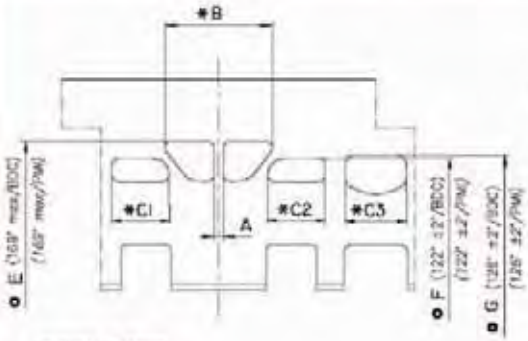


VOIDS AND REPLACES THE FORM n° 228/A OF 05-04-06
ANNULE ET REMPLACE LA FICHE n° 228/A DU 05-04-06

28-05-2008 n° 228/B

IAME S.p.A.

CYLINDER DEVELOPMENT - *DEVELOPPEMENT DU CYLINDRE*

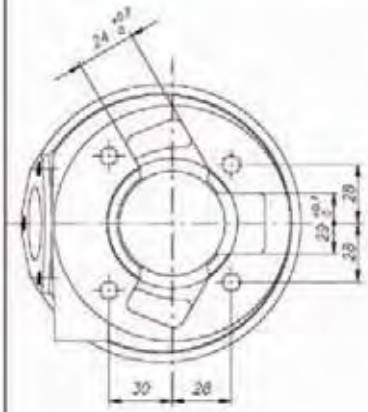


A	≥ 4 mm
B	≤ 50,2 mm
C1 = C2	≤ 25,5 mm
C3	≤ 28,3 mm
E	169° max
F	122° ± 2°
G	126° ± 2°

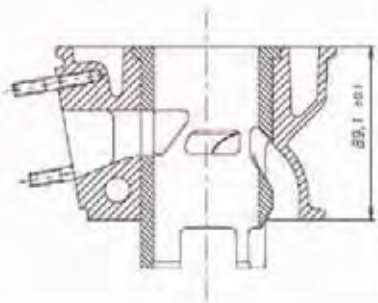
* CHORDAL READING
LECTURE CORDALE

° ANGULAR READING BY INSERTING A 0,2 mm GAUGE
LECTURE ANGULAIRE PAR INSERTION D'UNE CALE DE 0,2 mm

CYLINDER BASE VIEW
VUE DE LA BASE DU CYLINDRE



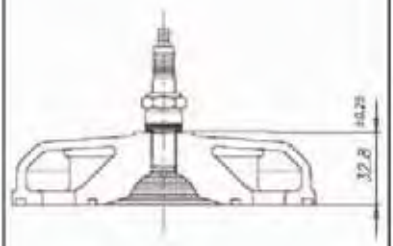
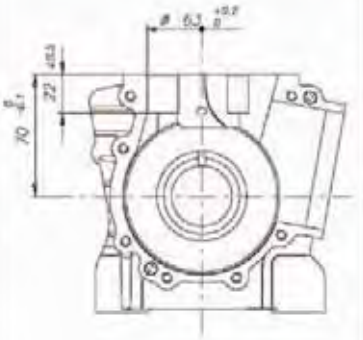
CYLINDER CROSS SECTION VIEW
VUE EN SECTION DU CYLINDRE



VOIDS AND REPLACES THE FORM n° 228/A OF 06-04-06
ANNULE ET REMPLACE LA FICHE n° 228/A DU 06-04-06

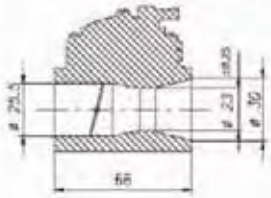
AME S.p.A.

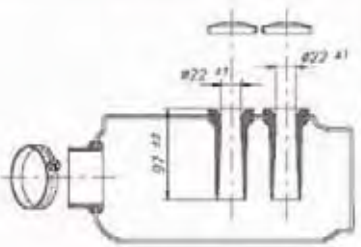
25-05-2006 n° 228/B

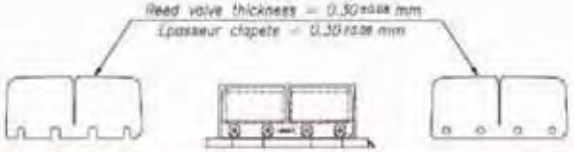
COMBUSTION CHAMBER VIEW *VUE DE LA CHAMBRE DE COMPRESSION*	CRANKCASE INSIDE VIEW *VUE A' L' INTERIEUR DU CARTER*
	

VENTURI CARB. DIMENSIONS *DIMENSIONS DU VENTURI DU CARBURATEUR*	INLET SILENCER *SILENCIEUX D' ASPIRATION*

TILLOTSON mod. HL-334 A
or
TILLOTSON mod. HL-334 AB





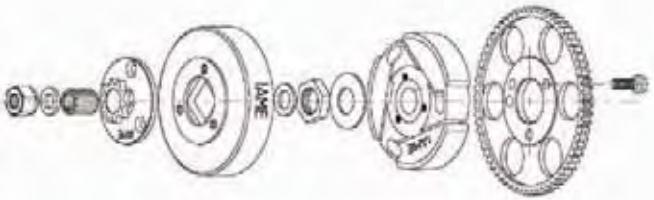


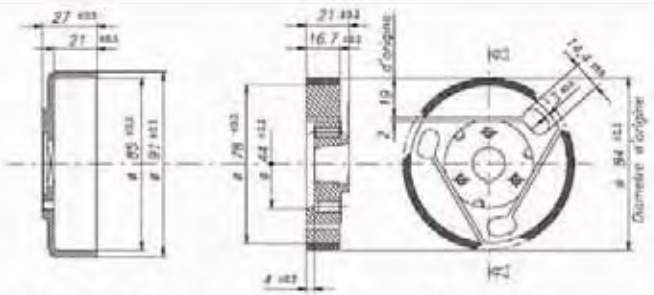
VOIDS AND REPLACES THE FORM n° 225/A OF 06-04-06
ANNULE ET REMPLACE LA FICHE n° 225/A DU 06-04-06

25-05-2009 n° 225/B

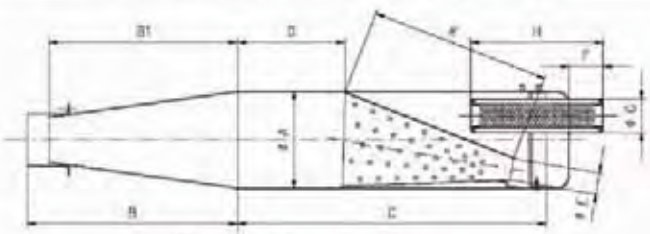
IAME S.p.A.

DESCRIPTION OF THE CLUTCH - *DESCRIPTION DE L' EMBRAYAGE*





EXHAUST MUFFLER VIEW AND DIMENSIONS
VUE ET DIMENSIONS DU SILENCIEUX D' ECHAPPEMENT



A:	100	D:	315	H:	38
B:	215	D:	110	G:	35
B1:	193	E:	24	H:	134	K:	185

VOIDS AND REPLACES THE FORM n° 228/A OF 08-04-08
ANNULE ET REMPLACE LA FICHE n° 228/A DU 08-04-08

-2008 n° 228/B

IAME S.p.A.

EXPERIMENTAL CLASS
Experimental Classes have been sanctioned by the National Karting Council.
The following specifications have been provided by the AKA for the conduct of this class as non championship events.

CHAPTER 46 - INTERCONTINENTAL C - GEARBOX

46.01 Preamble

This category of racing is restricted to CIK homologated 125cc engines. The power unit, that is the engine and the gearbox must be indissociable.
The kart may only be raced with variations described with in these regulations, any changes that fall outside these regulations and/or approved amendments are deemed illegal.

46.02 Chassis

1 The kart is to conform to the general kart formula as detailed in chapter 25 of the AKA Karting Manual except where specifically mentioned in this chapter

46.03 Engines

1 Two Stroke, maximum 125cc single cylinder engine. Direct feed without a compressor, reed valve admission, cooling exclusively water cooling one single circuit, the covering of the cylinder is free.
2 Engine case divided into only two parts (vertical and horizontal).
3 Reed valve box, support (dimensions and drawing) mentioned on the homologation form.

46.04 Clutch

Dry or oil bath, the process must be mentioned on the homologation form.

46.05 Gearbox

1 Homologated by the CIK (including the primary torque)
2 Minimum of 3 and maximum of 6 ratios.
3 *Check the ratios with a graduated disk with a minimum diameter of 200mm, the degree decimals given on the homologation form must be mentioned in tenths of degrees and not in minutes.*

46.06 Gearbox Control

All types of servo systems are forbidden (hydraulic, pneumatic, electric or other)

46.07 Cylinder Head

1 Volume of the combustion chamber: minimum 13 cc
2 The volume of the chamber is measured with a laboratory burette, class A, graduated in tenths of ccs. The mixture used for this check will be composed of unleaded petrol and 2-stroke oil, mixed in a ratio of one to one. The chamber will be filled to the level of the upper part of the spark plug channel.
3 All turbo or supercharger systems are forbidden.

46.08 Spark plug

1 The make of spark plug is free.
2 The thread of the spark plug, tightened on the cylinder head, must not extend beyond the upper part of the dome of the combustion chamber. Dimensions: length 20mm,

pitch 14 x 125.
The thread must be continuous and not present any chambers or niches of any kind.

46.09 Ignition

Use PVL ref: 105.458 homologated by CIK, Homologation Number 281/A/95/PVL

46.10 Exhaust System

Make and dimensions are free provided that:

1 Must conform to AKA noise limits. Refer Rules 24.2
2 The outlet of the muffler must be within the perimeter of the kart when viewed from above.
3 The exhaust system must be securely fastened to the kart as to ensure it should not come free from the kart should a mount fail.

46.11 Carburettor

1 1 carburettor of the Dellorto make, type "PHBE", made of aluminium, normal series, with a "venturi" type diffuser with a maximum diameter of 30mm, checked with a flat gauge 30.25mm wide. Only the adjustment of the needle nozzle is authorised.
2 All systems of fuel injection and / or spraying of products other than fuel are forbidden.

46.12 Air Intake

An approved CIK or AKA carburettor intake silencer must be fitted to the carburettor at all times.

46.13 Fuel

Refer Rule 25.14. Fuel as run to comply to test under Rule 22.01.

46.14 Tyres

1. No modifications permitted, tyre treatment is illegal (refer rule 23.03)
2. **Dry Weather Tyres** Any tyre from AKA dry list (1 set + 1 replacement tyre / meeting
3. **Wet Weather Tyres** Any tyre from group 2 CIK (1 set + 1 replacement tyre / meeting) See chart chapter 23

46.15 Weight

(a) 185kg
or otherwise at the promoters discretion

46.16 Nose Cone, Side Pods, and Nassau Panel

1 Bodywork must be AKA approved. Refer Rules 25.02, 03 and 06.
2 No other form of bodywork or aerodynamic device is permitted in this Class. Refer Rule 25.01(h).

46.17 Limitations on Drivers

1) The minimum grade of licence for entering this class will be senior AKA B grade
2) Drivers of 125 Intercontinental C – Gearbox must have 3 endorsements in their licence to compete on temporary circuits.

CHAPTER 47 - JUNIOR RESA

47.01 Engine Eligibility:

(a) PCR PV50, ReSa PV50
All parts must be by the original manufacturer where those parts are identified by PCR marking. Markings must not be altered or removed. Parts not identified, as PCR parts are free. All engines must be run as homologated.

(b) Crank Halves are not to be modified from the original homologation and are to be 43mm across the width of both halves for both ReSa aircooled engine.

(c) Conrod on Air-cooled engines must be either stamped or laser engraved with the PCR logo, and is not to be modified in any way from the original homologation.

(d) Barrell sleeves can be replaced with original PCR sleeves only.

(e) No external modifications allowed except for attachment of springs & seals.

(f) Engine measuring system will as per the new AKA Registered piston travel gauges. Removal of the head and barrel for inspection to certify the piston and conrod being run may be required to confirm PCR original parts have been used (parts will be labelled accordingly).

