

2024 IAME SERIES KSA TECHNICAL REGULATIONS

VER 1.0 (PROVISIONAL)

TECHNICAL REGULATIONS PART 1 OF 2 (GENERAL) (ARTICLE 1-5)

The FIA Karting Technical regulations apply for the IAME Series KSA. The English text is the authentic version. The Organizer of the series (The Track Jeddah) reserves the right to issue additional statements concerning the Technical Regulations from time to time following the agreement of the ASN. All such statements will be issued to all registered competitors by way of Competitors' Bulletins at the race meeting, posted to the address detailed on the Event Registration Form or by E-mail.

Article 1 CLASSIFICATION AND DEFINITION

1.1 Classification: Article 1.1 of the FIA Karting Technical Regulations.

Categories and Groups Karts used in competition are divided into the following Groups and Categories: Group 1: - OK: Cylinder capacity of 125cc - OK-Junior: Cylinder capacity of 125cc Group 2: - Mini: Cylinder capacity of 60cc

1.2 Definition: Article 1.2 of the FIA Karting Technical Regulations.

The definitions and abbreviations indicated hereafter will be adopted in the Regulations and their Appendices, and in all Supplementary Regulations, and they will be of a general use.

- CIK-FIA International Karting Commission
- FIA Fédération Internationale de l'Automobile
- ASN National Club or National Federation recognized by the FIA as the sole holder of the sporting power in a country
- CSN Sporting Commission of an ASN
- CoC Clerk of the Course
- SM Steward of the Meeting
- S Scrutineer
- TD Technical Delegate
- RD Race Director
- HR Homologation Regulations

1.2.1 – General

1.2.1.1 – Definition of a Kart

A kart is a land single seater vehicle without a roof or a cockpit, without suspensions and with or without bodywork elements, with 4 non-aligned wheels that are in contact with the ground, the 2 front ones of which control the direction and the other 2 rear ones, connected by a one-piece axle, transmit the power. The main parts are the chassis (including the bodywork), the tires and the engine.

1.2.1.2 – Data acquisition

All systems, with or without a memory, installed on a kart, allowing the Driver during or after the race to read, indicate, obtain, register, inform or transmit any information.

1.2.1.3 – Telemetry

Transmission of data between a moving kart and an outside entity.

1.2.1.4 – Mechanical components

Any components necessary for propulsion, steering and braking, as well as any accessory, whether mobile or not, necessary for their normal functioning.

1.2.1.5 – Original or series component

Any component which has undergone all the scheduled manufacturing stages carried out by the Manufacturer of the equipment considered and originally mounted on the kart.



Round 1 13 January 2024 Round 2 23 February 2024 Round 3 24 February 2024 Round 4 30 March 2024 Round 5 26 April 2024 Round 6 17 April 2024 Round 7 11 May 2024

1.2.1.6 - Composite

Material composed of several distinct constituents the association of which gives the material properties that no constituent taken separately has.

1.2.1.7 – Maximum

Greatest value reached by a variable quantity; highest limit.

1.2.1.8 - Minimum

Smallest value reached by a variable quantity; lowest limit.

1.2.2 - Chassis

Global structure of the kart which assembles the mechanical components and the bodywork, including any part that is interdependent of the said structure.

1.2.2.1 - Frame

Main supporting part of the chassis, in one piece and receiving the main and auxiliary parts.

1.2.3 - Engine

1.2.3.1 - Cylinder cubic capacity

V volume engendered in the engine cylinder(s) by the upward or downward movement of the piston(s). This volume is expressed in cubic centimeters and, for all calculations concerning engine capacity, the number "pi" will be taken inclusively as 3.1416.

 $V = 0.7854 \text{ x } d^2 \text{ x } | \text{ x } n$

with: d = bore; l = stroke; n = number of cylinders.

1.2.3.2 - Ducts or passages

Ducts or passages are cylindrical or cylindrical-conical elements allowing the passage of gases whatever the length or position of these elements. Number of ducts or passages: the number of real ducts or passages is the greatest quantity of cylindrical or cylindrical-conical elements which transmit gases from the pump casing to the top of the piston, as well as those which transmit gases from the outside of the cylinder to the inlet ports, or from the exhaust ports to the outside of the cylinder.

1.2.3.3 - Inlet or exhaust port

A port is composed of the intersection of the periphery of the cylinder and the inlet or exhaust duct. This port is opened or shut by the passage of the piston.

