



SIC NATIONAL KARTING SERIES 2019 TECHNICAL REGULATIONS v1.0, 170719

NAME OF EVENT: SIC NATIONAL KARTING SERIES 2019
ORGANISER: Langkawi Motorsport Club
PROMOTER: Sepang International Circuit, AutoInc Pte Ltd

CONTENTS

1. GENERAL INFORMATION
2. INITIAL SCRUTINEERING AND INSPECTIONS
3. ELIGIBLE EQUIPMENT
4. MINIMUM WEIGHT
5. DIMENSIONS, BODYWORK, REAR WHEEL PROTECTION
6. FRONT BRAKES
7. FRONT FAIRING MOUNTING KIT
8. SPORT ACTION CAMERAS
9. REAR SHAFT
10. BATTERY AND BATTERY HOLDER
11. CADET CATEGORY – WHEELS, RIMS, SEAT STAYS
12. TYRES
13. PETROL AND OIL
14. ENGINES – GENERAL REGULATIONS
15. IAME X30 WATER SWIFT 60CC
16. IAME X30 125CC RL TAG – X30

1. GENERAL INFORMATION

- 1.1. Classification and Definition: As per Article 1.2 of the CIK-FIA Technical Regulations
- 1.2. General Prescriptions: As per Article 2 of the CIK-FIA Technical Regulations
- 1.3. Kart and Equipment Safety: As per Article 3 of the CIK-FIA Technical Regulations
- 1.4. General Prescriptions for Group 2 Karts: Article 5.1 of the CIK-FIA Technical Regulations

2. INITIAL SCRUTINEERING AND INSPECTIONS

- 2.1. Initial Scrutineering will be carried out as per the time indicated on the Official Programme and is mandatory. Drivers may be required to provide the relevant homologation forms for the equipment submitted. It must be possible to identify the equipment submitted using the technical descriptions (drawings, dimensions, etc.) on the relevant homologation form.
- 2.2. The Scrutineers have the right to inspect, impound, or replace the equipment submitted for Initial Scrutineering at any time during the Event, regardless of whether the equipment has been used.
 - 2.2.1. Impounded equipment remains subject to the Supplementary Technical Regulations and may undergo further inspection.
 - 2.2.2. Equipment may be inspected to the point that it can no longer be used. In such cases, equipment found to be in conformity will be replaced at no cost. Non-conforming equipment will not be replaced.
 - 2.2.3. The engine homologation forms are the main reference material for Scrutineers. In case of any doubt, a comparison with the sample engine or accessories will be the definitive element establishing conformity.
- 2.3. The Scrutineers may decree the delivery of an engine or part thereof to the manufacturer IAME S.p.A. for an official inspection and judgement. Any costs incurred shall be borne by the Driver in the event of nonconformity.
- 2.4. In any moment, the Technical Officials have the right to replace any part, any accessory or even the entire engine. IAME Series Asia, while guaranteeing the efficiency and operation of the supplied material, will in no case be held liable for any malfunction occurring as a result of the replacement.
- 2.5. Controls can be carried on the engines, in race conditions, at any time of the Event.

3. ELIGIBLE EQUIPMENT

- 3.1. Each Driver is entitled to submit, per category entered, the following equipment during Initial Scrutineering for his mandatory personal use in the relevant category beginning from Official Practice.

Category	Chassis		Engines	
	Qty	Remarks	Qty	Remarks
SIC Rookie & Cadet	1	Any valid homologation with homologation plate presented	2	Of the correct model for the Driver's category.
Other		Valid CIK-FIA homologation		

- 3.2. If damage occurs to a chassis or an engine previously submitted for Initial Scrutineering, and if it is the opinion of the Scrutineers that the damage was the result of an accident and that it is impractical for such damage to be repaired in time, one alternative engine of the correct model or chassis of the same make may be scrutinized, at the discretion of the Stewards and Scrutineers.
- 3.3. Only engines bearing markings from the Asian Zone is accepted. The markings are: SEA, SGP, MY, RL, 17, PRC, JPN, IDN, etc.