47.02 Non Technical Items:

All Bearings, Piston Circlips, Seals, Fasteners, Fin Dampeners, Gaskets, Piston Pin, Crank Pin, Spacers and washers, Drive Sprocket, Exhaust Flex, Spark Plug, Spark Cap and Lead, All Port Surfaces.

Internal Modifications

No additional material may be added except in the case of engine repairs and can only restore the engine or components to original specifications.

All forms of standard tuning are permitted, including polishing and reshaping ports, polishing and rebalancing reciprocating or rotating parts. In all these cases these modifications cannot disguise the origin of the engine parts.

47.03 Ignition - Group 2 CIK ignitions are approved.

47.04 Port Duration:

(a) Max exhaust port duration for PCR/ReSa PV50 (air-cooled) is 177 (+/- 2) degrees.

47.05 Piston Size:

(a) Air-cooled engines ONLY. Maximum piston diameter 51.00mm. Piston diameter above 50.35 ONLY may be non-original.

(b) PCR Pistons up to 50.35 can be either black coated or silver and can be centre peg, or offset pet and must have the original PCR markings.

47.06 Carburettor:

(a) Walbro WB series as per KT 100S:
Venturi - 24.13mm, Throttle Bore - 25.7mm,

(b) Walbro WB as per CIK Inter A Junior:
Venturi - 24.00mm, Throttle Bore - 27.8mm

(c) PCR BF24A

Venturi – 24mm, Throttle Bore – 27.7mm

(d) Phenolic or Alloy spacers must be used with Walbro Carburettors and must have a minimum thickness of 6mm.

(e) PCR BF24 K4
ICAJ Homologation No.32/C/09

47.07 Exhaust Muffler:

Exhaust muffler must be either CIK192-E-06 (PCR) or CIK 195-E-06 (PCR). Or 278 E/95 PCR or 144 E/92 PCR, OR 320/M/09.

47.08 Chassis & Body Work:

1 Any chassis approved for general competition

2 Race Numbers – Black on White background

47.09 Tyres:

1. No modifications permitted, tyre treatment is illegal (refer rule 23.03)
2. **Dry Weather Tyres** MG Yellow (1 set + 1 replacement tyre / meeting)
3. **Wet Weather Tyres** Dunlop KT6SLW1 (1 set + 1 replacement tyre / meeting)
4. Refer chapter 23, for AKA contracted prices

47.10 Braking:

Front wheel brakes are not permitted. (Refer Rule 25.07)

47.11 Fuel:

Refer to Chapter 22.

47.12 Weights:

Kart and driver 135 kg.

47.13 Limitations on Drivers:

To be eligible to compete in this class, a competitor must have a minimum AKA B Grade Junior Licence and be a minimum of 13 years of age.

47.14 Restarting Before Race:

In the event of a spin or a collision during the rolling laps, prior to the Start, Juniors are permitted to be restarted with assistance from delegated persons and at the discretion of the Starter and/or Clerk of Course.

Delegated persons must retire to a safe position once the race has commenced. (Refer R16.08)

47.15 Any Junior called before a Steward/s or Official must be accompanied by a Parent/Guardian (Refer to Rule 7.29).

CHAPTER 48 - SPEEDWAY

48.01 Track Layout:

The track layout and conditions of Speedway circuits will be as agreed and approved by the State Speedway Track Inspector and relevant Government departments.

Any new tracks, or major alterations to an existing track, must be submitted to the State Office for all necessary inspections and approvals.

48.02 Tyres:

1. Restricted Classes Including KT Modified may use any AKA approved dry/slick and/or wet tyre from the current or immediate previous year rule book (Refer Table 23.09) and the dry/slick tyres and/or wet tyres may be hand grooved.
2. No 6-inch diameter tyres or Burris tyres allowed in classes other than Formula 100 / Sportsman.
3. Formula 100/Sportsman Classes may run any kart tyre, which may also be hand grooved.
4. The mixing of wet and dry tyres on the kart at any one moment, including competition, is permitted. (Rule 23.07 and Rule 19.34 ii (b) do not apply to Speedway racing).

48.03 Weights:

1. Class Weights

Midgets	90kg
Rookies	100kg
Junior National (Light)	115kg
Junior National (Heavy)	135kg
Senior Clubman (Light)	135kg
Senior Clubman (Heavy)	155kg
Senior Clubman Over 40	155kg
Senior KT100S Modified (Light)	135kg
Senior KT100S Modified (Heavy)	155kg
Senior KT100S Modified Ladies (Light)	135kg
Senior KT100S Modified Ladies (Heavy)	155kg
Senior Formula 100/Sportsman (Light)	135kg
Senior Formula 100/Sportsman (Heavy)	155kg

2. When only one single class division is competing at an event, the class weight will be the average between Light and Heavy.
3. Senior classes may have other weight division(s) and/or classes at the discretion of the Promoter. Changes to the divisions and/or weights will be as per the Supplementary Regulations for the event.
4. Maximum kart weight for all Heavy and Super Heavy classes of 83kg.

48.04 **A** **Bodywork (Optional):**

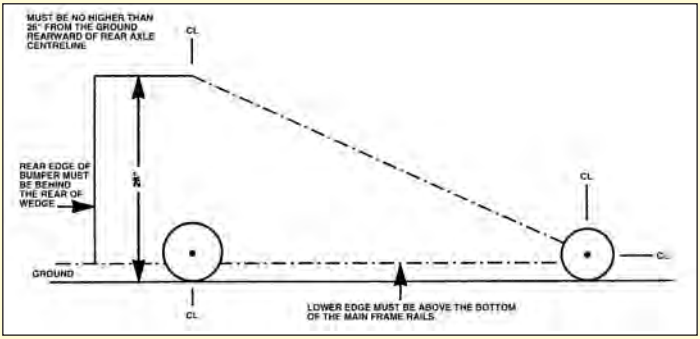
1. Side Pods are highly recommended, and they should be fitted in addition to any bodywork. They must conform to Rule 25.02, excluding references to wet weather tyres under diagram E.E, and also excluding rules 25.02 (v) and 25.02 (vii).

2. Side panels to be fitted to either the inside or outside plane of the Side Pod.

3. Side panels to be made of Coreflute sheeting only. All top edges to have plastic trim, such as fuel line or wind lacing (as used on car doors) to be held in place with PVC glue or silastic or with cable ties. The body side panels are NOT to be above the driver's shoulders whilst sitting in normal position in kart.

4. Bracing to be of lightweight material such as aluminium angle or tubing, or PVC tubing. NO SHARP CORNERS OR OPEN ENDS.

5. The bodywork must have no other protrusions on the outer surface. (i.e. fasteners must be "Button" or "Countersunk" type only with suitable washers to prevent pulling through the body. NO EXTERNAL BARS OR PLATES.



B. **Air Ducting:** NO external ducting allowed. Ducting must remain inside bodyline.

C. **Nassau Panel** must be used as long as they are no wider than 500mm. They may extend a maximum 50mm above the top of the steering wheel, and be minimum 50mm from the outer edge of the steering wheel. Nassau Panel must be securely fixed and be of shatterproof / non-metallic material. The Nassau Panel MUST NOT restrict the driver physically or restrict their line of vision.

48.05 **Air Filters**

The use of air filters is permissible for speedway (fitted internal or external)

48.06 **Method of Racing for Speedway:**

All racing will be in an anti-clockwise direction.

Four (4) Heats:

1st Heat:	Luck of the draw or computer drawn.
2nd Heat:	Reverse of First Heat or computer drawn.
3rd Heat:	Highest point-scorer to Grid 1 and so on or computer drawn.
Final / Feature:	Lowest point-scorer to Grid 1 and so on.

1. The number of Heats and method of gridding may be altered for major events and will be as per the Supplementary Regulations for that meeting. They may be further altered at the discretion of the Clerk of Course and/or Promoter or by force majeure.
2. The number of laps will be as per the Supplementary Regulations for the event or by force majeure.
3. **Winner:** Determined by highest point-scorer of the event OR the winner of the Final / Feature race.
4. **Points Allocation:** Will be as per Supplementary Regulations
5. **Restarts - Rolling Laps:**
   In the event of a collision during the rolling laps, prior to the Start, karts are permitted to be restarted with assistance by delegated person/s.
   Delegated person/s must retire to a safe position once the race has commenced.
   Karts that have stopped due to mechanical defect will not be permitted to restart.
6. **Restarts - Heats:** No restarts by any kart. Karts are NOT PERMITTED to restart if the kart becomes stationary.
7. **Restarts - First lap of the Final/Feature race:**
   (i) In order to justify a race restart, two or more karts must be involved in the SAME incident being deemed the cause for the stoppage.
   (ii) ALL KARTS involved in the incident, including stalled karts, will be allowed to restart at the rear of the field. Any karts not involved in the incident and that are already stationary at the time of the incident, will not be permitted to restart.
   (iii) In this situation the Chevron Flag and Yellow Flag are to be shown until the track is clear for a restart.

48.07 Flag Signals (Speedway)

Flag marshals are to be used at a minimum of 3 points around the track.

Green	Start the race
Green with Yellow Chevron	Restart. Reform on track. To be used by the Starter and/or Clerk of Course in the event of an error of judgement by the Starter or when a stoppage has occurred in the first lap in the Final/Feature race in which 2 or more karts have caused the stoppage. Can only be used prior to the first lap being completed by the race leader.
Red	All racing shall cease. Driver/s will indicate by raising his/her arm and pull to the side of the track and stop in a safe manner as soon as possible. This order shall be given only through the Clerk of Course and/or the Stewards of the Meeting. Red light/s may be used in addition to the red flag.
Red and White	Signifies that it has been a false start or no start, return to Pits, (this flag (chequered) is to be used by the Steward/Clerk of Course or Starter prior to the first lap being completed by the race leader to enable the Stewards to take immediate action for a breach of rule prior to the start.
Yellow	Full Course Yellow. A Yellow Flag at any flag point indicates, caution, driver will indicate by raising his/her arm and slow down. Maintain position and form one (1) lane ready to restart as soon as the Green Flag is shown. Passing under the Yellow Flag is prohibited. Failure to slow to a safe speed for a Yellow Flag will be considered a serious breach of these rules.
Blue	One or more competitors are about to lap you. You must hold your line and allow him/her to pass unimpeded.
Black and White Diagonal	If this flag is displayed to the driver concerned; it indicates that the competitor is being observed for unsportsmanlike behaviour. The competitor must report to the Clerk of Course immediately after the race. If this flag, together with the "Rear of Field" board, as directed by the Clerk of Course, is shown to a competitor, it indicates that the competitor is receiving an instant penalty for a starting or other infringement, and must immediately start/restart at the rear of the field.
Black	Should it become necessary for any reason to stop a driver, this order shall be given only through the Clerk of Course and/or Steward of the Meeting. The Black Flag shall be displayed to the driver concerned, together with a panel upon which is shown the kart number. Such signal indicates "that the driver is to immediately leave the racing circuit with safety to a position determined by the Clerk of Course at the Driver's Briefing".
Black and White Chequered	At the end of each race, the Black and White Chequered Flag shall be shown, stationery or waved, to the driver of the first kart to finish as he/she crosses the finishing line, and then in succession to other drivers as they cross the finishing line. This flag is also to be used to signal the end of practice.

48.08 **Baulk Lines:** The method of determining the baulk line and its position on the circuit is to be advised by the Clerk of the Course at the driver's briefing.

48.09 **Numbers:**

1. Front and rear Number Plates will be displayed in combination that identifies the class for the kart driver.

2.

Midgets	White number on red back
Rookies	Red number on white back
Juniors	Black number on white back
Senior Clubman	Black number on yellow back
Senior KT100S Modified	White number on red back
Senior Formula 100/Sportsman	White number on black back

3. In the event of two karts with the same number entering in any one class at any event where numbers are not allocated by the Promoter, the visiting driver will be issued with a special number by the Promoter.

48.10 **Special Class Specifications (Senior)**

a. Senior Yamaha KT100S Modified

Eligible Engines
All models of the Yamaha KT100S are eligible for use.

External Modifications
External modifications, which do not in any way affect a performance gain, are legal.

