

MARTING KARTING CHAMPIONSHIP NATIONS CUP

12-16 DECEMBER 2023

TECHNICAL REGULATIONS





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Table of Contents

	REGULA	TIONS	3
1 – GENERAL			3
	1.1	– CATEGORIES	3
2	– EQ	JIPMENT	3
	2.1	– AMOUNT OF EQUIPMENT	3
	2.2	– CHASSIS, BRAKE SYSTEM, BODYWORK	3
	2.3	– TYRES	5
	2.4	– ENGINES	6
	2.5	– RETURN OF EQUIPMENT	6
	2.6	– DATA ACQUISITION	6
	2.7	– SAFETY EQUIPMENT	6
	2.8	– FUEL / OIL	7
	2.9	– ADVERTISING ON ENGINES	7
3	– MC	DIFICATIONS, LEGAL ADDITIONS, NON-TECH ITEMS, MEASUREMENTS	7
	3.1	– MODIFICATIONS	7
	3.2	- LEGAL ADDITIONS	7
	3.3	MEASUREMENTS	7
4	– TEC	HNICAL SPECIFICATION (WITHIN SEAL) FOR ENGINES	7
	4.1	– SQUISH GAP	7
	4.2	- CYLINDER	8
	4.2.1	Exhaust Port Shape	8
	4.2.2	Exhaust Port Timing	8
	4.3	REED VALVE ASSEMBLY	8
5	– TEC	HNICAL SPECIFICATION (OUTSIDE SEAL) FOR ROTAX KART ENGINES:	8
	5.1	- BALANCE DRIVE	8
	5.2	– CENTRIFUGAL CLUTCH	9
	5.2.1	Clutch Components	9 10
	J.Z.Z Height c	f clutch (B)·	
	Outord	ameter of clutch drum (C):	10
	lonor di	ameter of clutch drum (D).	10
	inner di		
	Height d	f clutcn arum with sprocket/primary gear (E):	10













	5.3	– PRIMARY DRIVE (125 MAX DD2)	10
	5.4	– GEAR SHIFTING (125 MAX DD2)	
	5.5	– ELECTRONIC TIMED EXHAUST VALVE (125 MAX, 125 MAX DD2)	
	5.6	– IGNITION SYSTEM	
	5.6.	1 Spark Plug	12
	5.6.	2 Electrode gap	12
	5.6.	3 Spark Plug Cap	12
	5.6.4	4 Ignition Sensor	12
	5.6.	5 Ignition System	13
	5.6.	6 ECU	13
	5.7	– BATTERY AND BATTERY FIXATION	
	5.8	– INTAKE SILENCER	15
	5.9	– CARBURETTOR	
	5.10	– FUEL PUMP, FUEL FILTER	
	5.11	– FUEL FILTER	18
	5.12	- INTAKE RESTRICTOR	18
	5.13	– RADIATOR	19
	5.14	– COOLANT	
	5.15	– EXHAUST SOCKET	
	5.16	– EXHAUST SYSTEM	20
	5.16	5.1 Exhaust System 125 Micro MAX and 125 Mini MAX	21
	5.16	5.2 125 MICRO MAX Perforated Tube (Rotax Part No. 273212)	22
	5.16	5.3 125 MINI MAX Perforated Tube (Rotax Part No. 273211)	22
	5.16	5.4 Exhaust System 125 Junior MAX and 125 MAX	23
	5.16	5.5 Exhaust System 125 MAX DD2	23
	5.16	6.6 – ADDITIONAL SEAT SUPPORT (125 MAX DD2)	24
6	Арр	endices – Permitted adjustments to chassis and engine options	25
	6.1	APPENDIX A – Micro Max	25
	6.2	APPENDIX B – Mini MAX	
	6.3	APPENDIX C – Junior MAX	27
	6.4	APPENDIX D – Senior MAX	28
	6.5	APPENDIX E – DD2 and DD2 Masters	29















MENA KARTING CHAMPIONSHIP 2023 **TECHNICAL REGULATIONS**

PUBLISHED 13/11/2023

REGULATIONS

The final text of these Technical Regulations shall be the English version, which will be used, should any dispute arise as to their interpretation. Headings in this document are for ease of reference only and do not form part of the regulations.