1.2.3.4 – Power valve

By «power valve» is meant any system which can alter by manual, electric, hydraulic or any other means the normal exhaust port timing or the normal flow of exhaust gases at any point between the piston and the final exhaust exit when the engine is running.

1.2.3.5 – Decompression valve

By «decompression valve» is meant a passive mechanical system with the sole aim of limiting engine compression in the engine starting phases. Once the starting phase is finished, the valve must close. It must remain stationary and inactive when the kart is on the track with the engine on. This system may not, under any circumstances or at any time, decrease the volume of the engine's combustion chamber below the minimum authorized value.

1.2.4 – Radiator

This is a specific exchanger which permits the cooling of a liquid with air. Liquid/Air exchanger.

1.2.5 - Fuel tank

Any capacity containing fuel which may flow to the engine.

1.2.6 – Wheel

It is defined by the rim with a pneumatic tire, for the driving or propulsion of the kart.

GENERAL PRESCRIPTION Article 2

2.1

General: Article 2.1 of the FIA Karting Technical Regulations

2.1) GENERAL

2.1.1 – The kart and any modification must conform to the specific regulations of the Group and/or the Category in which the kart is entered, or to the General Prescriptions below.

2.1.2 – Application of the General Prescriptions

These General Prescriptions apply to all Groups and Categories in the event that they are not subject to specific regulations.

2.1.3 - It is the duty of every Entrant to prove to the Scrutineers and to the Stewards that his kart integrally complies with the Regulations throughout the event.

2.1.4 - Modifications

Any modification is forbidden if it is not explicitly authorized by an article of these Regulations or for safety reasons decided by the CIK-FIA. By modification are meant any operations likely to change the initial aspect, the dimensions, the drawings or the photographs of an original homologated part represented on the Homologation Form.

Furthermore, any modification or assembly resulting in altering regulatory dimension or impeding its control is assumed to be fraudulent and is therefore forbidden.



2.1.5 – Adjunction of material or parts

Any adjunction or fixation of material or of parts is forbidden if it is not expressly authorised by an article of these Regulations or for safety reasons decided by the CIK-FIA. Removed material may not be used again. Rebuilding the frame geometry, following an accident, is authorised by adjunction of the materials necessary for the repairs (additional metal for welding, etc.); other parts which may be worn out or damaged may not be repaired by addition or fixation of material, unless an article of these Regulations authorizes it exceptionally.

2.1.6 – Magnetic steel

Structural steel or structural steel alloy meeting the ISO 4948 classifications and the ISO 4949 designations.

Alloy steels having at least one alloy element the mass content of which is \geq 5 % are forbidden.

2.1.7 Composite Parts

All parts made from composite material are forbidden on the kart, except for the seat, the floor, the chain guard, the rear brake disc protective pad, the reed valves and the friction discs of the clutch in the KZ/KZ2 categories.

Article 3 KART AND EQUIPMENT SAFETY

3.1 Kart Safety: Article 3.1 of the FIA Karting Technical Regulations Karts are only allowed to race if they are in a condition which meets the safety standards and if they comply with the Regulations. They must be designed and maintained in such a way as to allow the respect of the Regulations and as not to represent a danger for the Driver and other participants.

3.2 Equipment Safety: Article 3.2 of the FIA Karting Technical Regulations The Driver must wear:

* A helmet with an efficient and unbreakable protection for the eyes.

Helmets must comply with the following prescriptions (Appendix 2):

For Drivers under 15 years old:

- Snell-FIA CM (Snell-FIA CMS2016 and Snell-FIA CMR2016),
- Snell-FIA CMH (Snell-FIA CMS2007 and Snell-FIA CMR2007),

For Drivers over 15 years old:

- Snell Foundation K2005, SA2005, K2010, K2015, SA2010, SAH 2010 and SA 2015,
- FIA 8859-2015, FIA 8860-2004, FIA 8860-210, FIA 8860-2018 and FIA 8860-2018-ABP
- SFI Foundation Inc., Spec. SFI 31.1A and 31.2A,
- Snell-FIA CM (Snell-FIA CMS2016 and Snell-FIA CMR2016),
- Snell-FIA CMH (Snell-FIA CMS2007 and Snell-FIA CMR2007).

Any modification to the above list will be published in the CIK Bulletin.