Fin Dampeners
Refer to Rule 34.30.

Internal Additions

(i) No additional material may be added except in the case of engine repairs and shall only restore engine or components to original specifications.

(ii) The use of thermal barrier coatings / ceramic coatings on or in exhaust components is prohibited.

(iii) The use of internal friction coatings on or in the engine and/or its components is prohibited.

Interchange of Parts
Permitted between engines of like dimensions (bore, stroke) as long as no removal or addition of material is required to interchange said parts.

Legal Additions
Legal additions shall be limited to the following: Carburettor return springs, chain

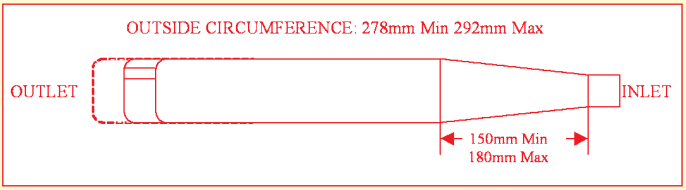
guard, direct drive sprocket, extension of carburettor jet needles, exhaust header, motor mount, muffler, starter nut and pulley, tachometer, temperature gauge, third bearing and adaptor shaft.

Non-tech Items
Unless otherwise specified, non-tech items include bearings and cages, crankpin, fasteners, gaskets, piston and rings, header pipe, seals, piston pin, spacers, washers and spark plug.

Displacement
Maximum bore and stroke including 5% tolerances are:
(i) Bore: 53.85mm, Stroke: 46.13mm.

Exhaust Muffler
The exhaust system will comply with Rule 25.09.

The only permissible mufflers for Senior Yamaha KT100S Modified motors are those commercially available and which confirm to the dimension of diagram.



Exhaust Intake and Transfer Ports
Modifications are permitted, except:

(i) Number of transfer passages and inlet ports in the cylinder and crankcase.
(ii) Number of exhaust ports and passages.
(iii) Port surface finish is a non-tech item.

Connecting Rod
Must be the same length as original and made of magnetic material.

Crank Shaft
Must be by original engine manufacturer with no change of stroke permitted.

Ignition
The only permissible ignition system is either of the following:
Group 2 CIK homologated or Yamaha.
The fitting of the module Yamaha, Victa, Atom or Delta/Wei Shieh is permissible. All engines must rotate in a clockwise direction when viewed from the drive side. Ignition/Rotor cover is optional.

Carburettor

(i) Will be stock externally appearing WALBRO WB Series.
(ii) Maximum of two jets permitted.
(iii) No fixed jets permitted.
(iv) All fuel to the engine must pass through the high and low speed fuel metering jets and passages.
(v) All air to the combustion chamber must pass through the carburettor venturi.
(vi) Fuel pump or pressurised fuel systems are forbidden. Squeeze type pump between fuel tank and carburettor is permitted.

Fuel

Fuel shall comply with Rule 25.14.

Head Gasket(s)

Must be retained.

Tyres

Refer to Rule 48.02.
All forms of tyre treatment are illegal. (Refer to Rule 23.03).

Braking

Front wheel brakes are not permitted.

b. Senior Formula 100 / Sportsman

This class originally combined 100cc International and 100cc Reed Classes (1997 AKA manual). However Senior Formula / Sportsman now combines any 100cc approved engine (+/- 5% tolerance).

48.11 Starting of Karts by Push Kart or Quad Bikes

a) Drivers to be 16 years or over.

b) Safety vests to be worn at all times.

c) Helmets to be worn at all times.

d) Appropriate footwear to be worn at all times i.e. Boots/Shoes

e) All drivers to be briefed on rules and safety prior to race meeting.

f) To be used in conjunction with local club rules and at the direction of the Clerk of the Course.

CHAPTER 50 - AUSTRALIAN CIK BASED CLASSES AND NATIONAL CHAMPIONSHIP REGULATIONS

50.1 Preamble:

The four CIK/FIA classes of Formula A, Intercontinental A, Intercontinental C and Intercontinental A Junior are raced in Australia.

National and State Championships are conducted for these classes.

These classes are raced in Australia to provide the necessary experience for Australian drivers, engine builders and manufacturers for them to compete competitively in CIK International events. To this end, the CIK classes will be raced as close to CIK/FIA International Technical and Race Regulations that local conditions will permit.

The NKC may from time to time publish any alterations to the Championship Regulations or Chapter 50, as may be required.

The Championship Regulations in this chapter do not apply to any competition other than CIK classes at Rounds of their Australian Championships or events for CIK classes specifically approved by the NKC.

Rule 20.11 does not apply to Chapter 50.

50.2 CIK Classes in Australia:

The following CIK classes are raced in Australia:

> Group 1: Formula-A
> Group 2: Intercontinental-A
Intercontinental-C
Intercontinental-A Junior

These classes will be conducted in accordance with the CIK/FIA Technical Regulations, unless otherwise stated in this Chapter.

50.3 Tyres:

Slick and wet tyres must have some form of bead retention with 3 screws minimum in the outside of the rim.

The tyres used by Group 1 and Group 2 classes in Australia will be restricted and listed in the supplementary regulations.

50.4 Homologated Engines and Modifications:

Modifications are permitted save for the following:

- The homologated stroke must be retained;

The maximum capacity of 2001 CIK homologation engines will be 100cc.

The maximum capacity of pre-2001 CIK homologation engines will be 102cc.

- (Information Note – Engines with cylinder capacities in excess of 100cc will be ineligible for use in international competition.)
- The homologated connecting rod length must be retained;
- The connecting rod must be of magnetic material;
- The number of transfer, inlet and exhaust ports and passages in cylinder and crankcases must remain as homologated;
- Only one carburettor may be fitted;
- External appearance of the engine must be retained.

(NOTE: “external appearance” does not include carburettor, ignition, exhaust or engine

mountings, but these must remain in their homologated positions.)

Engines must be homologated/AKA Registered single cylinder series production engines, complying with the CIK/FIA Technical Regulations. All "Power - Valve" systems are forbidden.

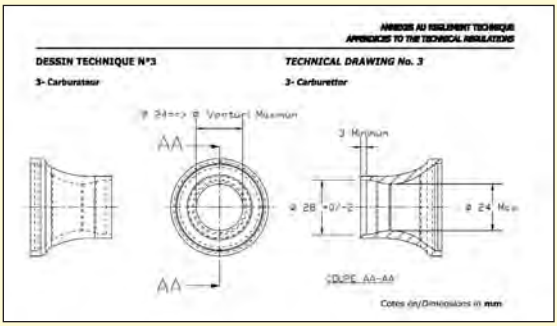
For all engines the ignition system used must be of the analogue type and homologated by the CIK/FIA.

50.5 Group 1

50.5.1 Formula-A (refer CIK - Article 7):

- Air-cooled or water cooled Reed or Rotary valve engines only;
- Minimum racing weight: 150kg;
- Minimum weight of the kart alone (without fuel): 65kg;
- The carburettor is free, save that it must be of butterfly type with central spindle with a venturi diameter of 24mm round and it must comply with the dimensions shown in diagram 50.5.2 (Refer CIK/FIA Technical Drawing No. 3 and Article 2 – Rule 25.4 for tolerances);
- Lateral bodywork (i.e. side pods) is obligatory;
- Front fairings are obligatory.
- The maximum diameter of the wheel rim must be 5" - Maximum width rear wheel, rim complete and fitted is 215 mm.

50.5.2



50.6 Group 2

50.6.1 Intercontinental-A (refer CIK Article 10):

Air-cooled or water cooled Reed-valve engine, with the following restrictions:

- Stroke, minimum 48.5mm, maximum 54.5mm;
- Total opening angle of exhaust limited to a maximum of 177°. (all tolerances included), reading by means of a graduated gauge of at least 200mm diameter;
- Number of transfer ports is three.

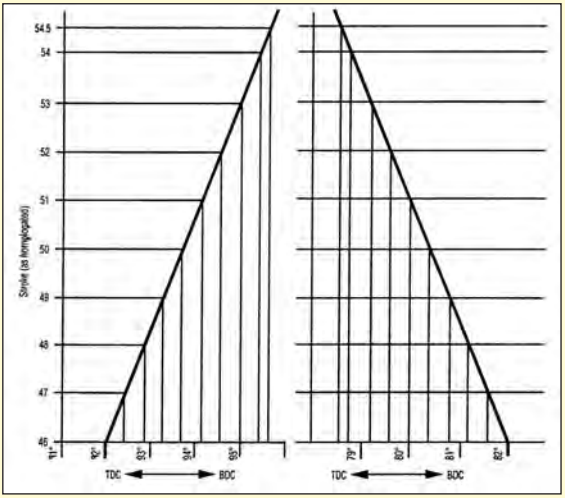
- The carburettor must be CIK/FIA homologated and must be of butterfly type with central spindle with a venturi diameter of 24mm round and it must comply with the dimensions shown in diagram 50.5.2 (Refer CIK/FIA Technical Drawing No. 3 and Article 2 – Rule 25.4 for tolerances);
- The exhaust system must be CIK homologated for the relevant engine;
- The intake silencer must be CIK registered;
- Minimum racing weight: 150kg
- Minimum weight of the kart alone (without fuel): 65kg;
- Lateral bodywork (i.e. side pods) and front fairings are obligatory.
- diameter of the wheel rim must be 5" - Maximum width rear wheel, rim complete and fitted is 215mm The maximum.

50.6.2 Intercontinental-A Junior (refer CIK Article 11):

Air cooled piston port engine or ARC aircooled Piston Port engine (ARC PP52A) with the following restrictions:

- The cylinder must have an iron liner (chrome and nikasil are forbidden);
- The complete dimensions of the piston must be as on the CIK homologation form;
- Stroke: minimum 46.0mm, maximum 54.5mm;
- The opening angle of exhaust (reading by means of graduated gauge of a minimum diameter of 200mm) must comply with the figure established by graph "A" according to the homologated stroke for the engine (all tolerances included).
- The width of the chord of the exhaust ports must not exceed 22.3 percent of the total circumference of the cylinder established by the theoretical maximum bore homologated by the CIK/FIA + the wall thickness of the division(s) between the ports. The shape of the exhaust port must be that of a geometric figure the sides of which are equal two by two and comprising 4 radii less than or equal to 4mm.
- The total maximum inlet angle (reading by means of a graduated gauge of minimum diameter 200mm) must comply with the figure established by graph "B" according to the homologated stroke for the engine (all tolerances included);
- The total width of the chord width of the inlet ports must not exceed 22.3 percent of the total circumference of the cylinder established by the theoretical maximum bore homologated by the CIK/FIA + the wall thickness of the division(s) between the ports.
- The number of transfer ports is free; Opening angles on page 212 CIK Manual
- Only one carburettor is permitted. It must be butterfly type, CIK homologated, with centre spindle, and maximum venturi diameter of 24mm (including the CIK Article 2 – Rule 25.4);
- The distance between the carburettor flange and the centre line of the cylinder must be greater than 91mm (tolerance as per CIK Article 2 – Rule 25.4 included) and includes any thermic spacer which may be used;
- The pressure hole in the crank-case must have a maximum internal diameter of 3.25mm diameter;
- Ignition timing must be fixed and invariable. The make and type/model must be as listed on the CIK homologation form for engines homologated prior to 2001. Engines homologated from 2001, the ignition is free but restricted to analogue type and must be homologated with the CIK-FIA.
- The exhaust must be CIK homologated/AKA registered for the relevant engine;

- The intake silencer must be CIK registered, and is obligatory;
- Clutch: CIK homologated centrifugal clutch is obligatory.
- An efficient protection (made of cast aluminium) covering the centrifugal clutch but leaving free access to the chain must be mounted and will be an integral part of the homologation of the centrifugal clutch by the CIK;
- The engine clutch, must be triggered at 5000rpm MAXIMUM and make the kart with the driver on board move forward.
- The starter system may be either electric or recoil or both and may be onboard;
- Total minimum racing weight: 135kg junior
- The minimum weight of the kart alone (without fuel) is 60kg;
- Lateral bodywork (ie, side pods) and front fairing is obligatory;
- The maximum diameter of the wheel rim must be 5" - Maximum width rear wheel, rim complete and fitted is 185mm.