1 – GENERAL

1.1 – CATEGORIES

Karts used in the MENA Karting Championship are divided into the following groups:

- ROTAX 125 Micro MAX (cylinder capacity 125 cc)
- ROTAX 125 Mini MAX (cylinder capacity 125 cc) .
- ROTAX 125 Junior MAX (cylinder capacity 125 cc)
- ROTAX 125 MAX (cylinder capacity 125 cc)
- ROTAX 125 MAX DD2/MASTERS (cylinder capacity 125 cc, 2-speed)

- EQUIPMENT 2

2.1 – AMOUNT OF EQUIPMENT

- 2.1.1 One chassis, one engine and tyres according to article 2.3
- Each driver will receive a complete kart draw by raffle (chassis and engine) on a loan basis 2.1.2 for the whole event, according to the official time schedule
- 2.1.3 The driver cannot refuse the vehicle that has been raffled
- 2.1.4 No modification is allowed unless specified in the MENA Karting Championship 2023 Technical Regulations and its Appendices
- 2.1.5 During the event drivers/competitors are not allowed to take the kart, or any part of it (except the battery and battery charger), outside the track facilities.

A Technical Scrutineer may check at any time during the event if the vehicle is complete and all components are present. If any element of the vehicle is missing, the driver will have the following penalties applied:

- Prior to qualifying, the driver will receive a 10 places penalty on the starting grid for all qualifying heats.
- Prior to any race, the driver will receive a penalty of 10 seconds for the next race in which he will take part.
- In the event of a repeated infringement, the driver will be disgualified from the event.

2.1.6 Any equipment that was detected as missing must be controlled by the Technical Scrutineer and can also be replaced.

- CHASSIS, BRAKE SYSTEM, BODYWORK 2.2

- 2.2.1 Single brand chassis per category, defined by tender, as follows: **BirelART**
- 125 Micro Max:
 - 125 Mini Max: **BirelART**
- 125 Junior Max:
- 125 Senior Max:
- Charles Leclerc **BirelART**
- 125 Max DD2 and Masters: BirelART













- 2.2.2 Chassis are randomly assigned (on a loan basis for the time of the event) to drivers registered and routinely checked/scanned by means of the Rotax EMS (Event ManagementSystem).
- 2.2.3 Chassis, brake system, bodywork and Rear Wheel protection system must be in accordance with RMCGF Technical Regulations 2023 and its Appendices
- 2.2.4 Front brakes are only permitted for DD2 class.
- 2.2.5 The Chief Scrutineer may allow some changes on the chassis, e.g. in case the height of a driver will not allow him/her to fit properly in the kart.
- 2.2.6 Every chassis may be marked with a chassis seal with a unique serial number
- 2.2.7 During the event, and in case of an accident, the driver can only change one time the chassis (frame) after the authorization of the Technical Scrutineers. In this case the frame and the other needed parts must be paid for in advance (prices will be defined in the manufacturers price list prior to the event).

2.2.8 Seat

- Original seat as supplied by the respective chassis supplier is legal to be used only.
- It is the Driver / Entrant responsibility to mount the seat in accordance with the regulations.
- All fixation screws and nuts for the seat must be mounted and tightened at all times.
- Additional seat stays (supports) must be either fitted and tightened or removed from the chassis.
- Seat supports welded on the frame must not be bent except when authorized by the chassis manufacturer.
- Lead must be fitted to the seat only.
- 2.2.9 Axles: Only the original rear axle as supplied by the respective chassis supplier islegal to be used.
- Cutting the rear axle is not allowed.
- Fitting anything into the rear axle is not allowed.
- Stub axle adjustment must not be covered.
- 2.2.10 Stabilizer and sleeves must be fitted and tightened.
- 2.2.11 Steering wheel can be mounted in any height positions to fit the driver using the standard or optional material as supplied/defined by the manufacturer. Steering shaft cannot be cut.
- 2.2.12 Floor tray: All screws and nuts must be fitted and tightened at all times.
- A data acquisition sensor must be mounted to one of the fixation screws of the floortray.
- Drilling a hole/s in the floor tray is not allowed.
- To remove the foot rest is an allowed adjustment.
- 2.2.13 The 2 supports for the rear bumper must be mounted tight to the frame at all times. Screws of the rear bumper may be loose to enable vertical movement of the rear bumper only.
- 2.2.14 Only original brake pads as supplied by the chassis manufacturer for the Grand Final are legal to be used.
- 2.2.15 It is only allowed to use the parts, including rims, originally supplied by the chassis manufacturer.













2.2.16 Legal optional parts:

- Shorter pedals.
- Shorter brake rod.
- Angled steering wheel boss.
- Adjustable steering wheel boss.

2.2.17 Front fairing

- a) The use of a homologated Front Fairing and of the homologated Front Fairing MountingKit of the bodywork homologation period 2015 2020 is mandatory for all categories, in accordance with CIK Specific Prescriptions, article 30 and CIK Technical Drawing No 2d.
- b) Appropriate fairings and mounting kits will be provided to Entrants/Drivers with each kart and are the only components which may be used.
- c) The provisions of CIK Specific Prescriptions, article 30 regarding mounting, installation, checking, reporting of breaches and application of penalties will be applied in full.

