

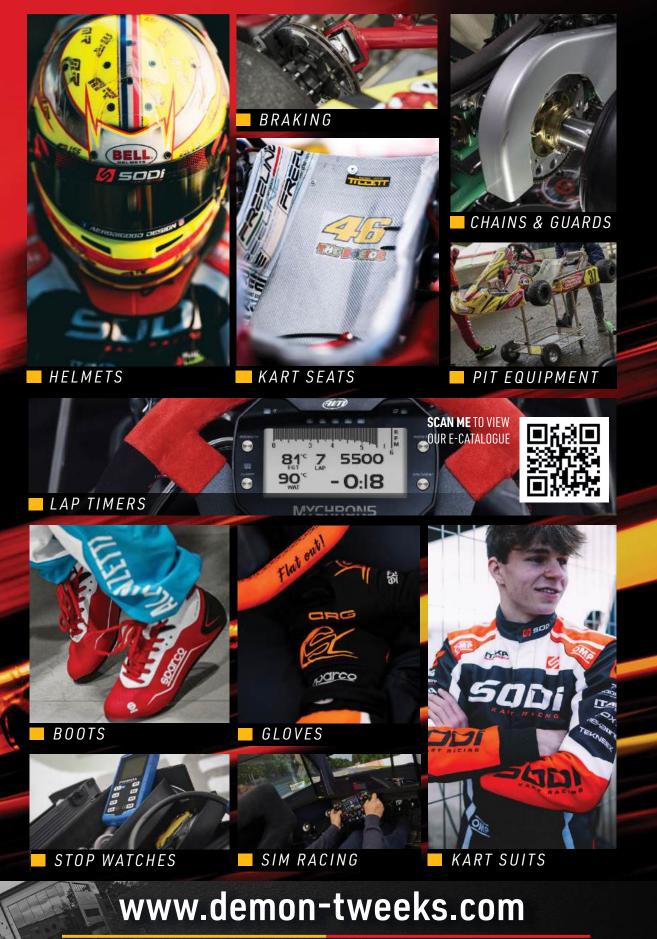
## Karting Yearbook 2025

Version 1.5

#### Contents

Introduction	4
Section A Bambino	8
1.0 MightE Bambino	10
Section B	12
Cadet	12
1.0 Cadet (general regulations)	13
2.0 IAME Water Swift (restricted)	15
3.0 Honda Cadet	18
4.0 Rotax Micro Cadet	19
Section C Inter	23
1.0 Inter (general regulations)	24
2.0 IAME Water Swift	26
3.0 Honda Inter	29
4.0 Rotax Inter	30
5.0 TKM Inter	34
Section D Junior	41
1.0 IAME X30 Junior	42
2.0 Rotax Junior Max	46
3.0 Junior TKM	50
Section E Senior – Non-Gearbox	62
1.0 IAME X30 Senior	63
2.0 Rotax Senior Max	67
3.0 TKM - Extreme (see D3.0)	50
Section F Senior – Gearbox	71
1.0 KZ2	72
2.0 Superkart 250	74
Appendices	78
Appendix 1 – Homologated/registered chassis' and brakes	79
Appendix 2 – Eligible engines (gearbox)	81
Appendix 3 – Silencing	82
Appendix 4 – General Regulations applicable to all Kart Clubs	84
Appendix 5 – ABKC specific General Regulations	89
Appendix 6 – Licensed Kart Tracks	90
Appendix 7 – ARKS Club examiners (as at 01.11.23)	91
Appendix 8 – Kart Classes at a glance	93

# **FOR EVERYTHING KARTING**



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#### Introduction

Welcome to the twenty-eighth (2025) edition of the Motorsport UK Karting Yearbook. Regulation changes from the previous version are highlighted red.

General competition, technical and safety regulations are in the National Competition Rules (NCR) which must be referred to in conjunction with the regulations herein and which takes precedence. Full details of international regulations are contained in the FIA Karting Regulations which should also be referred to for applicable classes. Competitors intending to enter International events or classes should familiarise themselves with the FIA Karting Regulations, which can be accessed at <u>www.fiakarting.com</u>, and ensure up to date compliance.

This document has been compiled using the best available information. The ASN accepts no responsibility for any errors or omissions.

#### **General notes**

- 1. **Silencing.** Sound level requirements for karting in the UK are constantly under review. Competitors should ensure that their equipment conforms to the levels defined in the NCR or as amended by venue local requirements. Where appropriate, additional regulations are given in Appendix 3.
- 2. Weights. All classes show minimum weights and these are defined as the minimum weight for the kart plus driver and equipment (race condition) at any time (see NCR Ch.18 App.8 Art.31). If approval of the ASN is given on application for a Kart Technical Exception (KTE), then Clubs may amend class weight limits upwards in accordance with NCR Ch.18 App.8 Art.31.2.
- **3. Class Regulations.** Queries on the class regulations should be sent in the first instance to the class owner, as shown in the 'Affiliation' section of each class.

Clubs must apply to the ASN for the issue of a KTE for any proposed changes to the published class regulations. The addition of a sub-class within a class is also subject to the approval of the ASN by issuance of a KTE.

All clubs must specify the classes they offer in their supplementary or championship regulations with a reference to the Motorsport UK Karting Yearbook and any other association's regulations, and have a reference to the source of the class regulations if found elsewhere e.g. "TECHNICAL REGULATIONS. Motorsport UK 2025 specific karting technical regulations apply together with the 2025 (insert association) regulations within the 2025 Motorsport UK Karting Yearbook and the SRs for the meeting."

"ELIGIBLE CLASSES: All Motorsport UK Karting Yearbook classes plus 'xx' and 'yy' are offered, except that Formula 'zz' is not offered. The regulations for all classes offered may be found in the 2025 Motorsport UK Karting Yearbook. Additionally, Formula '??' is offered under NCR Ch.18 App.1 Art.1.5, the class regulations are available from: (name and address of class promoter).'

4. Measurements. Where tube dimensions are quoted in metric units, the imperial equivalent is also acceptable.

5. **Categories and Classes ('Box Structure').** The table below details kart race Categories and the Classes available within those Categories.

Classes appearing in the same box (right-hand column) may be combined or run together on the same grid. However, it is stressed that where a Class is to be run off the same grid as another (for example due to low entry), the Classes closest in performance should always be chosen and the Class with slower lap times should always form the rearmost part of the grid.

*Important note:* The ages in the table are lower and upper limits for each Category. Individual Class regulations will define the specific age and licence requirements for entry and exit points within these limits.

Category	Age	Class	
Non-Gearbox:			
Bambino	6-8	MightE Bambino Comer Bambino*	
Cadet	8-12	IAME Gazelle* IAME Water Swift (restricted) Honda Cadet Honda GX160 Cadet* Rotax Micro Cadet Tillotson Cadet*	
Inter	10-13	IAME Water Swift Honda Inter Rotax Inter Tillotson Inter* TKM Inter	
Junior	12-16	IAME X30 Junior Rotax Junior Max Junior TKM Formula Libre Junior* Tillotson Junior*	
Senior	15+	IAME X30 Senior Rotax Senior Max TKM Extreme Formula Libre* Tillotson Senior*	
Gearbox:			
Junior	13-17	Junior Gearbox*	
Senior	15+	125 Open* 210 National* Superkart 250 450 4-stroke* KZ2	

\* Class regulations as KTE (motorsportuk.org/resource-centre/#technical-kart).

The following do not have their Class regulations included in this publication, but are recognised by the ASN as permitted kart Classes. Class regulations can be found on the Motorsport UK website at <u>motorsportuk.org/resource-centre/#technical-kart</u>, or by contacting the relevant organisation as detailed. Details in many cases are included in the table above (\*) to enable clubs to amalgamate with other Classes. Where required, clubs and/or associations must ensure that the ASN Kart Technical Exception (KTE) approval is in place for the current year before including these Classes in event regulations. Competitors should obtain confirmation from the event organising club that this approval is in place before submitting an entry.

IAME Gazelle - contact the ASN (for regulations): motorsportuk.org/resource-centre/#technical-kart

**Kart Clubman** – contact the ASN: <u>motorsportuk.org/resource-centre/#technical-kart</u> Regulations as published, or Club to apply for a KTE for any variation.

**Formula Libre** – contact the ASN: <u>motorsportuk.org/resource-centre/#technical-kart</u> Regulations as published, or Club to apply for a KTE for any variation.

**Classic (Formula Libre)** – contact the ASN: <u>motorsportuk.org/resource-centre/#technical-kart</u> Regulations as published, or Club to apply for a KTE for any variation.

Junior Gearbox - contact the ASN: motorsportuk.org/resource-centre/#technical-kart

210 National – contact 210 Challenge (the210challenge.co.uk)

**Comer Bambino** – contact Zip Kart (<u>zipkart.com</u>) or the ASN (for regulations): <u>motorsportuk.org/resource-centre/#technical-kart</u>

Honda GX160 Cadet – contact Anderson-CSK Motorsport (<u>andersonkarts.com</u>) or the ASN (for regulations): <u>motorsportuk.org/resource-centre/#technical-kart</u>



नावताद

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Comology



# Section A Bambino



### ELECTRIC KARTING



#### AT MIGHTE, WE'RE REDEFINING MOTORSPORT TO LET TRUE TALENT SHINE.

In traditional karting, winning can be influenced by budget rather than driving skill. Our mission is to change that by making karting accessible to all, where success is based on ability, not spending power. With the MightE Bambino powertrain as the official electric powertrain for the Motorsport UK Bambino Karting category, we're leveling the playing field to let the cream rise to the top.





Email: jonny@mighte.co.uk | Web: MightE.co.uk Mobile: +44(0) 7837388752 | WhatsApp: +44 (0) 7592 275968

A1.0	Category	Bambino
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Class MightE Bambino

Contact MightE - <u>www.mighte.co.uk</u>

- A1.6. Introduction. The first age-group Kart Category for 6 to 8 year olds. Held on circuits specifically licensed by the ASN for Bambino. Drivers must hold a Kart Interclub (Bambino) Licence to Race (Kart Clubman (Bambino) licence for Time Trials), which they can obtain from their 6th birthday and may continue in Bambino until the end of the year of their 8th birthday. Karts must comply with the Technical Regulations in the current NCR Ch.18 App.8, except where detailed below. These Regulations are subject to periodic review and possible alteration. Organisers are urged to download the latest version prior to organising any Bambino Kart Event.
- A1.7. Chassis. Motorsport UK registered Bambino chassis only, see Appendix 1 or motorsportuk.org/resource-centre/#technical-kart
  - A1.7.1 Materials. Carbon fibre, Kevlar, Magnesium, Ceramic and Titanium components are prohibited anywhere on the complete kart.
  - **A1.7.2 Bodywork & Bumpers**. As registered with the chassis. Fitment of the CIK-FIA detachable front fairing mounting kit is not a requirement. Bodywork must not be modified in any way.
  - A1.7.3 Dimensions. At all times the rear bumper must not exceed the overall width measured to the outside of the rear wheels or tyres (whichever is greater), and the side pods may not be located outside of the plane passing through the outer edge of the rear wheel or tyre (whichever is greater).

The rear bumper must cover at least 50% of each wheel/tyre at all times.

Overall width at the rear: Maximum 1100mm.

**A1.7.4 Steering**. No modification to stub axles whatsoever permitted, only standard as manufactured can be used. Steering wheel is free, if mounting data acquisition equipment this must be mounted in line with the dish of the wheel. All steering columns to be fitted with a security ring located below the top column mount and secured with a minimum of two locked grub screws.

Caster/Camber adjustment is not permitted unless otherwise noted in Championship Regulations with prior approval of the ASN.

- A1.7.5 Floor Tray. Only Aluminium floor trays are permitted, and fittings must always be tight.
- A1.8. Powertrain. MightE Bambino Powertrain Gen 4: The complete powertrain including the Motor, Controller, Battery Pack, Battery Management System, Throttle Sensor, Brake Sensor and Mounting System must be as supplied by MightE and at all times in compliance with the ASN homologation fiche, available from MightE or at motorsportuk.org/resource-centre/#technical-kart. No modifications are permitted. Motors and batteries must remain sealed with the original MightE issued seal at all times. An ASN Scrutineer or a representative of MightE may access the data system of the motor and/or battery to check status and compliance at any time.
- **A1.9. Transmission**. Direct from the motor to the axle via a single length of chain. Only a 63 tooth rear and MightE supplied 30t front sprocket may be used.
  - **A1.9.1 Axle**. Magnetic steel, as registered with the chassis. Must be fitted with circlips on the ends of the axle. Axle to be fitted with two bearings containing steel ball races. Ceramic or exotic material bearings are strictly prohibited. Bearings to be tightened to axle, multipoint locating grub screws. Quick release bearing carriers prohibited.

- A1.9.2 Chain/Sprocket Guard. A chain/sprocket guard complying with NCR Ch.18 App.8 Art.35.12 must be fitted.
- **A1.10. Brakes**. As registered with the chassis. Mechanical system with solid disc acting on the rear axle only. Interruptions on the brake surface (drilling, grooves, slots, etc.) are permitted, radially vented discs are not permitted. A dual-linkage (secondary cable) must be fitted at all times.
  - A1.10.1 Brake Disc Protector. Where required by the regulation, a brake disc protector in accordance with NCR Ch.18 App.8 Art.7.11 must be fitted.
- **A1.11.** Tyres. Le Cont MSA 04, all-weather tyres. Front: 10 x 4.00 x 5, Rear 11 x 5.00 x 5.

Maximum tyre circumference: Front 820mm, rear 840mm.

The minimum tyre treads depth is 1mm at any point.

The above tyre will be the sole tyre for the Bambino class until at least 31.12.2025.

A1.11.1 Wheels. Material: Aluminium only. Offset: Open.

Front: Single point mounting direct to stub axle. 3 point fixing hubs also permitted. The stub axle must not protrude beyond the outside edge of the front wheel.

Rear: 3 point fixing to standard short hub. No double bolt rear hubs. Widths measured from outside edges: Front: 100mm min. and 115mm max. Rear: 140mm ±2mm

#### A1.12. General.

- A1.12.1 Age. From 6th birthday to 31st December of the year of 8th birthday, subject to the conditions of NCR Ch.18 Art.5.4 for racing. Having moved to the Cadet Category, a Competitor may not revert to Bambino.
- A1.12.2 Weight. Minimum 83kg, including the driver. Minimum driver weight as per NCR Ch.18 App.8 Art.31.10 is 21.5kg.
- A1.12.3 Number Plates. Blue with white numbers (see NCR Ch.18 App.8 Art.30). The numbers must be of the 'Classic' type described in NCR Ch.18 App.8 Art.30.9. Full-size rear number plates only - no cut down or trimmed plates.
  - **A1.12.3.1** Side pod number plates/stick-on panels must be a minimum of 16.5cm high by 7.8cm wide, with a minimum 1cm space on all sides of the numbers. Numbers must be a minimum of 13cm high, and minimum 1.5cm stroke width. They must be displayed in accordance with NCR Ch.18 App.9 Drg.14.
- **A1.12.4 Data Logging**. The use of data acquisition is forbidden apart from the collection of powertrain parameters detailed in the homologation fiche, GPS and lap time data only. Any sensors not permitted by these regulations must be removed from the kart.



### Section B Cadet

B1.0 Category Cadet

Class All Cadet (general regulations)

Contact The ASN - <u>www.motorsportuk.org</u>

- **B1.1.** Introduction. Racing class from 8 years of age or year of 8th birthday with defined experience. Chassis, brakes and engines are homologated with the ASN. Details of homologation requirements are available from the ASN.
- **B1.2. Chassis**. Motorsport UK homologated or registered Cadet chassis only. The chassis must remain as homologated or registered in all respects and may only be subject to ASN approved modifications for safety reasons. A chassis manufacturer will be permitted to homologate or register one chassis model for any period (normally three years) and validity will last for a total of three successive periods (normally nine years). The current period for chassis and brakes commenced 1.1.2025; the next period will commence 1.1.2028. A full list of current homologated and registered chassis is included in Appendix 1.

**Chassis** homologated or registered in 2023 onwards: Must comply with the following Articles from the current CIK-FIA Karting Technical Regulations (except where specified otherwise in specific Class Regulations):

2 - 2.3.2 2.5 - 2.8 4.1 - 4.12.3 10.1.1 - 10.5.5

Further to NCR **Ch.18 App.8 Art.16.2**, all bumpers and bodywork including rear wheel protection must be CIK-FIA homologated for Group 3. Bumpers and bodywork with CIK-FIA Group 3 homologation that expired at the end of 2024 continue to be permitted unless otherwise specified in Championship Regulations.

**Chassis** homologated in 2017 or 2020: Must comply with 2022 Motorsport UK Cadet Regulations B1.3 (except where specified otherwise in specific Class Regulations).

- **B1.2.1** Eligibility. The complete chassis in its homologated or registered form, with accessories and equipment as homologated or registered and the engine as supplied by the manufacturer (or importer where applicable) are the only combination which will be allowed to race. The registered manufacturer may apply for changes to accessories, such as brakes, on the grounds of safety. Such changes will only be acceptable with the written approval of the ASN.
- B1.3. Engine. See Class specific regulations.
  - B1.3.1 Engine Modifications. The use of a single in-line fuel filter is permitted.
  - **B1.3.2 Performance Restrictions**. The ASN reserves the right at any time to vary any performance restriction in any Cadet Class.
- **B1.4. Transmission**. Direct from the engine to the axle via a single length of chain. A guard must be fitted covering the transmission in compliance with NCR Ch.18 App.8 Art.35.12.
  - **B1.4.1** Axle. Chassis homologated or registered in 2023 onwards: Must comply with current CIK- FIA Karting Technical Regulations Article 10.2 (except where specified otherwise in specific Class Regulations).

**Chassis** homologated in 2017 or 2020: Must comply with 2022 Motorsport UK Cadet Regulations B1.5.1 (except where specified otherwise in specific Class Regulations).

B1.5. Brakes. Motorsport UK homologated Cadet brake system only.

**B1.6.** Wheels. Chassis homologated or registered in 2023 onwards: Must comply with current CIK-FIA Karting Technical Regulations – Article 4.13-4.14 (except where specified otherwise in specific Class Regulations).

**Chassis** homologated in 2017 or 2020: Must comply with 2022 Motorsport UK Cadet Regulations B1.7 (except where specified otherwise in specific Class Regulations).

**B1.6.1** Tyres. The following will be the sole tyres for all Cadet Classes until at least 31.03.2026:

Dry	Vega Cadetti 'UK'	Front 10 x 4.00-5, Rear 11 x 5.00-5.
Wet	Vega WM1 CIK	Front 10 x 4.00-5, Rear 11 x 5.00-5.

Tyres must be fitted to run in the correct direction of rotation, as indicated in the sidewall.

- B1.7. General. The practice of lifting karts on the dummy grid or start line while the engine is running is prohibited.
  - **B1.7.1** Weight. See Class specific regulations below for minimum class and driver weights.
  - B1.7.2 Height. See Class specific regulations.
  - B1.7.3 Number Plates. See Class specific regulations.
  - B1.7.4 Age. From the 8th birthday to the 31st December of the year of the 12th birthday. Exceptionally, a driver with the required ASN Bambino experience may enter the class from the calendar year of their 8th birthday subject to NCR Ch.18 Art.9 and provided they meet a minimum height of 125cm (without helmet). Individual Class Regulations may vary, but only within the upper and lower limits set here.

Category	Cadet
Class	IAME Water Swift (restricted)

B2.0

Contact Argenti-KT Ltd – <u>www.argenti-kt.co.uk</u>

- **B2.1 Introduction.** This class endeavours to provide performance approaching that of the comparable current Cadet classes, combined with low running costs and low noise levels, the engine can be changed from Cadet to Inter by removal of a simple exhaust restrictor. It is expected that the class will continue to evolve and the promoters reserve the right, with the agreement of the ASN, to alter the technical regulations to ensure safety of drivers, fairness of competition, economy and the wishes of competitors and changes of specifications from IAME agreed by the ASN. Enquiries to Argenti-KT Ltd, Unit 9D, Manor Business Park, Grants Hill Way, Woodford Halse, Northants, NN11 3UB www.argenti-kt.co.uk.
- **B2.2.** Engine. IAME Water Swift 60cc U.K. two-stroke engine equipped with electric start, ignition, centrifugal clutch, carburettor, inlet silencer and exhaust system. The Water Swift (restricted) adheres to the main Water Swift Inter fiche plus the Cadet supplement. The power unit, as raced must conform in all aspects with the official Motorsport UK homologation fiche and must bear only the 'new' relevant official IAME markings as shown in the Motorsport UK homologation fiche. The machining of ANY surface is strictly prohibited. Compliance with the Motorsport UK homologation fiche may be checked at any time during an event, with the technical checking tools supplied by IAME. No addition of, or other change of material is permitted. No modification or tuning for whatever purpose is allowed, except for that listed in the following regulations, or where expressly permitted by the ASN. Where specific dimensions are not given for the engine and its supplied accessories in the Motorsport UK homologation fiche, the dimensions will be checked against a control engine held under the control of the ASN. Only engines with serial numbers beginning with a numerical are permitted (engine numbers beginning with a letter are not permitted).
  - **B2.2.1** Engine Replacement Parts. The only replacement parts allowed are those supplied by IAME and listed on their parts list for the Motorsport UK homologated engine. Replacement parts must carry the manufacturer's part number and/or marking where applicable.
  - **B2.2.2 Spark Plug**. The only spark plugs permitted are shown below; they must be unmodified and as supplied by the manufacturer, with original sealing washer in place. Permitted spark plugs:

NGK: B8EG, B9EG, B10EG, BR8EG, BR9EG, BR10EG, BR8EIX, BR9EIX, BR10EIX

The insulator must not exceed the spark plug thread, the length of the thread itself must be max. 18.5 mm (CIK-FIA Karting Technical Regulations Appendix 5).

- **B2.2.3 Bearings**. Main bearings part number 6204 C4 must be unmodified, complete with 8 steel balls and plastic cage. ORS or SKF can be used. 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.
- **B2.2.4** Engine Lubrication. The only oils permitted are those specified in the current CIK-FIA list of homologated lubricants, the current list can be found on the FIA Karting website at <u>www.fiakarting.com</u>.
- B2.2.5 Engine Management. Engine management equipment/systems are prohibited.
- **B2.2.6 Engine Sealing**. All engines will remain unsealed in their normal use. However, an ASN licensed scrutineer appointed to the meeting may reserve the right to seal any engine at any time during an event for further inspection at a later date or at their convenience.
- **B2.2.7** Engine Modifications. The engine must be raced in standard form as manufactured and supplied by IAME unless otherwise stated. Fixtures and fittings are free. Filing, grinding, polishing, surface treating, machining, adding or removal of material or lightening of any component, including for repair purposes, is not permitted unless otherwise stated in these regulations or unless expressly permitted by the ASN.

The following minor repairs/modifications/additions are permitted:

- Repair of damaged threads in the crankcase and/or cylinder with helicoils or timeserts.
- A wet-box or splash-guard attached to the IAME inlet silencer, provided that it in no way modifies the shape or size of the inlet trumpet or creates a ram effect. The IAME inlet silencer cannot be modified to aid in the attachment of a wet-box or splash-guard and the attachment must be of a non-permanent type, e.g. tape or cable ties.
- Decals applied on the engine side and on the inlet silencer.
- Modification of the chain guard upper edge to prevent fouling on the chain.
- The addition of protective material to the HT-lead.
- Honing of the cylinder.
- Shortening of the HT lead, but the length of the lead must not be less than 230mm. Cutting and rejoining of the lead is not permitted.
- The following repairs/modifications/additions are specifically not permitted:
- Painting of the cylinder head or cylinder.
- Repair of the cylinder head spark plug thread.
- Any device mounted on the kart to aid in the cooling of the engine is strictly prohibited, unless stated on the Motorsport UK homologation fiche.
- **B2.2.8** Engine Eligibility. The checking of the combustion chamber volume and/or cylinder head volume must be carried out as described in the Motorsport UK homologation fiche with TQF oil and using a digital burette. The checking of the squish must be done along the centreline axis of the gudgeon pin, at the smallest point, a maximum of three times. 1.6mm or 1.5mm solder must be used and conform to the engine fiche.
- B2.2.9 Ignition Unit. All parts, including the plug cap (from PVL or Selettra), must be unmodified as manufactured by Selettra, p.n IAME A-61951 and coil p.n. IAME A-61955 and as supplied by IAME. The rotor location key must be unmodified and have minimum thickness of 1.95mm. Scrutineers at any time during the Meeting have the right to request a part or full controlled ignition system to be fitted. The battery must be fixed to the chassis and connected to the ignition system at all times.

At a race meeting if a fault occurs which means the starter cannot be used, with agreement of an Official the engine may be started externally providing that all the components of the starter, battery etc. are in place.

- B2.2.10 Cylinder. Must remain strictly original with security pin and markings. Base gaskets are free, but a minimum of one must be used and all must remain strictly original IAME parts (part no.s: EBP-85045, EBP-85046, EBP-85046-A or EBP-85046-B in any combination). No head gaskets are permitted.
- **B2.3.** Exhaust. Exhaust with part no. A-61715 must be used. The exhaust system and silencer must not be modified in any way and must comply at all times with the Motorsport UK homologation fiche. The use of a jubilee clip to secure the end silencer screws is permitted. The use of any coating or plating is not permitted. Exhaust temperature probes are permitted and must only be used on unmodified IAME exhausts originally supplied with temperature probe fitting as detailed in the Motorsport UK homologation fiche.
  - **B2.3.1 Exhaust Restrictor**. The exhaust flange restrictor as defined in the Motorsport UK homologation fiche must be in place at all times. The restrictor must be as manufactured and supplied by IAME and must comply with the Motorsport UK homologation fiche, no modifications are permitted.

One single exhaust restrictor gasket (part no: A-60360) must be used. The use of any additional gasket is prohibited. All exhaust gases must pass through the restrictor.

- **B2.4. Carburettor**. Tillotson HW-47A laser marked 'IAME'. The carburettor must remain unmodified and conform in all aspects to the official Motorsport UK homologation fiche. Two inlet gaskets (part no: A-61822) and one thermal block (part no: A-61819C) are mandatory and must be in compliance and in the same order as indicated on the engine fiche. The use of any additional gasket is prohibited. Any parts fitted must be original parts as shown on the spare parts list in the Motorsport UK homologation fiche, and must remain unmodified. The only repair gasket set permitted is p.n DG3-HW & RK6-HW. The paddle spring is free, only one inlet tension spring may be fitted at any time and it must be an original Tillotson part as listed on the Motorsport UK homologation fiche and remain unmodified.
  - **B2.4.1** Inlet Silencer. The inlet silencer p.n. IAME A-61742 must be used unmodified as supplied by IAME for the Water Swift engine with CSAI 01/SA/14 homologation. The use of a gauze filter on the inlet trumpet is permitted. The rubber manifold connecting the inlet silencer to the carburettor can be installed in either way, it must be in compliance with the size indicated on the fiche. If the manifold with sponge air filter is used, the sponge must be intact and the whole must be in compliance with the size indicated on the fiche.
- B2.5. Transmission. The clutch must be as supplied by IAME for the Water Swift engine and must comply at all times with the Motorsport UK homologation fiche. The clutch cover must be securely fitted with a minimum of two bolts. Only IAME original Z10, Z11, Z12 or Z13 sprockets can be used. The internal running surface of the clutch must remain dry and free of grease or lubricant or any additional substance. Use of O-ring seal (part no: A-60565) and needle cage (part no: B-55598) for the clutch assembly is mandatory.
- **B2.6.** Cooling System. Radiator with p.n. T-8601 as detailed on the Motorsport UK homologation fiche must be used and it must be fitted to the left-hand side of the kart, using standard hoses and connectors. The water pump plastic or aluminium as supplied by IAME must be mounted to the chassis driven via pulley from the rear axle. The radiator, pump, axle pulley, radiator, hoses and support brackets must be as supplied by IAME.