4. MINIMUM WEIGHT

Category	Minimum Weight (kg)
SIC Rookie	110
Cadet	
Junior	145
Senior	158

5. DIMENSIONS, BODYWORK, REAR WHEEL PROTECTION

5.1. With reference to Article 2.4.1 and Article 2.5.3 of the CIK-FIA Technical Regulations and CIK-FIA Technical Drawing 2b:

Category	Maximum Width (cm)		Additional Requirement
	Overall Kart	Rear Wheel Protection	
SIC Rookie & Cadet	110	-	The rear wheel protection must at no time protrude beyond the external plane of the rear wheels.
Other	140	134	

6. FRONT BRAKES

6.1. Front brakes are not allowed.

7. FRONT FAIRING MOUNTING KIT

7.1. The use of a homologated front fairing and mounting kit as per the bodywork homologation period 2015 – 2020 is mandatory.

7.2.

Clearance Between	Minimum (mm)
Top and bottom front bumper tubes, measured between the front fairing mounting brackets	60
Front bumper (upper and lower tubes) and the front fairing (CIK Technical Drawing No. 2c)	27

7.3. From Qualifying until the Final, each kart must enter the Start Servicing Park with the front fairing fully detached. The Mechanic or the Driver himself must mount the front fairing in the Start Servicing Park under the supervision of a Scrutineer.

7.4. During each Race it is only allowed to restore the front fairing to the correct position in the Repair Area.

7.5. The black flag with an orange disc will not be shown to Drivers with front fairings in an incorrect position.

8. SPORT ACTION CAMERAS

8.1. Sport action cameras are not allowed.

9. REAR SHAFT

9.1. The rear shaft must be as homologated by CIK and identifiable as such.

9.2. With reference to Article 2.3.4.3 of the CIK-FIA Technical Regulations:

9.2.1. The rear shaft (axle) for the SIC Rookie and Cadet categories must have a maximum external diameter of 30mm and a minimum wall thickness at all points (except in key housings) as per Article 2.3.4.3 of the CIK-FIA Technical Regulations.

9.2.2. The rear shaft (axle) for other categories must have a maximum external diameter of 50mm and a minimum wall thickness at all points (except in key housings) as per Article 2.3.4.3 of the CIK-FIA Technical Regulations.

10. BATTERY AND BATTERY HOLDER

10.1. Lithium polymer batteries are allowed.

10.2. Non-original battery holders are allowed.

11. CADET CATEGORY – WHEELS, RIMS, SEAT STAYS

11.1. Front hubs are allowed in the Cadet Category.

11.2. Magnesium wheels are allowed in the Cadet Category.

11.3. Seat stays are allowed in the Cadet Category.

12. TYRES

- 12.1. There will be no impounding of tyres.
- 12.2. Only Komet tyres may be used beginning from Free Practice.
- 12.3. Each Driver must submit the following unused "Race Tyres" during Tyres Registration, to be mandatorily used in the Qualifying, Heats, Pre-Final, and Final. Race Tyres may not be used in Free Practice, Official Practice, and Warm Up.
- 12.4. Defective Race Tyres may be submitted to the Scrutineers for substitution at their discretion.
- 12.5.