2.3 – **TYRES**

2.3.1 Type:

 125 Micro MAX and 125 Mini MAX

 VEGA M1
 Front 4.0 x 10.0 - 5
 Rear 5.0 x 11.0 - 5

 125 Junior MAX, 125 MAX, 125 MAX DD2 and 125 MAX DD2 Masters

 VEGA XH3
 Front 4.6 x 10.0 - 5
 Rear 7.1 x 11.0 - 5

Wet tyres: not applicable in all classes

2.3.2 Quantity for each category

1. Dry tyres:

- 1 set is provided for non-qualifying practice with the kart (non parc fermé status). Additional sets can be purchased from the Paddock Tyre Compound. No upper limit on tyre sets for non-qualifying practice.
- Minimum 1 set (maximum 2 sets) for Qualifying up to and including Finals (non parc fermé status).
- 2. Distribution and usage of tyres:
- The first set of slick tyres will be handed out at the kart raffle. This set can be used during the event for all non-qualifying practices along with any additional tyres purchased from the Paddock Tyre Compound. After the last session of non-qualifying practice each driver will receive race tyres(minimum 1, maximum 2), which must be used for the qualification phase up to and including the final. Each tyre of this set is marked with a barcode and the starting number.
- Each driver is responsible for checking that the marking of the starting number isvisible outside, otherwise the tyre must be presented in parc fermé for remarking.
- In case of mechanical failure of a tyre, each driver may exchange maximum 1 front and 1 rear tyre, except if failure has been caused on purpose/misuse. In case of a mechanical failure of a tyre, the technical scrutineer will determine if thefailure was due to material defect or has been caused on purpose/misuse. The technical scrutineer's decision will be final and not subject to protest or appeal.













- 2.3.3 All tyres are marked with barcode and can only be used by the assigned driver.
- 2.3.4 Tyres are assigned (on a loan basis for the time of the event) to drivers, registered and routinely checked/scanned by means of the Rotax EMS (Event Management System).
- 2.3.5 Strictly no modifications or tire treatment is allowed. Tyre check with "tire sniffer" Mini-RAE-Lite: Maximum value = 4ppm. Over this value there will be a second check. If the value remains over the 4ppm, the competitor will be disqualified from the event.
- 2.3.6 Tyres must be mounted in accordance with the rotation markings defined on the tyre.

2.4 – ENGINES

- Every engine is sealed with an engine seal with a unique serial number (barcode)
- Engines are randomly assigned (on a loan basis for the time of the event) to drivers, registered and routinely checked/scanned by means of the Rotax EMS (Event Management System).
- The mandatory settings, permitted adjustments and optional parts are defined inthese MENA Karting Championship 2023 Technical Regulations and its Appendices.
- For all components outside the engine seal, the competitor is responsible to assure the conformity with the MENA Karting Championship 2023 Technical Regulations and its Appendices.
- At any moment of the event, a Driver/Entrant cutting or manipulating any seal ormodifying any of the engine, and/or carburettor will be disqualified from the event.

2.5 – RETURN OF EQUIPMENT

- At the end of the event Drivers must return the equipment according to the information about time, location and procedures of how to return the equipment defined by the organisation.
- Equipment must be returned in the same working conditions as delivered. All equipment must be fully cleaned before returned, otherwise a QAR 500 fee will be charged.
- Any damaged or missing part of the engine or accessories, toolbox and trolley mustbe paid for.
- Any damaged part of the chassis must be paid for.
- Personnel appointed by the organiser (Rotax and chassis suppliers) will be responsible for completing an extensive control of the material handed out to the Driver.

2.6 – DATA ACQUISITION

Systems which permit the reading/recording of following data only are allowed:

- a) Lap time
- b) Engine rpm (by induction on the high-tension cable)
- c) Engine coolant (water) temperature (sensor M10x1 mounted in the cylinder head)
- d) The speed of one wheel
- e) Acceleration in X/Y direction
- f) Position (via GPS system)
- g) Connection of the data acquisition system to the Rotax engine battery is allowed.

2.7 - SAFETY EQUIPMENT

According to FIA Karting Technical Regulations, Article 7.













2.8 - FUEL / OIL

Competitors should purchase fuel vouchers from the Fast Track Showroom LOCATION TBA. Controlled, pre-mixed fuel (and a 20 litre container) will be supplied by the organisers for the whole event.

2.9 - ADVERTISING ON ENGINES

No sponsor stickers except ROTAX, BRP, XPS are allowed on the engine or any of its accessories unless specifically directed by means of a Bulletin or Supplementary Regulation.