Extra joints in the water hoses are permitted to aid fitment to the chassis. The use of an inline temperature sensor is allowed but must use the blue aluminium IAME fitting without thermostat. The use of a radiator blind or wind shield as supplied by Newline is permitted.

All heaters or heater connection systems on the water circuit are strictly prohibited.

- **B2.7.** Weight. Minimum 100kg, including the driver. Minimum driver weight as per NCR Ch.18 App.8 Art.31.10 is 26kg.
- **B2.8.** Number Plates. Yellow with black numbers (see NCR Ch.18 App.8 Art.30). The numbers must be of the 'Classic' type as described in NCR Ch.18 App.8 Art.30.9.
- **B2.9.** General. An ignition kill switch must be fitted and must be identified with a blue triangle to assist marshals in the event of an incident. The start and stop buttons must be mounted on the battery box using brackets supplied.
  - **B2.9.1** Fasteners and Attachments. The use of alternative fasteners, washers, hose clips, fuel line is allowed unless otherwise specified. The use of an additional earth strap is allowed. The use of additional air box support brackets and/or radiator support brackets is allowed, providing the fitting of these does not necessitate modification of the original components.
  - **B2.9.2** Data Logging. Data logging is permitted, data logging systems with or without memory may be used. Global Navigation Satellite System reception is permitted. It is only permitted to take readings of engine rpm, engine water temperature, exhaust gas temperature, speed of 1 wheel, an X/Y accelerometer, lap times and split lap times. The rpm may only be recorded via a sensor on the HT-lead to sense spark plug pulses. The HT-lead must remain a single length from ignition coil to spark plug cap. The fitting of these sensors is only permitted providing there is no modification to the original engine components.

B3.0 Category Cadet

Class Honda Cadet

Contact Anderson-CSK Motorsport - <u>www.andersonkarts.com</u>

- **B3.1.** Materials. The following materials are specifically prohibited anywhere on the kart: Kevlar, carbon fibre (except for chain guards and floor tray), ceramic, magnesium and titanium.
- **B3.2.** Steering. Camber/caster adjustment is permitted. It is permissible to use up to two fixing screws per adjuster to maintain the position in the top face of the yoke. The offset of the king pin from its standard (concentric) position must not exceed 4mm. Only the concentric position is allowed on the bottom face of each yoke.
- B3.3. Dimensions. Overall rear width:

Chassis homologated or registered in 2023 onwards: 1125mm maximum.

Chassis homologated in 2017 or 2020: 1200mm maximum.

**B3.4.** Engine. The following engine types are permitted:

One Honda engine of the 'GX200 QHQ4', 'GX200 QX3' or 'GX200 QX4' designation, fully sealed as authorised by Anderson-CSK Motorsport. GX200 engine types are subject to a maximum power and torque graph and must comply with the Motorsport UK engine homologation fiche.

For Clubs wishing to continue to permit the previous GX160 engine, see: motorsportuk.org/resource-centre/#technical-kart

Honda will not accept warranty claims on engines used in any practice or racing capacity.

- **B3.4.1** Engine Modifications. No modification to the sealed unit outside of the Motorsport UK homologation fiche is permitted.
- **B3.4.2** Fuel. It is not permitted to have any additives or lubricant in the fuel, otherwise as NCR Ch.18 App.8 Art.14.
- **B3.5.** Weight. Minimum 105kg, including the driver. Minimum driver weight as per NCR Ch.18 App.8 Art.31.10 is 28kg
- **B3.6.** Number Plates. Yellow with red numbers (see NCR Ch.18 App.8 Art.30). The numbers must be of the 'Classic' type as described in NCR Ch.18 App.8 Art.30.9.

Category Cadet
Class Rotax Micro Cadet

B4.0

Contact JAG (UK) Ltd - www.jagrotax.co.uk

- **B4.1.** Introduction. A restricted version of the 125 Junior Max to give the younger driver the opportunity to race Rotax Max. The promoters reserve the right, with the agreement of the ASN, to alter the technical regulations to ensure safety of drivers, fairness of competition, economy and the wishes of competitors and changes of specifications from Rotax agreed by the ASN. Enquiries to JAG (UK) Ltd, Unit 6 Mid Sussex Business Park, Folders Lane East, Ditchling, Hassocks, Sussex BN6 8SE. Tel. 01444 243112.
- B4.2. Engine. The only engine permitted in this class is the Rotax 125 Micro Cadet with restrictors, from engine number 8626234. The Micro Cadet adheres to the current Motorsport UK Rotax Max Technical Regulations. The cylinder is to be of non-Power Valve type. The engine is a single cylinder, liquid cooled, reed valve two stroke. All engines must be sealed between cylinder, crankcases, cylinder head and the reed valve block with an official seal to prevent modification. All seals must be crimped with the official Rotax crimping tool part No.276 110. Each end of the sealing wire must only pass through the seal once.

All engines are issued with an official identity card. It is the competitor's responsibility to ensure the numbers inscribed on the engine and seal correspond with those on the identity card at all times. Only authorised dealers will be issued with seals for use during maintenance of the engines. The identity card must be filled in and signed by an authorised dealer. The engine must be presented at scrutineering with the official class seal intact and the identity card should be lodged with the scrutineer if requested. The card should be collected by the competitor at the end of the race meeting. The identity card should be available for inspection by the scrutineers at any time during the race meeting if requested.

Should a seal become damaged, loose or lost during racing it must be reported to the meeting's scrutineer before leaving parc fermé. To allow the competitor to continue racing the scrutineer may at their discretion re-seal the engine with an official ASN seal. The new seal no. must be entered in the engine's identity card and signed by the scrutineer, plus their licence number. The engine must be taken to an official dealer with the ASN seal intact to be re-sealed with an official class seal before competing at the next race meeting.

**B4.2.1 Modifications**. 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 regulations or the current Motorsport UK Rotax Max Technical Regulations. The adjustment of elements specifically designed for that purpose shall not be classified as modifications, i.e. carburettor and exhaust valve adjustment screws.

#### UNLESS IT STATES THAT YOU CAN DO IT YOU CANNOT!

The engine must be raced in standard form as manufactured and supplied by Rotax unless otherwise stated. Filing, grinding, polishing, surface treating, machining or lightening of any component is forbidden unless otherwise stated. The addition of material to any component is not allowed unless otherwise stated. All parts used in or on this engine must be of original manufacture or source as supplied by Rotax for the 125 Micro Cadet unless otherwise stated. The engine is to be used with air box, carburettor, fuel pump, radiator, wiring loom, ignition system and exhaust system as supplied by Rotax unless otherwise stated. Position and method of mounting the battery, wiring loom, exhaust system are free providing they are securely fixed to the satisfaction of the meeting's scrutineers and in accordance with the NCR. Filing of crankcase to allow easy fitting of water connection is allowed. Fitting of thread inserts or repair damaged threads is allowed, except for the spark plug thread in the cylinder head insert, providing such repairs are not used to derive any benefit other than rectification of damage.

Minor damage to the cylinder or crankcase may be repaired by welding but only to restore the component to the original specification.

The use of thermal barrier coatings/ceramic coatings on or in the engine or exhaust system is not allowed. Replacement connectors to repair wiring loom are permitted. Repairs to starter motor are also allowed.

### **B4.2.2** Exhaust Restrictor. Exhaust restrictor (Part No. 273197) must be in place at all times. Restrictors must be as supplied by JAG (UK) Ltd and comply with the current Motorsport UK Rotax Max Technical Regulations, no modifications allowed. Exhaust flange restrictor, 16.00mm maximum round bore, all exhaust gases must pass through this restrictor.

In addition the throttle body restrictor (Rotax Part No. 267536) must be installed in the rear of the carburettor and in the correct orientation at all times. Illustration of this can be found in the current Motorsport UK Rotax Max Technical Regulations.

#### B4.2.3 Carburettor. Dellorto VHSB 34 XS.

All parts of the carburettor including the body are to be unmodified and run as supplied by Rotax. The carburettor must have VHSB 34 (cast in body) XS (stamped on body). All parts must comply with the current Motorsport UK Rotax Max Technical Regulations. The only adjustments allowed are the main jet, external air screw, throttle stop adjustment screw, and needle position on the five grooves provided.

Needle jet DP267. Choke jet 60. Idle jet 60, idle jet emulsion tube 45. Needle K57. Float needle valve 150. Slide 45. Floats 4.0gr. The venturi insert must have 12.5 stamped on the top.

Throttle cable and adjusters are free. It is permitted to use a single length of vent tube looped across the two air vents of the carburettor with a hole or slot cut in the side of the vent tube at the top of the loop.

FLOAT LEVER ARM HEIGHT: Using the ROTAX gauge (Part No:277 400), the float arms must both fit between the gauge slot without touching. The carburettor must be upside down on a horizontal flat surface. The gauge must sit on the metal body of the carburettor without gasket.

**B4.2.4** Fuel Pump. Only Mikuni – Fuel Pump DF 44-210 may be used. The fuel pump must be fitted to the bottom side of the standard air box bracket. Only a single length of pulse tube from crankcase connector to fuel pump may be used.

A single fuel line may be fitted between the fuel pump and carburettor. Rotax in line fuel filter (Part No. 274161) must be used and fitted between fuel tank and fuel pump.

An Internal fuel tank filter is also permitted. No restrictors, fuel returns or additional reservoirs are permitted.

#### B4.2.5 Intake Silencer. Only Type 2 may be used.

The Intake Silencer/Airbox must be used unmodified as supplied by Rotax for the 125 Micro Cadet engine with its filter and all component parts including support bracket in place.

The two halves of the airbox must be securely screwed together using 4 M6 screws. All 4 screws must be sufficiently tightened to securely clamp the two halves of the airbox together. Intake silencer tube and airbox-to-carburettor socket must be marked with "ROTAX". In all conditions the air box MUST be positioned with inlet trumpets to the bottom of the box. The air box must be securely fitted in a manner to prevent rotation.

**B4.2.6** Exhaust System. Only Rotax 125 Micro exhaust (Part no. 273136) may be used. The exhaust system may not be modified in any way except for the pop rivets securing the silencer end plate may be replaced with screws. The use of a jubilee clip to secure the end plate pop rivets or screws is allowed. It is permitted to paint the exhaust system with black paint. The use of any other coating or plating is not allowed. It is permitted to make minor repairs by welding or brazing to the exhaust system providing there are no alterations to the original dimensions.

It is permitted to weld/braze a socket (at a distance of 50-80mm from the ball joint) on the top of the exhaust system for measuring the exhaust gas temperature.

- **B4.2.7** Radiator. The radiator must be fitted to the right-hand side of the engine using standard hoses and connections as supplied by Rotax. Only Micro/Mini Radiator Part no. 295923 is permitted. The use of alternative hose clips and screw fixings are permitted.
- B4.2.8 Ignition Unit. EVO Dellorto ignition system must use the system in its entirety which comprises of ignition coil, SENIOR MAX ECU (Part no. 666 815), mounting brackets, wiring loom, battery clamp (battery box) and all its components as described in the current Motorsport UK Rotax Max Technical Regulations. Battery clamp (battery box) must be mounted on the left side of the chassis, next to the seat. Only YUASA YT7B-BS (with or without Rotax branding) or ROTAX LiFePO4 battery may be used.
- **B4.2.9** Spark Plug. The only spark plugs permitted are as listed below, and must be unmodified with sealing washer in place. 1.20mm pin gauge must not fit between the two electrodes:

NGK GR8DI, GR9DI

Other makes/types may be added to this list by JAG (UK) Ltd, details will be published in official bulletin.

**B4.3. Transmission**. The clutch must be as supplied by Rotax for the 125 Micro Cadet. The internal running surface of the clutch must remain dry and free of grease or lubricant or any additional substance. The engine clutch must be triggered at 4000 rpm maximum and make the kart and driver move forward.

All sprockets must have 14 teeth and must use a 15 x 19 x 17 needle cage bearing and O-ring seal. The rear sprocket must have 80 teeth unless otherwise specified in the Championship Regulations or SRs, or varied by official bulletin.

- **B4.4.** Weight. Minimum 105kg, including the driver. Minimum driver weight as per NCR Ch.18 App.8 Art.31.10 is 28kg.
- **B4.5.** Number Plates. Yellow with black numbers (see NCR Ch.18 App.8 Art.30). The numbers must be of the 'Classic' type as described in NCR Ch.18 App.8 Art.30.9.
- **B4.6.** Age. From the 8th birthday to the 31st December of the year of the 11th birthday. Exceptionally, a driver with the required ASN Bambino experience may enter the class from the calendar year of their 8th birthday subject to NCR Ch.18 Art.9 and provided they meet a minimum height of 125cm (without helmet).
- **B4.7.** General. An ignition kill switch must be fitted and must be identified with a blue triangle to assist marshals in the event of an incident.
  - **B4.7.1** Fasteners and Attachments. The use of alternative fasteners, washers, hose clips, fuel and pulse line is allowed unless otherwise specified. The use of additional air box support brackets, radiator support brackets, coil-mounting brackets, chain and clutch guards is allowed providing the fitting of these does not necessitate modification of the original components.
  - **B4.7.2** Data logging. Data logging is permitted, data logging systems with or without memory may be used. Global Navigation Satellite System reception is permitted. It is only permitted to take readings of engine rpm, engine water temperature, exhaust gas temperature, speed of 1 wheel, an X/Y

accelerometer, lap times and split lap times. The engine water temperature sensor may only be fitted in the position provided in the cylinder head cover for this attachment. The rpm may only be recorded via a sensor on the HT lead to sense spark plug pulses. The HT lead must remain a single length from ignition coil to spark plug cap. The fitting of these sensors is only permitted providing there is no modification to the original engine components. Connection of the data logger system to the starter battery is permitted. Further to NCR **Ch.18 App.8 Art.34.11**, where an auxiliary data logger battery is used this must be securely fitted in a suitable location on the lower Nassau panel bracket.



C1.0	Group	Inter	
	Class	All Inter (general regulations)	
	Contact	The ASN - www.motorsportuk.org	

- **C1.1.** Introduction. Racing class from 10 years of age or year of 10th birthday with defined experience. Chassis, brakes and engines are homologated with the ASN. Details of homologation requirements are available from the ASN.
- **C1.2. Chassis**. Motorsport UK homologated or registered Inter chassis only. The chassis must remain as homologated or registered in all respects and may only be subject to ASN approved modifications for safety reasons. A chassis manufacturer will be permitted to homologate or register one chassis model for any period (normally three years) and homologations or registrations will last for a total of three successive periods (normally nine years). The current period for chassis and brakes commenced 1.1.2025; the next period will commence 1.1.2028. A full list of current homologated and registered chassis is included in Appendix 1.

Karts must comply with the following Articles from the current CIK-FIA Karting Technical Regulations (except where specified otherwise in specific Class Regulations and in agreement with the ASN):

2 - 2.3.2 2.5 - 2.8 4.1 - 4.12.3 10.1.1 - 10.5.5

Further to NCR **Ch.18 App.8 Art.16.2**, all bumpers and bodywork including rear wheel protection must be CIK-FIA homologated for Group 3. Bumpers and bodywork with CIK-FIA Group 3 homologation that expired at the end of 2024 continue to be permitted unless otherwise specified in Championship Regulations.

- **C1.2.1 Eligibility**. The complete chassis in its homologated or registered form, with accessories and equipment as homologated or registered and the engine as supplied by the manufacturer (or importer where applicable) are the only combination which will be allowed to race. The registered manufacturer may apply for changes to accessories, such as brakes, on the grounds of safety. Such changes will only be acceptable with the written approval of the ASN.
- **C1.3. Engine**. See Class specific regulations.
  - C1.3.1 Engine Modifications. The use of a single in-line fuel filter is permitted.
  - **C1.3.2 Performance Restrictions**. The ASN reserves the right at any time to vary any performance restriction in any Inter Class.
- **C1.4. Transmission**. Direct from the engine to the axle via a single length of chain. A guard must be fitted covering the transmission in compliance with NCR Ch.18 App.8 Art.35.12.
  - **C1.4.1** Axle. Must comply with current CIK-FIA Karting Technical Regulations Article 10.2 (except where specified otherwise in specific Class Regulations).
- **C1.5. Brakes**. Motorsport UK homologated Inter brake system only, operating on the rear axle only. The brake linkage must be duplicated.
- **C1.6.** Wheels. Must comply with current CIK-FIA Karting Technical Regulations Article 4.13-4.14 (except where specified otherwise in specific Class Regulations).
  - C1.6.1 Tyres. See Class specific regulations.

- C1.7. General. The practice of lifting karts on the dummy grid or start line while the engine is running is prohibited.
  - C1.7.1 Weight. See Class specific regulations for minimum class and driver weights.
  - C1.7.2 Height. See Class specific regulations.
  - C1.7.3 Number Plates. See Class specific regulations.
  - **C1.7.4 Age**. From the 10th birthday to the 31st December of the year of the 13th birthday. Drivers who hold a Kart National licence may enter the class from the calendar year of their 10th birthday. Subject to NCR **Ch.18 Art.10**.

C2.0	Category	Inter	
	Class	IAME Water Swift	

Contact Argenti-KT Ltd - <u>www.argenti-kt.co.uk</u>

- **C2.1. Introduction**. This class endeavours to provide performance approaching that of the comparable current Inter classes, combined with low running costs and low noise levels, the engine can be changed from Cadet to Inter by removal of a simple exhaust restrictor. It is expected that the class will continue to evolve and the promoters reserve the right, with the agreement of the ASN, to alter the technical regulations to ensure safety of drivers, fairness of competition, economy and the wishes of competitors and changes of specifications from IAME agreed by the ASN. Enquiries to Argenti-KT Ltd, Unit 9D, Manor Business Park, Grants Hill Way, Woodford Halse, Northants, NN11 3UB – <u>www.argenti-kt.co.uk.</u>
- **C2.2.** Engine. IAME Water Swift 60cc U.K. two-stroke engine equipped with electric start, ignition, centrifugal clutch, carburettor, inlet silencer and exhaust system. The power unit, as raced must conform in all aspects with the official Motorsport UK homologation fiche and must bear the relevant official IAME markings as shown in the Motorsport UK homologation fiche. The machining of ANY surface is strictly prohibited. Compliance with the Motorsport UK homologation fiche may be checked at any time during an event, with the technical checking tools supplied by IAME. No addition of, or other change of material is permitted. No modification or tuning for whatever purpose is allowed, except for that listed in the following regulations, or where expressly permitted by the ASN. Where specific dimensions are not given for the engine and its supplied accessories in the Motorsport UK homologation fiche, the dimensions will be checked against a control engine held under the control of the ASN.
  - **C2.2.1** Engine Replacement Parts. The only replacement parts allowed are those supplied by IAME and listed on their parts list for the Motorsport UK homologated engine. Replacement parts must carry the manufacturer's part number and/or marking where applicable.
  - **C2.2.2 Spark Plug**. The only spark plugs permitted are shown below; they must be unmodified and as supplied by the manufacturer, with original sealing washer in place. Permitted spark plugs:

NGK: B8EG, B9EG, B10EG, BR8EG, BR9EG, BR10EG, BR8EIX, BR9EIX, BR10EIX

The insulator must not exceed the sparkplug thread the length of the thread itself must be max. 18.5 mm. (CIK-FIA Karting Technical Regulations Appendix 5).

- **C2.2.3 Bearings**. Main bearings part number 6204 C4 must be unmodified, complete with 8 steel balls and plastic cage. ORS or SKF can be used. 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.
- **C2.2.4 Engine Lubrication**. The only oils permitted are those specified in the current CIK-FIA list of homologated lubricants, the current list can be found on the FIA Karting website at <u>www.fiakarting.com</u>.
- C2.2.5 Engine Management. Engine management equipment/systems are prohibited.
- **C2.2.6 Engine Sealing.** All engines will remain unsealed in their normal use. However, an ASN licensed scrutineer appointed to the meeting may reserve the right to seal any engine at any time during an event for further inspection at a later date or at their convenience.
- **C2.2.7 Engine Modifications**. The engine must be raced in standard form as manufactured and supplied by IAME unless otherwise stated. Fixtures and fittings are free. Filing, grinding, polishing, surface treating, machining, adding or removal of material or lightening of any component, including for repair purposes, is not permitted unless otherwise stated in these regulations or unless expressly permitted by the ASN.

The following minor repairs/modifications/additions are permitted:

- Repair of damaged threads in the crankcase and/or cylinder with helicoils or timeserts.
- A wet-box or splash-guard attached to the IAME inlet silencer, provided that it in no way modifies the shape or size of the inlet trumpet or creates a ram effect. The IAME inlet silencer cannot be modified to aid in the attachment of a wet-box or splash-guard and the attachment must be of a non-permanent type, e.g. tape or cable ties.
- Decals applied on the engine side and on the inlet silencer.
- Modification of the chain guard upper edge to prevent fouling on the chain.
- The addition of protective material to the HT-lead.
- Honing of the cylinder.
- Shortening of the HT lead, but the length of the lead must not be less than 230mm. Cutting and rejoining of the lead is not permitted.
- The following repairs/modifications/additions are specifically not permitted:
- Painting of the cylinder head or cylinder.
- Repair of the cylinder head spark plug thread.
- Any device mounted on the kart to aid in the cooling of the engine is strictly prohibited, unless stated on the Motorsport UK homologation fiche.
- **C2.2.8 Engine Eligibility**. The checking of the combustion chamber volume and/or cylinder head volume must be carried out as described in the Motorsport UK homologation fiche with TQF oil and using a digital burette. The checking of the squish must be done along the centreline axis of the gudgeon pin, at the smallest point, a maximum of three times. 1.6mm or 1.5mm solder must be used and conform to the engine fiche.
- C2.2.9 Ignition Unit. All parts, including the plug cap (from PVL or Selettra), must be unmodified as manufactured by Selettra, p.n IAME A-61951 and coil p.n. IAME A-61955 and as supplied by IAME. The rotor location key must be unmodified and have minimum thickness of 1.95mm. Scrutineers at any time during the Meeting have the right to request a part or full controlled ignition system to be fitted. The battery must be fixed to the chassis and connected to the ignition system at all times.

At a race meeting if a fault occurs which means the starter cannot be used, with agreement of an Official the engine may be started externally providing that all the components of the starter, battery etc. are in place.

- C2.2.10 Cylinder. Must remain strictly original with security pin and markings. Base gaskets are free, but a minimum of one must be used and all must remain strictly original IAME parts (part no.s: EBP-85045, EBP-85046, EBP-85046-A or EBP-85046-B in any combination). No head gaskets are permitted.
- **C2.3. Exhaust**. Exhaust with part no. A-61715 must be used. The exhaust system and silencer must not be modified in any way and must comply at all times with the Motorsport UK homologation fiche. The use of a jubilee clip to secure the end silencer screws is permitted. The use of any coating or plating is not permitted. Exhaust temperature probes are permitted and must only be used on unmodified IAME exhausts originally supplied with temperature probe fitting as detailed in the Motorsport UK homologation fiche.
  - **C2.3.1 Exhaust Manifold**. The exhaust manifold p.n. IAME A-61365 as defined in the Motorsport UK homologation fiche must be in place at all times. The manifold must be as manufactured and supplied by IAME and must comply with the Motorsport UK homologation fiche, no modifications are permitted. One single exhaust gasket (part no: A-60360) must be used. The use of any additional

gasket is prohibited. All exhaust gases must pass through the manifold.

- **C2.4. Carburettor**. Tillotson HW-31A laser marked 'IAME'. The carburettor must remain unmodified and conform in all aspects to the official Motorsport UK homologation fiche. Three inlet gaskets (part no: A-61822), two thermal blocks p.n IAME A-60819 & IAME A-61819A, are mandatory and must be in compliance and in the same order as indicated on the engine fiche. The use of any additional gasket is prohibited. Any parts fitted must be original parts as shown on the spare parts list in the Motorsport UK homologation fiche, and must remain unmodified. The only repair gasket set permitted is p.n DG1-HW & RK7-HW. The paddle spring is free, only one inlet tension spring may be fitted at any time and it must be an original Tillotson part as listed on the Motorsport UK homologation fiche and remain unmodified.
  - **C2.4.1** Inlet Silencer. The inlet silencer p.n. IAME A-61742 must be used unmodified as supplied by IAME for the Water Swift engine with CSAI 01/SA/14 homologation. The use of a gauze filter on the inlet trumpet is permitted. The rubber manifold connecting the inlet silencer to the carburettor can be installed in either way, it must be in compliance with the size indicated on the fiche. If the manifold with sponge air filter is used, the sponge must be intact and the whole must be in compliance with the size indicated on the fiche.
- C2.5. Transmission. The clutch must be as supplied by IAME for the Water Swift engine and must comply at all times with the Motorsport UK homologation fiche. The clutch cover must be securely fitted with a minimum of two bolts. Only IAME original Z10, Z11, Z12 or Z13 sprockets can be used. The internal running surface of the clutch must remain dry and free of grease or lubricant or any additional substance. Use of O-ring seal (part no: A-60565) and needle cage (part no: B-55598) for the clutch assembly is mandatory.
- **C2.6. Cooling System**. Radiator with p.n. T-8601 as detailed on the ASN homologation fiche must be used and it must be fitted to the left-hand side of the kart, using standard hoses and connectors. The water pump plastic or aluminium as supplied by IAME must be mounted to the chassis driven via pulley from the rear axle. The radiator, pump, axle pulley, radiator, hoses and support brackets must be as supplied by IAME.

Extra joints in the water hoses are permitted to aid fitment to the chassis. The use of an inline temperature sensor is allowed but must use the blue aluminium IAME fitting without thermostat. The use of a radiator blind or wind shield as supplied by Newline is permitted.

All heaters or heater connection systems on the water circuit are strictly prohibited.

C2.7. Tyres. Dry: KOMET K1D-M 10 x 4.00-5 fronts, 11 x 5.00-5 rears

Wet:KOMET K1D-W 10 x 4.00-5 fronts, 11 x 5.00-5 rears

- C2.8. Weight. Minimum 110kg, including the driver. Minimum driver weight as per NCR Ch.18 App.8 Art.31.10 is 31kg.
- **C2.9.** Number Plates. Yellow with black numbers (see NCR Ch.18 App.8 Art.30). The numbers must be of the 'Classic' type as described in NCR Ch.18 App.8 Art.30.9.
- **C2.10. General**. An ignition kill switch must be fitted and must be identified with a blue triangle to assist marshals in the event of an incident. The start and stop buttons must be mounted on the battery box using brackets supplied.
  - **C2.10.1 Fasteners and Attachments**. The use of alternative fasteners, washers, hose clips, fuel line is allowed unless otherwise specified. The use of an additional earth strap is allowed. The use of additional air box support brackets and/or radiator support brackets is allowed, providing the fitting of these does not necessitate modification of the original components.
  - C2.10.2 Data Logging. Data logging is permitted, data logging systems with or without memory may be used. Global Navigation Satellite System reception is permitted. It is only permitted to take readings of engine rpm, engine water temperature, exhaust gas temperature, speed of 1 wheel, an X/Y accelerometer, lap times and split lap times. The rpm may only be recorded via a sensor on the HT-lead to sense spark plug pulses. The HT-lead must remain a single length from ignition coil to spark plug cap. The fitting of these sensors is only permitted providing there is no modification to the original engine components.

C3.0 Category Inter

Class Honda Inter

Contact Anderson-CSK Motorsport - <u>www.andersonkarts.com</u>

- **C3.1. Introduction**. A fully controlled and balanced category for the younger driver and the logical next step from Honda Cadet. This class will hone driver skills while keeping costs under control.
- **C3.2. Materials**. The following materials are specifically prohibited anywhere on the kart: Kevlar, carbon fibre (except for chain guards and floor tray), ceramic, magnesium and titanium.
- C3.3. Dimensions. Overall rear width: 1125mm maximum.
- **C3.4. Engine**. One Honda engine with a slide carburettor of the 'GX200QHQ4' or 'GX200 QX4' (known as the 'R200' variant) fully sealed as authorised by Anderson-CSK motorsport. Seals must remain intact at all times. This engine type is subject to a maximum power and torque graph.