Category	Dry	Wet
	Round 1 Quantity: 2 sets Must be purchased in the form of vouchers and exchanged during Tyres Registration.	Quantity: 2 sets (1st set is mandatory, 2nd set is optional) Driver's own stock is accepted.
SIC Rookie Cadet	Komet K1D-M Front Size: 10 x 4.00-5, Rear Size: 11 x 5.00-5	Komet K1D-W Front Size: 10 x 4.00-5, Rear Size: 11 x 5.00-5
Other	Komet K1H Front size: 10 x 4.60-5, Rear Size: 11 x 7.10-5	Komet K1W Front size: 10 x 4.20-5, Rear size: 11 x 6.00-5

- 12.6. Running in of Wet Tyres
Running in of wet tyres on a dry track is prohibited.
- 12.7. Modification of Tyres
 - 12.7.1. Any modification, heating, cooling, remoulding, or treating of the tyres by any method is forbidden.
 - 12.7.2. The measuring device MiniRAE Lite shall be used to determine conformity with the Technical Regulations. The VOC measurement of the tyres may not exceed a maximum ppm limiting value of 15 under any circumstances. Pollution of the tyres, e.g. by chain spray, must be avoided as it may result in the limiting value being exceeded.
 - 12.7.3. Should a check at the Start Servicing Park establish nonconformity with the Technical Regulations, the nonconforming tyres will be confiscated. No additional tyres will be provided or sold to the Driver in such cases.
 - 12.7.4. Should a check carried out after a Race establish nonconformity with the Technical Regulations, the Driver may be excluded from the relevant Race.
 - 12.7.5. No Protests and Appeals against these procedures are allowed.

13. PETROL AND OIL

- 13.1. The requirements specified in these Regulations are intended to ensure the use of fuels predominantly composed of compounds normally found in commercial fuel, and to forbid the use of specific power-boosting chemical compounds.
- 13.2. There will be no impounding of fuel.
- 13.3. Official Pump
Only petrol purchased from the Official Pump is authorised for use in the Event. It will be each competitor's responsibility to purchase their own petrol from the Official Pump designated in the Additional Supplementary Regulations.
- 13.4. Petrol Details
- 13.4.1. It is forbidden to add any liquids, power-boosting chemicals, racing fuels, or additives into the petrol.
- 13.4.2. The oil mixture ratio for the SIC Rookie and Cadet categories shall be 3% to 5%.
- 13.4.3. The oil mixture ratio for all other categories shall be 4% to 6%.
- 13.4.4. The volume of the fuel in the tank must be over or equal to 1.5 litres at all times.
- 13.5. Scrutineering of Petrol
- 13.5.1. Petrol will be scrutineered against a sample obtained from the Official Pump.
- 13.5.2. Evaluation of petrol will be made with one or more of the following tests or devices: Digatron Fuel Meter test, Specific Gravity Test, and Water Solubility Test.
- 13.5.3. If a non-conformity is ascertained, further tests may be conducted at the cost of the Entrant/Driver.
- 13.5.4. The Scrutineers have the right to replace a driver's petrol at any time during the Event, at no cost to the Driver.
- 13.6. The official oil for the Event (CIK-FIA approved semi-synthetic 2-stroke oil) is the Wladoil Racing K-2T, though other Homologated Oils are also allowed.

14. ENGINES – GENERAL REGULATIONS

Category	Engine	Homologation Forms
SIC Rookie	IAME X30 Water Swift 60cc	364C IAME X30 Water Swift 60cc with Tillotson HW-31A
Cadet	IAME X30 Water Swift 60cc	364C IAME X30 Water Swift 60cc with Tillotson HW-31A
Junior	IAME X30 125cc	254T IAME X30 125cc with Tillotson HW-27A
Senior	IAME X30 125cc	254T IAME X30 125cc with Tillotson HW-27A

- 14.1. The Driver is liable for the conformity of his equipment.
- 14.2. Engines must be provided with their original serial number.
- 14.3. Engines must be original and strictly in compliance with the manufacturer's technical form (technical features, sizes, weights, diagrams with the tolerances prescribed by the manufacturer).
- 14.4. The relevant homologation forms, available on the Website, are an integral part of these Supplementary Regulations.
- 14.5. Tuning, improvement, modification, installation, adjunction, polishing, sandblasting, trimming, adjustment, heat treatment, surface treatment, addition or removal of material, or action having as a consequence the alteration of a dimension, aspect, or control possibility, to or of the original engine or accessories is forbidden unless expressly authorised.
- 14.6. Engines and parts thereof have to be installed in their original positions and functioning according to their original design specifications.
- 14.7. The tolerances reported on the engine homologation forms are necessary in comprising all machining, assembly and settling tolerances. Nevertheless, no intervention is allowed on the engine, regardless of whether the modified dimensions remain within prescribed tolerances.
- 14.8. The maximum and minimum allowed values and volume of the combustion chamber shall be measured according to the CIK Technical Regulations.