3 – MODIFICATIONS, LEGAL ADDITIONS, NON-TECH ITEMS, MEASUREMENTS

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 acondition of difference from that originally designed. This is to include the additionand/or omission of parts and/or material from the engine package assembly unlessspecifically allowed within these rules. The adjustment of elements specifically designed for that purpose shall not be classified as modifications, i.e. carburettorand exhaust valve adjustment screws.
- Only genuine ROTAX components that are specifically designed and supplied for the 125 MICRO MAX, 125 MINI MAX, 125 JUNIOR MAX, 125 MAX and 125 MAX DD2 engine are legal, unless otherwise specified.
- ANYTHING WHICH IS NOT EXPRESSLY ALLOWED IN THE MENA KARTING CHAMPIONSHIP TECHNICAL REGULATIONS IS FORBIDDEN.

3.2 – LEGAL ADDITIONS

Temperature sensor for engine coolant (water).

3.3 – MEASUREMENTS

When taking any dimensional reading of the following technical regulations, in the order of accuracy of 0.1 mm (or even more precise), the temperature of the part mustbe between $+10^{\circ}$ C and $+30^{\circ}$ C.

It is the responsibility of the competitor to check all components outside the engine seal to ensure that his/her equipment is in conformity with the MENA Karting Championship 2023 Technical Regulations.

4 - TECHNICAL SPECIFICATION (WITHIN SEAL) FOR ENGINES

4.1 – SQUISH GAP

The crankshaft must be turned by hand slowly over TDC (top dead centre) to squeeze thetin wire. The squish gap must be measured on the left and right side in the direction of thepiston pin. The average value of the two measurements counts.

125 MINI MAX, 125 JUNIOR MAX, 125 MAX, 125 MAX DD2

The squish gap must be measured with a certified slide gauge and by using a 2 mm tinwire. *Recommended 2mm tin wire (580 130)*

125 Mini MAX minimum = 1.20 mm 125 Junior MAX minimum = 1.20 mm 125 MAX minimum = 1.00 mm 125 MAX DD2 minimum = 1.30 mm

125 MICRO MAX

The squish gap must be measured with a certified slide gauge and by using a 3 mm tin wire. *Recommended 3mm tin wire (580 132)*

125 Micro MAX minimum = 2.40 mm











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4.2 - CYLINDER 4.2.1 Exhaust Port Shape

Horizontal and vertical dimensions of the exhaust port must be checked with the corresponding template which must be moved as far as possible [in bothdirections] into the exhaust port.

The template must not touch the exhaustsocket flange in either direction.

Cylinder 223994 (fully CNC machined exhaust port only) using Part no. 676240. Cylinder 223993 (fully CNC machined exhaust port only) using Part no. 676245*.

4.2.2 Exhaust Port Timing

The "exhaust port timing" (distance from the top of the cylinder tothe top of the exhaust port) must be checked by means of the template (ROTAX part 277402). Taking care to use the correct gauge (JUNIOR, MAX or DD2), thetemplate should be inserted into the cylinder and moved as far aspossible into the exhaust port (at the

highest point of the exhaustport).

In this position the template may not touch the cylinder wall.

4.3 REED VALVE ASSEMBLY

The reed valve assembly is equipped with 2 petal stops and 2 reeds, each having 3 petals. The thickness of the reeds is 0.6 mm + - 0.10 mm.

Stopper plates must retain the original profile (bending).

Only MOD.20 reed valve assembly (Rotax Part No. 224380) is allowed to be used. The distance between the stopper plates (D) at any point must be:

125 MICRO MAX / MINI MAX 125 JUNIOR MAX / 125 MAX 125 MAX DD2 / MASTERS

16mm +/- 1.0mm 19mm +/- 1.0mm 19mm +/- 1.0mm

- TECHNICAL SPECIFICATION (OUTSIDE SEAL) FOR ROTAX KART ENGINES: 5

5.1 – BALANCE DRIVE 125 MICRO MAX, 125 MINI MAX, 125 JUNIOR MAX, 125 MAX

Balance gears must be installed and aligned according to the instruction in the repair manual.

Only steel balance gears (minimum width8.8mm) are legal to be used.



















125 MAX DD2

Balance drive gear must be fitted on crank shaft.

Balance gear must be fitted on primary shaft and must be aligned with the balance drivegear according to the instruction in the repair manual.

Version 1:

Fly weight of balance gear must show cast surface.

Version 2:

Fly weight of balance gear can show machined surface.