It must be noted that certain types of helmets must not be painted or carry adhesive material. In accordance with Appendix L to the International Sporting Code (Chapter III, Article 1.2), any addition of devices, whether aerodynamic or other, to helmets is forbidden if they have not been homologated with the helmet concerned.

* A pair of gloves covering the hands completely.

* Fabric overalls must have a «Level 2» homologation granted by the CIK-FIA bearing in a visible way the CIK-FIA homologation number. They must cover the whole body, legs and arms included.

Overalls remain valid 5 years after their date of manufacturing and the homologation (i.e. the period during which they can be produced) is valid for 5 years.

* Leather overalls complying with the standards defined by the FIM are authorized. For events on long circuits, leather overalls are mandatory, complying with the FIM standards (motorbikes, 1.2 mm thickness), without an internal lining or, should there be one, only with a silk, cotton or Nomex internal lining.

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* Overalls approved according to CIK-FIA Standard No. 2013-1, which are listed in "Homologated Overalls – Part 1", will be accepted as from 01.01.2014.

* Boots must cover and protect the ankles.

* Wearing a scarf, a muffler or any other loose clothes at the level of the neck, even inside an overall, is strictly forbidden.

Furthermore, long hair must be contained entirely in the helmet.

Article 4 GENERAL PRESCRIPTION FOR GROUP 2 KARTS

4.1 Chassis: Article 5.1 of the FIA Karting Technical Regulations

All Group 2 chassis (OK, OK-Junior and KZ2 categories) must be homologated. They shall be described in the Manufacturer's catalogue and on a descriptive form called «Homologation Form» to be stamped by the ASN, according to the model drawn up by the CIK-FIA. Chassis will be homologated in every three years for a three-year validity period. Modifications to the chassis-frame (e.g.: position of tubes) are allowed only in the respect of the dimensions described on the Homologation Form, and if the curves are moved only on the tube where they were at the homologation.

Article 5 ORGANIZER'S SUPPLEMENTARY PROVISIONS

5.1 <u>Scrutineering</u>

A mandatory check will be carried out before the start of Practice at every Round. It must be possible to identify the homologated equipment using the technical descriptions (drawings, dimensions, etc.) on the homologation form. For any used equipment, which has been homologated, each competitor shall be able to submit the relative homologation forms to identify the homologated equipment. For identification and control it must be possible to identify the homologated equipment.

- 5.1.1 Each Driver will be entitled to submit to Scrutineering the following equipment:
- 5.1.1.1 One (1) chassis with a valid 2010 or newer FIA Karting / CIK-Homologation.
- 5.1.1.2 Two (2) engines of the same type per driver and category for the event.

5.2 <u>Chassis Homologation</u>

Chassis must have a valid 2010 or newer FIA Karting / CIK-Homologation. Front brakes are not allowed.

5.2.1 The use of the front fairing retaining system CIK / FIA Karting 2015-2020, as per CIK drawings N. 2c and 2d, is mandatory. The technical committee reserves the right to refuse front fairings, front fairing retaining systems or other components that do not meet the required standards. The front fairing must be CIK / FIA Karting homologated and must remain in the correct position at any time of a competition (qualifying or races), as described in the Technical Drawing CIK / FIA No. 2c and 2d. The use of CIK/FIA homologated front fairings is mandatory in all classes.

5.2.2 Chassis for X30 Mini class

Traditional chassis with a valid "MINI KART" homologation approved by ASNs members of the FIA Karting and in compliance with CIK prescriptions requirements.

5.2.2.1 Definition of the chassis

Chassis must be in compliance with the following

- Traditional chassis with a valid "MINI KART" homologation approved by ASNs members of the CIK-FIA and in compliance with FIA Karting prescriptions.

- Rear shaft max. diameter: 30mm
- Wheelbase 900/950mm (+/-5mm)
- Rear track width max. 115cm
- Ceramic ball bearings are forbidden
- Mechanical or hydraulic brakes
- Front brakes forbidden
- Steel or cast iron brake discs (Aluminium/Ceramic/Carbon are forbidden)
- Aluminium or magnesium wheels allowed
- Rear wheel protection must be CIK homologated
- Full chain guard is mandatory
- Chassis protection are allowed as long as they are made of strong material and do not provide any advantage
- 5.3 Amount of Equipment (Chassis)

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Drivers will be allowed one (1) chassis only. However if damage occurs to a chassis previously scrutinized for the Event, and if in the opinion of the Scrutineer it is not practical to repair in time, one alternative chassis of the same make and model as the damaged chassis may be scrutinized, in order to continue the Event.