50.6.3 Intercontinental-C

- Power Unit: It must not be possible to dissociate the engine from the gearbox. Engine case divided into 2 parts only (vertical and horizontal) Water cooled single cylinder engine with reed valve intake, one circuit only, homologated by CIK/FIA. Maximum cylinder capacity : 125cc Reed-valve box (dimensions and drawing) according to the homologation form. Reed valve cover : free.
- Carburettor: Carburettor made of Aluminium, with a venturi type diffuser with a maximum diameter of 30mm round. For 2003 CIK/FIA championships, Cups and Trophies, the carburettor must be Dell'Orto VHSH 30. The carburettor must remain strictly original. The only settings allowed may be made to :the slide, the needle, the floaters, the needle shaft (spray), the jets and the needle kit, subject to all the

interchanged parts being of Dell'Orto origin. The incorporated petrol filter may be removed: if it is kept, it must be original.

- Gearbox: Homologated by the CIK/FIA (including the primary Torque). Minimum 3 and maximum 6 ratios. Check of ratios using a graduated disc with a minimum diameter of 200mm or a digital decoder; the degree decimals given on the homologation form must be mentioned in tenths of degrees and not minutes. For the homologation of the gearbox, the manufacturer(s) and the model type must appear on the Homologation form. Mechanical gearbox control without a servo system. Any system of ignition cutting is forbidden.
- Total exhaust opening angle of 199 degrees maximum; to be read with a graduated circle of a minimum diameter 200mm or with a digital device.
- Volume of the combustion chamber: 13cc
- Spark Plug: The make is free. The thread of the spark plug, tightened on the cylinder head, must not extend beyond the upper part of the dome of the combustion chamber. Dimensions – length 18.5mm ; pitch M14* 1.25
- Exhaust: Exhaust must be CIK/FIA Homologated
- Tyres: maximum width of rear wheel, rim complete and fitted is 215mm
- Weight: 175Kg

50.6.4 For clarification of any technical references in Chapter 50, refer to the CIK/FIA Technical Regulations in the current CIK/FIA Karting Yearbook.

Championship Regulations
Australian Championships for CIK Classes

General Conditions

Article 1

The Australian Karting Association will organise an Australian Championship and State Championships for drivers in Formula A, Intercontinental A, Intercontinental C and Intercontinental A Juniors. These rules are formulated for the CIK classes to compete within a national championship under rules similar to international competition. Rules specific to the championships for the CIK classes are contained in these Championship Regulations. Where the Championship rules are in conflict, or otherwise, with the National Competition Rules the Championship rule shall take precedence over any similar rule found in the National Competition Rules. These rules may be modified, from time to time, by the National Karting Council and on recommendation of the International Karting Committee.

The Championship is being conducted with the following objectives:

[a] To conduct a national championship series that provides competitors with experience for international competition in the CIK classes.

[b] To be a vehicle to promote the CIK classes, and international karting competition, on a national basis.

[c] The Championship should be viewed as the pre-eminent karting competition within

Australia second only to the CIK/FIA Oceania Championships.

[d] The conduct of the race meetings should be the benchmark for quality in karting administration, promotion and operation of race meetings. In achieving this it is hoped to improve the experience, attitude and standard of karting officials on a national basis.

[e] The Championships should be commercially attractive to sponsors.

[f] To maximise participation, by competitors, in all rounds of the Championships.

Article 2 - Events

The Formula A, Intercontinental A, Intercontinental C and Intercontinental A Junior Championships will be contested over rounds in each of the states of South Australia, Queensland, Victoria and New South Wales. The classification of the Australian Championship will be established through the results obtained by the Drivers in all rounds of the Australian Championships. All rounds will be open to drivers holding the appropriate International or National Licence. (refer Article 18).

Article 3 - Organisation

The events will be conducted under the International Sporting Code of the FIA, the National Competition Rules of The Australian Karting Association, these Championship Regulations for the Australian Championships for the CIK Classes and such supplementary regulations, further addendum's and bulletins as may be issued by, or in conjunction with, the organising body of each race meeting.

These regulations also apply to the South Australian, Queensland, Victorian and New South Wales State Championship for Formula A, International A, Intercontinental C and Intercontinental A Junior. The organisers reserve the right to issue Supplementary Regulations and/or instructions to entrants and/or drivers and these shall be of the same effect as these regulations.

Article 4

All the concerned parties; officials, promoters, entrants and drivers may only participate in the Australian Championships for CIK Classes on the condition that they respect all texts and documents which govern it.

Article 5

The right to associate the name of a commercial company, organiser or brand with the Australian Championship for CIK Classes is exclusively reserved for the Australian Karting Association.

Article 6 – Additional Classes

The promoters of each round may run additional classes as non-championship races at their round of the championship, but only with the approval of the International Karting Committee.

Article 7 - Registration

Entry in the Championships point score will be by registration only. All entrants at all rounds are required to register. The Championship encourages drivers to compete in all rounds,

however registration after the first round will be accepted. Championship points are allocated to individual drivers within each class and are not transferable between drivers or classes. Registration for the Championships will open on the 1st January.

When registering, competitors will nominate a preferred race number (one or two digits only), which they shall retain for all rounds of the Championship. Numbers 1, 2 and 3 will be reserved, within each class, for the first three finalists from the previous years competition. Within each class, race numbers used in the previous year will be reserved for that competitor for use within that class. These numbers are only reserved up until close of entry for the first round, at which stage the numbers may be re-allocated. Other numbers will be allocated with preference given to order of receipt of registrations.

Article 8 - Fees

A single Championship registration fee and an entry fee, per round, will be applied.

Article 9 - Eligible Competitors

The championship events are restricted. All drivers must hold, at the time of competition, the appropriate licence for that class.

Formula A	International A licence or AKA FA grade licence or equivalent NZ licence as approved by the IKC.
Intercontinental A	International B grade licence or AKA A grade licence or New Zealand A grade.
Intercontinental C	International B grade licence or AKA B grade licence or equivalent NZ licence
Intercontinental A Junior	International C Junior grade licence or AKA Junior A grade licence or New Zealand Junior A grade

An entrant to be eligible to compete in ICA Junior must conform to Rule 13.21 3b.

Article 10 - Entries

Late entries will only be accepted at the discretion of the organisers. A penalty of $150, payable to the AKA, will apply to late entries.

Article 11 – Circuits and Practice

Number of karts admitted: Refer Track Safety Inspectors Handbook for track density. Track will be closed to entrants/drivers for practice on the Monday to Thursday prior to each event. Controlled private practice will be available Friday. Official practice will be Saturday morning. The track will be closed to karts after last race on Saturday.

Article 12 - Parc Ferme

An area of the circuit has been designated as parc ferme. This area includes, but may not be limited to, the fenced compound for pre and post race assembly for fitting tyres and fuel, the storage area for fuel and tyres, the in and out grids, the weigh scales, the mechanical

breakdown lane and the full track area with the safety fence. Only persons with correct passes may enter parc ferme and only in conjunction with their allocated class as per the official timetable. Only the driver and one mechanic per entry may enter parc ferme. Controls are in place as to the nature of equipment and materials that may be brought into parc ferme. These controls are communicated by the event regulations and will be interpreted and enforced by the responsible parc ferme officials.

Article 13 - Scrutineering

Administrative checking and scrutineering will take place as nominated in the supplementary regulations. All karts and equipment must be scrutineered before participating in official practice. All engines must be entered on the technical passport and be sealed prior to timed practice.

At scrutineering, each driver must present the equipment listed on the technical passport issued and it will be checked, marked and sealed in such a way as to be identifiable at any moment during the race.

The entrant must have the homologation papers and engine registration card, available for inspection if requested, for their engine, carburettor, clutch and exhaust.

The entrant will have completed the Technical Passport for presentation at scrutineering.

Race numbers and sponsors stickers will be in place at scrutineering. The placement of official sponsor's stickers on the bodywork of competing karts is compulsory. They must be located at the discretion of the chief scrutineer.

Article 14 – Driver's Briefing

Driver's briefing will take place on Saturday and Sunday, at a location and time to be nominated in the additional supplementary regulations or as announced on the events public address prior to the meeting. Driver's attendance at all briefings is compulsory, and they must sign the attendance sheet. Drivers who fail to attend a briefing or sign the attendance sheet will be referred to the stewards who may impose a fine.

Article 15 - Telemetry and Data Logging

The use and/or fitting of telemetric equipment is prohibited during official practice and racing. In Formula A, Intercontinental A and Intercontinental A Junior the use of data logging equipment is permitted during official practice and racing.

Article 16 - Medical

A state operated ambulance, and paramedic or doctor will be present on Saturday and Sunday.

Article 17 - Championship Officials

Series Officials - Series Steward , Series Co-ordinator, Clerk of Course, and Chief Scrutineer.

Judges of Fact

The judges of fact at each round are the starter, chief scrutineer, weigh marshal, chief lap scorer and chief timing officer. The Starter shall be the judge of fact while under the starters control and will determine competitors who break the start order, impede, delay or unduly affect the start procedure. The Chief Lapscorer shall be the judge of fact as to the number of

laps completed and the finishing order of any event. The Weigh Marshal shall be the judge of fact as to the measured weight of any kart and driver at the completion of any event. The Scrutineer shall be the judge of fact as to the technical compliance of any kart.

Article 18 – Fuel and Lubricants

The CIK classes will use a single control fuel for the Championships. The control fuel will be of the type and specification as stated in the supplementary regulations. Registered competitors will be notified of suppliers of the fuel. Competitors must use the control fuel at each round of the Championships. Failure to do so will result in the driver being referred to the Stewards of the meeting for action. The fuel is not to be modified except by the addition of approved lubricants. Only lubricants (oils) from the CIK/FIA list of approved lubricants may be used for mixing with fuel.

FUEL DISTRIBUTION

1 The organisers will be responsible for the supply and delivery of the fuel in the manufacturers sealed containers to the parc ferme impound. Only sealed manufacturers containers will be allowed into parc ferme.

2. This fuel remains impounded until the completion of the event.

3. Upon impounding, an official shall write the competitors name, number and class on each drum and hold them in parc ferme adjacent to the Paddock area. The fuel tank and/or drum only shall remain in the fuel impound area and may not be stored with any form of container or product for heating or cooling the fuel.

4. Each competitor will mix the selected amounts of oil and petrol as required from the respective containers in the presence of an official. Only sealed unopened manufactures oil containers may be brought into parc ferme. No other additive is permitted to the fuel.

5. Samples of mixed fuel, not less than 100mls each may be taken at any time and preserved in a sealable glass container for testing. The competitors name, class, date and signature will then be entered on a label affixed to the container and the sample will be retained for testing by the officials.

6. All fuel used by the competitor for racing will remain in parc ferme. No fuel or opened oil containers may be brought into parc ferme.

7. Prior to the carburetion session for Time Trials the kart will enter the parc ferme with an empty fuel tank. The kart will be filled with fuel from their marked drums. Upon completion of time trials the fuel tank will be refilled, removed from the kart in parc ferme and then handed into the fuel impound where it will be marked with the competitors identification. The fuel tank must stay in parc ferme at all times except when the kart is racing. he competitor will collect the tank prior to each event for fitting to the kart within parc ferme. A similar procedure is followed for carburetion, heats and finals with the tank being filled after each race prior to being returned to the impound. (It is recommended that karts be fitted with quick release fuel tanks.)

8. At the completion of the meeting, any fuel owned by the competitor may be claimed by the respective competitor.

Article 19 - Equipment

Karts must comply with either the current Australian Karting Association Technical Regulations or the current CIK/FIA International Karting Regulations excluding the following rules from Article 2 of the International Regulations;

Rule 19 – Noise

Rule 26 - Timing Equipment
Rule 21 - Fuel
Rule 24 - Racing Numbers

(Note: Compliance with the CIK/FIA IKR will require the use of homologated equipment and components where referenced.)

The name of the driver should appear in a visible position on the outside of the bodywork. In the interest of promotion of CIK competition it is the entrants responsibility to present themselves and their equipment in a clean, maintained and professional manner at all times.