Every engine must have its own identity card showing the unique engine number and seal number. The engine must be presented at scrutineering along with identity card.

The only allowable modifications/additions are those in compliance with the Motorsport UK homologation fiche, which is available at motorsportuk.org/resource-centre/#technical-kart.

Honda will not accept warranty claims on engines used in any practice or racing capacity

**C3.4.1 Engine Modifications**. No modification to the sealed engine outside of the Motorsport UK homologation fiche is permitted.

No modification to the Carburettor or Inlet Manifold outside of the Motorsport UK homologation fiche is permitted.

**C3.4.2 Spark Plug**. Spark plugs must be standard and unmodified (and with the original sealing gasket washer in place) from the following list only, no other can be used, unless subsequently notified of change of item. Electrode gap measurement is free. If using BP6ES then spark plug cap must be original Honda item and have resistor in place, when using BPR6ES (with resistor in place), cap is free.

Permitted spark plugs: NGK BPR6ES or BP6ES.

- C3.4.3 Fuel. It is not permitted to have any additives or lubricant in the fuel, otherwise as NCR Ch.18 App.8 Art.14.
- C3.5. Transmission. Only the Magnum 20 or 22 Tooth clutch is permitted.
- **C3.6.** Tyres. Dry: Dunlop SL3-MSUK. Front 10 x 3.6 x 5, Rear 11 x 5 x 5. Barcoded.

Wet: Dunlop KT3 Front. 10 x 3.6 x 5, Rear 11 x 4.5 x 5. Barcoded.

- **C3.7.** Weight. Minimum 110kg, including the driver. Minimum driver weight as per NCR Ch.18 App.8 Art.31.10 is 33kg.
- **C3.8.** Number Plates. Yellow with red numbers (see NCR Ch.18 App.8 Art.30). The numbers must be of the 'Classic' type as described in NCR Ch.18 App.8 Art.30.9.

C4.0 Category Inter

Class Rotax Inter

Contact JAG (UK) Ltd - <u>www.jagrotax.co.uk</u>

- **C4.1. Introduction**. A restricted version of the 125 Junior Max to give the younger driver the opportunity to race Rotax Max. The promoters reserve the right, with the agreement of the ASN, to alter the technical regulations to ensure safety of drivers, fairness of competition, economy and the wishes of competitors and changes of specifications from Rotax agreed by the ASN. Enquiries to JAG (UK) Ltd, Unit 6 Mid Sussex Business Park, Folders Lane East, Ditchling, Hassocks, Sussex BN6 8SE. Tel. 01444 243112.
- **C4.2. Engine**. The only engine permitted in this class is the Rotax 125 Inter with restrictors, from engine number 8626234. The Inter adheres to the current Motorsport UK Rotax Max Technical Regulations. The cylinder is to be of non-Power Valve type. The engine is a single cylinder, liquid cooled, reed valve two stroke. All engines must be sealed between cylinder, crankcases, cylinder head and the reed valve block with an official seal to prevent modification. All seals must be crimped with the official Rotax crimping tool part No.276 110. Each end of the sealing wire must only pass through the seal once.

All engines are issued with an official identity card. It is the competitor's responsibility to ensure the numbers inscribed on the engine and seal correspond with those on the identity card at all times. Only authorised dealers will be issued with seals for use during maintenance of the engines. The identity card must be filled in and signed by an authorised dealer. The engine must be presented at scrutineering with the official class seal intact and the identity card lodged with the scrutineer if requested. The card must be collected by the competitor at the end of the race meeting. The identity card must be available for inspection by the scrutineers at any time during the race meeting.

Should a seal become damaged, loose or lost during racing it must be reported to the meeting's scrutineer before leaving parc fermé. To allow the competitor to continue racing the scrutineer may at their discretion re-seal the engine with an official ASN seal. The new seal no. must be entered in the engine's identity card and signed by the scrutineer, plus their licence number. The engine must be taken to an official dealer with the ASN seal intact to be re-sealed with an official class seal before competing at the next race meeting.

**C4.2.1 Modifications**. 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 regulations or the current Motorsport UK Rotax Max Technical Regulations. The adjustment of elements specifically designed for that purpose shall not be classified as modifications, i.e. carburettor and exhaust valve adjustment screws.

#### UNLESS IT STATES THAT YOU CAN DO IT YOU CANNOT!

The engine must be raced in standard form as manufactured and supplied by Rotax unless otherwise stated. Filing, grinding, polishing, surface treating, machining or lightening of any component is forbidden unless otherwise stated. The addition of material to any component is not allowed unless otherwise stated. All parts used in or on this engine must be of original manufacture or source as supplied by Rotax for the 125 Inter unless otherwise stated. The engine is to be used with air box, carburettor, fuel pump, radiator, wiring loom, ignition system and exhaust system as supplied by Rotax unless otherwise stated. Position and method of mounting the battery, wiring loom, exhaust system are free providing they are securely fixed to the satisfaction of the meeting's scrutineers and in accordance with the NCR. Filing of crankcase to allow easy fitting of water connection is allowed. Fitting of thread inserts or repair damaged threads is allowed, except for the spark plug thread in the cylinder head insert, providing such repairs are not used to derive any benefit other than rectification of damage.

Minor damage to the cylinder or crankcase may be repaired by welding but only to restore the component to the original specification.

The use of thermal barrier coatings/ceramic coatings on or in the engine or exhaust system is not allowed. Replacement connectors to repair wiring loom are permitted. Repairs to starter motor are also allowed.

**C4.2.2 Exhaust and Inlet Throttle Restrictors**. Exhaust restrictor must be in place at all times. Restrictors must be as supplied by JAG (UK) Ltd and comply with the current Motorsport UK Rotax Max Technical Regulations, no modifications allowed. Exhaust flange restrictor, 22.20mm maximum round bore, all exhaust gases must pass through this restrictor.

The throttle body restrictor (Rotax Part No. 267536) must be installed in the rear of the carburettor and in the correct orientation at all times. Illustration of this can be found in the current Motorsport UK Rotax Max Technical Regulations.

#### C4.2.3 Carburettor. Dellorto VHSB 34 XS.

All parts of the carburettor including the body are to be unmodified and run as supplied by Rotax. The carburettor must have VHSB 34 (cast in body) XS (stamped on body). All parts must comply with the current Motorsport UK Rotax Max Technical Regulations. The only adjustments allowed are the main jet, external air screw, throttle stop adjustment screw, and needle position on the five grooves provided.

Needle jet DP267. Choke jet 60. Idle jet 60, idle jet emulsion tube 45. Needle K57. Float needle valve 150. Slide 45. Floats 4.0gr. The venturi insert must have 12.5 stamped on the top.

Throttle cable and adjusters are free. It is permitted to use a single length of vent tube looped across the two air vents of the carburettor with a hole or slot cut in the side of the vent tube at the top of the loop.

FLOAT LEVER ARM HEIGHT: Using the ROTAX gauge (Part No:277 400), the float arms must both fit between the gauge slot without touching. The carburettor must be upside down on a horizontal flat surface. The gauge must sit on the metal body of the carburettor without gasket.

**C4.2.4 Fuel Pump**. Only Mikuni – Fuel Pump DF 44-210 may be used. The fuel pump must be fitted to the bottom side of the standard air box bracket. Only a single length of pulse tube from crankcase connector to fuel pump may be used.

A single fuel line may be fitted between the fuel pump and carburettor. Rotax in line fuel filter (Part No. 274161) must be used and fitted between fuel tank and fuel pump.

An Internal fuel tank filter is also permitted. No restrictors, fuel returns or additional reservoirs are permitted.

#### C4.2.5 Intake Silencer. Only Type 2 may be used.

The Intake Silencer/Airbox must be used unmodified as supplied by Rotax for the 125 Inter engine with its filter and all component parts including support bracket in place.

The two halves of the airbox must be securely screwed together using 4 M6 screws. All 4 screws must be sufficiently tightened to securely clamp the two halves of the airbox together.

Intake silencer tube and airbox-to-carburettor socket must be marked with "ROTAX".

In all conditions the air box MUST be positioned with inlet trumpets to the bottom of the box. The air box must be securely fitted in a manner to prevent rotation.

### **C4.2.6 Exhaust System**. Only Rotax Mini EVO exhaust (Part no. 273137 or 273138) may be used. The exhaust system may not be modified in any way except for the pop rivets securing the silencer end plate may be replaced with screws. The use of a jubilee clip to secure the end plate pop rivets or

screws is allowed. It is permitted to paint the exhaust system with black paint. The use of any other coating or plating is not allowed. It is permitted to make minor repairs by welding or brazing to the exhaust system providing there are no alterations to the original dimensions.

It is permitted to weld/braze a socket (at a distance of 50-80mm from the ball joint) on the top of the exhaust system for measuring the exhaust gas temperature.

- **C4.2.7 Radiator**. The radiator must be fitted to the right hand side of the engine using standard hoses and connections as supplied by Rotax. Only Mini/Micro Radiator Part no: 295923 is permitted. The use of alternative hose clips and screw fixings are permitted.
- **C4.2.8 Ignition Unit**. EVO Dellorto ignition system must use the system in its entirety which comprises of ignition coil, MINI MAX ECU (Part no. 666 818), mounting brackets, wiring loom, battery clamp (battery box) and all its components as described in the current Motorsport UK Rotax Max Technical Regulations. Battery clamp (battery box) must be mounted on the left side of the chassis, next to the seat. Only YUASA YT7B-BS (with or without Rotax branding) or ROTAX LiFePO4 battery may be used.
- **C4.2.9 Spark Plug**. The only spark plugs permitted are as listed and must be unmodified with sealing washer in place: 1.20mm pin gauge must not fit between the two electrodes:

NGK GR8DI, GR9DI

Other makes/types may be added to this list by JAG (UK) Ltd, details will be published in official bulletin.

**C4.3. Transmission**. The clutch must be as supplied by Rotax for the 125 Inter. The internal running surface of the clutch must remain dry and free of grease or lubricant or any additional substance. The engine clutch must be triggered at 4000 rpm maximum and make the kart and driver move forward.

All sprockets must have 13 teeth and must use a 15 x 19 x 17 needle cage bearing and O-ring seal. The rear sprocket must have 80 teeth unless otherwise specified in the Championship Regulations or SRs, or varied by official bulletin.

C4.4. Tyres. Dry: Mojo C2 CIK Mini with barcode. Front 4.00x10.0-5, Rear 5.00x11.0-5.

Wet: Mojo CW CIK Mini with barcode. Front 3.60x10.0-5, Rear 4.50x11.0-5.

Tyres must be fitted to run in the correct direction of rotation, as indicated by the arrow on the sidewall of the tyre.

- **C4.5.** Weight. Minimum 115kg, including the driver. Minimum driver weight as per NCR Ch.18 App.8 Art.31.10 is 33kg.
- C4.6. Number Plates. Yellow with black numbers (see NCR Ch.18 App.8 Art.30). The numbers must be of the 'Classic' type as described in NCR Ch.18 App.8 Art.30.9.
- **C4.7.** General. An ignition kill switch must be fitted and must be identified with a blue triangle to assist marshals in the event of an incident.
  - **C4.7.1 Fasteners and Attachments**. The use of alternative fasteners, washers, hose clips, fuel and pulse line is allowed unless otherwise specified. The use of additional air box support brackets, radiator support brackets, coil-mounting brackets, chain and clutch guards is allowed providing the fitting of these does not necessitate modification of the original components.
  - **C4.7.2 Data logging**. Data logging is permitted, data logging systems with or without memory may be used. Global Navigation Satellite System reception is permitted. It is only permitted to take readings of engine rpm, engine water temperature, exhaust gas temperature, speed of 1 wheel, an X/Y accelerometer,

lap times and split lap times. The engine water temperature sensor may only be fitted in the position provided in the cylinder head cover for this attachment. The rpm may only be recorded via a sensor on the HT lead to sense spark plug pulses. The HT lead must remain a single length from ignition coil to spark plug cap. The fitting of these sensors is only permitted providing there is no modification to the original engine components. Connection of the data logger system to the starter battery is permitted. Further to NCR **Ch.18 App.8 Art.34.11**, where an auxiliary data logger battery is used this must be securely fitted in a suitable location on the lower Nassau panel bracket.

C5.0	Category	Inter

Class Formula TKM Inter

Contact Tal-Ko - <u>www.tal-ko.com</u>

**C5.1. Introduction**. TKM is the UK's own unique class catering for drivers of all ages from 9 (in the year of 10th birthday, with a National licence) upwards through to Juniors and Seniors. A cost-efficient class with strict technical and cost controls.

The TKM Inter category enables drivers to go from Inter class to Junior with simple low-cost restrictor changes to the same engine. Weight/restrictor size bands make for equal racing for all ages and sizes.

The TKM BT82 100cc engine is race designed. Simple and air-cooled with electric TAG starter and a clutch.

The control of the class regulations rest with Tal-Ko who are the class owners. Further copies of the full regulations are available from Tal-Ko, 54 Sunderland Road, Sandy, Bedfordshire SG19 1QY. Tel. 01767 682020. Email: info@tal-ko.com. Can be downloaded from <a href="http://www.tal-ko.com">www.tal-ko.com</a>. Full engine details are contained in the TKM BT82 official engine fiche also available from Tal-Ko.

While long term stability is at the heart of the classes, in the interests of fairness, clarity, safety, and drivers, Tal-Ko reserves the right to agree with the ASN clarifications and changes to regulations at short notice if required.

- **C5.2.** Materials. Ceramic ball bearings forbidden.
- **C5.3. Steering**. Steering column must be mounted in such a way that even if the bottom retaining bolt is removed it cannot pull free from its lower bearing.
- **C5.4. Bodywork**. It is not permitted to modify the bodywork, except sidepods may incorporate a suitable hole for handheld starter shaft.
- C5.5. Fuel Tank. Must be floor mounted. Overflow catch tank mandatory.
- **C5.6.** Engine. See also TKM BT82 Engine Fiche for all detailed information.
  - **C5.6.1** TKM BT82 Piston Port two stroke 100cc TAG engine fitted with a standard Walbro WB19 carburettor stamped TKM, carb spacer block marked TKM, ignition PVL system marked TKM, TKM exhaust system complete with flex and standard TKM Carburettor induction box complete with original filter. The engine as raced, including induction box and ancillaries, must conform, in all respects with the latest TKM BT82 Homologation Fiche with its Extension and Amendments, as clarified and elaborated within these regulations and any official TKM technical bulletins.
  - **C5.6.2** The engine and ancillary components such as carburettor, ignition, exhaust, and noise induction box must be raced in standard condition as manufactured and/or supplied by Tal-Ko with no other brand or tuner identity added. Filing, grinding, machining, polishing, surface treating, surface coating, plasma metal spraying and lightening of any component including bearings is expressly forbidden unless specifically authorised in these regulations and/or the official TKM BT82 fiche. This expressly includes any chemical or other treatments intended to smooth the flow of air/fuel within the carburettor.
  - **C5.6.3** Addition of materials to any component is not allowed. Black anodising of the head and barrel must remain, subject to fiche requirements. It is permitted to mark engine measurements and engine number on the barrel/head. Where components are found to be in breach of regulations and not capable of being rectified, they may be marked prominently and permanently as such by Tal-Ko. External wear and tear such as accident damage causing fin breakage, or throttle spring rubbing, will be permitted.
  - C5.6.4 While it is accepted that a minimal amount of damage is permitted to the exterior of the induction/

noise box system including its trumpets, any damage that affects the course of airflow into the engine is prohibited. This particularly applies to the shape of the inlet trumpets.

- **C5.6.5** New style noise induction box mandatory. Note that for wet use it is permitted and recommended to use a protective device to prevent water being sucked into the air box inlet trumpets. Design free and may be fitted externally to the airbox using cable ties, tape etc provided no holes are drilled into the air/mixture internal path. May also be fitted to sidepod. May only be fitted when the official conditions set as wet or open.
- **C5.6.6** All parts used in or on this engine must be of original TKM manufacture or source, except where expressly allowed.

#### UNLESS IT STATES THAT YOU CAN DO IT, YOU CANNOT!

- **C5.6.7** The following minor modifications are permitted:
- Drilling of a hole in a head or barrel fin to fit a throttle return spring.
- Modification to, and addition of, a slot in the carburettor swivel assembly and carburettor spacer to allow for ease of throttle cable fitment.
- Drilling holes in component mounting nuts and bolts to allow the fitting of locking devices.
- Extension to the high jet to ease adjustment while driving is permissible, providing the original jet is still used and the extension does not exceed 50mm in length. Extension to the low jet is not permitted.
- Drilling of scrutineer's sealing wire holes, one per component in the fins of the head, barrel, and two crankcase halves. It is also permitted for authorised scrutineers at a race meeting to mark engines with paint.
- Where spring location holes in the TKM exhaust and manifold bend flex spring flanges have become worn through, it is permissible to re-drill additional holes further around the flanges solely for spring retention purposes. It is also permitted to repair broken spring holes and or cracked flanges with a local weld/braze repair.
- TKM manufactured brass main bearing shims may be used to facilitate correct crankshaft end float clearance.
- As an alternative to the standard black carburettor fuel pump diaphragm, it is permitted to use the beige colour fuel pump diaphragm as supplied in the Walbro WB19 repair kits, part nos. D10-WB and K10-WB.
- The small butterfly adjustment screw and spring screw which sets tick over on the carburettor can be fitted either way round. It is beneficial to reverse it when setting up tick over.
- It is permitted to repair broken ignition wires providing original type connectors are used.
- It is permitted to mark the carburettor with personal identification marks like 1, 2 or A, B etc, but this must not interfere with the TKM logo or the model and batch number or have tuner recognition.
- **C5.6.8** It is permitted to paint the TKM manufactured exhaust silencer provided that only black paint is used and that the original TKM logo is still visible. It is expressly prohibited to use any other coating or plating or to use any colour other than black. It is also clarified that on all engine types, while the exhaust may be superficially cleaned and/or painted black on the external surface, it is not permitted to carry out extensive polishing and any accompanied weight reduction.
- **C5.6.9** Single TKM manufactured aluminium anodised carburettor restrictor plate mounted between the carburettor and engine. This is a flat metal plate with a nominal minimum thickness of 3mm and a central parallel round bore of varying sizes and identifying colour according to driver weight through

which all the mixture feeding the engine must pass.

- **C5.6.10** Single TKM manufactured steel exhaust restrictor plate mounted between the exhaust manifold flange and the engine. This is a flat metal plate with a nominal minimum thickness of 6mm and a central parallel round bore with large 45-degree chamfer on one side of its restriction hole which all the exhaust gases leaving the engine must pass through. Chamfered restriction hole side of plate to be fitted engine inwards. No blenders of any configuration are allowed. This part must not be modified or polished in any way and must be as made and supplied by Tal-Ko. It must display the genuine TKM logo. Longer M8 exhaust manifold studs as supplied by Tal-Ko are recommend when this restrictor plate is used with its extra exhaust gasket.
- **C5.6.11** Weight/restrictor sizes as follows, in each case the weight is total of driver as per NCR Ch.18 App.8 Art.31.10 and kart as raced. Restrictor sizes quoted are maximum diameter permitted.

Carb and Exhaust restrictors must be used as detailed in the table:

Inter TKM Class	Carb Restrictor Size/Colour	<b>Exhaust Restrictor Size</b>
Inter 108	18.50mm/Red	16.75mm
Inter 113	19.00mm/Silver	16.75mm

Tal-Ko reserves the right, with ASN approval, to amend restrictor size/minimum weight with one month's notice to correct any apparent advantage/disadvantage.

- **C5.6.12** Ignition timing is limited as detailed. When it is set it must be locked so that it cannot be adjusted by the driver with the kart in motion or by any mechanical and or vacuum/electronic device. Full details in engine fiche.
- C5.6.13 Engine management systems and additional fuel pumps are prohibited.
- **C5.6.14** Connection between the carburettor and throttle pedal to be of one Bowden type cable. No other means of throttle actuation permitted.
- **C5.6.15** The fitting of any device used to manually adjust the flow of fuel from tank to carburettor while on track is not permitted.
- **C5.6.16** It is mandatory to use the appropriate TAG HT lead, spark plug cap and approved spark plug (with its original sealing gasket washer in place).

The only spark plugs permitted are:

DENSO - No longer permitted.

NGK – B9EG, B10EG, BR9EG, BR10EG, B9EGV, B10EGV, BR9EIX and BR10EIX.

- **C5.6.17** It is permitted to use Helicoil and Timesert type thread replacements to repair all stripped threads on engine fixings on the crankcase and cylinder barrel. On the spark plug thread only a Helicoil type thread repair is permitted. Any other type of repair or insert is prohibited. Such repairs must not be used to derive any benefit other than rectification of damage. In the case of the spark plug thread, no portion of the Helicoil may protrude outside of the normal thread area. The coil must be inserted to the full length of the original thread and only one continuous coil to be used per repaired thread. In all cases the size of the repaired threads must remain as standard. On the carburettor, it is permitted to repair the non-metric threads with M3 or M4 threads providing they do not perform any other function.
- C5.6.18 All gaskets used in or on the engine must be of original TKM supply and must be fitted in accordance with the engine fiche. Only one gasket is permitted on any engine part with the exception of the barrel to crankcase mating face where it is permitted to use up to a total of any three of the standard 3 alternative thickness TKM supplied gaskets. Use of gasket sealer/grease is permitted.

- **C5.6.19** It is permitted to fit additional silencing where required by the NCR or local club regulations, provided that the original complete TKM equipment is still used in unmodified form.
- **C5.6.20** Use of an exhaust end can is mandatory and must be that provided by Tal-Ko and marked with the TKM logo. It must be fitted with the three large exhaust exit holes 180 degrees opposite to the main exhaust tailpipe exit.
- **C5.6.21** As part of TKM's commitment to noise reduction, it is mandatory to use effective heatproof webbing or similar sleeve material wrapped around the exhaust flex to help reduce noise. Make is free.
- C5.6.22 The use of purpose designed TKM fin rubbers is mandatory as a noise reduction method. All new engines are fitted with noise reducing fin rubbers as supplied by Tal-Ko. These comprise 10 special rubbers all with TKM logo and either marked H or B to indicate whether for head or barrel. Competitors must use a full set of these rubbers, which may be fitted to older engines. The use of more than 10 rubbers is allowed but not advised. Only TKM rubbers permitted. Where fins have become broken on an engine it is permitted to remove excess sections of the rubbers at this point. At post-race/qualifying scrutineering, loss of one rubber will be accepted provided it is then replaced before the next race.
- **C5.6.23** The use of one or more TKM manufactured with TKM logo special steel cylinder head retaining nuts with hole for sealing wire is permitted, even if sealing is not required. Use of such nuts may be mandatory at championship meetings as specified in their regulations.
- **C5.6.24** Piston rings must at all times remain free to operate in the manner in which they were designed and supplied. It is the responsibility of the driver to ensure that the rings are not 'coked' in place with carbon or prevented from their normal 'spring' effect by other methods. The rings must be appropriate to the piston size used and have a maximum ring gap of 0.5mm when measured with the ring placed squarely 5-10mm down from the top of the cylinder bore. Only the standard unmodified earless type piston circlips as supplied by Tal-Ko must be used. The TKM Inter 100cc engine may use one or two piston rings. The bottom piston ring for the engine can be removed for racing if required.
- C5.6.25 The TKM manufactured with TKM logo flex ring to help increase the life of the exhaust flex must be used.
- **C5.6.26** The TAG on-board starter system engine and associated equipment must be used as supplied by Tal-Ko and detailed in the official TKM BT82 engine fiche. It is clarified that when using a TAG specification engine it is mandatory to always have the full system in place as applicable and connected to enable the starter to be used to start the engine. An external hand-held starter may be used to start the engine in case of any problem, but at any time before or after a race the driver may be required to demonstrate that the starter system with its on-board battery is fully fitted and functioning.

Exceptionally at a race meeting if a fault occurs which means the starter cannot be used, with agreement of a scrutineer the engine may be started externally providing that all the components of the starter, battery etc are in place. No test will then be required.

- C5.6.27 Engine starter batteries and separate auxiliary data logger batteries where permitted must be fitted to a main Chassis Frame tube or within the confines of the main Chassis Frame and shall be placed on the Chassis Frame in an area located to the side of the seat opposite the engine and behind the central strut or alternatively mounted on or behind the seat. Battery trays must be fixed to the chassis by a minimum of two M8 bolts or four M6 bolts. If Lithium batteries are used, they must carry the appropriate "EC" markings (NCR Ch.18 App.8 Art.34.11).
- **C5.6.28** The on/off switches for the engine must be mounted in a clearly accessible position. The red kill switch MUST be marked as 'OFF'. A blue triangle may also be used to clearly identify to marshals.
- **C5.6.29** When measuring and checking for the maximum permitted piston bore size in the cylinder barrel, the bore may be measured at any position within its full length where the circumference is continuous i.e. not where there are port openings or con rod clearance cut outs. If the maximum permitted bore

size is exceeded at any point, then the cylinder barrel is illegal.

- **C5.6.30** The cylinder piston bore must be nominally perpendicular to the cylinder base and central to the cylinder liner. Out of centre and/or angled cylinder piston bores are not permitted.
- **C5.6.31** For the avoidance of doubt, where dimensions and tolerances are stated in the official TKM BT82 engine fiche these are for information only and it is stressed that unless specifically stated as permissible, it is NOT permitted to alter any component to the fiche dimensions.
- C5.7. Transmission. Engine sprocket to be 10, or 11 tooth.
  - **C5.7.1** The only permissible clutch assembly complete is the 'V' clutch as supplied by Tal-Ko with no modification and the TKM logo stamped on all of the three clutch shoe outer faces. It is not permissible to reline the clutch shoes or add substances to either the shoes or drum. A new alternative design clutch will also be permissible when available from Tal-Ko.
- **C5.8.** Wheels. Wheels are free but must not be made of plastic type material. Wheels must be of one moulding/ casting. The use of wheels which have been cut and joined to increase or reduce width is expressly prohibited. Front wheels may have a separate detachable hub. It is permitted to use wheel balance weights affixed to the wheels. Front wheel bearings must be of metal type. Ceramic not permitted.
- **C5.9. Tyres**. The only tyres permitted are Maxxis with TKM logo marked on their sidewalls. They must not be modified in any way including hand or machine cutting.

Tyre sizes/types as follows:

Maxxis TKM ROOKIE Dry - Front 10x4.00-5, Rear 11x5.00-5

Maxxis TKM BLUE LABEL Wet - Front 10x4.00-5, Rear 11x5.00-5

All tyres Dry and Wet must be as supplied by TAL-KO and have the official TKM logo marked on them.

**C5.9.1** Heating of tyres by any artificial method, or their treatment by any chemical substance, is prohibited.

C5.10. Weight. (on completion of any part of the event). Driver weights subject to NCR Ch.18 App.8 Art.31.10.

Inter TKM 108: min 108kg with driver. Minimum driver weight 31kg.

Inter TKM 113: min 113kg with driver. Minimum driver weight 32.5kg.

- C5.11. Number Plates. Yellow with black numbers. NCR Ch.18 App.8 Art.30 applies.
- C5.12. General.

Only the TKM BT82 name may be used under the heading "engine" in event programmes. No other names permitted.

As class owners Tal-Ko reserve the right to have an engine complete with carburettor, noise box, exhaust system, etc. sealed by an ASN scrutineer for the purposes of checking that it conforms to the BT82 engine fiche and TKM rules and if required power testing on the manufacturer's approved dynamometer. The competitor and an ASN scrutineer will be invited to be present for such strip down and any required testing, which is carried out at the risk of the competitor.

Tal-Ko have the right to clearly and permanently mark any component which is found to be in breach of regulations and not able to be rectified.