5.4 <u>Amount of Equipment (Engines)</u>

Only 2 (two) engine are allowed for each driver and category for Scrutineering and use per event.

5.5 <u>Fuel and Oil</u>

- 5.5.1 The organizer will supply the fuel for the competitors on the race day.
- 5.5.2 Fuel will be 95 octane supplied by local pumps, premixed at 4% with Motul Grand Prix 2T.
- 5.5.3 Each competitor must hand in his fuel tank empty to the organizers during scrutineering.
- 5.5.4 The organizers will fill up the tank to the mark set by the competitor.
- 5.5.5 After each run, the competitor must hand the fuel tank back to the organizers before leaving the parc-ferme area.
- 5.5.6 The competitor will get back the fuel tank going in to the pregrid area.
- 5.5.7 It is forbidden to add any liquid and/or power-boosting chemicals into the petrol.
- 5.5.8 The volume of the fuel in the tank must be over or equal to 1.5 litres at all times. (except Mini)
- 5.5.9 The Scrutineers, following the decision of the Stewards, have the right to change/replace any driver's petrol at their discretion, at any time during the official heats.
- 5.5.10 Evaluation of the fuel at the racetrack will be made with one or all of the following test devices:
 - a. Dynatron DT- 47 Fuel Meter Test
 - b. Specific Gravity Test
 - c. Water Solubility Test
- 5.5.11 If non-conformity is ascertained, further tests will be conducted at the cost of the Entrant/Driver. An invoice will be provided.

5.6 <u>Lubricant</u>

The official oil for the IAME Series KSA is the FIA Karting approved Motul Grand Prix 2T

5.7 <u>Tires</u> 5.7.1 Dry T

5.7.1 Dry Tires			
Category	Tire Make	Tire Model	Size
Mini		K1D-M	Front: 10 x 4.00-5
IVIIII	Kernet Desing Tire	KID-IWI	Rear: 11 x 5.00-5
Junior	Komet Racing Tire	К2Н	Front: 10 x 4.60-5
Senior		K2H	Rear: 11 x 7.10-5

5.7.2 Wet Tires

Category	Tire Make	Tire Model	Size
Mini		K1D-W	Front: 10×4.00-5
WIITH	Kanat Desing Tim		Rear: 11×5.00-5
Junior	Komet Racing Tire	K1W	Front: 10×4.20-5
Senior			Rear: 11×6.00-5

5.7.3 <u>Tires Availability</u>

Tires needed for free practice are available through The Track Jeddah.

5.8 Racing Numbers

Racing numbers must comply with the provisions of Article 2.24 of the FIA Karting Technical Regulations. The numbers shall be black (without shadow and colored stripes) on a clear yellow background, and they shall be at least 15 cm high and have a 2 cm thick stroke and represented with an Arial type or similar font. The competition number shall be bordered by a yellow background of 1 cm minimum. They must be fitted before free practice and must be clearly visible during the whole race event on both front and rear and on both sides towards the rear of the bodywork. Damaged numbers and I.D must be replaced regularly.

5.9 Driver Name and Nationality (Optional)

Display of Driver Name is optional. Should the driver wish to display his name and nationality on the kart, the Driver's name and the flag of his nationality (The flag displayed must be as per the nationality of the License) shall be in the fore part of the lateral bodywork. The minimum height of the flag and the letters of the name shall be 3 cm.



Round 1 Round 2 Round 3 Round 4 Round 5 Round 6 Round 7

TECHNICAL REGULATIONS PART 2 OF 2 (ENGINES) (ARTICLE 6-10)

Article 6. ENGINES

The FIA Karting Technical regulation also applies for the IAME Series KSA. The English text is the authentic version. The Track Jeddah reserves the right to issue additional statements concerning the Technical Regulations (previously approved by the ASN proposing the series and the FIA Karting) from time to time following the agreement of the ASN presenting the series, all such statements will be issued to All registered competitors by way of Competitors Bulletins at the race meeting, and/or posted to the email address detailed on the Event Registration Form.