Number plates will be black numbers on yellow background for seniors and black on white background for juniors.

Number of Engines	3 (max)	Sealed for the duration of the meeting
	(or equivalent)	Need not be the same make.
	FA	Homologated engine
	ICA	Homologated engine, carburettor and exhaust
	ICC	Homologated engine, homologated gearbox
	ICA Jnr	Homologated engine, clutch, carburettor and exhaust

(1) If the competitor has less than three engines the chief scrutineer may allow the rebuilding of the equivalent number of engines, but only under his/her direction and control

Number of Chassis	2 (max)	
	FA & ICC	Need not be homologated
	ICA & ICA Jnr	To be any current or past CIK/FIA homologation or AKA registered

Junior Clutch Test
Checking the motion of the kart with the engine at **5000 RPM** will take place on a level area prior to any race. Once the kart has been placed in position, the driver will sit in his/her kart, the mechanic will proceed to the kart with their starting equipment. On the command of the Technical Inspector, the mechanic will start the engine of his/her driver and then move back to the edge of the track.
No mechanic of a driver will have the right to intervene during the verification. Any infringement by the mechanic will be penalised. The Technical Inspector will attach the cable of the rev. counter to the cable of the spark plug, in order to read the revolutions. The driver sitting in the kart must obey the orders given by the Technical Inspector to allow a correct reading. The procedure outlined in the CIK/FIA Standard Regulations - Continental Championships for Juniors - Article 8 must then be followed.

Article 20 - Changing of Equipment

Notice of any change of equipment should be notified to the scrutineer before the start of any race or timed practice. Equipment, as entered on the technical passport, may be used at the entrant's discretion with the approval of the scrutineer.
The same engine may be entered for more than one competitor but must be recorded on each competitor's technical passport. (Local Regulation only)
The change of chassis, engine or tyres is forbidden during the starting procedure and between the start and finish of any race.

Article 21 - Tyres

Slick tyres	FA	Four (4) front and four (4) rear tyres CIK/FAI group 2 homologated
	ICA	Six (6) tyres CIK/FIA group 2 homologated
	ICC	Four (4) front and four (4) rear tyres CIK/FIA group 2 homologated
	ICAJ	Five (5) tyres CIK/FIA group 2 homologated
Wet weather tyres	FA ICA ICAJ ICC	five (5) front and five (5) rear tyres Wet tyres will be marked and impounded after use and until post race scrutineering

A set of tyres comprises two front and two rear tyres of the same approved CIK/FIA group 2 homologated make and type.

Article 22 -Tyre Impounding

A system of tyre pooling and impounding will be employed at all rounds. The selected compound will be stated in the supplementary regulations.

All slick tyres to be used for racing at this event will be delivered direct to the Service Park by the nominated tyre dealer. These tyres will remain in Service Park until the end of the meeting. It is the competitor's responsibility to organise with the dealer the purchase and supply of tyres.

Formula A, ICA, ICAJ and ICC will have impounded 4 front tyres and 4 rear tyres.

In Formula A, ICA, ICAJ and ICC the selection and use of tyres in Service Park is free, subject to Service Park access as set out in the official timetable.

Any changes or additions to this procedure will be stated in the supplementary regulations for the event.

Article 23 - Timed Qualifying

Timed qualifying will be conducted using the AMB, or other approved timing system. Transponder units must be fitted in purpose made AMB holders unless otherwise approved.

The fastest lap time for each driver will determine their position on the grid for the heats. In the event of a tie, the fastest lap/laps will determine position.

If no time is recorded for a driver they shall take the start in the heats at the rear of the grid. If several drivers are in that situation their starting positions shall be decided by drawing lots.

Any driver who does not record a time is not eligible for a re-run unless in the opinion of the Stewards, the transponder was faulty. A competitor who fails to register a qualifying time as result of a faulty transponder or through the fault of the organisers, must be given a complete timed session. If it was the first or only qualifying session, the competitor may fit new tyres at his/her own expense and with the approval of the Stewards.

When a transponder system is in use at race meetings for qualifying and/or lap scoring, it is the drivers responsibility to obtain their allocated transponder, correctly fit it to the kart and return it to the organisers.

If a competitor is deemed to be underweight in a session they shall receive a time penalty of the slowest qualifying time for their class plus one second.

Article 24 - Starts

A rolling start shall be given by means of light signals for Formula A, Intercontinental A and Intercontinental A - Junior. Should the lights fail, the national flag shall be used.

The grid shall be made up of two lines of karts arranged in the order of the best times set during official timed practice, or the order of points obtained in the heats, or in the order of arrival position of the pre-final.

Article 24.1 - Rolling Start Procedure for Formula A and Intercontinental A

From the moment the starter signals for the karts to be released, the drivers are under "starters orders" and may not received any outside assistance for repairs or other adjustments to their equipment while on the track.

From the moment the start procedure commences, race conditions apply. Wherever a kart is on the track it is forbidden to receive any assistance, other than to remove the kart to a place of safety.

A line will be painted 25 m before the start line and it is forbidden to accelerate before the front row of the grid has crossed this line.

Karts will cover approximately one Formation Lap before the start may be given. It is forbidden to overtake another driver under pain of a penalty inflicted by the stewards. If a driver stops for any reason during the Formation Lap, he/she will not be allowed to try and start again before he/she has been passed by the whole field. He/she shall start again from the back of the formation. Should he/she try to start ahead of the field in the hope that the leading drivers overtake him, he/she would be shown the black flag and be excluded from that Race.

A driver who is delayed will have the possibility of regaining his/her grid position only if this manoeuvre does not impede other drivers. In order to regain one's position, it is forbidden to use any course other than the track used during the Race.

If he/she considers that a driver has been immobilised as a result of another driver's mistake, the Clerk of Course may stop the Formation Lap and start again the Starting Procedure on the basis of the original grid or allow the impeded driver to regain his/her position.

At the end of the formation lap drivers will approach the start line at slow speed and in two lines. No lights will be on. No kart may accelerate before crossing the yellow line and before the green light is turned on. If the starter is happy with the formation he/she will give the start by switching on the green light. If he/she is not happy with the formation he/she will switch on the orange light, which means another formation lap must be covered.

Article 24.2 - Rolling Start Procedure for Intercontinental A Junior

When the starter is ready the competitors will be released from the dummy grid in grid order. From the time that the karts are released from the grid until the start is given, drivers are under starter's orders and may receive no outside assistance other than the restarting of their engine as authorised by an Official.

Karts will cover approximately one Formation Lap before the start may be given. It is forbidden to overtake another driver under pain of a penalty inflicted by the stewards. If a driver stops for any reason during the Formation Lap, he/she will not be allowed to try and start again before he/she has been passed by the whole field. He/she shall start again from

the back of the formation. Should he/she try to start ahead of the field in the hope that the leading drivers overtake him, he/she would be shown the black flag and be excluded from that Race.

A driver who is delayed will have the possibility of regaining his/her grid position only if this manoeuvre does not impede other drivers. In order to regain one's position, it is forbidden to use any course other than the track used during the Race.

If he/she considers that a driver has been immobilised as a result of another driver's mistake, the Clerk of Course may stop the Formation Lap and start again the Starting Procedure on the basis of the original grid or allow the impeded driver to regain his/her position.

The start will be a rolling start.

At the end of the Formation Lap drivers will go at a slow speed towards the start in two lines. During this approach stage, no lights will be on and karts must keep a formation in two lines. No kart shall accelerate before having crossed the yellow line and before the green light is turned on. If the starter is happy with the formation he/she will give the start by switching on the green light. If the Starter is not satisfied with the procedure, he/she will switch on the orange light, which means that an extra Formation Lap must be covered. Should the engine of a competitor stop during the Formation Lap, an official or a mechanic nominated to carry out this task may restart him as soon as he/she has been passed by the entire field.

Article 25 - On Track Safety

Any obstructive manoeuvre carried out by one or several drivers, with or without common interests, is prohibited.

The driver of any kart leaving the race shall signal his/her intention in good time and is responsible for ensuring that the manoeuvre is carried out safely and as near as possible to the point of exit.

It is forbidden to use any route other than the track used for the race to gain/regain a place.

Whilst practising or competing, karts shall not be driven other than on the defined track, in the pits, and in such other areas as Supplementary Regulations may specify. The track is the portion of the sealed surface between and including the white edge lines.

Should a driver be compelled to stop his/her kart, either involuntarily or for any other reason, the kart shall be moved off the track as soon as practical so that its presence does not constitute a danger or prevent the normal running of the race. If the driver is not able to move the kart out of the potentially dangerous position, it is the duty of the officials to assist, but only if this may be done without prejudice to their normal duties.

During practice sessions and the race, access from the track to the pits is allowed only through the deceleration zone. Penalty for breach of this rule shall be exclusion from the race, or the relevant practice session, and such other penalty as the stewards may apply.

In no circumstances may a vehicle travel in a direction opposite to that of the event.

Article 26 - Mechanical Breakdown Lane

Refer Rule 17.06. From the time the race ends (chequered flag is given to the lead kart) any kart in the mechanical breakdown lane under going repairs has three minutes to restart and cross the finish line, to be classified as a finisher.

Article 27 - Restarting

Restarting of a kart is permitted during practice and racing. A driver should only attempt to restart a kart if it can be done with safety and without unduly hindering other competitors. Any driver not respecting this rule may be directed to remove his/her kart from the track to a place of safety.

Article 28 - Stopping the Race

It may be deemed necessary to stop the race due to an accident.

The procedure to be followed varies according to the number of laps completed by the race leader before the signal to stop the race was given:

If less than 2 laps have been covered, the original start will be deemed null and void. A new start will be given. For the restart, the grid used will be the one drawn up for the first start, with the Drivers allowed to take the restart in their original grid positions. Unoccupied places on the grid shall remain vacant.

If more than 2 laps but less than 75% of the distance scheduled for the race (rounded up to the nearest whole number of laps), the race will be restarted. The length of the race will be the original number of laps less the number already completed. Those Drivers having crossed the Finishing Line at the end of the lap on which the race was stopped, and those who were in the mechanical breakdown lane, when the red flag was shown will be eligible to take the restart, either in their original kart or in their reserve kart. Grid positions will be determined by the finishing order of at the end of the lap before the one on which the race was stopped.

If 75% or more of the race distance (rounded up to the nearest whole higher number of laps) is completed the karts shall be sent directly to the Parc Ferme and the race will be deemed to have finished when the leading kart crossed the Line at the end of the lap prior to that during which the race was stopped.

Working on karts will be allowed only in the Parc Ferme; it will even also be allowed to introduce spare equipment (only the equipment identified in the case of chassis and/or engines). Refuelling will be allowed.

Article 29 - Finish

As soon as the chequered flag has been shown to a driver at the end of the race, he/she must proceed directly, using only the authorised route, to the parc ferme. From the moment the driver receives the chequered flag until he/she is released from parc ferme he/she is under parc ferme conditions and must make no alteration or adjustments to his/her kart or other material or equipment.

In the pre-final and final of the Australian Championships, any driver about to be lapped or who has been lapped for any reason whatsoever as from the first lap onwards may be shown the blue and red flag (double diagonal) with his/her number. He/she must go back to the scale in parc ferme and will be classified according to the number of laps completed. Any driver who does not obey the order given by the blue/red flag may be excluded from the event.

Article 30 - Qualifying Heats

Starting positions in the qualifying heats are awarded according to classification obtained in timed practice. The maximum number of drivers to take part in the heats will be equal to one and a half times the track density. Only the fastest drivers will be eligible to compete in qualifying heats. If the number of entries is equal to or less than the track density then three heats will be run with all the drivers to compete.

Oversubscribed classes will be divided into three (3) near equal groups A, B, and C. The fastest driver in timed practice will start in group A, the second fastest in group B, the third fastest in group C, the forth fastest in group A, the fifth fastest in group B, the sixth fastest in group C and so on.

Each of the three groups mentioned above will race with the other groups, in other words, A with B, B with C, and A with C. Points for heats will be awarded as in Article 31.