In the event of any dispute the regulations and fiche with updates as published within the official Formula TKM

Regulations and TKM BT82 engine fiche together with any appropriate Technical Bulletins will be taken as the definitive documents. It is the responsibility of each and every competitor to obtain these regulations and fully implement them. Ignorance of any rule will not be a defence.

Tal-Ko reserves the right to refuse to serve any trader found to be carrying out modifications not permitted in the class regulations.

Formation laps for a rolling start must be maintained as per NCR Ch.18 App.5 Art.1.23 at a steady pace, neither too fast nor excessively slow. For the avoidance of doubt that speed relates to engine running between 5000 and 6000rpm once karts are starting to form into grid.

The eligibility specialist to the TKM class is Paul Klaassen. In addition, Ernie Salmon is also added as a TKM eligibility specialist scrutineer.

A copy of the Formula TKM Regulations and Technical Guide including the official TKM BT82 engine homologation fiche is available free from Tal-Ko Racing at <u>www.tal-ko.com</u>.







## JOIN THE BLUE REVOLUTION

### 2025 CALENDAR CONFIRMED

T4 JUNIOR, T4 SENIOR & T4 SENIOR 168







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SPECT



tomate





## Section D Junior

D1.0	Category	Junior
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Class IAME X30 Junior

Contact Argenti-KT Ltd - <u>www.argenti-kt.co.uk</u>

- D1.1. Introduction. This class endeavours to provide performance approaching that of the comparable current nongearbox Junior classes, combined with low running costs and low noise levels, the engine can be changed from Junior to Senior by removal of a simple exhaust restrictor. It is expected that the class will continue to evolve and the promoters reserve the right, with the agreement of the ASN, to alter the technical regulations to ensure safety of drivers, fairness of competition, economy and the wishes of competitors and changes of specifications from IAME agreed by the ASN. Enquiries to Argenti-KT Ltd, Unit 9D, Manor Business Park, Grants Hill Way, Woodford Halse, Northants, NN11 3UB – www.argenti-kt.co.uk.
- **D1.2.** Chassis. Any chassis conforming to NCR Ch.18 App.8. Must use a currently or previously CIK-FIA homologated Rear Wheel Protection.
- D1.3. Engine. The only engine permitted in this class is the IAME X30. The Junior X30 adheres to the main IAME X30 fiche plus the Junior supplement. Two-stroke engine equipped with electric starter, 16,000 rpm ignition, centrifugal clutch, carburettor, inlet silencer and exhaust system. The power unit, as raced must conform in all aspects with the official Motorsport UK homologation fiche and must bear the relevant official IAME markings as shown in the Motorsport UK homologation fiche. The machining of ANY surface is strictly prohibited. Compliance with the Motorsport UK homologation fiche may be checked at any time during an event, with the technical checking tools supplied by IAME. No addition of, or other change of material is permitted. No modification or tuning for whatever purpose is allowed, except for that listed in the following regulations, or where expressly permitted by the ASN. Where specific dimensions are not given for the engine and its supplied accessories in the Motorsport UK homologation fiche, the dimensions will be checked against a control engine held under the control of the ASN.
  - **D1.3.1** Engine replacement parts. The only replacement parts allowed are those supplied by IAME and listed on their parts list for the Motorsport UK homologated engine. Replacement parts must carry the manufacturer's part number and/or marking where applicable.
  - **D1.3.2 Spark plug**. The only spark plugs permitted are shown below; they must be unmodified and as supplied by the manufacturer, with sealing washer in place:

NGK: B8EG, B9EG, B10EG, BR8EG, BR9EG, BR10EG, BR8EIX, BR9EIX, BR10EIX, R6252K-10, R6252K-105, R6254E-10, R6254E-105.

- **D1.3.3 Bearings**. All the bearings part numbers X30125396A, X30125397, IMB-20100 and X30125746A must be unmodified, complete with steel ball or rollers, plastic cage and remain the same type as supplied by the manufacturer. The use of alternative SKF roller bearing part number X30125397 (BC1-3342B) is permitted.
- **D1.3.4** Engine lubrication. The only oils permitted are those specified in the current CIK-FIA list of homologated lubricants. The current list can be found on the FIA Karting website at <a href="http://www.fiakarting.com">www.fiakarting.com</a>
- D1.3.5 Engine management. Engine management equipment/systems are prohibited.
- **D1.3.6** Engine sealing. All engines will remain unsealed in their normal use. However, an ASN licensed scrutineer appointed to the meeting may reserve the right to seal any engine at any time during an event for further inspection at a later date or at their convenience.
- **D1.3.7 Modifications**. 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 regulations or the official Motorsport UK fiche. The adjustment of elements specifically designed for that purpose shall not

be classified as modifications. The engine must be raced in standard form as manufactured and supplied by IAME unless otherwise stated. Filing, grinding, polishing, surface treating, machining, adding or removal of material or lightening of any component, including for repair purposes, is not permitted unless otherwise stated in these regulations or unless expressly permitted by the ASN.

The following minor repairs/modifications/additions are permitted:

- Repair of damaged threads in the crankcase and/or cylinder with helicoils or timeserts.
- A wet-box as supplied by IAME (part no. A-61700) may be attached to the inlet silencer; it may be adapted provided that it in no way modifies the shape or size of the inlet trumpet or creates a ram effect. The inlet silencer cannot be modified to aid in the attachment of a wet-box or splash- guard and the attachment must be of a non-permanent type, e.g. tape or cable ties.
- Decals applied on the engine and on the inlet silencer.
- The addition of protective material to the HT-lead, and the HT-lead may be shortened, however cutting and re-joining of the lead is not permitted.
- Honing of the cylinder.
- Use of a blanket on the front of the cylinder solely to assist in the prevention of freezing.
- Moderate repair to the crankcase due to component failure, this excludes welding or addition of any other material.

The following repairs/modifications/additions are specifically not permitted:

- Painting of the cylinder head or cylinder.
- Repair of the cylinder head spark plug thread.
- Repair of any of the cylinder, in any form.
- **D1.3.8 Ignition unit**. All parts must be un-modified original digital Selettra ignition. Scrutineers have at any time during the race meeting the right to request part or full controlled ignition system to be fitted. Only CDI box marked 'C' (16,000) is permitted. The marking on the electronic box 'C' is mandatory and must be clearly visible without disassembling the CDI box. The battery must be fixed to the chassis and connected to the ignition system at all times. The rotor location key must be unmodified and have minimum thickness of 2.43mm.

At a race meeting if a fault occurs which means the starter cannot be used, with agreement of an Official the engine may be started externally providing that all the components of the starter, battery etc. are in place.

- D1.3.9 Engine eligibility. The checking of the combustion chamber volume must be carried out as described in the Motorsport UK homologation fiche with TQF oil and using a digital burette. The checking of the squish must be done along the centreline axis of the gudgeon pin, at the smallest point, a maximum of three times. The angular reading of the port is to be carried out by inserting a 0.2 x 5mm wide feeler gauge. For damaged ports the angular reading is max. 125° side transfer, 126° front transfer and 176.5° exhaust port, using a 1mm pin gauge at no more than 4 points in the port.
- D1.3.10 Cylinder. Must remain strictly original with security pin and markings. Base gaskets are free, but a minimum of one must be used and all must remain strictly original IAME parts (part no.s: EBP-125045, EBP-125046, EBP-125047, EBP-125048 or EBP-125049 in any combination). No head gaskets are permitted.
- D1.4. Exhaust. Exhaust with part no. X30125715 must be used. The exhaust system and silencer must not be

modified in any way and must comply at all times with the Motorsport UK homologation fiche. The use of a jubilee clip to secure the end silencer screws is permitted. The use of an exhaust temperature (EGT) sensor in the appropriate fitting on the exhaust is permitted.

- **D1.4.1** Exhaust silencer. The use of additional silencer part number X30125723-K is mandatory, and must be used as shown in the Motorsport UK homologation fiche with no modifications. All mountings and fittings are free.
- **D1.4.2 Timing gears**. All gears must be fitted in the correct direction. All timing marks must be inline on the crank shaft, balance shaft and gears when the engines is at TDC, as shown in the Motorsport UK fiche.
- D1.5. Carburettor. Tillotson HW-27A laser marked 'IAME'. The carburettor must remain unmodified and conform in all aspects to the official Motorsport UK homologation fiche. One inlet gasket (part no. 10360-A) must be used between the carburettor and reed block. The use of any additional gasket is prohibited. Any parts fitted must be original parts as shown on the spare parts list in the Motorsport UK homologation fiche, and must remain unmodified. The only gasket set permitted is the red type as supplied as new (part no. DG3-HW). The paddle spring is free but must be the original part and remain unmodified.
  - **D1.5.1 Reed block**. Both the reed block and cover must remain strictly original. Either fiberglass or carbon original IAME marked petals may be fitted, but they may only be used in matching pairs.
  - **D1.5.2** Inlet silencer. The inlet silencer (part no. X30125740) with 22mm trumpets must be used and must remain unmodified as supplied by IAME for the IAME X30 engine. The rubber manifold with air filter is mandatory and must conform to the homologation paper. The use of a gauze filter on the inlet trumpet is permitted.
- **D1.6. Cooling system**. The radiator part no. T-8000B or T-8001 must be fitted to the left-hand side of the kart, using standard hoses and connectors. The water pump plastic or aluminium as supplied by IAME must be mounted to the chassis driven via pulley from the rear axle. The use of the large size radiator as supplied by IAME is permitted.

The radiator, pump, axle pulley and radiator support brackets must be as supplied by IAME.

It is not mandatory to fit and/or use the thermostat within the water cooling system. It is permitted to delete this item. However, if the competitor elects to use it then it must only be used as supplied by IAME and must not be modified in any way.

Extra joints in the water hoses are permitted to aid fitment to the chassis. The use of a radiator blind or wind shield as supplied by Newline is permitted. The water pump drive belts are free.

All heaters or heater connection systems on the water circuit are strictly prohibited.

- D1.7. Transmission. Direct from the engine to the rear axle via a single length of chain. The clutch must be as supplied by IAME for the Parilla X30 engine and must comply at all times with the Motorsport UK homologation fiche. The clutch cover must be securely fitted with a minimum of two bolts. The internal running surface of the clutch must remain dry and free of grease or lubricant or any additional substance. Only IAME original Z9, Z10, Z11, Z12 or Z13 sprockets can be used. Use of O-ring seal (part no. A-60565) and needle cage (part no. B-55598) for the clutch assembly is mandatory. The only clutch drum permitted is part number X30125550A.
- D1.8. Brakes. Hydraulic disc brake operating on rear wheels only.
- D1.9. Tyres. Dry:

KOMET K3H 10 x 4.60-5 fronts. 11 x 7.10-5 rear

 Wet:
 Until 31.03.2025:
 KOMET K1W 10 x 4.20-5 front. 11 x 6.00-5 rear

 From 01.04.2025:
 KOMET K3W 10 x 4.20-5 front. 11 x 6.00-5 rear

The previous K1W wet tyres may be used at Club meetings only (App 4 B14) until 30.06.2025.

Wet tyres must be fitted with the correct direction of rotation.

Only tyres with rounded corner barcodes and prefix "K" are permitted.

- **D1.10.** Weight. Minimum of 148kg including driver at all times. The minimum driver weight as per NCR Ch.18 App.8 Art.31.10 is 41kg.
- D1.11. Number plates. Yellow with black numbers. NCR Ch.18 App.8 Art.30 applies.
- **D1.12.** Age. 12th birthday to 31st December of the year of 16th birthday. Drivers who have not reached the calendar year of their 13th birthday must hold a minimum of a Kart National licence (NCR Ch.18 Art.11).
- **D1.13. General**. An ignition kill switch must be fitted and must be identified with a blue triangle to assist marshals in the event of an incident. The start and stop buttons must be mounted on the battery box using brackets supplied.
- **D1.14.** Fasteners and attachments. The use of alternative fasteners, washers, hose clips, fuel line is allowed unless otherwise specified. The use of an additional earth strap is allowed. The use of additional air box support brackets and/or radiator support brackets is allowed, providing the fitting of these does not necessitate modification of the original components.
- D1.15. Data logging. Data logging is permitted, data logging systems with or without memory may be used. Global Navigation Satellite System reception is permitted. It is only permitted to take readings of engine rpm, engine water temperature, exhaust gas temperature, speed of 1 wheel, an X/Y accelerometer, lap times and split lap times. The rpm may only be recorded via a sensor on the HT-lead to sense spark plug pulses. The HT-lead must remain a single length from ignition coil to spark plug cap. The fitting of these sensors is only permitted providing there is no modification to the original engine components.

D2.0 Category Junior

Class Rotax Junior Max

Contact JAG (UK) Ltd - <u>www.jagrotax.co.uk</u>

- **D2.1. Introduction**. This class endeavours to provide an affordable high performance racing kart class combined with low running costs and low noise levels. It is expected that the class will continue to evolve and the promoters reserve the right, with the agreement of the ASN, to alter the technical regulations to ensure safety of drivers, fairness of competition, economy and the wishes of competitors and changes of specifications from Rotax agreed by the ASN. Enquiries to JAG (UK) Ltd, Unit 6 Mid Sussex Business Park, Folders Lane East, Ditchling, Hassocks, Sussex BN6 8SE. Tel. 01444 243112.
- D2.2. Chassis. Any chassis conforming to NCR Ch.18 App.8.
- D2.3. Engine. The only engine permitted in this class is the Rotax 125 Junior MAX.

The 125 Junior MAX adheres to the current Motorsport UK Rotax Max Technical Regulations. The cylinder is to be of non-Power Valve type. The engine is a single cylinder, liquid cooled, reed valve two stroke. All engines must be sealed between cylinder, crankcases, cylinder head and the reed valve block with an official seal to prevent modification. All seals must be crimped with the official Rotax crimping tool (Part No: 276 110). Each end of the sealing wire must only pass through the seal once.

All engines are issued with an official identity card. It is the competitor's responsibility to ensure that the numbers inscribed on the engine and seal must correspond with those on the identity card at all times Only authorised dealers will be issued with seals for use during maintenance of the engines. The identity card must be filled in and signed by an authorised dealer. The engine must be presented at scrutineering with the official class seal intact and the identity card lodged with the scrutineer if requested. The card must be collected by the competitor at the end of the race meeting. The identity card must be available for inspection by the scrutineers at any time during the race meeting. Should a seal become damaged, loose or lost during racing it must be reported to the meeting's scrutineer before leaving parc fermé. To allow the competitor to continue racing the scrutineer may at their discretion re-seal the engine with an official ASN seal. The new seal No. must be entered in the engine's identity card and signed by the scrutineer, plus their licence number. The engine must be taken to an official dealer with the ASN seal intact to be re-sealed with an official class seal before competing at the next race meeting.

**D2.3.1 Modifications**. 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 regulations or the current Motorsport UK Rotax Max Technical Regulations. The adjustment of elements specifically designed for that purpose shall not be classified as modifications, i.e. carburettor and exhaust valve adjustment screws.

#### UNLESS IT STATES THAT YOU CAN DO IT YOU CANNOT!

The engine must be raced in standard form as manufactured and supplied by Rotax unless otherwise stated. Filing, grinding, polishing, surface treating, machining or lightening of any component is forbidden unless otherwise stated. The addition of material to any component is not allowed unless otherwise stated. All parts used in or on this engine must be of original manufacture or source as supplied by Rotax for the 125 Junior MAX unless otherwise stated. The engine is to be used with air box, carburettor, fuel pump, radiator, wiring loom, ignition system and exhaust system as supplied by Rotax unless otherwise stated. Position and method of mounting the battery, wiring loom and exhaust system are free unless otherwise stated providing they are securely fixed to the satisfaction of the meeting's scrutineers and in accordance with the NCR. Filing of crankcase to allow easy fitting of water connection is allowed. Fitting of helicoils and inserts to repair damaged threads is allowed, except for the spark plug thread in the cylinder head insert, providing such repairs are not used to derive any benefit other than rectification of damage.

Minor damage to the cylinder or crankcase may be repaired by welding but only to restore the component to the original specification.

The use of thermal barrier coatings/ceramic coatings on or in the engine or exhaust system is not allowed. Replacement connectors to repair wiring loom are permitted. Repairs to starter motor are also allowed.

#### D2.3.2 Carburettor. Dellorto VHSB 34 XS.

All parts of the carburettor including the body are to be unmodified and run as supplied by Rotax. The carburettor must have VHSB 34 (cast in body) XS (stamped on body). All parts must comply with the current Motorsport UK Rotax Max Technical Regulations. The only adjustments allowed are the main jet, external air screw, throttle stop adjustment screw, and needle position on the five grooves provided.

Needle jet DP267. Choke jet 60. Idle jet 60, idle jet emulsion tube 45. Needle K57. Float needle valve 150. Slide 45. Floats 4.0gr. The venturi insert must have 12.5 stamped on the top.

Throttle cable and adjusters are free. It is permitted to use a single length of vent tube looped across the two air vents of the carburettor with a hole or slot cut in the side of the vent tube at the top of the loop.

FLOAT LEVER ARM HEIGHT: Using the ROTAX gauge (Part No: 277 400), the float arms must both fit between the gauge slot without touching. The carburettor must be upside down on a horizontal flat surface. The gauge must sit on the metal body of the carburettor without gasket.

**D2.3.3 Fuel Pump**. Only Mikuni fuel pump DF 44-210 or Dellorto fuel pump 994487 may be used. The fuel pump must be fitted to the bottom side of the standard air box bracket. Only a single length of pulse tube from crankcase connector to fuel pump may be used. Only a single length of fuel line from fuel pump to carburettor may be used. An in-line fuel filter as supplied by Rotax must be used between the fuel tank and fuel pump. An Internal fuel tank filter is also permitted. No restrictors, fuel returns or additional reservoirs are permitted.

#### D2.3.4 Intake Silencer. Only Type 2 may be used.

The Intake Silencer/Airbox must be used unmodified as supplied by Rotax for the 125 Junior MAX engine with its filter and all component parts including support bracket in place.

The two halves of the airbox must be securely screwed together using 4 M6 screws. All 4 screws must be sufficiently tightened to securely clamp the two halves of the airbox together.

Intake silencer tube and airbox-to-carburettor socket must be marked with "ROTAX".

In all conditions the air box MUST be positioned with inlet trumpets to the bottom of the box. The air box must be securely fitted in a manner to prevent rotation.

**D2.3.5 Exhaust System**. Only EVO exhaust system with separate silencer with 90° elbow outlet may be used. The exhaust system and silencer may not be modified in any way except for the pop rivets securing the silencer end plate may be replaced with screws. The use of a jubilee clip to secure the end plate pop rivets or screws is allowed. It is permitted to paint the exhaust system with black paint. The use of any other coating or plating is not allowed. It is permitted to make minor repairs by welding or brazing to the exhaust system providing there are no alterations to the original dimensions.

Gasket ring must be fitted between exhaust system and silencer.

It is permitted to weld/braze a socket (at a distance of 50-80mm from the ball joint) on the top of the exhaust system for measuring the exhaust gas temperature.

- **D2.3.6 Cooling System**. The radiator must be fitted to the right hand side of the engine using standard hoses and connections as supplied by Rotax. Engines using the thermostat cooling system must use the system in its entirety which comprises of thermostat head cover, radiator, radiator cap, radiator hoses, steel crankcase water hose connecting tube and radiator bracket. It is permitted to use the thermostat cooling system with or without the thermostat in place. The use of alternative hose clips and screw fixings are permitted. Minor repairs to the radiator are allowed.
- D2.3.7 Ignition Unit. Digital battery ignition system. Variable ignition timing. No adjustments possible. As supplied by Rotax. The ignition coil must have three pin connection. The ignition coil must be mounted by means of two original rubber mounting blocks or equivalent to the gearbox cover. In the case of chassis component interference with the original mounting position it is permitted to relocate the ignition coil by the use of an extension bracket. The extension bracket must be attached to the original gearbox cover mounting holes. The minimum length of HT lead permitted is 210mm from outlet of cable at ignition coil to outlet of cable at spark plug connector (= the visible length of wire). Spark plug cap must be as described in the current Motorsport UK Rotax Max Technical Regulations. Ignition switch can be either On-Off type, or Automatic fuse type. Any make of lead acid battery is permitted provided it is of the same specification as supplied by Rotax for the 125 Junior MAX 12v/6.5Ah, 12V/7.2Ah or 12v/9Ah. FIAMM-GS type FG20651, FG20722, FGHL20722, FGH20902, YUASA YT7B-BS or YT7B and ROTAX BATTERY FX7-12B. ONLY the ROTAX lithium iron phosphate battery RX7-12L, RX-12B or LiFePO4, or Rotax lithium battery 12V/4Ah may be used as an alternative to lead acid batteries. The ignition pick up must be marked with the numbers 029600-0710, followed by a variable production code on the 2nd line.

EVO Dellorto ignition system: Ignition coil with separate ECU. The minimum length of HT lead permitted is 210mm from outlet of cable at ignition coil to outlet of cable at spark plug connector (= the visible length of wire). Spark plug cap must be marked with "NGK TB05EMA", or alternative red rubber version marked "NGK", as described in the current Motorsport UK Rotax Max Technical Regulations. Engines must use the EVO Dellorto ignition system in its entirety which comprises of ignition coil, ECU, mounting brackets, wiring loom, battery clamp (battery box) and all its components as described in the current Motorsport UK Rotax Max Technical Regulations. Battery clamp (battery box) must be mounted on the left side of the chassis, next to the seat. Only YUASA YT7B-BS (with or without Rotax branding), or ROTAX RX7-12B, RX7-12L or LiFePO4 (lithium-ion phosphate type) may be used with EVO Dellorto ignition system.

**D2.3.8** Spark Plug. The only spark plugs permitted are as listed below and must be unmodified with sealing washer in place:

NGK GR8DI, GR9DI

Other makes/types may be added to this list by JAG (UK) Ltd; details will be published in official bulletin.

**D2.4. Transmission**. Direct from the engine to the rear axle via a single length of chain. The clutch must be as supplied by Rotax for the 125 Junior MAX. The internal running surface of the clutch must remain dry and free of grease or lubricant or any additional substance. The engine clutch must be triggered at 4000 rpm maximum and make the kart and Driver move forward.

All sprockets must use a 15 x 19 x 17 needle cage bearing and O-ring seal except in the case of an 11 tooth sprocket. An 11 tooth sprocket must be fitted with a plain bearing and an O-ring seal.

- D2.5. Brakes. Hydraulic disc brake operating on rear wheels only.
- **D2.6.** Tyres. Dry: MOJO D2XX 'CIK-Option', with barcode 10.0 x 4.50-5 front. 11.0 x 7.10-5 rear.

Wet: MOJO W5 'CIK Rain' with barcode 10.0 x 4.50-5 front. 11.0 x 6.00-5 rear

Tyres must be fitted to run in the correct direction of rotation, as indicated by the arrow on the sidewall of the tyre.

D2.7. General. An ignition kill switch must be fitted and must be identified with a blue triangle to assist marshals in

the event of an incident.

- **D2.7.1** Retail Price. Not applicable.
- **D2.7.2 Weight**. Minimum of 145kg including driver at all times. Minimum driver weight as per NCR Ch.18 App.8 Art.31.10 is 40kg.
- D2.7.3 Number Plates. Red with white numbers. NCR Ch.18 App.8 Art.30 applies.
- D2.7.4 Age. 12th birthday to 31st December of the year of 16th birthday. Drivers who have not reached the calendar year of their 13th birthday must hold a minimum of a Kart National licence (NCR Ch.18 Art.11).
- D2.7.5 Non-Technical Items. The use of alternative fasteners, washers, hose clips, fuel and pulse line is allowed unless otherwise specified. The use of additional and/or alternative earth straps is allowed. The use of additional air box support brackets, radiator support brackets, coil-mounting brackets, chain and clutch guards is allowed providing the fitting of these does not necessitate modification of the original components.
- D2.8. Data Logging. Data logging is permitted; data logging systems with or without memory may be used. Global navigation satellite system reception is permitted. It is only permitted to take readings of engine rpm, engine water temperature, exhaust gas temperature, speed of 1 wheel, an X/Y accelerometer, lap times and split lap times. The engine water temperature sensor may only be fitted in the position provided in the cylinder head cover for this attachment. The rpm may only be recorded via a sensor on the HT lead to sense spark plug pulses. The HT lead must remain a single length from ignition coil to spark plug cap. The fitting of these sensors is only permitted providing there is no modification to the original engine components. Connection of the data logger system to the starter battery is permitted. Further to NCR Ch.18 App.8 Art.34.11, where an auxiliary data logger battery is used this must be securely fitted in a suitable location on the lower Nassau panel bracket.

D3.0	D3.0 Category	Junior and Senior	
	Class	Formula TKM	
	Contact	Tal-Ko - <u>www.tal-ko.com</u>	

**D3.1.** Introduction. The UK's own unique class catering for drivers of all ages from 9 upwards in Inter through to Juniors and Seniors. These regulations are specific to Junior and Senior. Inter regulations are listed separately. A commercial and cost-efficient category with strict technical and cost controls.

The TKM brand is unique in enabling young drivers to go from Mini/Inter through to Senior all with one engine which needs only minor upgrades. This is made possible by having weight/restrictor size bands. to enable fair racing across all sizes and weights of drivers. It is intended that normally all bands within a class will race together for the same trophies with same colour number plates. Where a club has sufficient numbers, they may if they wish run different weight/restrictor bands of either class on separate grids. Note minimum weight for drivers in the Junior age class. Where appropriate TKM Junior 2- and 4-stroke classes may race together, and TKM Senior 2 and 4-stroke classes may race together. Full regulations for the TKM 4-stroke class are available at: <a href="https://www.tal-ko.com/PDF/FormulaTKM4-StrokeRegulations.pdf">https://www.tal-ko.com/PDF/FormulaTKM4-StrokeRegulations.pdf</a>

The Clubman and Masters sub-classes may be used by clubs at their discretion where there is sufficient interest either within normal Extreme classes or extra to, according to numbers.

Classic TKM is aimed at the fast-growing number of drivers who wish to race older karts to slightly modified regulations but which fully adopt the ethos of the class.

Note TKM Inter class regulations using the 950mm wheelbase karts have their own unique regulations.

The classes allow optional use of clutches and TAG. All seniors should now be on Extreme 115cc class engines, though any that are not should race within the normal grid. The control of the class regulations rest with Tal-Ko who are the class owners. Further copies of the full regulations are available from Tal-Ko, 54 Sunderland Road, Sandy, Bedfordshire SG19 1QY. Tel. 01767 682020. Email: info@tal-ko.com. Can be downloaded from <u>www.tal-ko.com</u>. Full engine details are contained in the TKM BT82 official fiche also available from Tal-Ko.

While long term stability is at the heart of the classes, in the interests of fairness, clarity, safety, and drivers, Tal-Ko reserves the right to agree with the ASN clarifications and changes to regulations at short notice if required.

#### D3.2. Chassis.

- **D3.2.1** Drivers may compete in any chassis conforming to NCR **Ch.18** App.8 providing it meets all other requirements herein. TKM homologated karts must still display a TKM sequential plate if using modified old-style crash bars.
- D3.2.2 Chassis to be constructed from magnetic steel tubing, cross section free. The method of welding/ brazing is free but for all main chassis joins welding/brazing is obligatory – i.e. No clamping, sliding members or torsional and stiffness adjustments including additional bolt-in torsion and/or stiffness bars are permitted. The use of any type of hydraulic or similar damping device for any purpose is specifically prohibited.
- **D3.2.3** Engine must be mounted to the right hand side, driver seated facing to the front.
- D3.2.4 The rear axle must be of parallel magnetic steel up to 50mm nominal diameter. The axle can be either solid or hollow. It must be supported in two bearings only, using any type of metal bearing and retention method including cassette type. Ceramic bearings are not permitted. No other bearings or stiffening devices may be attached to the rear axle for any purpose. It is permitted to use circular collars around the rear axle immediately next to the axle bearings to prevent axle movement. They must not exceed 21mm in width and must be fitted for the sole purpose of axle location. It

is permitted to semi-drill the axle for grub screw location. It is permitted to make use of rear axle bearing mounts or bearing adaptors and flanges which allow wheelbase or height adjustment provided that it does not exceed NCR Ch.18 App.8 dimensions permitted. It is permitted to fit internal inserts positioned in keyway and bearing areas for the specific use of extending life of axle with regards to cracking etc.