6.1 <u>Technical Regulations</u>

All Technical Regulations available on: www.thetrackjeddah.com

Article 7 IAME X30 125cc RL TaG – X30 JUNIOR / SENIOR

Any modification on the engine and its accessories, if not expressly authorized, is forbidden. IAME considers as modifications any action changing the initial aspect and dimensions of an original part. Any modification and/or installation having as a consequence to alter a dimension and/or its control possibility is strictly forbidden. The Entrant is liable for the conformity of their equipment.

- 7.1 The following original homologation forms of the engine are the integral parts of the technical regulations:
- 7.1.1 «254W» Parilla 125cc X30 LIMIT. 16000
- 7.1.2 «348B» Carburettor Tillotson HW27-A and «293E» Carburettor TRYTON HB27-C 26mm
- 7.1.3 «254S» Parilla 125cc X30 LIMIT. 16000 Valid for old Exhaust Plant/Inlet Silencer only (pages 5 and 24)
- 7.2 Only the IAME X30 125cc-RL-TaG, original and strictly in compliance with the manufacturer's technical form (technical features, sizes, weights, diagrams with the tolerances prescribed by the manufacturer) is admitted. The pictures on the original homologation forms are as well valid to identify the engine and the parts.
- 7.3 The engines must be provided with their original serial number. No modification, improvement, polishing, addition or removal of material of any engine part is allowed. Each engine internal or external part has to be installed in its original position and functioning according to the original design specs.

IMPORTANT: The tolerances reported on the homologation forms are necessary to comprise all the machining, assembling and settling tolerances. Nevertheless, the Entrant is absolutely not allowed to make any intervention on the engine, even if the characteristic dimensions after his intervention will still be within the prescribed tolerances.

- 7.4.1 Any tuning is forbidden: the maximum and minimum allowed values and the volume of the combustion chamber have to be measured according to the FIA Karting Technical Regulations.
- 7.5 <u>Diagrams and Volume Chart: IAME X30</u> Refer to Homologation form « 254W »
- 7.6 Cylinder Head

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- 7.6.1 The cylinder head has to be strictly original. Only the thread repairing by means of an M14 x1,25 helicoi of the same length as the original thread is allowed. The sparkplug body tightened on the cylinder head must not protrude from the upper part of the combustion chamber dome.
- 7.6.2 The squish (distance between piston and the cylinder head) with the engine technical form prescriptions at all points. The thickness of the tin wire (50% tin minimum.) used for the squish measurement must have a 1,5mm diameter. Measurements must be taken with the engine in racing conditions at any time during the event. The original IAME gauge n. ATT-025/1 is the reference to measure the cylinder head profile. The gauge shape must match with the dome profile, the squish area and the gasket plane.

7.7 <u>Cylinder</u>

Only the original cylinder can be employed. Polishing, sandblasting, trimming or adjustments are not allowed. Only reboring is allowed. In case of doubt, the shape and the height of the transfers have to be compared to the cylinder of the sample engine. No heat treatment or surface treatment is allowed. The diagram adjustment is allowed only by means of the cylinder gasket replacement. Only original gaskets are allowed. No head gasket is admitted. The original IAME gauge n. ATT-025/2 is the reference to measure the cylinder transfers profile. The original IAME gauge n. ATT-035/1 is the reference to carry a visual check of the ports.

7.8 <u>Crankcase, Crankshaft, Con-Rod, Crankpin</u>

Strictly original and without any modification.

The original IAME gauge ATT-035/3 is the reference to check the reed block housing plane

The original IAME gauge ATT-035/4 is the reference to check the distance between the indexing pins of the cylinder The original IAME gauge ATT-035/5 is the reference to check the height of the cylinder base plane

Only original big end cage (X30125431), small end cage (E-10440/E-10441) and original washers (X30125436/X30125436EX) allowed.

Oil seals must be installed in the correct position, concave side facing inside the crankcase.

7.9 <u>Bearings</u>

Only crankshaft bearings 6206 C4 and balance shaft 6202 C3/C4/C4H and 6005 C3/C4 steel ball and polyamide cage are allowed.

Oblique contact prohibited. Ceramic balls prohibited.

The bearings must be mounted with balls visible from the inside of the crankcase.

All bearings not reporting the correct and clearly visible classification number, as described in the present regulations, are expressively forbidden.

The use of spacer shims behind the bearings is allowed to obtain the correct axial clearance.

All internal parts of the engine must be of manufacturer origin, the same number as the assembly of the factory and mounted in the same direction.