15. IAME X30 WATER SWIFT 60CC

15.1. Diagrams and Volume Chart

15.1.1. As per homologation form.

15.2. Cylinder Head

15.2.1. The cylinder head must be original.

15.2.2. The sparkplug body tightened on the cylinder head must not protrude from the upper part of the combustion chamber dome.

15.2.3. The squish must be in compliance with the homologation form. The tin wire (minimum 50% tin) 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.

15.2.4. The original IAME gauge n. 10215 is the reference to measure the cylinder head profile conformity. The gauge shape must match with the dome profile, squish area and gasket plane.

15.3. Cylinder

15.3.1. The cylinder must be original.

15.3.2. Only re-boring is allowed.

15.3.3. In case of doubt, the shape and height of the transfers shall be compared to a cylinder from the sample engine.

15.3.4. A diagram adjustment is allowed only by means of a cylinder gasket replacement. Only one-cylinder gasket, identical to the original (0.40mm ± 0.05 mm) is admitted.

15.3.5. No head gasket is admitted.

15.3.6. 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.

15.4. Crankcase, Crankshaft, Con-rod, Crankpin

15.4.1. Parts must be original and without any modification. Only the original big end cage (IAME B-10431), original washers (IAME E-38436) and original small end cage (IAME A-60440) are allowed.

15.5. Bearings

15.5.1. Only original crankshaft ball bearings (IAME p.n. 10400-D 6204 C4) are allowed.

15.5.2. Ball-bearings with oblique contacts are forbidden.

15.5.3. Only bearings with steel balls and rings are allowed. Ceramic is forbidden.

15.6. Piston, Ring and Pin

15.6.1. Strictly original without any modification and in compliance with the homologation form.

15.7. Carburettor

15.7.1. Only the Tillotson HW-31A carburettor (Venturi max. diam. 17.15mm) 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 and represented on the homologation forms are allowed; needle valve spring is free.

15.7.2. 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.

15.7.3. The inlet silencer must be original as supplied with the engine (same brand, same model, and same reference - IAME mod. MINI SWIFT with CSAI 01/SA/14 homologation) with max 22mm internal diameter intake tubes. Protective grids are optional.

15.7.4. The rubber manifold with air filter connecting the inlet silencer to the carburettor is mandatory and must be installed and in compliance with the homologation form.

15.7.5. Any injection and/or spraying system is forbidden.

15.8. Clutch

15.8.1. 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 forbidden.

15.8.2. 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 triggered at max. 6,500 RPM in any condition. This measurement can eventually be checked with proper instruments. The driver is responsible for the wear status of the clutch padding material and cleaning of the friction parts. Proper operation of the clutch might be checked at any time during the event or after each phase.

15.9. Ignition

15.9.1. Only original Selettra ignition (p.n. IAME-61951) and coil (p.n. IAME A-61955) without modification are allowed.

15.9.2. The battery must be fixed to the chassis and connected to the ignition system at all times.

15.10. Sparkplug

- 15.10.1. Only the following NGK sparkplugs, strictly original and without any modification, are allowed: B8EG - B10EG, BR8EG - BR10EG, BR8EIX - BR10EIX, BR8ECMIX – BR10ECMIX, B8ES – B10ES, B8EGV – B10EGV.
- 15.10.2. The sparkplug must be installed with its original gasket.
- 15.10.3. The insulator must not exceed the sparkplug body and the length of the sparkplug body itself must be max. 18.5 mm. (CIK technical regulations appendix 7).
- 15.10.4. The sparkplug cap must be original as delivered with the engine (IAME p.n. 10544).