- **D3.2.5** Adjustable rear ride height permitted.
- D3.2.6 The steering must have non-adjustable castor and camber angles.

The king pin bolts must be centrally positioned in both the frame stub axle mounts and stub axles. The position of the king pin holes must be non-adjustable and if required central neutral components must be used in place of adjustable ones.

- **D3.2.7** Front ride height adjustment is permitted.
- **D3.2.8** All karts must have the steering column mounted in such a way that even if the bottom retaining bolt is removed it cannot pull free from its lower bearing.
- D3.2.9 Adjustable or removable rear, front and side torsion and/or stiffness bars are specifically banned. If a kart is manufactured with torsion and/or stiffness bar options each bar must either be removed or welded permanently in place. If welded in place the torsion and/or stiffness bars must be welded directly to the chassis permanently. Welding the clamps is not sufficient and it must be torsion and/or stiffness bar to chassis direct welding. Torsion bar clamps must be removed. Although the exact method of welding is free (mig, tig, braze, etc) tack welds are not sufficient. The welding must be nominally continuous around each joint and at a minimum cover 75 per cent of the circumference allowing for areas which may be difficult to access. The word permanent is stressed. The only additions permitted to chassis are items to meet latest NCR Ch.18 App.8 safety regulations.
- D3.2.10 Unless listed here for a specific purpose, use of the following materials for chassis/kart parts is specifically prohibited: Components made from Kevlar, Carbon Fibre, Titanium alloys, Magnesium alloys, Cobalt alloys, Tungsten Alloys and Beryllium Alloys, Metal Matrix Composites and Ceramics. The seat, floor tray and chain guard can be made from Plastic or similar materials, Fibre Glass, Aluminium, Kevlar or Carbon Fibre. It is permitted to use Magnesium Alloys for the following specific parts: wheels, front and rear wheel hubs, engine mount, brake disc hub, brake caliper mount, rear axle bearing mounts, sprocket carrier and steering wheel mounting boss. The use of plastic or similar materials for components such as wheels, wheel hubs/bosses, sprockets and brake disc carriers is expressly forbidden. Lubricants on kart only, excluding engine, are free.
- D3.2.11 Additional bolt on seat stays/mountings are permitted position and style free.

#### D3.2.12 Bodywork.

(A) All karts: Use of CIK-FIA homologated crash tested bodywork consisting of Side Pods, a Front Fairing and Nassau Panel is mandatory and must conform to NCR Ch.18 App.8. It is permitted to modify the bodywork mounting points on the chassis to accept CIK-FIA homologated bodywork but it must be undertaken in a professional manner. The combination of homologated bodywork elements of different makes or models is authorised, save and except that the two side bodywork elements must be used together as a set. Components from the same element cannot be mixed, i.e. side bars from one homologation cannot be used with side pods from another homologation. The Front Fairing and Nassau Panel, providing they compatibly connect with each other, may be from different makes and models. Side Pods may incorporate a suitable hole for starter shaft, even when clutch not fitted. When wet weather tyres are fitted, it is permitted for the wheels and tyres to be inside the Side Pods.

Use of the CIK-FIA homologated detachable front fairing mounting kit is mandatory (NCR Ch.18 App.8 Art.16.8). A pre-2015 CIK-FIA homologation front fairing CANNOT be used with the CIK-FIA detachable front fairing mounting kit. All karts MUST attach their dismountable front fairing/spoiler with the CIK-FIA approved KG manufactured and homologated Front Fairing Mounting kit. **(B) Clubman karts only**: TKM homologated karts for the period up to 2006 inclusive with old style diagonal bar fixing points may use side bumpers with a minimum of one tube with a minimum size of 18mm diameter (19/20mm recommended) and a wall thickness of 1.4mm minimum securely fixed to the chassis by a minimum of two points on each side and must allow for the attachment of mandatory side bodywork. Kart front bumper may be modified to allow fitment of a dismountable front fairing.

D3.2.13 Two types of rear bumper/ wheel protection are permitted:

(A) A metal rear bumper which must comply to NCR Ch.18 App.8 Art.20.4. It must not incorporate adjustable torsion and/or stiffness by its design and construction. The one piece main horizontal steel tube element of the rear bumper must be attached to its two bumper mounting points by welding only. The two upright supports of the rear bumper must also be welded to their bumper mounting points but can either be welded to or attached with bushes that can freely move on the one piece main horizontal steel tube element. No bolted or clamp-like joints permitted.

It is fully permitted to use additional measures to ensure the bumper does not fall off in case of a breakage or failure through use of cable ties and wire type cable. A small bracket with bolts may be used with a maximum of one bolt on either side of the kart attaching next to or adjoining the mounting points on the bumper itself. This must be for security only.

It is permitted to use rubber pipe type material secured by cable ties or jubilee type clips to guard against the main horizontal steel tube element of the bumper where it meets the two upright supports, fracturing and falling off while on track. If jubilee clips they must be fitted with their tightening screw heads forward of the main horizontal steel tube element.

**(B)** An adjustable width CIK-FIA homologated plastic rear wheel protection system is also permitted. The width of this rear wheel protection should always be in line with the outside of the rear wheels/ tyres. The gap between the front of the rear wheel protection system and the surface of the rear tyres must be between 15mm and 50mm.

- D3.2.14 Drivers may make use of tank tape, cable ties, thin wire or throttle cable type Bowden cable in ensuring that items such as exhaust, bumpers, electrical wiring, chain guard, etc. do not come off during the course of racing. One or more fixings may be used, however the item used must only be there for secondary security and reliability purposes and must not be attached in such a manner that it affects torsion and/or stiffness adjustment of the kart or provides any other performance advantage.
- D3.2.15 Seat type is free including material, subject to NCR Ch.18 App.8 Art.10.
- **D3.2.16** Floor tray shape and material free but must comply to NCR Ch.18 App.8 Art.4. Must not have any sharp edges exposed.
- D3.2.17 The fuel tank must be floor tray mounted beneath the steering column, forward of the driver. Type free. Fuel filter permitted either in-line or within the fuel tank or both. Maximum fuel tank capacity 9.25 litres. An overflow catch-tank must be used.
- **D3.2.18** The fitting of any device used to manually adjust the flow of fuel from tank to carburettor while on track is not permitted.
- **D3.2.19** On the grounds of safety the use of aluminium nuts and bolts is prohibited throughout the whole of the kart including the engine.
- D3.2.20 Brake and throttle foot pedal position and type free.
- **D3.3.** Engine See also TKM BT82 Engine Fiche.
  - D3.3.1 TKM BT82 Piston Port two stroke engine fitted with a standard Walbro WB19 carburettor stamped

TKM, carb spacer block marked TKM, ignition Motoplat 9600903-1 or PVL system marked TKM, TKM exhaust system complete with flex and standard TKM Carburettor induction box complete with original filter. The engine as raced, including induction box and ancillaries, must conform, in all respects with the latest TKM BT82 Homologation Fiche with its Extension and Amendments, as clarified and elaborated within these regulations and any official TKM technical bulletins.

- D3.3.2 The engine and ancillary components such as carburettor, ignition, exhaust and noise induction box must be raced in standard condition as manufactured and/or supplied by Tal-Ko with no other brand or tuner identity added. Filing, grinding, machining, polishing, surface treating, surface coating, plasma metal spraying and lightening of any component including bearings is expressly forbidden. This expressly includes any chemical or other treatments intended to smooth the flow of air/fuel within the carburettor.
- D3.3.3 The addition of materials to any component is not allowed. Black anodising of the head and barrel must remain, subject to fiche requirements. It is permitted to mark engine measurements and engine number on the barrel/head. Where components are found to be in breach of regulations and not capable of being rectified they may be marked prominently and permanently as such by Tal-Ko. External wear and tear such as accident damage causing fin breakage, or throttle spring rubbing, will be permitted.
- **D3.3.4** While it is accepted that a minimal amount of damage is permitted to the exterior of the induction/ noise box system including its trumpets, any damage that affects the course of airflow into the engine is prohibited. This particularly applies to the shape of the inlet trumpets.
- D3.3.5 Old style noise induction boxes. No longer permitted.

New style noise induction boxes. Mandatory for all classes.

For full regulations see official TKM BT82 engine fiche. Note that for wet use it is permitted and recommended to use a protective device to prevent water being sucked into the air box inlet trumpets. Design free and may be fitted externally to the airbox using cable ties, tape etc provided no holes are drilled into the air/mixture internal path. May also be fitted to sidepod. May only be fitted when the official conditions set as wet or open.

**D3.3.6** All parts used in or on this engine must be of original TKM manufacture or source, except where expressly allowed.

#### UNLESS IT STATES THAT YOU CAN DO IT YOU CANNOT!

- **D3.3.7** The following minor modifications are permitted:
- Drilling of a hole in a head or barrel fin to fit a throttle return spring.
- Modification to, and addition of, a slot in the Carburettor swivel assembly and Carburettor spacer to allow for ease of throttle cable fitment.
- Drilling holes in component mounting nuts and bolts to allow the fitting of locking devices.
- Extension to the high jet to ease adjustment while driving is permissible, providing the original jet is still used and the extension does not exceed 50mm in length. Extension to the low jet is not permitted.
- Drilling of scrutineer's sealing wire holes, one per component, in the fins of the head, barrel, and two crankcase halves. It is also permitted for authorised scrutineers at a race meeting to mark engines with paint.
- Where spring location holes in the TKM exhaust and manifold bend flex spring flanges have become worn through, it is permissible to re-drill additional holes further around the flanges solely for spring retention purposes. It is also permitted to repair broken spring holes and or cracked flanges with a local weld/braze repair.

- TKM manufactured brass main bearing shims may be used to facilitate correct crankshaft end float clearance.
- As an alternative to the standard black carburettor fuel pump diaphragm, it is permitted to use the beige colour fuel pump diaphragm as supplied in the Walbro WB19 repair kits, part nos. D10-WB and K10-WB.
- The small butterfly adjustment screw and spring screw which sets tickover on the Carburettor can be fitted either way round. It is beneficial to reverse it when setting up tickover on a clutch type engine.
- It is permitted to repair broken ignition wires providing original type connectors are used.
- It is permitted to mark the carburettor with personal identification marks like 1, 2 or A, B etc., but this must not interfere with the TKM logo or the model and batch number or have tuner recognition.
- **D3.3.8** It is permitted to paint the TKM manufactured exhaust silencer provided that only black paint is used and that the original TKM logo is still visible. It is expressly prohibited to use any other coating or plating or to use any colour other than black. It is also clarified that on all engine types, while the exhaust may be superficially cleaned and/or painted black on the external surface, it is not permitted to carry out extensive polishing and any accompanied weight reduction.
- D3.3.9 Junior TKM (using 100cc TKM BT82 engine) must use a single TKM manufactured aluminium anodised carb restrictor plate between the carburettor and engine. This is a flat metal plate with a nominal minimum thickness of 3mm and a central parallel round bore of varying sizes and identifying colour according to driver weight through which all the mixture feeding the engine must pass. No blenders of any configuration are allowed. This part must not be modified or polished in any way and must be as made and supplied by Tal-Ko. It must display the genuine TKM logo. Coloured anodising must be intact. The Junior 100cc 148kg power band does not require a restrictor.
- D3.3.10 Senior and Junior weight/restrictor sizes as follows, in each case the weight is total of driver as per NCR Ch.18 App.8 Art.31.10 and kart as raced. Restrictor sizes quoted are maximum diameter permitted:

TKM Class	Colour	Restrictor
Junior 123 Junior 128 Junior 135 Junior 142 Junior 148 Senior Extreme & Clubman 132 Senior Extreme & Clubman 139 Senior Extreme & Clubman 147 Senior Extreme & Clubman 154 Senior Extreme Masters 160	Black Gold Blue Purple Black Gold Blue	19.5mm 20.5mm 22.0mm 24.0mm No restrictor 19.5mm 20.5mm 22.0mm No restrictor No restrictor

Tal-Ko reserve the right, with ASN approval, to amend restrictor size/minimum weight with one month's notice to correct any apparent advantage/disadvantage.

- **D3.3.11** Ignition timing is limited as detailed. When it is set it must be locked so that it cannot be adjusted by the driver with the kart in motion or by any mechanical and or vacuum/electronic device.
- D3.3.12 On Motoplat Ignition, the timing must be set to between 2.0mm and 3.0mm before Top Dead Centre. On the PVL system, ignition timing must be set to between 1.5mm and 2.1mm BTDC. Ignition timing to be measured statically using a dial indicator on the piston crown and the original ignition timing lines. TAG engine has its own specifications as set out in the official TKM BT82 engine fiche.
- **D3.3.13** Engine management systems and additional fuel pumps are prohibited.

- **D3.3.14** Connection between the carburettor and throttle pedal to be of one Bowden type cable. No other means of throttle actuation permitted except for hand throttles used as easy-start mechanism.
- D3.3.15 For all engines it is mandatory to use the appropriate HT lead, spark plug cap and approved spark plug (with its original sealing gasket washer in place) all in unmodified form. Note for TAG engines the plug cap is PVL and black in colour and for non-TAG it is NGK and red in colour. The HT leads are also different and not interchangeable between TAG and non-TAG engines.

The only spark plugs permitted are:

DENSO - no longer permitted.

NGK – B9EG, B10EG, BR9EG, BR10EG, B9EGV, B10EGV, BR9EIX and BR10EIX.

D3.3.16 A minimal amount of machining is permitted to the cylinder head subject to stringent conditions, primarily intended to allow rectification of engines that have suffered head damage. This must be carried out in line with the drawings laid out in the official TKM BT82 engine fiche. Note that the squish angle face of 12 degrees plus or minus 1 degree must meet and intersect the liner mating face of the cylinder head at that angle, with no intermediary angles or curves throughout their full circumference. Any form of step, recess, groove or similar will render the cylinder head illegal since it will not follow the original shape.

The combustion chamber dome must at all times remain as a concave spherical shape throughout its entire diameter. At the point where it meets the squish band there must be only one nominal radius which must be a maximum of 3mm. Any fundamental shape changes to the concave spherical dome introducing convex spherical shaping, more than one intermediary angle or radius at the point of meeting the squish band, or any change which makes its shape outside that stated, will render the cylinder head illegal.

- **D3.3.17** The cylinder head and/or liner mating face(s) must remain flat. If machining or any other operation is carried out on the cylinder head and/or liner mating face(s), the mating faces must always remain flat over the full extent of their original surface.
- D3.3.18 It is permitted to use Helicoil type and Timesert thread replacements to repair all stripped threads on engine fixings on the crankcase and cylinder barrel. On the spark plug thread only a Helicoil type thread repair is permitted. Any other type of repair or insert is prohibited. Such repairs must not be used to derive any benefit other than rectification of damage. In the case of the spark plug thread, no portion of the Helicoil may protrude outside of the normal thread area. The coil must be inserted to the full length of the original thread and only one continuous coil to be used per repaired thread. In all cases the size of the repaired threads must remain as standard. On the carburettor, it is permitted to repair the non-metric threads with M3 or M4 threads providing they do not perform any other function.
- D3.3.19 When measuring the inlet and exhaust port timing it is clarified that the maximum contact pressure on the official TKM 0.25mm thick x 6mm parallel nominal width feeler gauge (P/N: TFG025) should be only that achieved through finger and thumb pressure on either one of the crank nuts. The dial gauge and fixture block used for this purpose must be tightened down at 13lb/ft on each of the two nuts. The nuts/studs must have threads in good condition, lubricated, and with nuts which can be easily moved by finger-only pressure at the point of being tightened.
- D3.3.20 All gaskets used in or on the engine must be of original TKM supply and must be fitted in accordance with the engine fiche. Only one gasket is permitted on any engine part with the exception of the barrel to crankcase mating face where it is permitted to use up to a total of any three of the standard 3 alternative thickness TKM supplied gaskets. Use of gasket sealer/grease is permitted.
- **D3.3.21** It is permitted to fit additional silencing where required by the NCR or local club regulations, provided that the original complete TKM equipment is still used in unmodified form.

- **D3.3.22** Use of an exhaust end can is mandatory and must be that provided by Tal-Ko and marked with the TKM logo. It must be fitted with the three large exhaust exit holes 180 degrees opposite to the main exhaust tailpipe exit.
- D3.3.23 When taking measurement of the cylinder head volume, the cylinder head must be fitted to the engine in the manufacturer's normal manner with the standard brass head nuts & TKM sealing nut tightened to 13lb/ft and the two small cap headed bolts tightened to 8lb/ft. The nuts/studs must have threads in good condition, lubricated, and with nuts which can be easily moved by finger & thumb-only pressure at the point of being tightened. If the engine is fitted with the optional EeziStart De-Comp valve, then this must be in the fully closed position and tightened to 13lb/ft. The digital burette must be used with light grade oil which meets the specification:- Viscosity: 61 Centistokes at 20 C which is available from Tal-Ko.

The engine when measured must be as raced - e.g. with the same gaskets in position and with no carbon removed from the top of the piston, inside of the combustion chamber, etc. The engine can be hot from racing or at cold ambient temperature for measurements to be taken. Definitive sanctioned measurement must be at cold ambient temperature.

The cylinder head may only be removed for inspection in the presence of an authorised ASN licensed eligibility scrutineer before being replaced for further head volume checks if required. Greasing of top & bottom ring is not permitted and all measuring oil thoroughly removed before a further head volume check is carried out.

Method of taking head volume measurement:

The engine must be in an upright stable position with the measuring plug in position and fully tightened down on spark plug washer face to 13lbs/ft. Rotate the engine over and lock into place with a wedge or feeler gauge placed between ignition rotor and stator with the piston as close to Top Dead Centre (TDC) as possible. Once the digital burette has been zeroed, insert the measuring oil into the engine to the permitted minimum required cc and then gently rotate the engine clockwise and anticlockwise a small amount to put the piston exactly at TDC. If the oil does not seep out of the measuring plug hole onto its top face surface, then it is legal. It is recommended that the insertion of the oil and TDC test to take no longer than 10 secs. If the oil seems to keep needing topping up, then a suspect illegal stuck top ring will need to be investigated.

ENGINE	Engine fitted with EeziStart	DIGITAL BURETTE	GLASS BURETTE (comparison guide only)
Junior 100cc	Junior 100cc	Digital: 10.6cc min.	Burette: 11.0cc min.
Senior Extreme 115cc	Senior Extreme 115cc	Digital: 11.6cc min.	Burette: 12.0cc min.
TAG Jnr/Inter 100cc	N/A	Digital: 9.6cc min.	Burette: 10.0cc min.
TAG Senior 115cc	N/A	Digital: 10.6cc min.	Burette: 11.0cc min.

CYLINDER HEAD VOLUME: Use of a Digital Burette and the official TKM measuring plug P/N 003 is the only definitive sanctioned method of measuring.

- **D3.3.24** As part of TKM's commitment to noise reduction, it is mandatory to use effective heatproof webbing or similar sleeve material wrapped around the exhaust flex to help reduce noise. Make is free.
- D3.3.25 The use of purpose designed TKM fin rubbers is mandatory as a noise reduction method. All new engines are fitted with noise reducing fin rubbers as supplied by Tal-Ko. These comprise 10 special rubbers all with TKM logo and either marked H or B to indicate whether for head or barrel. Competitors must use a full set of these rubbers, which may be fitted to older engines. The use of more than 10 rubbers is allowed but not advised. Only TKM rubbers permitted. Where fins have become broken on an engine it is permitted to remove excess sections of the rubbers at this point. At post race/qualifying scrutineering, loss of one rubber will be accepted provided it is then replaced before the next race.
- **D3.3.26** The use of one or more TKM manufactured with TKM logo special steel cylinder head retaining nuts with hole for sealing wire is permitted, even if sealing is not required. Use of such nuts may be mandatory at championship meetings as specified in their regulations.

- **D3.3.27** Piston rings must at all times remain free to operate in the manner in which they were designed and supplied. It is the responsibility of the driver to ensure that the rings are not 'coked' in place with carbon or prevented from their normal 'spring' effect by other methods. The rings must be appropriate to the piston size used and have a maximum ring gap of 0.5mm when measured with the ring placed squarely 5-10mm down from the top of the cylinder bore. Only the standard unmodified earless type piston cir-clips as supplied by Tal-Ko must be used. The Extreme 115cc engine uses one piston ring, the Junior/Inter 100cc engine may use one or two piston rings. The bottom piston ring for the Junior/Inter 100cc engine can be removed for racing if required.
- D3.3.28 Where specified, officially sanctioned and part numbered TKM gauges and measurement devices must always be used when checking engine measurements. In the case of any doubt or dispute, only these approved items must be used and the results taken as definitive and final. The engine and other test equipment should be at a cold (ambient) temperature of between –5C and +50C. Any readings taken within this temperature span will be accepted as definitive.
- **D3.3.29** It is mandatory to use the optional TKM manufactured with TKM logo flex ring to help increase the life of the exhaust flex.
- D3.3.30 Permitted Re-bore (Extreme Specification Engines Only). It is permitted to re-bore the barrel in order to take new TKM Extreme oversize pistons 54.25 54.75mm. This modification may be carried out to any age engine. It is also permissible to carry out minor machining to the cylinder head to match as detailed in the latest official TKM BT82 engine fiche additions. The pistons in these Extreme engines will have only one piston ring. In all other respects normal Formula TKM rules apply.
- D3.3.31 A TAG on-board starter system engine and associated equipment may be used as supplied by Tal-Ko and detailed in the official TKM BT82 engine fiche. It is clarified that when using a TAG specification engine it is mandatory to always have the full system in place as applicable and connected to enable the starter to be used to start the engine. An external hand-held starter may be used to start the engine in case of any problem, but at any time before or after a race the driver may be required to demonstrate that the starter system with its on-board battery is fully fitted and functioning. Exceptionally at a race meeting if a fault occurs which means the starter cannot be used, with agreement of a scrutineer the engine may be started externally providing that all the components of the starter, battery etc. are in place. No test will then be required.

The only items which must be used on both the old and new style and replacement TAG ignition systems are:

Old Style: PVL Plug Cap, PVL HT Lead, PVL Coil, PVL Rotor, PVL Stator, PVL Relay and the PVL CDI box.

New Style: PVL Plug Cap, PVL HT Lead, PVL Ignition Module, PVL Rotor PVL Stator and PVL Relay.

The HT Lead on replacement TAG Coil is the same as used on non-TAG Coils.

A cable-tie can be used to seal the plug cap to the HT lead in the plug cap groove provided.

It is not permitted to use/mismatch the rotors and stators from the old 682 system with th new 683 system.

It is permitted to use/mismatch the coils, rotors and stators from the 683 system with the replacements as listed.

Various items listed as not mandatory such as Relays, Fuses & PVL wiring loom may be completely removed from the kart.

D3.3.32 When measuring and checking for the maximum permitted piston bore size in the cylinder barrel, the bore may be measured at any position within its full length where the circumference is continuous – i.e. not where there are port openings or con rod clearance cut outs. If the maximum permitted bore size is exceeded at any point then the cylinder barrel is illegal.

- **D3.3.33** The cylinder piston bore must be nominally perpendicular to the cylinder base and central to the cylinder liner. Out of centre and/or angled cylinder piston bores are not permitted.
- **D3.3.34** For the avoidance of doubt, where dimensions and tolerances are stated in the official TKM BT82 engine fiche these are for information only and it is stressed that unless specifically stated as permissible, it is NOT permitted to alter any component to the fiche dimensions.
- D3.3.35 Use of the official TKM supplied optional EeziStart de-compressor valve is allowed across all engines except TAG in unmodified form with sealing washer in place. See official TKM BT82 Engine Fiche for details.
- **D3.3.36** On all clutched karts the on/off switches for the engine must be mounted in a clearly accessible position. The red kill switch MUST be marked as 'OFF'. A blue triangle may also be used to identify to marshals.
- D3.3.37 The battery for the starter MUST be mounted to the kart chassis in the correct ASN specified position (NCR Ch.18 App.8 Art.34.11) placed in a metal mounting tray and cover. Modifications can be carried out to both the mounting tray and its plastic cover to aid fitment to the kart. If the normal TKM mounting tray and cover is used it must be raced complete with the plastic TKM provided cover. The smaller TKM battery mounting tray does not need a cover. It is permissible to seal any connections to aid waterproofing as well as the repairs to broken wiring including replacement connections to suit. It is permissible to drill additional holes both in the battery mounting tray and the plastic cover for the fitment of additional security fittings such as cable ties and water proofing or other.

Engine starter batteries and separate auxiliary data logger batteries where permitted must be fitted to a main Chassis Frame tube or within the confines of the main Chassis Frame and shall be placed on the Chassis Frame in an area located to the side of the seat opposite the engine and behind the central strut or alternatively mounted on or behind the seat. Battery trays must be fixed to the chassis by a minimum of two M8 bolts or four M6 bolts. If Lithium batteries are used, they must carry the appropriate "EC" and markings (NCR **Ch.18 App.8 Art.34.11**).

#### D3.4. Transmission.

- **D3.4.1** The drive must be direct, i.e. the crankshaft and rear axle are connected only by a single length of chain. No belt drive, reduction gears, etc., permitted. Engine sprocket to be 9, 10, or 11 tooth. On clutched engines 10 or 11 tooth only.
- **D3.4.2** Junior Class engines MUST be fitted with a clutch, optional for Senior Class. Only clutches permitted: Horstman dry clutch or 'V' clutch and the new alternative design clutch when available from Tal-Ko. If fitted these must carry the TKM markings and be used in unmodified form as manufactured or supplied by Tal-Ko.
- **D3.4.3** Engines fitted with a Horstman clutch must use the genuine TKM clutch safety cover in unmodified form. An effective and working ignition on/off switch must be fitted to the kart and clearly marked in the off position.
- D3.4.4 On TAG engines the only permissible clutch assembly complete is the 'V' clutch as supplied by Tal-Ko with no modification and the TKM logo stamped on all of the three clutch shoe outer faces. It is not permissible to reline the clutch shoes or add substances to either the shoes or drum. A new alternative design clutch will also be permissible when available from Tal-Ko.

#### D3.5. Brakes.

- **D3.5.1** Brakes must be hydraulic disc brake operating on the rear wheels only no ABS or similar systems.
- **D3.5.2** The brake disc must be made from cast iron or steel. Type free may be ventilated floating, etc. The brake to consist of one calliper, with two pads. Twin master cylinders permitted. Disc carrier free. Any brake system may be used. Pads free.

**D3.5.3** For the purposes of safety it is mandatory for all karts to make use of a dual connection between the brake pedal and master cylinder. The prime connection may be either solid or cable operated, with a secondary safety cable minimum 1.8mm nominal diameter set slightly looser to act as a back up in the case of failure.

#### D3.6. Wheels, Bearings and Tyres.

**D3.6.1** The only tyres permitted are Maxxis with the word 'TKM' moulded or laser marked on their sidewalls. Dry slick tyres will have WHITE labels, wet tyres will have RED with a WHITE outline labels. They must not be modified in any way including hand or machine cutting. The existing GREEN label TKM slick tyres will still be permitted for use until 31.03.2025.