7.10 Piston, Ring and Pin

Strictly original without any modification and in compliance with the engine technical form. The IAME original gauge ATT-035/2 is the reference to check the piston head shape.

7.11 <u>Reed Block</u>

Strictly original without any modification. No gasket planes machining is allowed. Free screws. Original reed valve cover without any modification is allowed. Reed block/crankcase gasket thickness is 1mm (admitted tolerance +/- 0.3mm). Conveyor/reed block gasket thickness is 0.8mm (admitted tolerance +/- 0.3mm).

7.12 <u>Reed Petals</u>

Only fiberglass (min. thickness 0.30mm) or carbon fibre (min. thickness 0.24mm) original IAME marked reed petals are allowed. Mixing of carbon fibre and fibreglass petals is forbidden.

7.13 <u>Carburettor</u>

7.13.1 Carburettor Tillotson HW27-A & Carburettor Tryton HB27-C 26mm Carburettor positioning (i.e. with pump in upper or in lower position) is free. Carburettor gasket thickness is 1 mm (admitted tolerance +/- 0.3mm). Any injection and/or spraying system is forbidden.

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In case of doubt the carburetor must be compared to the sample carburettor.

7.14 <u>Clutch</u>

The centrifugal clutch must engage at max. 4.000 RPM moving the kart with driver on board and in racing conditions. The clutch must be completely triggered at max. 6.000 RPM in any condition, this measurement can eventually be checked with proper instruments.

Each driver will be responsible for the wear status of the clutch padding material and friction parts cleaning, since the proper clutch operation might be checked at any moment of the event, and even after each phase. The original IAME gauge ATT-047/4 is the reference to check the clutch drum. The tool must not enter into the clutch drum in perpendicular position respect to the clutch drum axis.

7.15 Ignition

- 7.15.1 Only original ignitions, either Digital "K" Selettra or Selettra "S" or Digital PVL systems are allowed, without any modification. Scrutineers, following a decision of the Stewards, have the right to ask for the replacement of the whole ignition system or any part thereof at any moment before starting the race. The organizer will not be liable for any eventual breakdown occurred after the replacement.
- 7.15.2 Only the electronic CDI box type "C" (16000 RPM) is allowed and must be fixed on the chassis or on the engine or on the engine (plant Digital S) The markings on the electronic box are compulsory and must be clearly visible without disassembling the electronic box. Covering with adhesive or masking tape is forbidden.

Modifications on the stator fixing, the shape and thickness of the rotor key and the rotor and crankshaft keyways are forbidden.

The IAME original gauge ATT-035/7 is the reference to check the correct position of the phase reference marking on the rotor.

The battery must be fixed to the chassis and always connected to the ignition system.

7.16 Sparkplug

- 7.16.1 Only the following NGK sparkplugs, strictly original and without any modification, are allowed: BR9EG BR10EG
- 7.16.2 The sparkplug must be installed with its original gasket.
- 7.16.3 The insulator must not exceed the sparkplug body and the length of the sparkplug body itself must be max. 18,5 mm.

7.17 <u>Exhaust</u>

- 7.17.1 Only original IAME exhaust are allowed, both old and new types. Part number X30125718 & X30125715
- 7.17.2 Senior exhaust must be equipped with exhaust pipe X30125365 for old type or X30125370 for new type.
- 7.17.3 Junior exhaust must be equipped with exhaust pipe X30125366 for old type or X30125370J for new type.

7.18 <u>Cooling</u>

Maximum radiator size 410mm x 230mm.

Aluminium & Plastic water pumps are allowed.

The number of radiator support brackets is not limited.

Only simple or by pass original IAME thermostats are allowed and their use is optional.

Only water with no other additive is allowed for cooling.

Radiators shields, either adhesive or mechanic are allowed but should not be removable when the kart is in motion. Water pump driving belt type is free. Belt must operate on the water pump pulley.

7.19 <u>Starting</u>

The engine is provided with an on board electric starter. The original on board starting system has to be installed with all its components and properly connected.

7.20 Sprockets

Only Z10 – Z11 – Z12 sprockets are admitted.

7.21 Inspections

7.21.1 The engine technical inspection is performed by Scrutineers. The Scrutineers have the right to inspect any part to the point that it can no longer be used. In the case that the inspected item is found to be conforming it will be replaced to the driver at no cost. Any part found to be non-conforming, will not be refunded.