At the end of the Qualifying Heats, the drivers with the lowest points will progress to the finals.

Article 31 - Point Score for Heats

Each heat will have a length of approximately 15 km for seniors and 10 km for juniors and points for the heats will be awarded as follows:

1st place	0 points
2nd place	2 points
3rd place	3 points

and so on with 1 point being added for each place.

Any driver, who has not completed the full number of provided laps, even if he/she does not finish the heat, will be classified according to the number of laps completed.

If a driver fails to make the start they will be awarded points equal to the number of entries in the heat of that class.

If any driver is disqualified from a race they will be awarded points equal to the number of entries in the heat of that class plus one.

At the end of the qualifying heats, the drivers with the lowest accumulated points will qualify for the finals. In case of a tie in total points between two or more drivers, they will be ranked according to the times set in timed practice. The maximum number of competitors to progress to the pre-final and final will be equal to the track density.

Article 32 Non-competition

It is the spirit and intent of the competition that all races should be contested to the fullest. Where a competitor is considered to have missed or retired from a race in an attempt to gain an advantage, then they may be required to appear before the stewards for the appropriate action and/or penalty.

Article 33 – Final 1 Final 2

The first and second Final will be conducted over a total distance of approximately 50km for Formula A, Intercontinental A and Intercontinental C and 40 km for Intercontinental A Junior, according to the following system.

Starting grid positions for the first final are according to the total number of points obtained by the qualifiers in the elimination heats, with lowest total accumulated points to the front. In the case of equal accumulated points, timed practice results will determine the outcome.

Any driver, who does not complete the full number of provided laps, even if he/she does not finish the pre-final, will be classified according to the number of laps completed.

Starting grid positions for Final 2 will be determined according to the finishing position in the first final.

Both finals shall be of equal length.

Article 34 - Reserved

Article 35 - Results

The placings for each round, including the State Titles, will be determined by the placings obtained in the final. Any driver who has not completed the full number of provided laps, even if he/she does not finish the final, will be classified according to the number of laps completed.

Trophies will be presented for 1st, 2nd and 3rd place getters at the completion of each round.

Championship points system for the Australian Championships for Formula A, Intercontinental A , Intercontinental C and Intercontinental A Juniors

Points for Placing in Final 1 and Final 2

First	25 pts
Second	20 pts
Third	18 pts
Fourth	16 pts
Fifth	14 pts
Sixth	12 pts
Seventh	11 pts
Eighth	10 pts
Ninth	9 pts
Tenth	8 pts
Eleventh	7 pts
Twelfth	6 pts
Thirteenth	5 pts
Fourteenth	4 pts
Fifteenth	3 pts
Sixteenth	2 pts
Seventeenth	1 pts

Participation points

5 pts awarded recording a time in each individual timed practice session unless excluded
5 pts awarded by completing 75% of the laps in heat 1 unless excluded
5 pts awarded by completing 75% of the laps in heat 2 unless excluded
5 pts awarded by completing 75% of the laps in heat 3 unless excluded

Championship points for the first final are only available to entrants who receive the start signal in the first final.
Championship points for the second final are only available to entrants who receive the start signal in the second final.

CHAPTER 51 - ENDURANCE KARTING

Organising Club to submit supp regs to the State Office for approval and for the issuing of a race permit.

Preamble
It is expected that this class with AKA approval will continue to evolve during it's early life and the promoters of the class reserve the right to alter the technical regulations at short notice to ensure the safety of drivers and the fairness of competition.

51.01 Officials and Duties
For endurance karting:

Extra Essential Officials:
(a) At a meeting there shall be at least one Pit Marshal appointed by the Clerk of the Course.
(b) At a meeting were the race duration exceeds one hour, there shall be at least one Refueling Marshal appointed by the Clerk of the Course.
(c) At a meeting Flag Marshals will be appointed by the Clerk of the Course.

51.02 Parc Ferme/Paddock
(a) For endurance karting, designated pit crews **are** permitted in the pit area during racing.

51.03 Formulae
a) "Sprint racing as per Class Specifications" with "endurance karting".
b) Numbers not applicable to endurance karting (refer to 51.08.7).

51.04 Time For Practice
(a) Sprint Kart Racing
The Promoters (Club) must provide time for practice for all competitors on the day of competition.
(b) Endurance Kart Racing
The Promoters (Club) must provide time for practice for all competitors on the day of competition or the day prior to the event.

51.05 Change of Motors
10. Not applicable to endurance karting and the Honda GX200 motor.

51.06 Steering
For endurance karting solid plastic/nylon tie rods with a minimum outside diameter of 20mm and fitted with metal rose joint connectors are permitted.

51.07 Introduction
An endurance karting event is a speed event conducted on a circuit with a sealed surface usually with a duration of not less than one hour.

51.08 Endurance Racing Competition Regulations

1. Team Registration

All drivers/teams in an event are required to submit a completed Race Entry form for the team.

Teams may nominate a Team Name which may be a company, business or other name. This name must not be offensive to the public or other competitors.

2. Licences

Seniors and Juniors are not to mix as per the AKA Manual
The minimum licence requirement for endurance racing is a Provisional C Grade Licence.
"P" Plate drivers are not to "start" the race in a mixed grade team. Full "P" team are to start at the rear of field.

3. Required Number of Drivers

The minimum number of drivers that can be nominated for an event is as follows:
2 hours – Minimum 2 drivers
4 hours – Minimum 2 drivers
6 hours – Minimum 3 drivers
8 hours - Minimum 3 drivers
12 hours – Minimum 4 drivers
24 hours - Minimum 4 drivers
Once a race has commenced, there can be no change to the drivers nominated for that event. Cross entering of drivers between teams is not permitted.

4. Driving Limit

No driver is permitted to drive for more than 60 minutes without a driver change. A minimum break of at least 20 minutes should be taken in between driving stints. Penalty for infringement: Computer lap penalty of 5 laps.

5. Compulsory Pit Stops

The minimum number of compulsory pit stops required in endurance events is as follows:
2 hour events – 4 pit stops (including the stop at the end of the event)
4 hour events – 8 pit stops (including the stop at the end of the event)
6 hour events – 10 pit stops (including the stop at the end of the event)
8 hour events – 12 pit stops (including the stop at the end of the event)
12 hour events – 15 pit stops (including the stop at the end of the event)
24 hour events – no minimum requirement
It is the responsibility of each team to monitor the number of pit stops. The electronic pit stop record is not available to teams.
Stop/go penalties do not count as compulsory pit stops.

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 the 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.

Should the timing system fail at any time for any reason whatsoever, the race will be red flagged and the race order for the restart or results will be as shown on the most recent printout or computer record.

Should a teams transponder fail, they will be credited with laps equivalent to time from the point at which the transponder ceased to function to the time they rejoin the race with a replacement transponder. The method for determining the number of laps to be credited will be to take an average lap time based on the team's performance immediately prior to the failure of the transponder. Pit or fuel stops will be taken into consideration when making such calculations. Laps will only be credited where the Clerk of the Course determine that there has been a genuine transponder failure. Note: If a battery was not sufficiently charged prior to the event by the competitor, this is not considered a genuine transponder failure and consequently any loss of laps and/or position as a result will remain.

A team will not score any points if the kart does not cross the start/finish line at the completion of the event under its own power within two minutes of the chequered flag being waved to signal the completion of the event. This result will be recorded as a DNF (Did Not Finish).

7. Qualifying

Qualifying will usually be limited to a specified maximum number of laps during a qualifying period. Any team that exceeds the maximum number of laps permitted will start from the rear of the grid. If more than one team exceeds the maximum number of laps permitted, the last team to infringe will start from the rear of the field. Note: The "out" lap and "in" lap are included in the maximum number of laps allowed.

During qualifying, drivers should be particularly aware of other karts on the circuit. The Clerk of the Course may black flag drivers who are impeding the qualifying laps of other drivers.

Tyres used during qualifying must be used to commence the race unless the Clerk of the Course indicates that there has been a change in race conditions.

51.09 Pit Area

The pit area is the area designated by the Clerk of the Course for driver changes.

Driver changes are not permitted in the refuelling or weighing area unless specifically permitted by the Clerk of the Course for a particular activity or event.

The Clerk of the Course may appoint a Pit Marshal(s) to control the pit area.

Competitors are required to obey the directions of the Pit Marshal(s) at all times.

Karts must be driven at a safe speed within the pit area (no more than 20 kilometres per hour). Pit speed limits are applied for safety reasons and will be strictly policed and enforced by the Clerk of the Course or Pit Marshal(s). A minimum time period may be specified for a kart to travel from the pit entry to the pit exit.

Chain oiling and minor mechanical or damage repairs only are permitted in this area. For repairs requiring more than 2 minutes, the kart must be removed to the paddock area. Any kart removed to the paddock area may be inspected by a Scrutineer(s) prior to being permitted to restart.

Extreme care and caution should be exercised when rejoining the circuit from the pit lane. You should only rejoin the circuit when it is safe to do so or when instructed to do so by the Pit Marshal.

Pit Area infringements may result in any of the following penalties: stop/go penalty, computer lap penalty or exclusion from the event.

During an event (including practice, qualifying and race) only the driver getting out of the kart, the driver getting into the kart and one pit crew are permitted in the pit area. Once a pit stop has been completed they are to leave the pit area immediately. One member of the team is permitted in the pit area to monitor the race and to signal the driver.

51.10 Minimum Weight and Weighing Procedures

1. Minimum Weight

The minimum weight of the kart, inclusive of driver, engines and engine oil shall not be less than 185 kilograms using the scales nominated by the Clerk of the Course at the event. Karts may be weighed at any time during qualifying, the race or at post race scrutineering at the discretion of the Clerk of the Course. Penalty for Infringement: 5 laps deducted for every kilogram or part thereof under the weight limit.

If a kart is underweight it will be required to be re-weighed. In this case the team requiring re-weighing will have to wait for any other teams waiting to use the scales.

2. Fixing of Ballast to the Kart

Ballast may be added to the kart but must be firmly attached with secure mechanical fixings. Any ballast carried in the seat or seat insert must be restrained by a method deemed acceptable by the scrutineer. It is the team's responsibility to supply ballast if required. A team may be disqualified from the event if any ballast becomes dislodged during practice, qualifying or the race.

No divers belts or other methods of ballast are to be carried by drivers. It is a serious offence to have any ballast in a driver's clothing or on a driver's person.

3. Weighing Procedure

The standard weighing procedure will be as follows:

- The driver will bring the kart to the weighing area at a safe speed (no faster than walking pace).
- The driver will only proceed onto the scales when instructed to do so by the Weighing Marshal(s).

- Once the kart and driver have been weighed, the Weighing Marshal(s) will instruct them to move off the scales.
- The driver may not leave the weighing area until directed to do so by the Weighing Marshal(s).
- No contact is permitted between the driver and any other team member, pit crew or spectators.

4. Timing of Weighing

During the race, all weighing stops will be timed by the Weighing Marshal(s). The time period for weighing is one minute.

5. Infringements

Weighing Area infringements, other than underweight, may result in any of the following penalties: stop/go penalty, computer lap penalty or exclusion from the activity or event.

6. Average Weight

If an average weight system is in use in lieu of min weight 51.04.1, then the combined Kart and all team drivers are to be weighed and the average weight of drivers and kart shall not be less than 185 kg. All team drivers are expected to complete at least 10 % of the total race duration." Only if a Minimum Kart Weight is applied.

51.10 Fuel and Refueling Procedures

1. Fuel

Permitted fuel for practice, qualifying and endurance races will be premium unleaded petrol or unleaded petrol which is readily available to the general public. The organiser will supply the fuel for qualifying and races, however it is the responsibility of teams to supply fuel for practice.

2. Refueling Area

Refueling during qualifying and races must only take place in the designated refueling area. Smoking is forbidden in this area and admission is prohibited to all persons other than the Refueling Marshal(s) and competitors refueling their karts.

3. Access to Refueling Area

The refueling area will be opened approximately one hour after the commencement of the race and will remain open for the duration of the race EXCEPT during safety vehicle periods when the refueling area will be closed. Should a team wish to refuel during a safety vehicle period, they will be required to wait until racing resumes.