Tyre sizes/types as follows:

Dry – Laser marked TKM Maxxis Sport	Front 10x4.50-5,	Rear 11x7.10-5
Wet – Moulded TKM Maxxis	Front 10x4.50-5,	Rear 11x6.00-5

- D3.6.2 Heating of tyres by any artificial method, or their treatment by any chemical substance, is prohibited.
- **D3.6.3** Wheels are free but must not be made of plastic type material. Wheels must be of one moulding/ casting. The use of wheels which have been cut and joined to increase or reduce width is expressly prohibited. Front wheels may have a separate detachable hub. It is permitted to use wheel balance weights affixed to the wheels. Front wheel bearings must be of metal type. Ceramic not permitted.
- **D3.6.4** Maximum wheel width should be a nominal 122mm front and 210mm rear as measured across the inside edge of the beads. Maximum permitted width across the outer edges of the rims to be 133mm at the front and 217mm at the rear.
- **D3.6.5** When wet weather tyres are fitted, it is permitted for the wheels and tyres to be inside the sidepods, so long as the sidepods have closed solid ends and this will apply for both types A and B of permitted rear protection bumper/ protection (3.2.13).

#### D3.7. General.

D3.7.1 Weight. (On completion of any part of the event.) Driver weights subject to NCR Ch.18 App.8 Art.31.10.

Junior TKM 123: min 123kg with driver. Minimum driver weight 35kg.

Junior TKM 128: min 128kg with driver. Minimum driver weight 37kg.

Junior TKM 135: min 135kg with driver. Minimum driver weight 39kg.

Junior TKM 142: min 142kg with driver. Minimum driver weight 41kg.

Junior TKM 148: min 148kg with driver. Minimum driver weight 43kg.

Senior TKM Extreme 132 & Extreme Clubman 132: min 132kg with driver. Minimum driver weight for drivers under the age of 16 as per NCR Ch.18 Art.12.1 is 40kg

**Senior TKM Extreme 139 & Extreme Clubman 139**: min 139kg with driver. Minimum driver weight for drivers under the age of 16 as per NCR Ch.18 Art.12.1 is 41kg.

**Senior TKM Extreme 147 & Extreme Clubman 147**: min 147kg with driver. Minimum driver weight for drivers under the age of 16 as per NCR **Ch.18 Art.12.1** is 43kg.

Senior TKM Extreme 154 & Extreme Clubman 154: min 154kg with driver. Minimum driver weight for drivers under the age of 16 as per NCR Ch.18 Art.12.1 is 44kg.

**Senior TKM Extreme Masters**: min 160kg with driver. Drivers must be aged 35 years or over, or the driver must weigh a minimum of 80kg.

#### D3.7.2 Plates. NCR Ch.18 App.8 Art.30 applies.

Senior TKM Extreme – red with white numbers.

Senior TKM Extreme Clubman – white plates with black numbers.

Senior TKM Extreme Masters - red with white numbers and white line across top or bottom of plate.

Junior TKM – blue with white numbers.

#### D3.7.3 Ages/Sizes.

**Junior TKM** – 12 to 16 years old. A Competitor may enter from the calendar year of their 13th birthday, or from their 12th birthday with a National licence and, continue until 31st December in the year of their 16th birthday. As per NCR Ch.18 Art.11.1. Minimum weight 35kg.

**Senior TKM Extreme** – The Class is open to any driver from the calendar year of their 16th birthday, subject to 3.7.2 and NCR Ch.18 Art.12.1. A holder of a Kart National licence may transfer to the Senior Class from their 15th birthday, subject to 3.7.2 and NCR Ch.18 Art.12.1. Exceptionally, a holder of an International ITE licence may transfer to the Senior Class at any time. Having moved into an ASN Senior Class he/she may not revert to a Junior Class.

**TKM Extreme Clubman** – A sub class which clubs may use if they wish with the karts either on the same grid as TKM Extreme or separate. It allows a lower cost factor. All current TKM Extreme regulations apply with the following modifications:

TAG engine and any engine with CNC barrel NOT permitted. All other TKM BT82 engines fitted with cast barrels permitted, with or without clutch.

Any type of kart chassis may be used, but must be a minimum of two years old. Driver must provide confirmation of kart age.

Where an older TKM homologated kart is being used, if it displays the TKM homologation plate it may be used with older style sidebars modified to take new style CIK-FIA bodywork, and may have front bumper modified to take approved dismountable front fairing. See rule 3.2.12 (B).

For the removal of uncertainty, it is clarified that TKM homologated karts may be upgraded to current regulations on items such as Ackermann steering, brakes, stub axles, 50mm rear axle etc. as per full class regulations.

Gearing may be specified by a Club.

Tyres will be current spec Maxxis slick and wet. Clubs may specify restrictions on tyre age and/or depth.

**TKM Extreme Masters** – Same as normal senior class technical regulations. Driver must be 35 years and over or weigh a minimum of 80kg in full racegear, subject to NCR Ch.18 App.8 Art.31.10.

#### D3.7.4 Additional Notes.

While taking part in racing or official practice a revolution counter/data logging device may be fitted provided it meets these criteria. It is permitted that this rev counter or another device may record lap times, split times, speed, revs and length of engine running time. If such equipment is fitted with temperature sensing capability/g-force sensors these connections must not be used. The information gathered may be downloaded when the kart is off the track into any type of memory equipment including a PC. It is not permitted to transmit a signal to another receiver whilst the kart is

in motion. Any sensors not permitted must be removed from the kart for racing and official practice if this equipment does not comply. The only exception to this rule applies to the fitting of officially sanctioned cameras and other recording devices and to transponders and other equipment required as part of the organisers requirements for that race meeting. On-board still and motion cameras may be fitted subject to NCR Ch.18 App.8 Art.36.

The use of "Easystart" wheels is permitted.

Only the TKM BT82 name may be used under the heading "engine" in event programmes. No other names permitted.

As class owners Tal-Ko reserve the right to have an engine complete with carburettor, noise box, exhaust system, etc. sealed by ASN licensed scrutineer for the purposes of checking that it conforms to the BT82 engine fiche and TKM rules and if required power testing on the manufacturer's approved dynamometer. The competitor and an ASN licensed scrutineer will be invited to be present for such strip down and any required testing, which is carried out at the risk of the competitor.

Tal-Ko have the right to clearly and permanently mark any component which is found to be in breach of regulations and not able to be rectified.

It is permitted to add weight to the kart in order to meet minimum weight requirements provided that NCR **Ch.18 App.8 Art.31** is adhered to. Weights must be attached within the periphery of the main kart frame and must not be attached to the side pods and/or front nose cone. It is permitted to add weights to the seat but strongly recommended not to add more than a total of 2kg weight to the floor tray. No one single piece of ballast must be more than 5kg. All weights to be fixed using a minimum of two mechanical fixings, i.e. bolts with washers.

In the event of any dispute the regulations and fiche with updates as published within the official Formula TKM Regulations and TKM BT82 engine fiche together with any appropriate Technical Bulletins will be taken as the definitive documents. It is the responsibility of each and every competitor to obtain these regulations and fully implement them. Ignorance of any rule will not be a defence.

Tal-Ko reserves the right to refuse to serve any trader found to be carrying out modifications not permitted in the class regulations.

Formation laps for a rolling start must be maintained as per NCR Ch.18 App.5 Art.1.23 at a steady pace, neither too fast nor excessively slow. For the avoidance of doubt that speed relates to engine running between 5000 and 6000rpm once karts are starting to form into grid.

The eligibility specialist to the TKM class is Paul Klaassen. In addition, Ernie Salmon is also a TKM eligibility specialist scrutineer.

All rules effective 01 January 2025.

A copy of the Formula TKM Regulations and Technical Guide including the latest engine homologation fiche is available free from Tal-Ko Racing at <u>www.tal-ko.com</u>.

**D3.7.5 Classic TKM**. This is a specific fully authorised class for those taking part in historic racing. Karts must be no newer than 2006, tyres are current Maxxis TKM specification and engines must make use of original parts and not have any modifications other than those specified.

Full details of the slightly revised regulations for the class are available at: <u>https://www.f100uk.co.uk/regulations</u>



E1.0 Category Senior – Non-Gearbox

Class IAME X30 Senior

Contact Argenti-KT Ltd - <u>www.argenti-kt.co.uk</u>

- E1.1. Introduction. This class endeavours to provide performance approaching that of the comparable current nongearbox Senior classes, combined with low running costs and low noise levels, the engine can be changed from Junior to Senior by removal of a simple exhaust restrictor. It is expected that the class will continue to evolve and the promoters reserve the right, with the agreement of the ASN, to alter the technical regulations to ensure safety of drivers, fairness of competition, economy and the wishes of competitors and changes of specifications from IAME agreed by the ASN. Enquiries to Argenti-KT Ltd, Unit 9D, Manor Business Park, Grants Hill Way, Woodford Halse, Northants, NN11 3UB – www.argenti-kt.co.uk.
- E1.2. Chassis. Any chassis conforming to NCR Ch.18 App.8. Must use a currently or previously CIK-FIA homologated Rear Wheel Protection.
- E1.3. Engine. The only engine permitted in this class is the IAME X30. Two-stroke engine equipped with electric starter, 16,000 rpm ignition, centrifugal clutch, carburettor, inlet silencer and exhaust system. The power unit, as raced must conform in all aspects with the official Motorsport UK homologation fiche and must bear the relevant official IAME markings as shown in the Motorsport UK homologation fiche. The machining of ANY surface is strictly prohibited. Compliance with the Motorsport UK homologation fiche may be checked at any time during an event, with the technical checking tools supplied by IAME. No addition of, or other change of material is permitted. No modification or tuning for whatever purpose is allowed, except for that listed in the following regulations, or where expressly permitted by the ASN. Where specific dimensions are not given for the engine and its supplied accessories in the Motorsport UK homologation fiche, the dimensions will be checked against a control engine held under the control of the ASN.
  - **E1.3.1** Engine replacement parts. The only replacement parts allowed are those supplied by IAME and listed on their parts list for the Motorsport UK homologated engine. Replacement parts must carry the manufacturer's part number and/or marking where applicable.
  - **E1.3.2 Spark plug**. The only spark plugs permitted are shown below; they must be unmodified and as supplied by the manufacturer, with sealing washer in place:

NGK: B8EG, B9EG, B10EG, BR8EG, BR9EG, BR10EG, BR8EIX, BR9EIX, BR10EIX, R6252K-10, R6252K-105, R6254E-10, R6254E-105.

- E1.3.3 Bearings. All the bearings part numbers X30125396A, X30125397, IMB-20100 and X30125746A must be unmodified, complete with steel ball or rollers, plastic cage and remain the same type as supplied by the manufacturer. The use of alternative SKF roller bearing part number X30125397 (BC1-3342B) is permitted.
- **E1.3.4** Engine lubrication. The only oils permitted are those specified in the current CIK-FIA list of homologated lubricants. The current list can be found on the FIA Karting website at <a href="http://www.fiakarting.com">www.fiakarting.com</a>
- E1.3.5 Engine management. Engine management equipment/systems are prohibited.
- **E1.3.6 Engine sealing**. All engines will remain unsealed in their normal use. However, an ASN licensed scrutineer appointed to the meeting may reserve the right to seal any engine at any time during an event for further inspection at a later date or at their convenience.
- E1.3.7 Modifications. 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 regulations or the official Motorsport UK fiche. The adjustment of elements specifically designed for that purpose shall not be classified as modifications. The engine must be raced in standard form as manufactured and

supplied by IAME unless otherwise stated. Filing, grinding, polishing, surface treating, machining, adding or removal of material or lightening of any component, including for repair purposes, is not permitted unless otherwise stated in these regulations or unless expressly permitted by the ASN.

The following minor repairs/modifications/additions are permitted:

- Repair of damaged threads in the crankcase and/or cylinder with helicoils or timeserts.
- A wet-box as supplied by IAME (part no. A-61700) may be attached to the inlet silencer; it may be adapted provided that it in no way modifies the shape or size of the inlet trumpet or creates a ram effect. The inlet silencer cannot be modified to aid in the attachment of a wet-box or splash-guard and the attachment must be of a non-permanent type, e.g. tape or cable ties.
- Decals applied on the engine and on the inlet silencer.
- The addition of protective material to the HT-lead, and the HT-lead may be shortened, however cutting and re-joining of the lead is not permitted.
- Honing of the cylinder.
- Use of a blanket on the front of the cylinder solely to assist in the prevention of freezing.
- Moderate repair to the crankcase due to component failure, this excludes welding or addition of any other material.
- The following repairs/modifications/additions are specifically not permitted:
- Painting of the cylinder head or cylinder.
- Repair of the cylinder head spark plug thread.
- Repair of any of the cylinder, in any form.
- **E1.3.8 Ignition unit**. All parts must be un-modified original digital Selettra ignition. Scrutineers have at any time during the race meeting the right to request part or full controlled ignition system to be fitted. Only CDI box marked 'C' (16,000) is permitted. The marking on the electronic box 'C' is mandatory and must be clearly visible without disassembling the CDI box. The battery must be fixed to the chassis and connected to the ignition system at all times. The rotor location key must be unmodified and have minimum thickness of 2.43mm.

At a race meeting if a fault occurs which means the starter cannot be used, with agreement of an Official the engine may be started externally providing that all the components of the starter, battery etc. are in place.

- E1.3.9 Engine eligibility. The checking of the combustion chamber volume must be carried out as described in the Motorsport UK homologation fiche with TQF oil and using a digital burette. The checking of the squish must be done along the centreline axis of the gudgeon pin, at the smallest point, a maximum of three times. The angular reading of the port is to be carried out by inserting a 0.2 x 5mm wide feeler gauge. For damaged ports the angular reading is max. 125° side transfer, 126° front transfer and 176.5° exhaust port, using a 1mm pin gauge at no more than 4 points in the port.
- E1.3.10 Cylinder. Must remain strictly original with security pin and markings. Base gaskets are free, but must use a minimum of one and all must remain strictly original IAME parts (part no.s: EBP-125045, EBP-125046, EBP-125047, EBP-125048 or EBP-125049 in any combination). No head gaskets are permitted.
- **E1.4. Exhaust**. Exhaust with part no. X30125715 is mandatory. The exhaust system, manifold and silencer must not be modified in any way and must comply at all times with the Motorsport UK homologation fiche. The use

of a jubilee clip to secure the end silencer screws is permitted. Use of a spacer between the manifold and engine is permitted but must be as supplied by IAME, maximum of 2 exhaust gaskets can be used. Painting black on the outside is allowed however, the use of any other coating or plating is not permitted. The use of an exhaust temperature (EGT) sensor in the appropriate fitting on the exhaust is permitted.

- **E1.4.1 Exhaust silencer**. The use of additional silencer part number X30125723-K is mandatory, and must be used as shown in the Motorsport UK homologation fiche with no modifications. All mountings and fittings are free.
- **E1.5. Carburettor**. Tillotson HW-27A laser marked 'IAME'. The carburettor must remain unmodified and conform in all aspects to the official Motorsport UK homologation fiche. One inlet gasket (part no. 10360-A) must be used between the carburettor and reed block. The use of any additional gasket is prohibited. Any parts fitted must be original parts as shown on the spare parts list in the Motorsport UK homologation fiche, and must remain unmodified. The only gasket set permitted is the red type as supplied as new (part no. DG3-HW). The paddle spring is free but must be the original part and remain unmodified.
  - **E1.5.1 Reed block**. Both the reed block and cover must remain strictly original. Either fiberglass or carbon original IAME marked petals may be fitted, but they may only be used in matching pairs.
  - **E1.5.2** Inlet silencer. The inlet silencer (part no. X30125740) with 22mm trumpets must be used and must remain unmodified as supplied by IAME for the IAME X30 engine. The rubber manifold with air filter is mandatory and must conform to the homologation paper. The use of a gauze filter on the inlet trumpet is permitted.
- **E1.6. Cooling system**. The radiator must be fitted to the left hand side of the kart, using standard hoses and connectors. The water pump must be mounted to the chassis and driven from the rear axle.

All cooling system components and mountings are free.

All heaters or heater connection systems on the water circuit are strictly prohibited.

- E1.7. Transmission. Direct from the engine to the rear axle via a single length of chain. The clutch must be as supplied by IAME for the X30 engine and must comply at all times with the Motorsport UK homologation fiche. The clutch cover must be securely fitted with a minimum of two bolts. The internal running surface of the clutch must remain dry and free of grease or lubricant or any additional substance. Only IAME original Z9, Z10, Z11, Z12 or Z13 sprockets can be used. Use of O-ring seal (part no. A-60565) and needle cage (part no. B-55598) for the clutch assembly is mandatory. The only clutch drum permitted is part number X30125550A.
- E1.8. Brakes. Hydraulic disc brake operating on rear wheels only.

E1.9.	<b>Tyres</b> . Dry:		KOMET K3M 10 x 4.60-5 fronts. 11 x 7.10-5 rear
	Wet:	Until 31.03.2025: From 01.04.2025:	KOMET K1W 10 x 4.20-5 front. 11 x 6.00-5 rear KOMET K3W 10 x 4.20-5 front. 11 x 6.00-5 rear

The previous K1W wet tyres may be used at Club meetings only (App 4 B14) until 30.06.2025.

Wet tyres must be fitted with the correct direction of rotation.

Only tyres with rounded corner barcodes and prefix "K" are permitted.

- E1.10. Weight. Minimum of 162kg including driver at all times. Minimum driver weight for any driver under the age of 16 as per NCR Ch.18 Art.12.1 is 53kg.
- E1.11. Number plates. Yellow with black numbers. NCR Ch.18 App.8 Art.30 applies.

- E1.12. Age. The Class is open to any driver from the calendar year that he/she achieves their 16th birthday, subject to 1.10 and NCR Ch.18 Art.12.1. A holder of a Kart National licence may transfer to this Class from their 15th birthday, subject to 1.10 and NCR Ch.18 Art.12.1. Exceptionally a holder of an International ITE kart licence may transfer to this Class at any time (NCR Ch.18 Art.12.1). Having moved into an ASN Senior Class he/she may not revert to a Junior Class.
- **E1.13.** General. An ignition kill switch must be fitted and must be identified with a blue triangle to assist marshals in the event of an incident. The start and stop buttons must be mounted on the battery box using brackets supplied.
- **E1.14.** Fasteners and attachments. The use of alternative fasteners, washers, hose clips, fuel line is allowed unless otherwise specified. The use of an additional earth strap is allowed. The use of additional air box support brackets and/or radiator support brackets is allowed, providing the fitting of these does not necessitate modification of the original components.
- **E1.15.** Data logging. Data logging is permitted, data logging systems with or without memory may be used. Global Navigation Satellite System reception is permitted. It is only permitted to take readings of engine rpm, engine water temperature, exhaust gas temperature, speed of 1 wheel, an X/Y accelerometer, lap times and split lap times. The rpm may only be recorded via a sensor on the HT-lead to sense spark plug pulses. The HT-lead must remain a single length from ignition coil to spark plug cap. The fitting of these sensors is only permitted providing there is no modification to the original engine components.

E2.0 Category Senior – Non-Gearbox

Class Rotax Senior Max

Contact JAG (UK) Ltd - www.jagrotax.co.uk

- **E2.1.** Introduction. This class endeavours to provide an affordable high performance racing kart class combined with low running costs and low noise levels. It is expected that the class will continue to evolve and the promoters reserve the right to alter the technical regulations at short notice to ensure safety of drivers, fairness of competition, economy and the wishes of competitors and changes of specifications from Rotax agreed by the ASN. Enquiries to JAG (UK) Ltd, Unit 6 Mid Sussex Business Park, Folders Lane East, Ditchling, Hassocks, Sussex BN6 8SE. Tel. 01444 243112.
- E2.2. Chassis. Any chassis conforming to NCR Ch.18 App.8.
- **E2.3. Engine**. The only engine permitted in this class is the Rotax 125 Senior MAX. The 125 Senior MAX adheres to the current Motorsport UK Rotax Max Technical Regulations. This engine is a single cylinder, liquid cooled, reed valve two stroke. All engines must be sealed between cylinder, crankcases, cylinder head and the reed valve block with an official seal to prevent modification. All seals must be crimped with the official Rotax crimping tool part no. 276 110. Each end of the sealing wire must only pass through the seal once.

All engines must be sealed between cylinder and crankcases with an official seal to prevent modification. All engines are issued with an official identity card. It is the competitor's responsibility to ensure the numbers inscribed on the engine and seal correspond with those on the identity card at all times. Only authorised dealers will be issued with seals for use during maintenance of the engines. The identity card must be filled in and signed by an authorised dealer. The engine must be presented at scrutineering with the official class seal intact and the identity card lodged with the scrutineer if requested. The card must be collected by the competitor at the end of the race meeting. The identity card must be available for inspection by the scrutineers at any time during the race meeting. Should a seal become damaged, loose or lost during racing it must be reported to the meeting's scrutineer before leaving parc fermé. To allow the competitor to continue racing the scrutineer may at their discretion re-seal the engine with an official ASN seal. The new seal No. Must be entered in the engine's identity card and signed by the scrutineer, plus their licence number. The engine must be taken to an official dealer with the ASN seal intact to be re-sealed with an official class seal before competing at the next race meeting.

**E2.3.1 Modifications**. 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 regulations or the current Motorsport UK Rotax Max Technical Regulations. The adjustment of elements specifically designed for that purpose shall not be classified as modifications, i.e. carburettor and exhaust valve adjustment screws.

#### UNLESS IT STATES THAT YOU CAN DO IT YOU CANNOT!

The engine must be raced in standard form as manufactured and supplied by Rotax unless otherwise stated. Filing, grinding, polishing, surface treating, machining or lightening of any component is forbidden unless otherwise stated. The addition of material to any component is not allowed unless otherwise stated. All parts used in or on this engine must be of original manufacture or source as supplied by Rotax except where expressly allowed. The engine is to be used with air box, carburettor, fuel pump, radiator, wiring loom, ignition system and exhaust system as supplied by Rotax for the 125 Senior MAX unless otherwise stated. Position and method of mounting the battery, wiring loom and exhaust system are free unless otherwise stated providing they are securely fixed to the satisfaction of the meeting's scrutineers and in accordance with the NCR. Filing of crankcase to allow easy fitting of water connection is allowed. Fitting of helicoils and inserts to repair damaged threads is allowed, except for the spark plug thread in the cylinder head insert, providing such repairs are not used to derive any benefit other than rectification of damage.

Minor damage to the cylinder or crankcase may be repaired by welding but only to restore the component to the original specification.

The use of thermal barrier coatings/ceramic coatings on or in the engine or exhaust system is not allowed. Replacement connectors to repair wiring loom are permitted. Repairs to starter motor are also allowed.

#### **E2.3.2** Carburettor. Dellorto VHSB 34 XS.

All parts of the carburettor including the body are to be unmodified and run as supplied by Rotax. The carburettor must have VHSB 34 (cast in body) XS (stamped on body). All parts must comply with the current Motorsport UK Rotax Max Technical Regulations. The only adjustments allowed are the main jet, external air screw, throttle stop adjustment screw, and needle position on the five grooves provided.

Needle jet DP267. Choke jet 60. Idle jet 60, idle jet emulsion tube 45. Needle K57. Float needle valve 150. Slide 45. Floats 4.0gr. The venturi insert must have 12.5 stamped on the top.

Throttle cable and adjusters are free. It is permitted to use a single length of vent tube looped across the two air vents of the carburettor with a hole or slot cut in the side of the vent tube at the top of the loop.

FLOAT LEVER ARM HEIGHT: Using the ROTAX gauge (Part No:277 400), the float arms must both fit between the gauge slot without touching. The carburettor must be upside down on a horizontal flat surface. The gauge must sit on the metal body of the carburettor without gasket.

- **E2.3.3 Fuel Pump**. Only Mikuni fuel pump DF 44-210 or Dellorto fuel pump 994487 may be used. The fuel pump must be fitted to the bottom side of the standard air box bracket. Only a single length of pulse tube from crankcase connector to fuel pump may be used. Only a single length of fuel line from fuel pump to carburettor may be used. An in-line fuel filter as supplied by Rotax must be used between the fuel tank and fuel pump. An Internal fuel tank filter is also permitted. No restrictors, fuel returns or additional reservoirs are permitted.
- E2.3.4 Intake Silencer. Only Type 2 may be used.

The Intake Silencer/Airbox must be used unmodified as supplied by Rotax for the 125 Senior MAX engine with its filter and all component parts including support bracket in place.

The two halves of the airbox must be securely screwed together using 4 M6 screws. All 4 screws must be sufficiently tightened to securely clamp the two halves of the airbox together.

Intake silencer tube and airbox-to-carburettor socket must be marked with "ROTAX".

In all conditions the air box MUST be positioned with inlet trumpets to the bottom of the box. The air box must be securely fitted in a manner to prevent rotation.

**E2.3.5 Exhaust System**. Only EVO exhaust system with separate silencer with 90° elbow outlet may be used. The exhaust system and silencer may not be modified in any way except for the addition of brackets to allow easy fitting. The pop rivets securing the silencer end plate may be replaced with screws. The use of a jubilee clip to secure the end plate pop rivets or screws is allowed. These modifications are allowed providing there is no benefit in performance. It is permitted to paint the exhaust system with black paint. The use of any other coating or plating is not allowed. It is permitted to make minor repairs by welding or braising to the exhaust system providing there are no alterations to the original dimensions.

Gasket ring must be fitted between exhaust system and silencer.

It is permitted to weld/braze a socket (at a distance of 50-80mm from the ball joint) on the top of the exhaust system for measuring the exhaust gas temperature.

- **E2.3.5.1 Exhaust valve**. The EVO electronic exhaust valve only must be used in conjunction with the EVO Dellorto ignition system.
- **E2.3.5.2 Exhaust valve protection plate**. Only usable with non-revised cylinders (223993). In accordance with the current Motorsport UK Rotax Max Technical Regulations.
- **E2.3.6 Radiator**. The radiator must be fitted to the right hand side of the engine using standard hoses and connections as supplied by Rotax. Engines using the thermostat cooling system must use the system in its entirety which comprises of thermostat head cover, radiator, radiator cap, radiator hoses, steel crankcase water hose connecting tube and radiator bracket. It is permitted to use the thermostat cooling system with or without the thermostat in place. The use of alternative hose clips and screw fixings are permitted. Minor repairs to the radiator are allowed.
- **E2.3.7** Ignition Unit. Digital battery ignition system. Variable ignition timing. No adjustments possible. As supplied by Rotax. The ignition coil must have three-pin connection. The ignition coil must be mounted by means of two original rubber mounting blocks or equivalent to the gearbox cover. In the case of chassis component interference with the original mounting position it is permitted to relocate the ignition coil by the use of an extension bracket. The extension bracket must be attached to the original gearbox cover mounting holes. The minimum length of HT lead permitted is 210 mm from outlet of cable at ignition coil to outlet of cable at spark plug connector (= the visible length of wire). Spark plug cap must be marked with "NGK TB05EMA" or alternative red rubber version marked "NGK" or "ROTAX", as described in the current Motorsport UK Rotax Max Technical Regulations. Ignition switch can be either On- Off type, or Automatic fuse type. Any make of lead acid battery is permitted provided it is of the same specification as supplied by Rotax for the 125 Senior MAX 12v/6.5Ah, 12V/7.2Ah or 12v/9Ah. FIAMM-GS type FG20651, FG20722, FGHL20722, FGH20902, YUASA YT7B-BS or YT7B and ROTAX BATTERY FX7-12B. ONLY the ROTAX lithium iron phosphate battery RX7-12L, RX-12B or LiFePO4, or Rotax lithium battery 12V/4Ah may be used as an alternative to lead acid batteries. The ignition pick up must be marked with the numbers 029600-0710, followed by a variable production code on the 2nd line.

EVO Dellorto ignition system: Ignition coil with separate ECU. The minimum length of HT lead permitted is 210mm from outlet of cable at ignition coil to outlet of cable at spark plug connector (= the visible length of wire). Spark plug cap must be marked with "NGK TB05EMA", or alternative red rubber version marked "NGK", as described in the current Motorsport UK Rotax Max Technical Regulations. Engines must use the EVO Dellorto ignition system in its entirety which comprises of ignition coil, ECU, mounting brackets, wiring loom, battery clamp (battery box) and all its components as described in the current Motorsport UK Rotax Max Technical Regulations. Battery clamp (battery box) must be mounted on the left side of the chassis, next to the seat. Only YUASA YT7B-BS (with and without Rotax branding) or ROTAX RX7-12B, RX7-12L or LiFePO4 (lithium-ion phosphate type) may be used with EVO Dellorto ignition system.