15.11. Exhaust

- 15.11.1. Only the original muffler and header as supplied with the engine are allowed and must be kept in compliance with the homologation form, therefore no modification in structure or dimensions is allowed.
- 15.11.2. Drilling and welding operations on the muffler are allowed only on the support provided and only for the installation of a temperature probe.
- 15.11.3. The complete sealing of the exhaust gas between the cylinder and the exhaust manifold must be guaranteed at all 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 checking for leaks. The proper sealing of the exhaust system is the Driver's responsibility.
- 15.11.4. The exhaust manifold (Ø28.5mm) must be strictly original and in compliance with the technical form. Only one original exhaust gasket is allowed.

15.12. Differential Reading Between Exhaust and Inlet

- 15.12.1. Checks will be conducted as follows: Install the graduated disc or encoder onto the crankshaft. Insert the feeler gauge (wedge) 0.2 x 5mm at the centre of the inlet port. Rotate the crankshaft counter clockwise (seen from clutch side), and take the piston skirt in contact with the feeler gauge. Set the graduated disc or encoder to zero. Rotate the crankshaft clockwise enough to lift the piston and release the feeler gauge. Rotate the crankshaft counter clockwise to lower the piston until the exhaust port is open. Insert the feeler gauge in the centre of the exhaust port. Rotate the crankshaft clockwise and take the piston ring in contact with the feeler gauge. Check the disc or encoder reading. To be legal it must be 30.0° minimum and 31.0° maximum.

15.13. Differential Reading Between Exhaust and Transfers

- 15.13.1. Checks will be conducted as follows: Install the graduated disc or encoder onto the crankshaft. Insert the feeler gauge (wedge) 0.2 x 5mm at the centre of the exhaust port. Rotate the crankshaft clockwise (seen from clutch side) and take the piston ring in contact with the feeler gauge. Set the graduated disc or encoder to zero. Rotate the crankshaft counter clockwise to lower the piston until the transfer ports are open. Insert the feeler gauge into one of the transfer ports. Rotate the crankshaft clockwise and take the piston ring in contact with the feeler gauge. Check the disc or encoder reading. To be legal it must be minimum 19.5° and maximum 20.5°.

15.14. Cooling

- 15.14.1. The cooling system must be in its original configuration. Only one IAME original radiator (p.n. T-8601) is allowed. Only one simple water pump of any make is allowed. The number of radiator support brackets is not limited. Only simple or bypass IAME original thermostats are allowed and their use is optional. Only water with no additives is allowed for cooling. Radiator shields, either adhesive or mechanical are allowed but should not be removable when the kart is in motion. Water pump hoses are free. The belt can operate with or without the water pump pulley. Water pump pulley is free.

15.15. Starting

- 15.15.1. The engine is provided with an on-board electric starter. The original on-board starting system must be installed and properly connected with all components.
- 15.15.2. The use of an external starter is authorized only in the event that a mechanical or electrical problem prevents the operation of the starting system.

15.16. Sprockets

- 15.16.1. Only IAME original Z10 or Z11 sprockets are admitted.

15.17. This is only applicable to the SIC Rookie Category

- 15.17.1. Only IAME Original Z11 pinion, and sprocket sizes 85, 86, and 87 are admitted.

16. IAME X30 125CC RL TaG – X30

16.1. Diagrams and Volume Chart

16.1.1. As per homologation form.

16.2. Cylinder Head

16.2.1. The cylinder head must be original.

16.2.2. Only thread repairing by means of an M14x1.25 helicoil of the same length as the original thread is allowed.

16.2.3. The sparkplug body tightened on the cylinder head must not protrude from the upper part of the combustion chamber dome.