Dimension A (widest part of balance weight) must be either 53 mm +/- 0.5mm or 57 mm +/- 0.5mm

The minimum weight of a dry balance gear includingbearing must not be less than 240g.

Version 3:

Number 635745 visible on the gear

Fly weight of balance gear can show machined surface. The minimum weight of a dry balance gear includingbearing must not be lower than 255g.

5.2 – CENTRIFUGAL CLUTCH

5.2.1 Clutch Components

125 MICRO MAX, 125 MINI MAX, 125 JUNIOR MAX, 125 MAX

Dry centrifugal clutch with engagement speed at max 4,000 rpm, i.e. the kart (without driver) muststart to move before a max engine speed of 4,000 rpm.

The clutch (item 1 on diagram) must show the wording "ROTAX".

O-Ring (item 2) must be fitted and must ensure appropriate sealing between the clutch drum and the needle/plain bearing.

The clutch drum (item 3 on diagram) must show thewording "ROTAX".

Signs of emission of grease from the needle/plain bearing may not exceed theadjacent picture.

The contact area between the clutch and clutch drum must be completely dry at all times – no lubrication allowed under any circumstances!





















125 MAX DD2

Centrifugal clutch with engagement speed at maximum 4,000 rpm, i.e. the kart (without driver)must start to move before a maximum enginespeed of 4,000 rpm.

The clutch (item 1 on diagram) must show the wording "ROTAX".

O-Ring (item 2) must be fitted.

The clutch drum with drive gear (item 3 on diagram) must show the wording "ROTAX".

5.2.2 Clutch dimensions

Thickness of clutch shoe (A):

Measurement must be done at the 3 open ends of the clutch shoes, 5-10mm from the machined groove. All clutch shoes must be completely closed (no gap).

125 MICRO MAX, 125 MINI MAX, 125 JUNIOR MAX, 125 MAX,

125 MAX DD2 Minimum = 24.10 mm

Height of clutch (B):

125 MICRO MAX, 125 MINI MAX 125 JUNIOR MAX, 125 MAX 125 MAX DD2 minimum = 11.45 mm minimum = 11.45 mm minimum = 14.45 mm

Outer diameter of clutch drum (C):

Diameter must be measured with a sliding caliper beside the radius from the shoulder (not at the open end of the clutch drum).

125 MICRO MAX, 125 MINI MAX 125 JUNIOR MAX, 125 MAX 125 MAX DD2 minimum = 89.50 mm minimum = 89.50 mm minimum = 89.50 mm

Inner diameter of clutch drum (D):

The inner diameter must be measured with a sliding caliper. The measurement must be taken in the middle of the clutch drum (in the contact area between clutch and clutch drum).

125	MICRO MAX, 125 MINI MAX	(
125	JUNIOR MAX, 125 MAX	
125	MAX DD2	

maximum = 84.90 mm maximum = 84.90 mm maximum = 84.90 mm

Height of clutch drum with sprocket/primary gear (E):

125	MICRO MAX, 125 MINI	MAX
125	JUNIOR MAX, 125 MAX	
125	MAX DD2	

minimum = 33.90 mm minimum = 33.90 mm minimum = 39.50 mm

5.3 – PRIMARY DRIVE (125 MAX DD2)

Original drive gears (4+5) must be used only.



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5.4 - GEAR SHIFTING (125 MAX DD2)

The 2-speed gearbox must be operated from the steering wheel via the original Rotax paddleshift system (*pic below right*).

Cutting of the original aluminium shift paddles (item 30)or the adding of non-original parts is not allowed.

Mounting the shift paddles (30) on the bottom or topside of the whip (item 23) is an allowed adjustment.

Optional parts (items 35-37) can be mounted on theshift paddle in any position.

Bending the aluminium shift paddles to align them to thesteering wheel is an allowed adjustment.

The whip (23) offers two connections for the cables on each side for short travel or long travel. Both connections are legal to be used.

To change the connections of the cables to the whip (23) from left to right and right to left is an allowed adjustment

5.5 - ELECTRONIC TIMED EXHAUST VALVE (125 MAX, 125 MAX DD2)

System must be used as supplied with all components fitted as shown in the illustration with the exception of the impulse nozzle (item 22) which is optional.

If used, the impulse nozzle must be fitted inside the pressure hose(item 23). The direction of the impulse nozzle is free.

Compression spring (item 13, part number 239952) length 48.5mm must be fitted.

Only the green coloured bellow is legal to be used (ROTAX part number 260723)

The cylinder protection plate (*see pic right* - ROTAX part number251336) is mandatory to be installed and must have a minimum thickness of 0.08 mm.

The cylinder protection plate is not symmetrical. In combination with the electronic RAVEsystem, the plate must be installed such that the impulse hole of the cylinder is **closed**.