**E2.3.8** Spark Plug. The only spark plugs permitted are as listed below and must be unmodified with sealing washer in place:

#### NGK GR8DI, GR9DI

Other makes/types may be added to this list by JAG (UK) Ltd; details will be published in official bulletin.

**E2.4. Transmission**. Direct from the engine to the rear axle via a single length of chain. The clutch must be as supplied by Rotax for the 125 Senior MAX. The internal running surface of the clutch must remain dry and free of grease or lubricant or any additional substance. The engine clutch must be triggered at 4000 rpm maximum and make the kart and Driver move forward.

All sprockets must use a 15 x 19 x 17 needle cage bearing and O-ring seal except in the case of an 11 tooth sprocket. An 11 tooth sprocket must be fitted with a plain bearing and an O-ring seal.

**E2.5.** Brakes. Hydraulic disc brake operating on rear wheels only.

- **E2.6.** Tyres. Dry: MOJO D5 'CIK-Prime' with barcode 10.0 x 4.50-5 front. 11.0 x 7.10-5 rear.
  - Wet: MOJO W5 'CIK Rain' with barcode 10 x 4.50-5 front. 11 x 6.00-5 rear

Tyres must be fitted with the correct direction of rotation, as indicated by the arrow on the sidewall of the tyre.

- **E2.7. General**. An ignition kill switch must be fitted and must be identified with a blue triangle to assist marshals in the event of an incident.
  - **E2.7.1** Weight. Minimum of 162kg including driver at all times. Minimum driver weight for any driver under the age of 16 as per NCR Ch.18 Art.12.1 is 52kg.
  - E2.7.2 Number Plates. Blue with white numbers. NCR Ch.18 Art.30 applies.
  - **E2.7.3 Non-Technical Items**. The use of alternative fasteners, washers, hose clips, fuel and pulse line is allowed unless otherwise specified. The use of additional and/or alternative earth straps is allowed. The use of additional air box support brackets, radiator support brackets, coil-mounting brackets, chain and clutch guards is allowed providing the fitting of these does not necessitate modification of the original components.
  - E2.7.4 Age. The Class is open to any driver from the year that he/she achieves their 16th birthday, subject to 2.7.1 and NCR Ch.18 Art.12.1. A holder of a Kart National licence may transfer to this Class from their 15th birthday, subject to 2.7.1 and NCR Ch.18 Art.12.1. Exceptionally a holder of an International ITE kart licence may transfer to this Class at any time (NCR Ch.18 Art.12.1). Having moved into an ASN Senior Class he/she may not revert to a Junior Class.
- **E2.8.** Data Logging. Data logging is permitted, data logging systems with or without memory may be used. Global Navigation Satellite System reception is permitted. It is only permitted to take readings of engine rpm, engine water temperature, exhaust gas temperature, speed of 1 wheel, an X/Y accelerometer, lap times and split lap times. The engine water temperature sensor may only be fitted in the position provided in the cylinder head cover for this attachment. The rpm, may only be recorded via a sensor on the HT lead to sense spark plug pulses. The HT lead must remain a single length from ignition coil to spark plug cap. The fitting of these sensors is only permitted providing there is no modification to the original engine components. Connection of the data logger system to the starter battery is permitted. Further to NCR Ch.18 App.8 Art.34.11, where an auxiliary data logger battery is used this must be securely fitted in a suitable location on the lower Nassau panel bracket.

#### E2.9. ROTAX SENIOR MAX/177

Minimum weight limit of 177kg including driver at all times. The driver must, in full racing equipment, weigh a minimum of 80kg at all times, weighed in accordance with NCR Ch.18 App.8 Art.31.10. In all other respects the class must follow Rotax Senior Max regulations.

**E2.9.1** Number Plates. Green plates with white numbers. NCR Ch.18 App.8 Art.30 applies.

#### E2.10. ROTAX SENIOR MAX/177 MASTERS

Minimum weight limit of 177kg including driver at all times. The driver must be over 32 years of age. In all other respects the class must follow Rotax Senior Max regulations.

**E2.10.1 Number Plates**. Green plates with white numbers and white stripe under the numbers. NCR Ch.18 App.8 Art.30 applies.

# Section F Senior – Gearbox

Bennetts

F1.0 Category Senior – Gearbox

Class KZ2

Contact The ASN - <u>www.motorsportuk.org</u>

- F1.1. Introduction. This class mimics the CIK-FIA class KZ2 in all respects except for those listed below.
- **F1.2.** Chassis. Must comply with NCR Ch.18 App.8 and must be currently CIK-FIA homologated for KZ2. A homologated chassis will remain valid for a further 6-year period after it's CIK-FIA homologation has expired.
  - **F2.2.1 Bodywork**. As per CIK-FIA Karting Technical Regulations and currently CIK-FIA homologated, except that the detachable front fairing option and mounting kit is not mandatory. Bubble alternative to Nassau panel not permitted.
  - F2.2.2 Bumpers. As per CIK-FIA Karting Technical Regulations and currently CIK-FIA homologated. CIK-FIA homologated rear wheel protection or ASN specification (NCR Ch.18 App.8 Art.25) rear bumper for gearbox karts is permitted in this class.

#### F1.3. Engine.

- **F1.3.1 Carburettor**. Dellorto VHSH 30 (CS) or (BS). The carburettor must remain strictly original except that the internal bore may be polished. The only settings allowed may be made to: the slide, the needle, the floats, the float chamber, the needle shaft (spray), the jets and the needle kit, subject to all the interchanged parts being of Dellorto origin. The incorporated petrol filter and the plate (part No. 28 on the CIK-FIA Karting Technical Drawing No. 2.5) may be removed; if they are kept, they must be original.
- **F1.3.2** Noise & Exhaust. ASN noise limits apply (NCR Ch.18 App.8 Art.13.13) and Appendix 3 regulations apply where applicable e.g. Section 2 Exhaust Silencers. CIK-FIA homologated silencer is mandatory.
- **F1.4. Transmission**. Must be mechanical with no electrical, electronic, hydraulic or pneumatic operation or assistance. No form of ignition control to aid gear changing is permitted, for example continuous traction system (cts).

F1.4.1 Axle. In accordance with NCR Ch.18 App.8 Art.35 and not required to be CIK-FIA homologated.

- **F1.5. Brakes**. A brake disc protector is mandatory where specified in NCR Ch.18 App.8 Art.7.11 and CIK-FIA Karting Technical Regulations.
- **F1.6.** Tyres. This class is limited to 5" diameter wheels with a maximum tyre width of 7.1". The following will be the sole tyres for the Class until at least 31.12.2025:
  - Dry: Le Cont LPM (CIK-FIA Prime homologated) with white UK sticker label Front: 10 x 4.5 x 5. Rear: 11 x 7.1 x 5.
  - Wet: Le Cont LWR (CIK-FIA homologated) with white UK sticker label Front: 10 x 4.50 x 5. Rear: 11 x 6.50 x 5.

#### F1.7. General.

- **F1.7.1** Weight. Minimum 180kg short circuit trim, including driver at all times.
- F1.7.2 Plates. Yellow plates with black numbers. NCR Ch.18 App.8 Art.30 applies.
- F1.7.3 Age. The class is open to any driver aged 16 or over. A junior may transfer to the class at any time during

the calendar year of their 16th birthday, provided that they hold a minimum of a Kart National licence and have competed in a minimum of 10 ASN Kart Events across a minimum of 3 different venues. The class is also open to drivers aged 15 and over and who are in possession of an International ITE licence.

## F1.8. KZ UK Variation if approved in championship regulations:

- F1.8.1 Chassis: Any chassis complying with NCR Ch.18 App.8 for gearbox karts.
- **F1.8.2 Tuning Regulations**: The mix and match of cylinder, cylinder head and crankcase from different homologation periods of the same manufacturer is permitted.
- **F1.8.3 Exhaust**: See APPENDIX 3. Homologated exhaust is not mandatory, the magnetic steel sheet metal thickness must be 0.75 mm minimum. In all other respects the class must follow KZ2 regulations above.

F2.0 Category Senior – Gearbox Class Superkart 250

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**F2.1. Introduction**. This class is restricted to Motorsport UK registered single cylinder engines. Engines must be of a maximum of 250cc. Engines must be designed to have no more than five gears, or modified to have no more than five operational gears, and with piston and/or reed valve induction into the original induction tract.

Provided they are registered with the ASN in the appropriate time period 'kit engines' are permitted, e.g. engines using donor parts from an existing engine or upgrade parts for an existing engine. The following Replacement Parts may be registered to fit an existing engine and must be direct replacements without any requirement for machining of the original engine: crankcase, cylinder, cylinder head.

A new registration period commenced 01.01.2025. Registration of new engines into the class is on a threeyear basis, the next permitted update of engines in these classes will be for the 2028 season. Replacement Parts may be registered on an annual basis, otherwise subject to the standard registration requirements from the ASN, and only for reason of non-availability from the engine manufacturer.

The Rotax 257 in five or six speed form is exceptionally permitted in short-circuit unless Championship or Supplementary Regulations state otherwise.

Fuel injection is not permitted for long or short circuit registrations.

- **F2.2. Chassis**. Any chassis complying with NCR **Ch.18 App.8** for gearbox karts. All chassis main parts must be firmly secured together on to the chassis frame. Flexible connections are only authorised for the conventional steering knuckle support, and for the steering system. All other devices with the function of one, two or three dimensional joints are forbidden. The chassis frame is the central and main supporting element of the entire vehicle. It must have the necessary strength in order to be able to absorb the loads which are produced when the vehicle is in motion. Any hydraulic, pneumatic or elastomeric elements for damping chassis oscillation are forbidden. Minimum wheelbase is 106cm.
  - **F2.2.1** Bodywork. Bodywork and/or front fairing are not mandatory in this class.
  - **F2.2.2** Front, rear and side protection is mandatory and must comply with NCR Ch.18 App.8 with the following exceptions:
  - F2.2.3 The front bumper must conform to NCR Ch.18 App.8 Art.24. In Race Venue Event Kart trim (NCR Ch.18 App.8 Art.28), it must allow the attachment of the compulsory front fairing.
  - **F2.2.4** Unless crash-tested bodywork is fitted conforming to NCR Ch.18 App.8, side bumpers are mandatory and must conform to NCR Ch.18 App.8 Art.26.
  - **F2.2.5** In the case of a 'Wet Race' side bumpers or bodywork may not be located outside the plane passing through the outer edge of the rear wheels.
  - F2.2.6 Bubble-shields conforming to NCR Ch.18 App.8 Art.29 are permitted.
  - **F2.2.7** Floortrays are permitted to extend rearwards beyond the central strut of the chassis frame as for karts in Race Venue Event Kart trim as defined in NCR Ch.18 App.8 Art.28.
  - **F2.2.8** Rear bumper must be fitted in accordance with NCR Ch.18 App.8 Art.25. CIK-FIA homologated Rear Wheel Protection is not permitted.
- F2.3. Engine. See Appendix 2 for the list of eligible engines.

## F2.3.1 Tuning rules for engines.

Modifications to the engine are allowed, providing the following are not varied.

- Stroke.
- Bore (outside maximum limits).
- Connecting rod centre line. Connecting rod must be magnetic material only.
- For non-Series Production engines (see Appendix 2) the crankshaft must be on the manufacturer's parts list.
- External appearance of the engine other than carburettor, ignition system, reed block, carburettor rubber mounting, clutch cover, engine mounting points. (The addition of a fuel pulse pump adapter is permitted.)
- Number of carburettors (1 only). The material magnesium is not permitted.
- All systems of injection and/or spraying of products other than permitted fuel are forbidden, unless specifically permitted by the engine registration approval.
- No form of electronic carburetion system, unless specifically permitted by the engine registration approval.
- The ignition system type is open but the electronic unit box and the coil must receive only one feeding energy source of the rotor/stator or of a battery and one crankshaft pick-up signal in order to set the ignition signal. The advance and cartography may under no circumstances be modifiable whilst the kart is in motion under normal racing conditions.
- Replacement Parts (crankcase, cylinder or cylinder head) for an existing engine, which must be direct replacements without any requirement for machining of the original engine, are permitted if registered with the ASN.
- **F2.3.2 Silencing**. Intake See Appendix 3. Exhaust See Appendix 3.
- **F2.4. Transmission**. Gearbox maximum of five gears except for the Rotax 257 as specified in 2.2. Gear ratios can be varied.

Axles greater than 40mm diameter must have minimum wall thickness of 2.9mm, see NCR Ch.18 App.8 Art.35.7.

- F2.5. Brakes. Brakes as NCR Ch.18 App.8 Art.7.
- **F2.6.** Wheels and Tyres. Limited to 5" diameter wheels with a maximum tyre width of 8". Listed control tyre(s) may be specified in Championship Regulations.
  - **F2.6.1** Both rear outer rims must incorporate bead retention comprising three pegs at equidistant positions. This is applicable to both wet and dry tyres. Radial tyres are not permitted.

Slick: Unless otherwise specified with the approval of the ASN in Championship or Event regulations, a single tyre type must be specified in Championship or Event Regulations and must be selected from the current CIK-FIA list of homologated tyres with a suitable speed rating.

Only complete sets of the same type of tyre are permitted. Only one set of slick tyres is permitted per race meeting (not including official practice) except where a tyre is damaged beyond use as determined by the Chief Scrutineer, one extra front and one extra rear may be allowed. It is the competitor's responsibility to make sure the Scrutineer inspects a faulty tyre before the kart leaves the track exit/weighing in area.

Wet: Unless otherwise specified with the approval of the ASN in Championship or Event regulations, a single tyre type must be specified in Championship or Event Regulations and must be selected from the current CIK-FIA list of homologated tyres. It does not need to be a tyre from the same manufacturer as that selected for the slick tyre.

Only complete sets of the same type of tyre are permitted.

The ASN or Championship organisers reserve the right to introduce control tyres in future years, and may specify particular types for championship meetings.

#### F2.7. General.

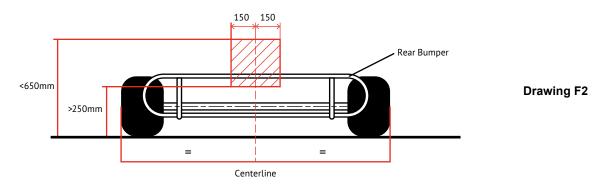
F2.7.1 Weight. Minimum weight with driver on the completion of any part of the event:

195kg short circuit (NCR Ch.18 App.8 Art.27) or 200kg if a wing is fitted with any other sidepod or sidebar combination, or 208kg when racing in Race Venue Event Kart trim (NCR Ch.18 App.8 Art.28).

- F2.7.2 Plates. White number plates with black numbers. NCR Ch.18 App.8 Art.30 applies.
- F2.7.3 Age. The class is open to any driver aged 16 or over on Short Circuit.

### F2.8. Rain Light.

- **F2.8.1** A rear facing high intensity red lamp must be fitted. It will be permanently illuminated when wet tyres are fitted to the kart or a race is designated as a wet race, or when instructed by the Clerk of the Course.
- **F2.8.2** The lens must have a minimum surface area of 28cm<sup>2</sup> or an intensity level of between 60-85 Candela at 0° on axis and the illumination must be visible from a point 45° either side of the centre line.
- **F2.8.3** The light unit must be mounted securely and centrally on the kart, forward of the rear bumper and the whole illuminated area of the light is to be positioned in the area shown in Drawing F2 below, in wet or dry configuration.



**F2.8.4** Karts with lights not switched on when a race is declared wet will not be let out onto the circuit from the dummy grid/assembly area or pit lane.



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# Appendix 1 – Homologated/registered chassis' and brakes

These lists are subject to change. For up to date lists please visit motorsportuk.org/resource-centre/#technical-kart.

## **Bambino Chassis Registration**

Top Kart CRG OTK Birel Wright Tecno Wright Haase-Corsa MS Kart Birel ART Ricciardo Tecno Synergy Fullerton Intrepid MS Kart CRG	Bambino Smurf Various RK Baby Bambino 1 P14 Centaur Minox – Ninjia Bambino Baby Kart Baby P15 Titanium TF Xenon Scout Bambino Baby Bambino	01/B(C)/10 02/B(C)/11 03/B(C)/11 04/B(C)/11 05/B(C)/13 06/B(C)/14 07/B(C)/14 08/B(C)/14 09/B(C)/14 10/B(C)/15 11/B(C)/15 13/B(C)/15 13/B(C)/16 15/B(C)/16 15/B(C)/16 17/B(C)/16
MS Kart	Bambino	16/B(C)/16
Project One Wright RCE IPK Parolin	Bambino P1 Minotaur 2020 Baby Delfino	19/B(C)/18 20/B(C)/18 21/B(C)/20 22/B(C)/21 23/B(C)/24

## Cadet Chassis (900mm)

Note that 2014 homologated chassis are no longer eligible for use.

## 2017 Homologation

#### Valid until 31.12.2025

Project One	Rossi	01/CAD/25
Zip Kart	Vanquish	02/CAD/25
Benik	Spitfire	03/CAD/25
Sodi	Delta 900 2T	04/CAD/25
OTK	Various	05/CAD/25
Xenon	Kaos	06/CAD/25
Synergy	Platinum	07/CAD/25
Top Kart	Blue Eagle	08/CAD/25
Wright	Vulcan	09/CAD/25
BRK	Atomic	10/CAD/25
Shark	Edge	11/CAD/25

## 2020 Homologation Valid until 31.12.2028

Project One	P1	01/CAD/28
Zip Kart	Edge	02/CAD/28
Synergy	Carbon	03/CAD/28
ОТК	Various	04/CAD/28
CRG	Black Mirror	05/CAD/28
BirelART	C28M	06/CAD/28
Wright	Phoenix	08/CAD/28

## Cadet & Inter Chassis (950mm)

## 2023 Homologation

## Valid until 31.12.2030

BRK/Fluro/	Mini	01/CAD/30
Atomic		
Zip Kart	Edge 950	02/CAD/30
Wright	Hydra	03/CAD/30
RCE	DDR22	04/CAD/30
Project One	950	05/CAD/30

## 2025 Homologation

Valid until 31.12.2033		
BRK/Fluro/	Mini	01/CAD/33
Atomic		
Project One	950	02/CAD/33
RCE	DDR25	03/CAD/33
Tecno	T1	04/CAD/33

## 2023 CIK-FIA Registration Valid until 31.12.2030

Energy	Storm	017-CH-75
EKS	Eagle	009-CH-02
IPK	Monster Evo	006-CH-15
TGroup	Black Mirror	002-CH-18
OTK	Rookie	012-CH-77
KR	Mini	023-CH-67
BirelART	C28	007-CH-92
Benik	Raton	015-CH-43
Righetti Ridolfi	Hurricane	005-CH-11
Sodi	ASC950	022-CH-76
MS Kart	Mini Blue Kite	008-CH-54
Parolin	Opportunity	017-CH-12

## 2025 CIK-FIA Registration

Valid until 31.12.2033		
Bestkart	Mini	013-CH-99
Synergy	Envy	007-CH-80
Alonso Kart	A1	023-CH-12
DR	Mini 20	002-CH-27
New Drago	MM-01	068-CH-01
Pantano	P0	057-CH-30
Intrepid	Speedy 02	015-CH-34
Parolin	Pioneer	017-CH-82
TB Kart	Monster	020-CH-98
Croc Promotion	MC-04	009-CH-04

## Cadet Brake

## 2017 Homologation

### Valid until 31.12.2025

KC Brakes	KC30	01/CAD(B)/25
Benik	BK01	02/CAD(B)/25
Tekneex	F11	03/CAD(B)/25
OTK	BSM3	04/CAD(B)/25
Synergy	SRD1	05/CAD(B)/25
Top Kart	Blue Eagle	06/CAD(B)/25
Kelgate	KDET	07/CAD(B)/25

## 2020 Homologation

#### Valid until 31.12.2028

ОТК	BSM6	02/CAD(B)/28
CRG	VEN12	03/CAD(B)/28
Alto	ACB2	04/CAD(B)/28
Wright	Phoenix Cadet	06/CAD(B)/28
Extension		
KAOS	HD1	04/C(B)/19

## Cadet & Inter Brake

#### 2023 Homologation Valid until 31,12,2030

	2.2000	
Free Line	RR-125x2	01/CAD(B)/30
BRK	BRK	02/CAD(B)/30
Wright	Cadet Mini	03/CAD(B)/30
RCE	C950	04/CAD(B)/30
KC Brakes	KC30X	05/CAD(B)/30

## 2025 Homologation

Valid until 3 <sup>4</sup>	1.12.2033	
Tecno	FR60-25	02/CAD(B)/33
2023 CIK-FIA Registration Valid until 31.12.2030		
EL.ZET	LZF08	055-B2-49
AP	AP06	017-B2-65

IPK	MKB.V2	006-B2-17
CRG	VEN12	002-B2-99
OTK	BSM5	012-B2-71
Righetti Ridolfi	MA21	005-B2-97
Tekneex	F15	022-B2-14

## 2025 CIK-FIA Registration

Valid until 31.12.2033						
AMV	SB-Mini	013-BRKR-40				
EL.ZET	LZF14	055-BRKR-14				
Italfreno	Avatar	009-B2-89				
Filmax	FBM-01	013-BRKR-80				
K-Kart	Mini Racing	004-BRKR-88				
Wildkart	MK21	019-BRKR-88				
Freeline	RR Mini	007-BRKR-10				
Intrepid	R3 20	015-B2-67				

## SUPERKART 250 (F2)

## Eligible engines:

DEA SK250 Single Gas Gas K250 \* Honda CR250 \* Kawasaki KX250 \* KTM 544 / 545 / 546 / 548 / SX250 \* Moto TM Cross 250 \* Rotax 257 \* Suzuki RM250 Z to V (1982-1997 inclusive) \* TM MX2502SES \* Viper SK250S1 Yamaha YZ250 \*

\* Series production engines

So long as the silhouette of the crankcase, the sprocket output orientation position and bore and stroke of the engine remains unchanged, evolution model numbers are accepted if complying with F2.3.

## **Replacement parts:**

DEA SK250 Single Pneumatic Exhaust Valve Victory CR250R PFP Racing CR01 Cylinder Head PFP Racing CR250 92-01 Crankcases VHM Cylinder Head CR250

## Kit engines:

THR Engineering THR02-14 THR Engineering SS250 Viper Racing UK SK250S Viper Racing UK EV0250S

#### Appendix 3 – Silencing

#### 1. Intake Silencers

**1.1** CIK-FIA noise boxes conform to the following nominal specification:

The intake silencer must make a petrol tight fit with the carburettor interface.

The minimum volume of the silencer must be 1000cc.

The material must be non splinterable plastic.

Have a maximum of two openings for the air intake.

The air intakes must be unmodified and be a maximum of 23mm diameter for non-gearbox and Junior Gearbox karts and maximum of 30mm diameter for all other gearbox karts unless otherwise authorised via an ASN or previously ABKC approved design or otherwise stated in Class Regulations.

**1.2** A CIK-FIA homologated box must not be modified, with the exception of drilling holes in the mounting flange and drilling a maximum of two small airtight sealed holes in the box wall, for the sole purpose of mounting on gearbox karts (not applicable to the KZ classes). The carburettor adapter is free providing a petrol tight joint is made between the box and the carburettor.

All gearbox karts must have a CIK-FIA homologated or previously homologated intake box correctly fitted, or one that is approved by the ASN or previously ABKC for that class or otherwise stated in Class Regulations.

1.3 In order to obtain ASN approval 10 boxes must be presented for inspection. The boxes must be professionally produced devices complete with production diagrams. During a noise test, which is made on an overhead microphone, static and on both sides of the kart, the box must give at least equal noise attenuation to a currently homologated CIK-FIA intake box fitted to the same engine. The lap times with the box on test must be comparable with lap times using a currently homologated CIK-FIA intake box. A sample of the box will be retained under the control of the ASN as a reference.

An ASN or ABKC approved box must be permanently marked with its approval code in order to be deemed legal for use.

**1.4** The following intake boxes have been previously approved by the ABKC for use on all gearbox karts with the exception of the KZ classes:

Single Cylinder FIS/2RV Motivation Design and Development Filtered Induction Silencer System Assembly, side fitting for rotary valve gearbox class engines, fitted with Pipercross foam filter element. Approval expires 31/12/2025.

Twin Cylinder FIS/2T Motivation Design and Development Filtered Induction Silencer System Assembly, side fitting for rotary valve twin cylinder gearbox class engines, fitted with Pipercross foam filter elements. Approval expires 31/12/2025.

Single Cylinder FIS/2PR Motivation Design and Development Filtered Induction Silencer System Assembly, for reed valve or piston port induction single cylinder gearbox engines, fitted with Pipercross foam filter element. Approval expires 31/12/2025. It must be fitted with the intake trumpets facing towards the ground. Not applicable to 250E.

Note that the intake box designated GB1/94 is no longer approved

**1.5** Formula 210. All air entering the carburettor must flow through either a K & N cylindrical filter, Part No. RU 0840, or a K & N conical filter, Part No. RU 9220, RC 5136 or RC 9640 or K & N filter Part

No. 33-2826 which must be enclosed in a current or previously CIK-FIA homologated air box and sealed to the carburettor. These intake filters must only be used with an exhaust muffler conforming to Class Regulations. An air box conforming to the CIK-FIA specification or an air box approved by the ASN or previously by ABKC may also be used.

- **1.6** Formula 450 4-stroke Gearbox. The KGR 13768 intake box is approved for this class.
- **1.7** In all classes all air entering the intake silencer must do so without the addition or proximity of any device that may direct an increased flow of air from the forward movement of the kart towards the inlet.

### 2. Exhaust Silencers

- **2.1** Unless specifically authorised exhaust lengths may not be varied whilst the kart is in motion. Any such system must be failsafe in operation, not present a hazard and incorporate a measurable reduction in sound level.
- **2.2** The following regulations 2.3 and 2.4 are mandatory for all gearbox classes, unless varied in Class Regulations. The following regulation 2.5 is mandatory for all gearbox classes except 210 National.
- **2.3** Karts shall be provided with an exhaust silencer lying approximately parallel to the rear axle of the kart, and fed by a gas-tight tubed link pipe of a minimum 300mm length from the exit of the expansion chamber to the entrance of the silencer/muffler. In Formula 250E at least one silencer must lie approximately parallel to the axle.
- **2.4** The link pipe must have a bend of approximately 180 degrees for engines exhaust ported to the rear. For engines exhaust ported to the front, the bend must be between approximately 45 degrees and approximately 180 degrees. Formula 250E is exempt from these bend angle requirements.
- **2.5** The muffler must have an external minimum cross-section 100mm and a minimum canister length of 380mm. The canister must be used with muffling material and/or baffling plates to be an efficient silencer. The exhaust exit diameter of the canister must be no greater than 38mm.
- 2.6 Formula 250E: Mufflers as above, two to be fitted.
- 2.7 Formula 210. All gasses leaving the engine must pass through a muffler with minimum active length 47.5cm, external minimum cross-section 100mm, with an inner tube 4.0cm which must have perforations over the majority of its complete length. The muffler must be connected to the exhaust tailpipe by a nominal 180 degree bend or if exhaust port is front facing then by a flexible or rigid pipe. The exhaust exit diameter of the canister must be no greater than 40mm.

#### 3. General

- **3.1** The black and orange flag will be shown during a race to signify that a kart is exceeding the sound level limit for the class or circuit. Drivers must return to the pits and report to the Clerk of the Course. If the silencing system is broken during a race the driver must stop in a safe place as soon as is practical and not attempt to continue or return to the pits.
- **3.2** Attention must be given to silencing systems maintenance. With the published reductions to permitted levels it is important that flex connections and joints are checked regularly and made good. Exhaust silencers that are capable of being repacked, such as Rotax 125 Max, can suffer from declining performance and it is essential that repacking is carried out in accordance with manufacturer's instructions.