16.2.4. The squish must be in compliance with the homologation form. The tin wire (minimum 50% tin) 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.

16.2.5. The original IAME gauge n. ATT-025/ is the reference to measure the cylinder head profile conformity. The gauge shape must match with the dome profile, squish area and gasket plane.

16.2.6. The CIK insert body tightened on the cylinder head must not protrude from the upper part of the combustion chamber dome.

16.3. Cylinder

16.3.1. The cylinder must be original.

16.3.2. Only re-boring is allowed.

16.3.3. In case of doubt, the shape and height of the transfers shall be compared to a cylinder from the sample engine.

16.3.4. A diagram adjustment is allowed only by means of a cylinder gasket replacement. The number of cylinder gaskets is not limited. Cylinder gaskets must be original.

16.3.5. No head gasket is admitted.

16.3.6. The original IAME gauge n. ATT-025/2 is the reference to measure the cylinder ports position.

16.3.7. The original IAME gauge n. ATT-035/1 is the reference for a visual check of the ports.

16.3.8. Starting from the serial n. M3521/B3059 the X30 engines are equipped with a marked cylinder, as shown on the homologation form:

16.3.8.1. Engines with serial numbers prior to M3521/B3059 can be equipped with the marked cylinder.

16.3.8.2. Engines with serial numbers subsequent to M3521/B3059 cannot be equipped with the non-marked older cylinder.

16.4. Crankcase, Crankshaft, Con-rod, Crankpin

16.4.1. Parts must be original and without any modification. Only the original big end cage (X30125431), original washers (X30125436) and original small end cage (E-10440) are allowed.

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

16.4.3. The original IAME gauge ATT-035/4 is the reference to check the distance between the indexing pins of the cylinder.

16.4.4. The original IAME gauge ATT-035/5 is the reference to check the height of the cylinder base plane.

16.5. Bearings

16.5.1. Steel and plastic cages are allowed.

16.5.2. Only original crankshaft ball bearings (6206, C3 or C4) and counter balancing shaft ball bearings (6202, C3 or C4 and 6005, C3 or C4) are allowed.

16.5.3. Ball bearings with oblique contacts are forbidden.

16.5.4. Only bearings with steel balls and rings are allowed. Ceramic is forbidden.

16.6. Piston, Ring and Pin

16.6.1. Strictly original without any modification and in compliance with the homologation form.

16.6.2. The IAME original gauge ATT-035/2 is the reference to check the piston head shape.

16.7. Reed Block

16.7.1. Must be strictly original without modification. No gasket planes machining is allowed. Free screws. Only original reed valve cover without modification is allowed.

16.7.2. Reed block/crankcase gasket thickness is 1mm (admitted tolerance +/- 0.3mm).

16.7.3. Conveyor/reed block gasket thickness is 0.8mm (admitted tolerance +/- 0.3mm).

16.8. Reed Petals

16.8.1. Only fibreglass (min. 0.3mm) or carbon fibre (min 0.24mm) original IAME marked reed petals are allowed. Mixing of fibreglass and carbon fibre petals is forbidden.

16.9. Carburettor

- 16.9.1. Only the Tillotson HW-27A 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 and represented on the homologation forms are allowed; needle valve spring is free.
- 16.9.2. Carburettor positioning (i.e. with pump in upper or in lower position) is free. Carburettor gasket thickness is 1 mm (admitted tolerance +/- 0.3mm).
- 16.9.3. The inlet silencer must be original as supplied with the engine (same brand, same model, and same reference) with max 22mm internal diameter intake tubes. Protective grids are optional.
- 16.9.4. The rubber manifold with air filter connecting the inlet silencer to the carburettor is mandatory and must be installed and in compliance with the homologation form.
- 16.9.5. Any injection and/or spraying system is forbidden.
- 16.9.6. The original IAME gauge n. ATT-035/2 is the reference to check the carburettor inlet duct. The gauge shape must match with the inlet profile.