4. Refueling Marshal(s)

Competitors are required to obey the directions of the Refueling Marshal(s) at all times.

5. Refueling Procedure

The standard refueling method will be as follows:

- The driver will bring the kart to the refueling area at a safe speed (no faster than walking pace).
- The driver will be responsible for switching off the engines before getting out of the kart.
- It is the drivers responsibility to activate the Electronic Fuel Timing System.

- The driver must then move away from the kart to the designated driver area or to an area as directed by the Refueling Marshal(s).
- The driver will at all times during the refueling process remain in the designated driver area.
- The driver may be required to hold and be prepared to use one of the refueling area fire extinguishers.
- The driver may only return to the kart when directed to do so by the Refueling Marshal(s).
- The Refueling Marshal(s) will replace the fuel cap(s) and restart the motors.
- The driver may not leave the refueling area until the Electronic Fuel Timing System light turns to Green or until directed to do so by the Refueling Marshal(s).
- No driver changes, mechanical or damage repairs, oiling of chains, etc may be carried out on the kart at any time whilst it is in the confines of the designated refueling area.
- No queue jumping is permitted in the refueling area unless directed by an official.
- Compulsory Fuel Marshall and Refueling Marshall must be present.

6. Timing of Refueling

During the race, all refueling stops will be timed by the Refueling Marshal(s) or by an Electronic Fuel Timing System. The time period for refueling is one minute.

7. Fuel Cap(s)

Drivers are advised to check the tightness and security of fuel cap(s) prior to leaving the refueling area.

8. Safety

Refueling has the potential to be dangerous. Any driver, team member or pit crew which recklessly endangers themselves or anyone else during the refueling process may be excluded from the event.

51.11 Race Regulations

1. Starting Grid

All karts must be taken to the starting grid at least five minutes prior to the commencement of the race. The pit lane will close five minutes before the commencement of the race and any karts not on the grid will start from the pit lane. Note: This may mean that the "out" lap is not electronically recorded as a race lap. In this case, there will be no computer adjustment.

2. Race Start

Karts will do two warm-up laps and will then be directed to their grid positions on the completion of the second warm-up lap. When all karts are in their grid positions the race start will be signaled.

Safety Kart Board

A white board with the initials SK in black will be used to indicate a Full Course Caution. This indicates that a safety vehicle or slow vehicle is on the circuit or likely to enter the circuit. Competitors must slow down and maintain position. No overtaking is permitted.

3. Access to the Track

Unless authorised by the Clerk of the Course, apart from the driver, no team member, pit crew, spectator or other person is to access the track area during an activity or race.

4. Breakdown or Stoppage on the Circuit

Should a kart break down on the circuit the driver is permitted to carry out minor repairs to allow the kart to rejoin the race or to expedite the return of the kart to the pit area. Any repairs may only be affected by hand and no tools are permitted to be carried by the driver, on the kart or to be taken onto the circuit. No other team member may assist in any such repairs.

Repairs are only permitted once the kart and driver have been moved to a position of safety. Whilst in the confines of the track the driver must leave all protective clothing on including helmet, driving suit, boots and gloves.

Any kart breaking down on the circuit may be returned to the pit or paddock area for repair with the approval of, and under the supervision of an appropriate official. No member of the team or pit crew is permitted onto the circuit to work on or help retrieve the kart without the express permission of the Clerk of the Course.

5. Safety Vehicle

A safety vehicle may be used from time to time to control the race under certain circumstances. Should the need to use the safety vehicle arise the following protocol should be observed.

In the event of a full course caution, where possible or safe, the safety vehicle will enter the circuit in front of the lead kart. If unable to enter the circuit in front of the lead kart, drivers will be waved past by the safety vehicle driver, Clerk of the Course or nominated official until the lead kart is behind the safety vehicle. Unless specifically instructed by the safety vehicle driver, Clerk of the Course or nominated official, under no circumstances do you overtake the pace vehicle.

All karts must proceed in single file behind the pace vehicle. One lap prior to the safety vehicle leaving the circuit, the safety vehicle driver, Clerk of the Course or nominated official will indicate that there is one lap to go. Once the safety vehicle leaves the circuit, you must remain in single file and may only resume racing once your kart has crossed the start line. Penalty for Infringement: Stop/go penalty.

Under a safety vehicle, karts should attempt to close up on the line of karts behind the safety kart and should not unfairly impede the progress of the kart behind. In these circumstances, the Clerk of the Course or nominated official may wave the kart behind through and may impose a stop/go penalty on the impeding kart.

Pit stops are permitted whilst the safety vehicle is on the circuit however you must rejoin the circuit at the end of the single file line behind the safety vehicle. Refueling is not permitted under a full course caution or safety vehicle period.

6. Race Stoppage and Restart

In the event of a restart, the starting grid order will be as they were on the lap prior to the red flag being used to signal the race stoppage. Restarts will be single file rolling start and competitors will be given one warm up lap in single file grid order. Overtaking on the warm up lap is forbidden.

Once the lead kart has crossed the start line on the warm up lap, the race will be considered as restarted and any karts requiring entry to the pit area will be permitted to do so. Karts wanting to

rejoin at this point can only do so once the last kart in the single file has gone past the pit lane exit on the warm up lap or once the last kart has gone past the pit lane exit on the first racing lap of the restart. (ie. you must rejoin at the rear of the field not the front).

During a race stoppage, karts may be removed to the paddock area for mechanical or damage repairs. Any kart removed to the paddock area may be inspected by a Scrutineer(s) prior to being permitted to restart.

51.12 Offences and Penalties

1. Types of Penalties

The Clerk of the Course may impose any one or combination of the following penalties: reprimand; stop/go penalty (10 seconds to 5 minutes); computer lap penalty; place penalty; points penalty (event or championship); revision of grid position; exclusion of driver, team member or pit crew; exclusion from activity, event or championship; fine or suspension.

2. Stop/Go Penalty

In Endurance karting, a special flag (a green and red diagonal flag which will be unique for Endurance Karting) should be displayed together with a panel upon which the competitors' kart number is shown. This flag is used to signify that a stop/go penalty has been imposed on that competitor or team. When a competitor receives the special flag they are to immediately return to the pits next time he/she reaches it without impeding other competitors. The driver must complete the stop/go penalty together with any time penalty and can then rejoin the race. No driver change, refuelling, mechanical repairs, tyre pressuring or chain lubing etc is permitted during a stop/go penalty. At the completion of the driving stint, the driver must report to the Clerk of the Course or Steward immediately after returning to the Pit Area. Penalty for Infringement: Another stop/go penalty.

3. Computer Lap Penalty

The Clerk of the Course may impose a computer lap penalty in lieu of, or in addition to, a stop/go penalty. The computer lap penalty may be one or more laps.

4. Forfeiture of Entry Fees

In the event that a team is excluded from an event or from the championship, entry fees are forfeited.

5. Abuse, Threats or Assault - As per the AKA Manual

It shall be regarded as a serious offence for any driver, team member or pit crew to abuse, threaten or assault any official, member, competitor, other team member or other pit crew.

6. Responsibility of Driver, Team Member or Others

The driver and/or team shall be responsible for all acts or omissions on the part of a driver, team member, pit crew or any third party attached or associated with a driver or team, but each of these shall also be responsible for any infraction of these Rules and Regulations, Supplementary Regulations or instructions given by the Clerk of the Course or nominated officials.

51.13 Kart Specifications and Regulations

1. Tyres and Hubs

Permitted tyres are as follows:

Dry - Dunlop SL1 (Front: 10 x 4.50 x 5 – Rear: 11 x 7.10 x 5)

Wet - Maxxis WT3KTM (Front: 10 x 4.50 x 5 – Rear: 11 x 6.00 x 5) or

- Dunlop KT6-SLW1 (Front: 10 x 4.00 x 5 – Rear: 11 x 6.50 x 5)

Tyres may be marked by the Scrutineer(s) prior to qualifying.

"The number of sets of prescribed dry tyre and prescribed wet weather tyres allowable in an event will be specified in the supplementary regulations."

Rear hubs must not exceed 140mm in length and must not protrude past the axle circlip. Axle collars or stiffening devices may be fitted to the rear axle adjacent to and inside the rear hub, however the overall length of the hub and axle collar or stiffening device combined must not exceed 140mm in length.

2. Axle

The rear axle must be one piece, 30mm nominal diameter, solid magnetic material. Maximum overall length is 1100mm and maximum rear measurement outside to outside rim and tyre is 1400mm. Where axle keys are not the same length as the keyway, or there is a risk that the key may become dislodged, a hose clamp or other positive method of key retention is required.

Metal collars intended to prevent the axle moving laterally may be fitted to the rear axle adjacent to and inside the outside rear bearings, however these can be no more than 35mm wide and there can be no more than two fitted to the axle.

PVC or plastic sleeves fitted over the axle and intended to prevent the hub moving on the axle are permitted.

3. Sprockets

Final drive sprockets are fixed at 66 teeth. Only one sprocket may be fitted to the rear axle for each engine.

4. Clutches

All karts must be fitted with dry air cooled Noram GE20-219 centrifugal clutches. Clutches will be used to transmit the drive with a maximum engagement speed of not more than 2,500 rpm engines speed.

The Noram GE20-219 clutch sprocket has 20 teeth.

5. Rear Bumper Bars

An extended rear bumper is mandatory and must be securely attached in at least two separate mounting points across the chassis. The bumper can be made from metal or high impact plastic and must be of such a construction to withstand a substantial impact. In side view the bumper must be in vertical plane. The overall width of the bumper must not exceed the rear width of the kart at any time, however must at all times cover at least 50% of the width of the rear tyre.

6. Kart Numbers and Number Plates

Number plates shall be coloured as follows:
Division A Yellow background with Black number(s)
Division B White background with Black number(s)
Division N White background with Red number(s)
Numbers are not required to be mounted on the side of the kart.
Kart numbers are confirmed at time of entry.
The kart numbers must be clearly visible, of non-reflective material and at least 130mm high and 20mm wide.
Provisional Licence Holders must display a regulation red "P" on a white background on the rear of their helmet.

51.14 Engine Specifications and Regulations

1. Engines

The only permitted power plants are standard 6.5hp Honda GX200 series QXU engines in as supplied condition from Honda MPE Australia or it's appointed agents. Note: Honda MPE Australia will admit no warranty claims on engines used in practice or racing.

Engines will be mounted on either side of the kart at the rear and drive the kart through chains.

2. Modifications

Modifications to engines are strictly limited to the following:

- Removal of the governor mechanism and oil switch. If the whole mechanism is removed, the holes in the crankcase must be sealed to prevent oil leakage.
- Fitting of alternative exhaust valves (Honda Part No. 14721-ZH8-810)
- Fitting of alternative valve springs (Honda Part No. 14751-ZH8-940 or 14751-ZE1-000)
- Fitting of alternative carburettor jets
  Size 68 (Honda Part No. 99101-ZF5–0680)
  Size 70 (Honda Part No. 99101-ZF5–0700)
  Size 72 (Honda Part No. 99101-ZF5–0720)
  Size 75 (Honda Part No. 99101-ZF5–0750)
- Substitution or complete removal of the air filter is permitted, however the outer air filter casing must remain as standard and in place. No modification to the outer air filter housing is permitted.
- The linkage connecting the throttle cables to the standard carburettor throttle arm is free and it is permitted to fit throttle return springs to each carburettor.
- Spark plugs are free, however no spark enhancers or boosters are permitted.

Apart from the modifications above, no engine parts other than genuine Honda parts, as specified for this engine type, may be used. Furthermore, it should be noted that the terms "standard" and "genuine" refer not only to the components used but also to the number used and the manner in which engines are assembled. Apart from the modifications specifically mentioned in these regulations, the engines should be completely standard and all components should remain in place unless it specifically states that you are allowed to remove them.

Reboring of the engine or regrinding of the crankshaft is not permitted. No sleeving or surface material change to the bore is permitted. No other metal removal from any component is permitted.

No polishing of the cylinder head, combustion area, inlet tract or exhaust port tract is permitted. Chemical agents must achieve carbon removal only. It would not be expected to see casting marks or imperfections removed.
If using the standard Honda fuel tanks, the maximum capacity for each fuel tank is 3.6 litres.