## Appendix 4 – General Regulations applicable to all Kart Clubs

## A. General

These regulations are applicable to all ASN permitted Kart Events.

## B. General Regulations for all Classes

- B.1 Fuel.
  - **B.1.1** The use of power boosting or octane boosting additives by competitors in any fuel is prohibited. Some power/octane boosters are carcinogenic.
  - B.1.2 When control fuel is specified the fuel will be obtained through the appointed supplier and will conform to the current NCR. Any driver found to be using fuel that does not conform to the blueprint provided by the appointed supplier may be excluded from the Championship. All systems of injection and/or spraying of products other than fuel are forbidden unless specifically permitted in Class Regulations.
  - **B.1.3** If a control fuel is specified for use in an event or championship series this must be specified in the Regulations for the event.
  - **B.1.4** Recordings or video of any dialogue with an event official is not permitted unless written permission is first obtained.
- **B.2** The recognition of seeded numbers will take place immediately as the Championship results are no longer provisional.
- **B.3** Data Logging equipment is recognised as a device that will allow the downloading of information from the kart. A revolution counter that monitors maximum revs is not considered a Data Logging Device.

## B.4 Scrutineering.

- **B.4.1** The host Club or Championship organiser will provide each driver with a Scrutineering document, which may be electronic.
- **B.4.2** The document will contain space for the numbers of the engines and chassis being used as appropriate for the competition, any seals applied and may ask for tyre barcode numbers or these may be recorded via a scanning device.
- **B.4.3** The Scrutineering document must be completed and, where relevant, signed by the driver prior to the commencement of the event. It is the responsibility of the driver to comply with the above but if the driver is under 18 years of age any signature on the Scrutineering document must be that of the driver's entrant.
- **B.4.4** At the completion of any part of the event, if the equipment being used, including the chassis and engine numbers, and barcodes if appropriate, does not conform in all respects to the data on the Scrutineering document or barcode system the driver may be excluded from the meeting.
- **B.4.5** All equipment recorded on the Scrutineering document must conform to the Class Regulations.

## B.5 Weight.

B.5.1 It is the responsibility of the entrant to ensure that their equipment conforms to the Class weight limits using the "scales of the day" (NCR Ch.18 App.3 Art.1.9). There is no tolerance.

## B.6 Class sub-division.

**B.6.1** A Class may be sub-divided to suit a Club's requirements. Clubs may further divide Classes into experienced and inexperienced drivers using suitable names that indicate this division to drivers when entering an event.

## B.7 Starting.

- **B.7.1** Karts capable of self starting, either by means of a starter motor being fitted to the engine or by attaching a starter motor, or by means of a pull cord must conform to the following regulations:–
  - **B.7.1.1** All karts fitted with a self-starting system must also be fitted with an operational on/off ignition switch clearly marked with the relevant positions.
  - **B.7.1.2** The driver of a self-start kart must be in the seat when the engine is started if the kart is placed on the ground or when it is running on the dummy grid. It is recommended that the brake is applied during the starting procedure.
  - **B.7.1.3** Engines that may be self-started must not be started on the dummy grid until the signal is given by the grid marshal. They must be given the opportunity to start before the rest of the karts are given the signal to move off from the dummy grid.
- **B.7.2** It is forbidden to lift the rear of the kart with the engine running with the purpose of revving the engine further and spinning the rear axle. It is further expressly forbidden to carry this out with the purpose of warming the rear tyres.
- **B.7.3** All karts MUST leave the grid in a safe manner at slow speed so as not to endanger pushers, other competitors, or any other personnel.
- B.7.4 Once a practice or race session has started, karts may only be worked on in a designated place of safety (NCR Ch.18 App.7 Art.1.13 e.g. pit lane). At no time can work be carried out on a kart while its engine is running (e.g. replacing a chain, exhaust etc.). Any engine fitted with an ignition switch must have this switched off.
- **B.7.5** Starts: A 'Yellow Line' (acceleration line) as per NCR Ch.18 App.5 Art.1.18b may be used whether or not the circuit utilises the 2m wide lanes at the start area and then the appropriate parts of NCR Ch.18 App.5 Art.1-26-1.31 apply.
- **B.8** Tyre bead retention pegs are permitted in all classes.
- **B.9** Sprocket protectors are permitted in all classes but must not be metallic.
- **B.10** Clubs must use the sound level meter at a height of 3.6m unless a waiver has been given (NCR Ch.18 App.8 Art.13.13) and recorded on the Track Licence.

B.11 Noise Safety. The following regulations are highly recommended and may become mandatory in subsequent years. Refer to NCR Ch.7 App.8 Art.2.1, 2.2 and 2.7. It should be noted that the HSE limits (The Control of Noise at Work Regulations 2005) for exposure to noise are summarised as follows and are available on www.legislation.gov.uk:

The lower exposure action values are a) a daily or weekly personal noise exposure of 80dBA, b) a peak spl of 135 dBC.

The upper exposure action values are a) a daily or weekly personal noise exposure of 85dBA, b) a peak spl of 137 dBC.

The exposure limit values are a) a daily or weekly personal noise exposure of 87dBA, b) a peak spl of 140 dBC.

An employer who carries out work which is liable to expose any employee to noise at or above a lower exposure action value shall make a suitable and sufficient assessment of the risk from that noise to the health and safety of those employees, and the risk assessment shall identify the measures which need to be taken to meet the requirements of these regulations etc.

- **B.11.1 Officials**. Every official and helper who is located close to the track should be issued with ear protection. This can be either earmuff style or disposable foam plugs style.
- **B.11.2 Competitors**. It is highly recommended that every competitor wear ear plugs at all times when driving a kart.
  - **B.11.2.1** Competitors are forbidden to chew gum or consume any food substance whilst racing or practicing.
- **B.11.3 Dummy Grid and after race collecting area**. It is recommended that all personnel in the pit area use ear protection.
- **B.11.4 Dummy Grid, collecting area and Spectator Areas close to the track**. Signs are recommended advising that ear protection is recommended, and advising a source to purchase such protection.
- **B.11.5 Ear plugs**. Clubs should have supplies of disposable ear plugs for officials and for sale to spectators and drivers.
- B.12 Fire Extinguishers. All drivers must have present at race meetings a fire extinguisher to BSEN3 or EN3 standard with a minimum 55B rating. Environmental scrutineers will carry out spot checks in the paddock. (Note: Type B means for use with flammable liquids, and the 55 refers to the capacity. The actual extinguishant is not specified, but Halon is no longer legal in the UK). Fire extinguishers must be kept at the entrance to the competitors pit space at all times. It is recommended that competitors with enclosed awnings have a minimum of a 2kg foam or powder extinguisher, and if more than one private competitor is sharing the awning then a minimum of two 2kg extinguishers be available. Commercial enterprises should be aware of Health and Safety at Work legislation and provide a minimum of two 6kg foam or powder extinguishers to be placed at the entrance(s) of the awning.
- **B.13** Front fairings of the wedge or shovel nose type are ineligible in all classes except gearbox when in Race Venue Event Kart trim.
- **B.14** A Club meeting is defined as a Kart Clubman or Kart Interclub status Event which is not a round of a National or Regional multi-venue Championship, O or E plate, or any Kart National meeting, but may be part of the organising club's own single venue Club Championship.
- **B.15** Any competitor found to be using chemical treatment on tyres in contravention of NCR Ch.18 App.8 Art.6.9 / Ch.8 App.3, or using fuel or lubricants in contravention of NCR or Championship

Regulations may, in addition to any other penalty, be referred to the ASN for further action.

B.16 Pitting for repairs is permitted and outside help is allowed in designated pit or repair areas (See NCR Ch.18 App.7 Art.1.13 / Ch.12 App.11 Art.1). The repair area along with the entrance and exit should be indicated in the programme or published track map.

## C. Non-Gearbox Class General Regulations

- **C.1** Rear view mirrors are forbidden.
- **C.2** The use of acoustic measures such as inserts between head and cylinder fins to reduce noise in air cooled classes is recommended unless prohibited by Class Regulations.
- **C.3** It is recommended that Clubs incorporate into their Supplementary Regulations that only one set of slicks be used during a race meeting, and these should be marked or barcode numbers logged at the beginning of competition. In Cadet it is recommended that regulations only permit one set of wets for the meeting. Clubs are strongly encouraged to take other measures to limit the use of tyres over one or more meetings e.g. limiting the number of tyres that may be used in a season.

## D. Gearbox Class General Regulations

# D.1 Refer to the 'Box Structure' for information on mixing Classes. All gearbox Classes, except Junior Gearbox, may be raced together.

- **D.2** Drive by wire and traction control devices are expressly forbidden.
- D.3 Gear change in 210 National, 125 Open, KZ2, and Superkart 250 (including 450cc 4-stroke) classes must be mechanical with no electrical, electronic, hydraulic or pneumatic operation or assistance. No form of ignition control to aid gear changing is permitted, for example continuous traction system (cts). Paddle change is permitted in any gearbox class for any disabled driver limited to hand use.
- **D.4** No part of the kart other than the bolts or clamps fixing the floor tray, the engine, the seat and seat stays, or the brake discs, the front kingpin bolts, the sprocket, the wheels and the tyres, may protrude below the bottom of the main longitudinal chassis rails. The floor tray may be clamped direct to the lower edge of the main longitudinal chassis rails.
- **D.5** It is compulsory to have valve caps fitted to all four wheels at the start of a race or official practice session. Metal caps are recommended.
- **D.6** Kevlar and carbon fibre are not permitted in KZ2 or Superkart 250 (including 450cc 4-stroke) except for seats, silencers, Nassau panels and instrument panels, Carbon fibre or Kevlar bodywork is specifically permitted in 125 Open, Superkart 250 long circuit trim and Formula 250E.

## E. Lap Scoring and Points Scheme Recommendations

After a survey of the procedures used by Clubs when lap scoring and calculating the grids for the finals during a meeting the following suggestions are made to enable the drivers to understand the system.

- **E.1** System (A) The first placed driver in any heat will be given 0 points, 2nd place 2 points, 3rd place 3 points and so on until the last placed driver, or System (B), the first placed driver will be given the number of points equal to the maximum number on the grid plus two, the second placed driver the maximum less two, the third the maximum less three and so on.
- **E.2** (A) A driver who fails to start a race will take 1 point more than the number of drivers that started the race, or (B) 1 point less than the maximum number of starters.
  - **E.2.1** If the grid is part of a meeting when drivers may not be racing in every grid used for that Class, then a non-finishing driver will take (A) 1 point more or (B) 1 points less, than the largest starting grid used in that Class.

**E.2.2** Drivers who fail to finish will be given points according to their positions on the lap charts.

- **E.3** A driver who is excluded from a race will take (A) 1 point more, or (B) 1 point less, than the number of drivers that started a race, calculated in exactly the way as in 2.1. The C of C may decide to increase this penalty under certain circumstances (NCR Ch.2 App.2).
- **E.4** Lap scoring, when transponders are not being used, should take the form of at least three people independently observing the drivers, this is important should a dispute arise in order that a majority decision may be made. The practice of one person "calling" the drivers is not encouraged!
- E.5 In order to enable the judicial procedures to proceed with the minimum of complication the lap scoring team are advised to include the following pieces of information on their lap scoring sheets: Race start and finish times.
   Number of starters and number of finishers.
   Any other observations pertinent to the result of the race.
- **E.6** In accordance with the NCR (Ch.5-1 App.7 Art.12.2 & Ch.18 App.4 Art.10) the Chief Timekeeper or Chief Lap Scorer will be a judge of fact in respect of laps completed and finishing order. The Chief Timekeeper or Chief Lap Scorer must forward the race finishing order to the results team and the Clerk of the Course.

#### F. Transponder Lap Scoring

- **F.1** Transponder lap scoring is highly recommended. Transponders used must be on the ASN approved list and the type permitted must be designated in SRs or Championship Regulations. Every driver will be expected to own a transponder, although clubs may hold back up stocks for hire at a nominal cost for a weekend.
- **F.2** The transponder must be fitted in an approximately upright position (ie with the 'R' clip to the top) on the back of the seat fitted at a height from the ground at 25cm ±5cm measured to any point of the transponder.
  - **F.2.1** Transponders must be mounted in accordance with the manufacturer's recommendations.
  - **F.2.2** If transponder lap scoring is in use then at least one lap scorer must manually lap score each race as per NCR Ch.18 App.4 Art.10. Transponder decoders must be a certified and approved type.
  - **F.2.3** Where timing by transponder is permitted Kart Timekeepers must be ASN licensed.

## G. Tyre Testing Guidelines

- **G.1** A photo-ionization detector (PID) with a calibration certificate for isobutylene at 100ppm issued in the preceding 24 months and calibrated prior to use may be used for testing for indication of chemical treatment of tyres.
- G.2 A reading greater than 2ppm on a PID as described in G.1 with the sampling probe within 5mm of any part of the tyre or tread, where the reading is 50% greater than the average readings found on tyres from other competitors in the race may be deemed evidence of chemical treatment as per NCR Ch.18 App.8 Art.6.9.
- G.3 If chemical treatment of tyres is established before the race, using the above technique or any other, the competitor will not be allowed to race as chemically treated tyres may constitute a safety risk and contravenes the NCR (Ch.18 App.8 Art.6.9). If the event regulations allow then the competitor may at the discretion of the Chief Scrutineer be given the opportunity to change tyre(s). No additional time will be allowed for this.

## Appendix 5 – ABKC specific General Regulations

The Association of British Kart Clubs (ABKC) was formed in 1990 to act as an interface between kart clubs and the sport's governing body, the ASN, with whom there is a high degree of discussion and co-operation. The clubs are represented by a Steering Group, which is elected each year during the ABKC AGM. ABKC is the ASN Regional Association for Kart Clubs.

All clubs affiliated to ABKC have agreed to use the regulations in the Motorsport UK Karting Yearbook including Appendix 4 for their race meetings unless otherwise agreed by the ASN, and if applicable by ABKC. Without this co-operation it would be impossible for drivers to move from club to club during the racing season and find the same race Classes.

ABKC strongly recommends that all commercial teams hold suitable public liability insurance cover and holds an Entrants licence. Note that the ASN may conform to changes in CIK-FIA regulations that occur after the publication of the Motorsport UK Karting Yearbook.

The ASN requires Class owners to provide notice of proposed changes to Class Regulations in July each year, giving time for feedback before full ratification in the Autumn. New regulations, tyre changes, changes to Class weights etc will normally only come into effect from the 1st of January each year, but exceptionally changes due to force majeure (e.g. the cessation of manufacture of a part, or an urgent safety regulation) may be brought in from mid-season.

The FIA Karting Regulations available on the FIA Karting website www.fiakarting.com

## Senior officers of the Association -

Chairman	Secretary	Treasurer
Nigel Edwards	Graham Smith, 'Stoneycroft', Godsons	Graham Smith, 'Stoneycroft', Godsons
Email: chairman@abkc.org.uk	Lane, Napton, Southam CV47 8LX.	Lane, Napton, Southam CV47 8LX.
	Tel: 01926 812177	Tel: 01926 812177
	Email: secretary@abkc.org.uk	Email: secretary@abkc.org.uk

Member Clubs (as at 01.12.24) are:

Bayford Meadows KC • British Historic KC • Camberley KC• Champions KC • Chasewater KRC • Clay Pigeon KC • Club100 Promotions • Cumbria KRC • Daniel Ricciardo Series KC • Dragon KC • Dunkeswell Kart Club • East of Scotland KC • F100 KC • Forest Edge KC • FP4K • Fulbeck KC • Global Karting League UK • Grampian KC • Hunts KRC • Jersey K&MC • Lydd International KC • Manchester & Buxton KC • Medway Valley KC • NATSKA • North of Scotland KC • RAF Motor Sports • Rissington KC • Rye House KC • Shenington KRC • South Yorkshire KC • Trent Valley KC • Two Counties KC • Ultimate Karting Championship • Ulster KC • Warden Law KC • West of Scotland KC • Whilton Mill KC.

ABKC member clubs will acknowledge the 1 to 10 number plates recognising the top ten finishers in the relevant approved Gearbox Championship and in the 210 Challenge, subject to a minimum number of registrations in the class (see NCR Ch.18 App.8 Art.30.11-30.13). If the minimum is not reached, the 'seeded' numbers may be reduced, in which case the remaining numbers must remain unallocated. Winners of the Open Championships (O & E) and the winner of the 210 Challenge O Plate competition may use the "O" plate which will be acknowledged by member clubs. English, Scottish, Welsh and Northern Irish Championship winners number plates (e.g. E, S & C) in recognised Classes will be recognised by ABKC clubs, so long as the class is raced fully to the ABKC regulations, all subject to ASN approval. The recognition of the above numbers will take place immediately as the Championship results are no longer provisional. It is a condition of the Club's acceptance of a driver's race entry that they, the driver, agrees to conform to the regulations contained within the regulations contained within this publication and subsequent amendments.

Any competitor found to be using chemical treatment on tyres in contravention of NCR Ch.18 App.8 Art.6.9, or using fuel or lubricants in contravention of the NCR or Championship Regulations may, in addition to any other penalty, be banned from racing at all ABKC Clubs for a minimum period of one year. Drivers may appeal any decision to the ABKC Steering Group.

## Appendix 6 – Licensed Kart Tracks

Bayford Meadows (Kent) 1 mile east of Sittingbourne, ME10 3RY. [TQ 912 645]

**Bishopscourt** (Co. Down) 6 miles east of Downpatrick, Northern Ireland, BT30 7EY. [J 570 425]

#### Blackbushe

(Surrey) off A30 at Blackbushe Airport and follow signs towards Sunday Market, GU17 9LG. [SU 802 593]

Boyndie (Banffshire) 4 miles west of Banff. [NJ 615 645]

Buckmore Park (Kent) Chatham, between J3 on M2 and J6 on M20, ME5 9QG. [TQ 742 632]

#### **Clay Pigeon**

(Dorset) On A37 midway between Dorchester and Yeovil (10 miles to each), DT2 9PW. [ST 610 028]

Crail Raceway (Fife) A917 approx. 1 mile from Crail. [NO 627 094]

Darley Moor (Derbyshire) 2 miles South of Ashbourne on A515, DE6 2ET. [SK 173 423]

#### **Ellough Park**

(Suffolk) 1.5 miles east of Beccles on A416, 6 miles west of Lowestoft, NR34 7XD. [TM 447 878]

#### **Forest Edge**

(Hampshire) near Andover, 2 miles from Barton Stacey village off A303. [SU 445 425]

#### Fulbeck

(Lincs) 8 miles east of Newark off A17 at Brant Broughton Cross Road. [SK 901 505]

#### Glan y Gors

(Conwy) On A5, 1 mile west of Cerrigydrudion village, LL21 0RU. [SH 937 495]

Hooton Park (Wirral) Ellesmere Port, 2 miles off Junction 6 M53. [SJ 368 797]

#### Kimbolton

(Cambs) 7 miles north-west of St Neots on B645. [TL 111 699]

#### Kirkistown

(Co. Down) 27 miles from Belfast on Ards Peninsula between Kircubbin (4 mles) and Portavogie, BT22 1AU.

#### Larkhall

(Strathclyde) Summerlee Raceway, Merrydon Road off A72. 800m, off J7 of M74. [NS 759 527]

#### Littleferry

(Sutherland) Golspie, off A9 Inverness to Thurso. [NH 819 979

#### Llandow

(Vale of Glamorgan) 9 miles from Cardiff, off B4270 between A48 and Llantwit Major, CF71 7PB. [SS 959 715]

#### Lydd Raceway

Kent) 20 miles from J10 of M20, TN29 9JH. [TR 044 190]

#### **Nutts Corner**

(N. Ireland) 3 miles east of Crumlin. [J 203 768]

#### **P.F. International**

(Lincs) 10 miles east of Newark, 2 miles off A17 towards Stragglethorpe. [SK 897 499]

#### Portstewar

(Co. Londonderry) NW200 car park, off A2 Ballreagh Roa, Northern Ireland.

#### Rissington

(Glos) RAF Station. Off the A429, 4 miles east of Bourton on the Water. [SP 218 186]

#### Rowrah

(Cumbria) On the A5086 4 miles north-east of Frizington and 8 miles south-west of Cockermouth, CA26 3XU. [NY 068 183]

#### **Rye House**

(Herts) J5 of M25 then A10, Rye Road, Hoddesdon, EN11 0EH. [TL 389 095]

#### Shenington

(Oxon) 8 miles west of Banbury, off A422 Banbury-Stratford road, OX15 6NY. [SP 362 428]

#### Sorel Point

(Jersey) off La Route du Nord, north of St John's village.

#### St. Sampsons

(Guernsey) 1 mile from St. Peter port

#### **Three Sisters**

(Lancs) 5 minutes off J25 of M6, WN4 8DD. [SD 582 014]

#### Warden Law

(Sunderland) 2 miles east of Houghton-le-Spring, SR3 2PR.

#### Whilton Mill

(Northants) 3 miles north of Weedon off the A5. From north M1 J18, from south M1 J16. [SP 622 646]

**Wombwell** (Yorks) 6 miles south-east of Barnsley, off A4633 [SE 402 032]

Additionally, most Race Circuits are licensed for Race Venue Event Kart events.

500 MRCI/ULSTER KART CLUB Nutts Corner Evan Freeman Email: evanfreeman15@hotmail.com Phone: 07702 247471

CAMBERLEY KART CLUB Blackbushe Lee Cobb Email: lee\_alc@hotmail.co.uk Phone: 07947 422099

CHAMPIONS KART CLUB Dan Ashton Email: dan.karting14@hotmail.com Phone: 07584 657391

CHESHIRE KART CLUB Hooton Park Bob Wilson Email: mail@hootonparkcircuit.co.uk Phone: 01606 883956

CUMBRIA KART RACING CLUB Rowrah Malcolm Fell Email: marion.fell@markfell.co.uk Phone: 01229 463748

DRAGON KART CLUB Glan y Gors Ashley Davies Email: gygkarting@live.co.uk Phone: 01490 420770

DRS KART CLUB Keith Ramsbottom Email: keith.m.ramsbottom@gmail.com Phone: 07805 049632

Matthew Daniels Email: matthewd@boston.ac.uk Phone: 07904 965386

#### EAST OF SCOTLAND KART CLUB Crail Ross McIver Email: ross@rmhomeimprovement.co.uk Phone: 07591 010440

FOREST EDGE KART CLUB Forest Edge Peter A Bryceson Email: pabryceson@aol.com Phone: 07711 207070

Keith Ramsbottom Email: keith.m.ramsbottom@gmail.com Phone: 07805 049632

FULBECK KART CLUB Fulbeck Clive Charlesworth Email: clivecharlesworth@yahoo.co.uk Phone: 07843 661145

Julie Thornsby Email: compsec@fulbeckkartclub.co.uk Phone: 07749 106101

GRAMPIAN KART CLUB Boyndie Gordon Rennie Email: renniex88@btinternet.com Phone: 01358 724478

Martin Towler Email: martin691@icloud.com Phone: 07812 021464

GUERNSEY KART & MOTOR CLUB St. Sampsons Claude Ford Email: claude.ford@cwgsy.net Phone: 07781 138382

Alan R Trustum Email: roadrace@cwgsy.net Phone: 07781 143317 HUNTS KART RACING CLUB Kimbolton Nigel Freeman Email: nigelfreeman2010@hotmail.co.uk Phone: 07743 189580

Mick French Email: mickfrench@aol.com Phone: 07518 271139

#### JERSEY KART & MOTOR CLUB Sorel Robin Troy Email: robin.troy@robinetroy.com Phone: 07797 742378

Michael Reddy Email: mistereddyjersey@gmail.com Phone: 07797 727734

MEDWAY KART CLUB Jay Fairbrass Email: arks@mvkc.co.uk Phone: 07973 401722

NORTH OF SCOTLAND KART CLUB Golspie Ron Blanchard Email: rocketron41@uwclub.net Phone: 01463 870875

RAFMSA (KART) Simon Hilton Email: shilton120@btinternet.com Phone: 07548 885985

RYE HOUSE KART CLUB Sam Green Email: sam@rye-house.co.uk Phone: 07881 923897

#### SHENINGTON KART RACING CLUB Shenington Tom Whitehouse Email: tomwhitehouse46@gmail.com Phone: 01926 496694

SOUTH YORKSHIRE KART CLUB Wombwell Clive Charlesworth Email: clivecharlesworth@yahoo.co.uk Phone: 07843 661145

TRENT VALLEY KART CLUB PF International Dan Ashton Email: arks@tvkc.co.uk Phone: 07584 65739

Class	Number Plate/ Number	Class weight (driver min. weight) kg	Ages	Tyres – Dry	Tyres – Wet	Comments
MightE Bambino	Blue/White	83 (21.5)	6-8	Le Cont MSA04	Le Cont MSA04	Motorsport UK homologated electric powertrain
IAME Water Swift (restricted)	Yellow/Black	100 (26)	8-12^	Vega Cadetti 'UK'	Vega WM1 CIK	Restricted version of the Water Swift Inter engine
Honda Cadet	Yellow/Red	105 (28)	8-12^	Vega Cadetti 'UK'	Vega WM1 CIK	GX200 4-stroke engine with clutch
Rotax Micro Cadet	Yellow/Black	105 (28)	8-11^	Vega Cadetti 'UK'	Vega WM1 CIK	Restricted version of the 125 Junior MAX engine
IAME Water Swift	Yellow/Black	110 (31)	10-13#	Komet K1D-M	Komet K1D-W	Unrestricted 60cc water- cooled engine
Honda Inter	Yellow/Red	110 (33)	10-13#	Dunlop SL3- MSUK	Dunlop KT3	R200 variant of the GX200 4-stroke engine
Rotax Inter	Yellow/Black	115 (33)	10-13#	Mojo C2 CIK	Mojo CW CIK	Restricted version of the 125 Junior MAX engine
TKM Inter	Yellow/Black	108+ (31+)	10-13#	Maxxis TKM Rookie	Maxxis TKM Blue Label	As TKM Junior, with different restrictors
Junior TKM	Blue/White	123+ (35+)	12-16*	TKM Maxxis Sport	Maxxis Red/ White 'TKM'	As TKM with restrictor, optional TAG
Rotax Junior Max	Red/White	145 (40)	12-16*	Mojo D2XX 'CIK'	Mojo W5 'CIK'	Junior version of Rotax 125 Senior MAX engine
IAME X30 Junior	Yellow/Black	148 (41)	12-16*	Komet K3H	Komet K1W / K3W	As IAME X30 Senior but with exhaust restrictor
TKM Extreme	Red/White	132+ (u16 40+)	15+**	TKM Maxxis Sport	Maxxis Red/ White 'TKM'	BT82 115cc piston port, optional Clutch, optional Clutch, optional TAG
Rotax Senior Max	Blue/White	162 (u16 52) & 177 (80)	15+**	Mojo D5 'CIK'	Mojo W5 'CIK'	125cc water-cooled TAG engine with electric start
IAME X30 Senior	Yellow/Black	162 (u16 53)	15+**	Komet K3M	Komet K1W / K3W	125cc water-cooled TAG engine with electric start
KZ2	Yellow/Black	180	16+ª	Le Cont LPM 'CIK'	Le Cont LWR 'CIK'	125cc International gearbox class
Superkart 250	White/Black	195/200/208	16+	CIK-FIA Homologated	CIK-FIA Homologated	Registered gearbox engines up to 250cc

Key:

- Calendar year of 8th birthday with required Bambino experience
- # Calendar year of 10th birthday with Kart National licence
- \* Calendar year of 13th birthday, or from 12th birthday with Kart National licence
- \*\* Calendar year of 16th birthday, or from 15th birthday with Kart National licence, or any International ITE licence holder
- a Calendar year of 16th birthday with Kart National licence + min. 10 Kart Events at min. 3 venues, or from 15th birthday with International ITE licence