It is possible for the cylinder protection plate to show signs of wear or damage.

The exhaust valve itself must be as supplied by the manufacturer with no modification allowed.

Length of exhaust valve is 36.5 mm +0.20 mm/-0.30 mm. Width of collar is 4.8 mm +/-0.3 mm





With the exhaust port closed by the piston, insert exhaust valvegauge (Rotax 277030) until it stops at the cylinder flange.

A feeler gauge 0.05mm may not fit between the gauge and the flange.

This measurement must be performed outside of the exhaust valve contact area indicated in red (*picture left*).















The electronic timed exhaust valve offers two different settings (A or B) for the opening of the exhaust valve. Both settings are legal to be used.





(A) additional ground cable not connected

(B) additional ground cable connected

5.6 – IGNITION SYSTEM

Dellorto digital battery ignition system with variable ignition timing as supplied by the manufacturer. No adjustments necessary or possible.

5.6.1 Spark Plug

Spark plug – only the following is legal to be used: NGK $\ensuremath{\mathsf{GR8DI}}$

5.6.2 Electrode gap

125 MICRO MAX, 125 MINI MAX

Minimum0.50 mmMaximumFeeler gauge 1.20mm must not fit in between the two electrodes.

125 JUNIOR MAX, 125 MAX, 125 MAX DD2

Minimum0.50 mmMaximumFeeler gauge 1.00mm must not fit in between the two electrodes.

5.6.3 Spark Plug Cap

Spark plug cap – two versions are legal to be used: Version 1: Red, marked "NGK" (Rotax Part No. 866707) Version 2: Red, marked "ROTAX" (Rotax Part No. 866700)

5.6.4 Ignition Sensor

The marking of the pick-up must show the following numbers in the firstline 029600-0710 (*see pic right*).

A steel ball (diameter 3-5 mm) placed on the circular surface of the sensor must stay in the centre of the circular surface.

The inclusion of one or maximum two original gaskets (part 431500, thickness 0.8mm) between the pick-up and the crankcase (in addition to the original rubber sealing ring) is a legal specification.

Fitting position of the additional gasket(s):

Crankcase / rubber sealing ring / gasket(s) / pick-up

Note: It is not necessary to install any additional gasket/s with the exception of the rubber sealing ring on crankcases with the machined sealing surface for the pick-up sensor.



















5.6.5 Ignition System

The visual appearance of the ignition coil must be identical to the adjacent pictures.

Ignition coil must show 2 pins at the terminal.

The ignition coil is labeled with two stickers, "BRP 666820" (or "BRP 666820-01") and "NIG 0105". The ignition coil is still legal to be used if one or both stickersis/are faded or missing.

The minimum length of the high tension cable of the ignition coil is 210 mm from outlet of ignition coil to outletof spark plug connector (visible length of cable).

Ignition coil (and magnet valve - 125 Senior MAX and 125 MAX DD2 only) must be fitted with all components according to the illustrations below:



In case the mounting bracket (left illustration only) conflicts with a chassis component, the additions of 2 spacers, one per mounting hole, with a maximum thickness of 20 mmbetween the mounting bracket and the gearbox cover is allowed.

5.6.6 ECU

Each electronic control unit (ECU) is labeled with a sticker but is still legal if the sticker is unreadable or is missing.

125 MICRO MAX:	<i>``666815″</i>
125 MINI MAX:	"666818"
125 JUNIOR MAX:	<i>``666813″</i>
125 MAX:	<i>``666815″</i>
125 MAX DD2:	<i>``666816″</i>

The ECU must be checked using ECU tester (Rotax part no.276230) according to following procedure:

- Disconnect engine cable harness from ECU
- Connect ECU tester cable harness to ECU
- Connect energy cable of ECU tester cable harness with thecharging connect or of engine cable harness.
- Start the test by pressing the button "√" on the ECU tester.
- After approx. 3 seconds the type of ECU ① that is actuallytested will be indicated [in the second line of the display].
- After approx. 30 seconds the result ② of the test will beindicated [in the first line of the display].

The test must be performed using the software version **2V00** of the ECU tester (indicatedwhen connected to the battery).



















The ECU tester has to indicate following results:

- 125 MICRO MAX category
- ① 666815MAX

125 MINI MAX category

- ① 666818MINIMAX
- ② !! Test OK !!

125 JUNIOR MAX category

- ① 666813JNRMAX
- ② !! Test OK !!

125 MAX category

- 0 666815MAX
- ② !! Test OK !!
- 125 MAX DD2 category
- 0 666816MAXDD2
- ② !! Test OK !!