16.10. Clutch

- 16.10.1. 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. The driver is responsible for the wear status of the clutch padding material and cleaning of the friction parts. Proper operation of the clutch might be checked at any time during the event or after each phase.
- 16.10.2. 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 a perpendicular position respective to the clutch drum axis.

16.11. Ignition

- 16.11.1. Only original Selettra Digital K or S ignition systems without modification are allowed.
- 16.11.2. Only the electronic CDI box type C (16000 RPM) is allowed and must be fixed on the chassis or engine. The markings on the electronic box are compulsory and must be clearly visible without disassembly. Obscuring of the markings is forbidden.
- 16.11.3. Modifications to the stator fixing, shape and thickness of the rotor key, and rotor and crankshaft slots are forbidden.
- 16.11.4. The battery must be fixed to the chassis and connected to the ignition system at all times.
- 16.11.5. The IAME original gauge ATT-035/7 is the reference to check the correct position of the phase reference marking on the rotor.

16.12. Sparkplug

- 16.12.1. Only the following NGK sparkplugs, strictly original and without any modification, are allowed: B8EG - B10EG, BR8EG - BR10EG, BR8EIX - BR10EIX, BR8ECMIX - BR10ECMIX, B8ES - B10ES, B8EGV - B10EGV.
- 16.12.2. The sparkplug must be installed with its original gasket.
- 16.12.3. The insulator must not exceed the sparkplug body and the length of the sparkplug body itself must be max. 18.5 mm. (CIK technical regulations appendix 7).
- 16.12.4. The sparkplug cap must be original as delivered with the engine (IAME p.n. 10544).

16.13. Exhaust

- 16.13.1. Only the original muffler and header as supplied with the engine are allowed and must be kept in compliance with the homologation form, therefore no modification in structure or dimensions is allowed. Only the Junior exhaust manifold is allowed, in compliance with the homologation form.
- 16.13.2. Drilling and welding operations on the header are allowed only for the installation of a temperature probe.
- 16.13.3. The complete sealing of the exhaust gas between the cylinder and the exhaust header must be guaranteed at all 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 manifold, filling of the exhaust manifold with liquid through the exhaust port and checking for leaks. The proper sealing of the exhaust system is at Driver's responsibility.
- 16.13.4. One original gasket only between cylinder and exhaust manifold is allowed, the use of the original exhaust spacer is allowed and not mandatory.
- 16.13.5. In all cases the exhaust system must be in compliance with the phonometric measurement.

16.14. Differential Reading Between Exhaust and Transfers

- 16.14.1. Checks will be conducted as follows: Install the graduated disc or encoder onto the crankshaft. Insert the feeler gauge (wedge) 0.2 x 5mm at the centre of the exhaust port. Rotate the crankshaft clockwise (seen from clutch side) and take the piston ring in contact with the feeler gauge. Set the graduated disc or encoder to zero. Rotate the crankshaft counter clockwise to lower the piston until the transfer ports are open. Insert the feeler gauge into one of the transfer ports. Rotate the crankshaft clockwise and take the piston ring in contact with the feeler gauge. Check the disc or encoder reading. To be legal it must be minimum 24° and maximum 25°.

16.15. Cooling

16.15.1. The cooling system must be in its original configuration. Only one IAME original radiator (p.n. T-8000B or T-8001) is allowed. Only one simple water pump of any make is allowed. The number of radiator support brackets is not limited. Only simple or bypass IAME original thermostats are allowed and their use is optional. Only water with no additives is allowed for cooling. Radiator shields, either adhesive or mechanical are allowed but should not be removable when the kart is in motion. Water pump hoses are free. The belt can operate with or without the water pump pulley. Water pump pulley is free.

16.16. Starting

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

16.17. Sprockets

16.17.1. Only IAME original Z10, Z11, Z12 and Z13 sprockets are admitted.