Remote engine kill switches are permitted however the standard start/stop switch must be retained and must function independently of any remote engine kill switch.

3. Alternative Fuel System

The only permissible fuel tank shall be a central fuel tank with a maximum capacity of 9 litres. A fuel tank with a capacity greater than 7 litres must have a line clearly and permanently marked on the fuel tank by a scrutineer to indicate a 7 litre fuel level. Refer Rule 22.04.
When refuelling, it is not permitted to fill the fuel tank past the 7 litre mark. The tank may be fitted to the kart with a quick-change mechanism to allow for ease of refuelling.

Pulse Pumps can be fitted using either the original hole used by the governors once they have been removed or by utilising the inlet manifold. If via the inlet manifold, the fitting used must be a commercial off-the shelf product with no modifications and must protrude into the inlet port no less than 0.5mm, thus making de-burring unnecessary. If the port is modified in any other way the engine will not pass scrutineering.

51.15 Engine Scrutineering

Engine Scrutineers will be approved and appointed from time to time. Only approved Engine Scrutineers may inspect and seal engines. Engine Scrutineers may charge a fee for this service.

A list of approved Engine Scrutineers is available on request and is included in Appendix A.

The Engine Scrutineer will pay particular attention to the finish of all components to ensure that they match the standard unit. The Engine Scrutineer may check and compare any suspect component with a standard part as supplied by Honda MPE Australia. Checks and measurements may be carried out to ensure that tolerances are within those specified by Honda.

Engines will be sealed by the Engine Sealer using lock wire and lead or plastic seals.

The Engine Sealer shall keep a record of the engine numbers of engines sealed for endurance karting events.

Engine seals will be inspected by the Scrutineer(s) prior to each event. It is the teams responsibility to ensure that engine seals are intact and in place. If a seal is broken the engine must be represented to the Engine Scrutineer for inspection and sealing. No engine inspections or sealing will be available at events unless specifically requested or approved by the organiser or the Engine Sealer.

At the conclusion of an event, the organiser reserves the right to take away any engine or engines for inspection and/or dynamometer testing if they wish. If any infringement is found to exist the team will be liable for any inspection fee.

APPENDIX A – APPROVED ENGINE SCRUTINEERS

Unanderra Mowers
51 Princes Highway
Unanderra NSW 2525

Contact: Brian Luck
Bus: 02 4271 1340
Mobile 0402 352 164
Fax: 02 4271 2121
Email: unamoce@ihug.com.au

J & C Mowers
214 Fifteenth Avenue
West Hoxton NSW 2171

Contact: Joe Princi
Bus: 02 9826 0188
Fax: 02 9607 4500

EXPERIMENTAL CLASS

Experimental Classes have been sanctioned by the National Karting Council.
The following specifications have been provided by the AKA for the conduct of this class as non-championship events/series.

CHAPTER 52 ARC A1 EVOLUTION CLASS

52.01 Engine: ARC A1. Yamaha KT100J.

(a) This section covers the ARC A1 series engines. Any alterations/modifications are strictly prohibited except as specifically authorised within these rules.

(b) The KT 100 J series engine, Must conform to chapter 36 .As specified by the AKA any alterations/modifications are strictly prohibited except as specifically authorised within these rules.

52.02 Tyres

1 No modifications permitted, tyre treatment is illegal (refer rule 23.03)
2 **Dry Weather Tyres** MG-AZ (1 set + 1 replacement tyre/meeting)
3 **Wet Weather Tyres** Dunlop KT6SLW1 (1 set + 1 replacement tyres/ meeting)
4 Refer chapter 23, for AKA contracted prices

52.03 Braking

Front wheel brakes are not permitted. Refer Rule 25.07 (4).

52.04 Fuel:

Fuel, as run, to comply to test under Rule 22.01.

52.05 Weight:

(a) **Junior A1 Evolution Light** - 120 Kg
(b) **Junior A1 Evolution Heavy** - 140 Kg
(c) **Senior A1 Evolution- Light** - 140Kg
(d) **Senior A1 Evolution- Heavy** - 160Kg
MAXIMUM KART WEIGHT FOR A1 Evolution HEAVY CLASS - 88 kgs.

52.06 External Modifications:

External modifications, which do not in any way affect a performance gain, are legal.

52.07 Internal Additions:

No additional material may be added except in the case of engine repairs and shall only restore engine or components to original specifications. The cylinder may NOT be repaired in any of the port or passage as cast areas.

(1) The use of thermal barrier coatings / ceramic coatings on or in the engine / engine components and on or in exhaust components is prohibited.
(2) The use of anti friction coatings on or in the engine / engine components is prohibited.

52.08 Legal Additions:

Shall be limited to the following: Chain guard, motor mount, carburettor return springs, extension of carburettor jet needles, third bearing and adaptor, temperature gauge and tachometer.

52.09 Clutch:

Dry centrifugal clutch – using genuine components only. Whilst on level ground the kart (with driver) must start to move under its own power, when the engine speed reaches 3000rpm or less.

52.10 Non-Tech Items:

Refer Rule 25.21.

52.11 Displacement:

The maximum bore and stroke are:-

Engine	Bore	Stroke
ARC A1	53.10 mm	46.13 mm

52.12 Exhaust, Intake and Transfer Ports:

Cylinder and liner

1. All ports in the liner to be "as machined" condition NO grinding is permitted.
2. All passages must remain in as cast condition; sandblasting, glass beading, peening, etc. are NOT a substitute for "as cast" condition.

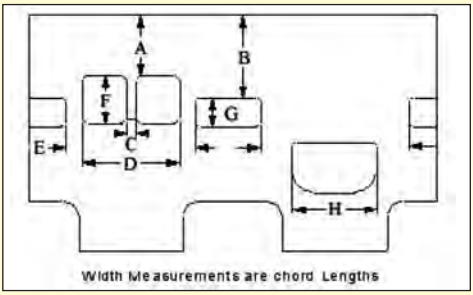


DIAGRAM IS FOR DIMENSIONAL REFERENCE ONLY

CODE	DIMENSION	CODE	DIMENSION
A	N/A	E	23.60 mm max
B	N/A	F	17.87 mm max
C	3.70 mm min	G	11.80 mm max
D	36.30 mm max	H	34.10 mm max

52.13 Engine Compliance

Refer to Rule 26.04

52.14 Cylinder Head:

1 Must be original ARC casting.

2 The welding and re-machining of the Combustion area, gasket face and spark plug surface is allowable.

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 13cc. Ref R26.01(for procedure only)

5 The combustion chamber/squish area shall not protrude beyond the gasket sealing face of the cylinder head

6 The spark plug thread may be repaired but must remain visually concentric with squish and bowl

52.15 Piston:

1. Piston must be AKA approved ARC (forged or cast) and stock in appearance.
2. Approved aftermarket pistons form 2000 include YAMAHA, KSI, KSI MK II, JDP/Vertex and Strike.
3. 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.

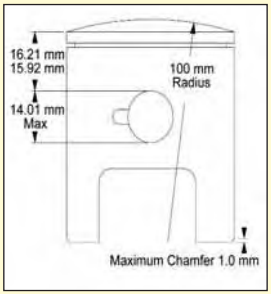


DIAGRAM IS FOR DIMENSIONAL REFERENCE ONLY

52.16 Gudgeon Pin:

Refer rule 25.21 – non tech items

52.17 Connecting Rod:

(a) Connecting rod must be O.E.M ARC.

(b) Minimum/Maximum rod length, centre to centre 99.87mm – 100.13mm.

(c) Conrod alignment may be either top or bottom.
Bearings and spacers are non-tech items.

52.18 Crankshaft:

Must be of original engine manufacturer.

(a) Crank Pin to be standard pin 18mm with end plugs.

(b) Crank Pin length 44.80mm min, 45.00mm max

(c) Crank Pin bore diameter measurement: 10.25 mm min, 10.45 mm max.

(d) Crank Shaft outside diameter measurement: 86.60mm min., 87.25mm max.

NOTE: If the crank assembly is outside the min/max dimensions, then disassemble engine to inspect further. Crankshaft width (measured across shoulder for the main bearings) to be 45.59 mm min.

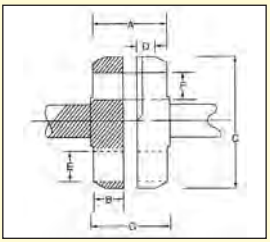


DIAGRAM IS FOR DIMENSIONAL REFERENCE ONLY

CODE	DIMENSION mm	CODE	DIMENSION mm
A	44.5 min	E	22.0 +/-.15
B	17.5 +/- .1	F	Crankpin 18.0
C	86.60min - 87.25max	G	45.59 min
D	10.8 min		

52.19 Crankcase:

The crankcase ports will remain as cast. The minimum chordal distance measured with a vernier calliper across the widest section of the transfer ports shall be 97.5mm minimum. (Refer diagram below).

NOTE: Existing crankcases that are narrow may be spaced with a thicker gasket.

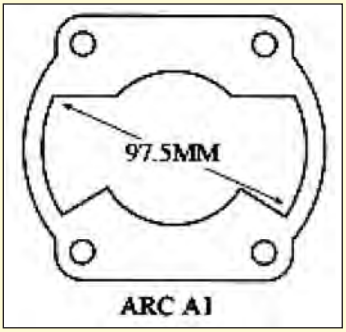


DIAGRAM IS FOR DIMENSIONAL REFERENCE ONLY

52.20 Ignition:

a) Ignition must be that supplied by the original engine manufacturer, which is approved by the AKA. Any optional unit must be approved and registered with the AKA for this class. The use of the following AKA approved TCI module is permissible:
YAMAHA, VICTA, ATOM, DELTA/WEI SHIEH, PRD, PRD with coil.,OPPRAMA
No modifications or repairs to any of the listed AKA approved modules is permitted.
The fitting of a PRD ignition coil and a PRD ignition rotor (flywheel) is permissible.

b) Ignition timing may be adjusted by the removal of the locating key or part thereof and/or by the ignition plate.

c) All engines must rotate in a clockwise direction when viewed from the drive side.
d) Ignition/rotor cover is optional.

52.21 Carburettor:
Refer to Rule 25.26

52.22 Pressurised Fuel Systems:
Fuel pump or pressurised fuel systems are forbidden. Squeeze type pump between fuel tank and carburettor is permitted.

52.23 Phenolic Spacer:
To remain as moulded by ARC Factory and conform to diagram below. Drilling of the phenolic spacer mounting holes permitted. Sealing face may be re-faced.

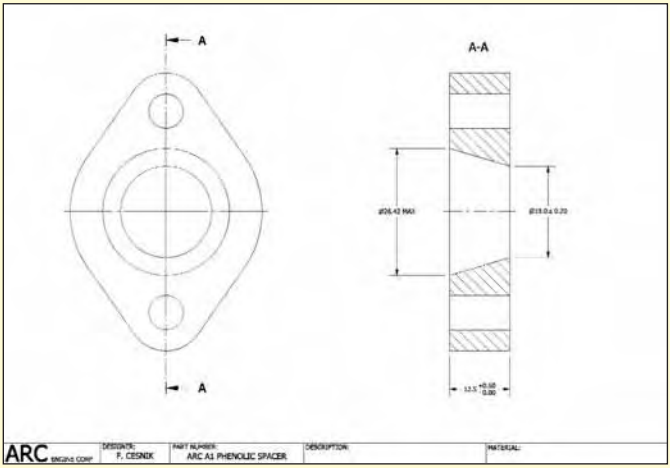


DIAGRAM IS FOR DIMENSIONAL REFERENCE ONLY

52.24 Exhaust Muffler:
Must be Control Exhaust Muffler AKA 14. Refer Rule 25.22 for technical specification.

52.25 Exhaust Header Pipe:
Refer to rule 25.08 for exhaust pipe header.
Refer to Rule 25.09 for exhaust probe.

52.26 Exhaust Header Studs:
Must remain in their original position.

52.27 Internal Parts:
Must be finished as per ARC Factory specifications.