5.7 - BATTERY AND BATTERY FIXATION

Original battery with the following specification only are legal to be used:

YUASA YT7B-BS (with and without Rotax branding)

Battery must be fitted with original battery clamp and battery cover (according to illustration right) and must be fixed to the chassis with both clamps (at least 4 screws).

Battery clamp must be mounted on the left side of the chassis (next to the seat).















5.8 – INTAKE SILENCER

125 MICRO MAX, 125 MINI MAX, 125 JUNIOR MAX, 125 MAX

Intake silencer with integrated, washable air filter must be used with all parts as shown in illustration and must be mounted on the support bracket with two screws (in dry andwet race condition).

Intake silencer tube (pos 2) and carburettor socket (pos 6) are only legal if marked with "ROTAX".

The intake silencer case bottom is marked on the inside with ROTAX part no. 225015.

The intake silencer case top is marked on the inside with ROTAX part no. 225025.

Air filter (pos 4) must be installed as shown in illustration between the two holders (pos 3) and must cover the complete area of the intake silencer bottom (pos 1).

It is not allowed to attach anything to the air box to protect the air inlet from water spray even in wet conditions.

Air filter has two layers (green/dark green) marked "TwinAir".

125 MAX DD2

Intake silencer with integrated, washable airfilter as shown in illustration.

The intake silencer case (pos 1) is marked on the inside with "225013" $\!\!\!$

The intake silencer cover (pos 2) is markedon the inside with ``225023''

Two versions of air filters (pos 3) are legal: Version 1 – integrated steel frame Version 2 – separate plastic frame (pos 4)

The air filter must be assembled between theintake silencer case and the intake silencer

cover so that the whole area of the intake silencer case is covered.

It is not allowed to attach anything to the air box to protect the air inlet from water sprayeven in wet conditions.













5.9 – CARBURETTOR

125 MICRO MAX, 125 MINI MAX, 125 JUNIOR MAX, 125 MAX, 125 MAX DD2

Dellorto carburettor housing must show the cast wording "VHSB 34". DELL'ORTO carburettor with "XS" stamped on the carburettor housing.

The complete inlet bore of the carburettor must show cast surface.

The venturi hole of the carburettor insert can show signs of a CNC control machining. The two vent fittings must be connected with the original air vent hose minimum length 155mm (ROTAX part no. 260260). The location of the opening must be placed at the rearside of the carburettor.

Settings of the carburettor adjustment screws (idle and idle air) are free. The position of the jet needle is free.

All jets must be correctly seated and securely fitted (tight).

Carburettor can be used with and without fuel sieve in thecarburettor housing.

The carburettor slide must show size "45" in casting.

Jet needle must be stamped with "K57". The position of theneedle is free (see appendices).

The height of the two arms of the float lever must be within theslot of the carburettor gauge (ROTAX part no. 277400) by theirnormal weight, measured at the carburettor housing in the reverse upright position <u>without</u> the gasket (*see pic right*).

Needle valve assembly is stamped "150". For 125 MAX DD2 "200" is also a legal option.

Needle of needle valve marked with diamond symbol "INC" only (see picture right)

Start jet is stamped with the digits "60"

Optional items ROTAX part no. 240184 (allen screw, 2pcs.) and ROTAX part no. 261552 (main jet cup, 1pc.) are legal to be used. These parts optionally replace the parts 262020 and 261550 in the case of sealing a carburettor.

Refer to appendices for information on which main jets are permitted.

Further restrictions on the size of main jet may be determined for each race event by aSupplementary Regulation or Bulletin.

Only the following combination of floats/jets is legal: Floats are marked with "4.0 gr"Idle jet is stamped "60" Idle emulsion tube is stamped "45" Carb insert is stamped 12.5 (*see picture right*)

Needle jet must be stamped with "DP267" and have the following dimensions:

Total length 51.00 +/- 0.5 mm (*pic below left*) Length of bottom section 33.00 +/- 0.45 mm (*pic below middle*)Top bore diameter 2.67 +/- 0.10 mm (*pic*





to the right)

























Idle jet 60: using jet gauge set (ROTAX part no. 281920) it must not be possible for plug gauge 0.65 mm to enter the bore of idle jet 60 (*pic right*).

Idle emulsion tube 45: using jet gauge set (ROTAX part no. 281920) it must not be possible for plug gauge 0.50 mm to enter the bore (*pic far right*).

Carburettor insert 12.5 must meet the following criteria:

Angular bore: using jet gauge set (ROTAX part no. 281920) it must not be possible for plug gauge 0.60 mm to fit (*pic right*).