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- 7.21.2 At any moment, the Scrutineers, following a decision of the Stewards, have the right to replace any part, any accessory or even the entire engine.
- 7.21.3 The technical forms are the main comparison reference for Scrutineers. In case of doubts on the engine parts conformity, the comparison with the sample engine will be the definitive probating element.

Article 8 IAME X30 Water Swift 60cc TaG – (Mini Category)

Any modification on the engine and its accessories, if not expressly authorized, is forbidden. IAME considers as modifications any action changing the initial aspect and dimensions of an original part. Any modification and/or installation having as a consequence to alter a dimension and/or its control possibility are strictly forbidden. Polishing, sandblasting, trimming or adjustments are not allowed. No heat treatment or surface treatment is allowed. The Entrant is liable for the conformity of its own equipment. Any tuning is forbidden: the maximum and minimum allowed values and the volume of the combustion chamber have to be measured according to the procedure described on the CIK Technical Regulations.

- 8.1 The following original homologation forms of the engine:
- 8.1.1 «364F» IAME X30 WATER SWIFT 60cc RL TaG
- 8.2 Only the IAME X30 WATERSWIFT 60cc RL TaG: original and strictly in compliance with the manufacturer's technical form (technical features, sizes, weights, diagrams with the tolerances prescribed by the manufacturer) is permitted. The pictures on the original homologation forms are as well valid to identify the engine and the parts.
- 8.3 The engines must be provided with their original serial number. No modification, improvement, polishing, addition or removal of material of any engine part is allowed. Each engine internal or external part has to be installed in its original position and functioning according to the original design specification.
- 8.4 The tolerances reported on the homologation forms are necessary to comprise all the machining, assembling and settling tolerances. Nevertheless, the Entrant is absolutely not allowed to make any intervention on the engine, even if the characteristic dimensions after his intervention will still be within the prescribed tolerances.
- 8.5 Any tuning is forbidden: the maximum and minimum allowed values and the volume of the combustion chamber have to be measured according to the CIK Technical Regulations.
- 8.6 In any moment, the technical officials, following a decision of the Stewards, have the right to replace any part, any accessory or even the complete engine.

8.7 <u>DIAGRAMS TABLE</u>:

Refer to technical form of the engine

8.8 <u>Cylinder Head</u>:

- 8.8.1 Strictly original. The sparkplug body tightened on the cylinder head must not protrude from the upper part of the combustion chamber dome.
- 8.8.2 The squish minimum value must be as prescribed on the engine technical form. The thickness of the tin wire (50% tin minimum.) used for the squish measurement must have a 1,5mm diameter. The original IAME gauge n. 10215 is the reference to check the cylinder head profile conformity. The gauge shape must match with the dome profile, the squish area and the gasket plane.

8.9 <u>Cylinder</u>:

Only the original cylinder can be employed. Polishing, sandblasting, trimming or adjustments are not allowed. Only re-boring is allowed. In case of doubt, the shape and the height of the transfers have to be compared to the cylinder of the sample engine. No heat treatment or surface treatment is allowed. The diagram adjustment is allowed only by means of the cylinder gasket replacement. Only one cylinder gasket, identical to the original one (0.40mm +/- 0.05 mm) is admitted. No head gasket is admitted. The original IAME gauge n. ATT-005 is the reference to measure the distance of the upper edge of the ports from the cylinder head plane.

8.10 Crankcase, Crankshaft, Con-rod, Crankpin

Only original parts are allowed, without any modification. Only strictly original big end cage (IAME B-10431), original washers (IAME E-38436) and original small end cage (IAME A-60440) are allowed. Oil seals must be installed in the correct position, cave side looking inside the crankcase

8.11 Bearings

Strictly original: crankshaft ball bearings p.n. IAME: 10400-D (6204 C4). Ball-bearing with oblique contacts are forbidden. Only bearings with steel balls and rings are authorized. (Ceramic is forbidden). Shims can be added behind the main roller bearings to reach the correct axial play. All bearings not reporting the correct and clearly visible classification number, as described in the present regulations, are expressively forbidden.

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8.12 Piston, Ring and Pin

Strictly original without any modification and in compliance with the engine technical form.

8.13 **Carburettor**

Only the Tillotson HW-31A carburettor supplied together with the engine in its original configuration (same brand, same model, same reference) is admitted.

- Only the accessories supplied together with the original carburettor are allowed; diaphragms, diaphragm gaskets and the needle 8.13.1 valve spring are free. Carburettor positioning (i.e. with pump in upper or in lower position) is free. All carburettor spacers and gaskets are mandatory and must be in compliance and in the same order as indicated on the technical form.
- 8.13.2 In case of doubt the carburettor must be compared to the sample carburettor.
- Inlet silencer strictly original as supplied together with the engine (same brand, same model, same reference) that is IAME mod. 8.13.3 MINI SWIFT with CSAI 01/SA/14 homologation. Inlet hose max. internal diameter must be 22mm. Protective grids are optional.
- 8.13.4 The rubber manifold with air filter connecting the inlet silencer to the carburettor is mandatory, it must installed and in compliance with the homologation form.
- 8.13.5 Any injection and/or spraying system is forbidden.

8.14 <u>Clutch</u>

The engine is supplied with a dry centrifugal clutch system. Any intervention intended to extend the sliding of the clutch hub beyond the prescribed limit is strictly forbidden. The centrifugal clutch must engage at max. 4.500 RPM moving the kart with driver on board and in racing conditions. The clutch must be completely engaged at max. 6.500 RPM in any condition, this measurement can eventually be checked with proper instruments. Each driver is responsible for the wear status of the clutch padding material and friction parts cleaning, since the proper clutch operation might be checked at any moment of the event, and even after each phase.

8.15 Ignition

Original ignition only, that is SELETTRA p.n. IAME A-61951 and coil p.n. IAME A-61955. Without any modification.

- 8.15.1 Scrutineers, following a decision of the Stewards have the right to ask for the replacement of the whole ignition system or part thereof at any moment before starting the race. The organizer will not be liable for any eventual breakdown occurred after the replacement.
- The battery must be fixed to the chassis and always connected to the ignition system. 8.15.2

8.16 <u>Sparkplug</u>

- 8.16.1 Only the following NGK sparkplugs, strictly original and without any modification, are allowed: BR9EG - BR10EG
- 8.16.2 The sparkplug must be installed with its original gasket.
- 8.16.3 The insulator must not exceed the sparkplug body and the length of the sparkplug body itself must be max. 18.5 mm.

8.17 Exhaust

Only the original exhaust pipe is allowed as supplied with the engine and must be kept strictly original and in compliance with the homologation form.

- No modifications in structure or in dimensions are allowed. 8.17.1
- The complete sealing of the exhaust gas between the cylinder and the exhaust manifold must be guaranteed at all 8.17.2 times. The control of the sealing of the exhaust gas can be performed at any time through occlusion of the outlet hole of the exhaust header, filling of the exhaust header with liquid through the exhaust port and check for leaks. The proper sealing of the exhaust system is at Driver's responsibility.
- 8.17.3 The exhaust manifold (Ø28,5mm) must be strictly original and in compliance with the technical form. Only one original exhaust gasket is allowed
- 8.17.4 Exhaust temperature probes are not allowed.

8.18 Cooling

The cooling system must be in its original configuration: only one IAME original radiator (p.n. T-8601), only one IAME original simple water pump (black or blue) are allowed and in compliance with the homologation form.

- 8.18.1 Only simple or by pass original IAME thermostats are allowed and their use is optional.
- 8.18.2 Cooling only by water, no other additives allowed.
- 8.18.3 Radiators shields, either adhesive or mechanic are allowed but should not be removable when the kart is in motion.
- 8.18.4 The use of the original water pump pulley activating the water pump through O rings is mandatory.
- 8.19 **Starting**

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The engine is provided with an on board electric starter. The original on board starting system can be installed with all its components and properly connected.

8.19.1 The use of an external starter is authorized only in the event that a mechanical or electrical problem prevents the starting system operation.

8.20 Sprockets

Only IAME original clutch drums with built-in Z10 or Z11 sprockets are allowed.

8.21 Inspections

- 8.21.1 The engine technical inspection is performed by the Scrutineers. The Scrutineers have the right to inspect any part to the point that it can no longer be employed. If this is the event, the inspected part that comes out to be regular will be replaced to the driver at no cost. Any part found out irregular, will not be refunded
- 8.21.2 In any moment, the Scrutineers, following a decision of the Stewards, have the right to replace any part, any accessory or even the entire engine
- 8.21.3 The technical forms are the main comparison reference for Scrutineers. In case of doubts on the engine parts conformity, the comparison with the sample engine will be the definitive probating element.