Vertical bore: using jet gauge set (ROTAX part no. 281920) it must not be possible for plug gauge 1.30 mm to fit (*pic far right*). Carburettor insert maybe be supplied with 1 or 2 gaskets placed between the insert and body of the carburettor as standard.

Atomiser must meet the following criteria:

Note: Use venturi tool set (ROTAX part no. 676034) to remove atomiser from carb body.

Total length 23.75 +/- 0.35 mm (*pic below far left*) Length of cylindrical part 15.75 +/- 0.25 mm (*pic below middle left*) Dimension of cutaway 5.80 +/- 0.30 mm (*pic below middle right*) Diameter of cross bore 5.00 +/- 0.15 mm (*pic below far right*)



5.10 - FUEL PUMP, FUEL FILTER

MIKUNI diaphragm pump (*pic right*) must be used and mounted on support bracket as shown in the illustration.





125 MICRO MAX, 125 MINI MAX, 125 JUNIOR MAX, 125 MAX

Fuel pump must be mounted on the bottom side of the supportbracket for the intake silencer as shown left illustration).

125 MAX DD2

Fuel pump should be mounted on the support bracket, marked651055 or 651056, attached to the clutch cover (below right illustration).

Mounting the fuel pump with the two original rubber buffersto the chassis is an allowed option. In this case the fuel pump must be mounted below the inlet center line of the carburettor.











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5.11 - FUEL FILTER

Original fuel filter only is legal to be used (picture right). It is mandatory for the fuel filter to be fitted between the fueltank and the fuel pump.

No additional parts except the fuel line, fuel pump as well as the original fuel filter are legal to be mounted between the fuel tank and the carburettor.

5.12 - INTAKE RESTRICTOR 125 MICRO MAX, 125 MINI MAX

The throttle body restrictor (ROTAX part number: 267536) must beinstalled in the rear of the carburettor and in the correct orientationat all times (see picture right).

No modifications are allowed. The ribbed surface on the inlet is to help ensure that the dimensions have not been modified.













5.13 - RADIATOR

Radiator must be mounted with all components as shown in the respective illustrations.

To apply tape (neutral tape without advertising only) around the radiator is an allowed modification to control the air flow through the radiator.

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Tape may not be removed from the radiator during operation on the track.

Any other non-original device to control the air flow through the radiator is prohibited.

125 MICRO MAX, 125 MINI MAX

Cooling area: Height = 280-300 mm Width = 58-62 mm Thickness of radiator = 30-34 mm

Removal of the original plastic flap is NOT allowed.

125 JUNIOR MAX, 125 MAX

The radiator must be mounted on the right side of the engine as shown in the illustration:

Cooling area: Height = 290 mm Width = 138 mm Thickness of radiator = 30-34 mm

Radiator must be stamped on the side with "ROTAX". Removal of the original plastic flap is NOT allowed.

125 MAX DD2

The radiator must be mounted on the left side of the driver's seat according to the illustration:

The highest point of the radiator with cap may not be higherthan 400 mm above the main tube of the kart chassis.

Cooling area: Height = 290 mm Width = 196 mm Thickness of radiator = 34 mm

Removal of the original plastic flap is NOT allowed

5.14 - COOLANT

Plain water without any additives must be used.





















5.15 - EXHAUST SOCKET

Only exhaust sockets with gasket ring (Rotax Part No. 450360) are legal to be used.

125 MICRO MAX, 125 MINI MAX

Diameter (A) must apply for a length (B) of at least 12 mm.

Measurement (C) must be at least 18.5 mm.

Maximum inner diameter (A) of exhaust sockets are:

125 MICRO MAX:	18.30 mm (Rotax Part no. 273 192)	
125 MINI MAX:	22.20 mm (Rotax Part no. 273 196)	

The internal profile of the exhaust socket should be checked with the template (Rotax Part no. 277405).

Fit template (MICRO MAX "18 mm", MINI MAX "22 mm") as far as possible into exhaust socket (no gasket, carbon deposits removed). There must be a constant crack of light between the profile of the templateand the exhaust socket profile.

125 JUNIOR MAX, 125 MAX, 125 MAX DD2

Only Rotax Part No. 273190 is allowed to be used. Measurement (C) must be at least 15.5 mm.

5.16 – EXHAUST SYSTEM





Original exhaust system as supplied by Rotax is mandatory to be used for the relevant class. Welding of the exhaust is not permitted other than to repair the support brackets in case offailure.

Allowed modifications on original exhaust systems are:

• Replacement of the original rivets of the silencer end cap by 4 mm metricscrews and corresponding locking nuts. The 3 x fixations (rivets, bolts and locking nuts) must be always secured tightly to ensure a sealing between the perforated tube and exhaust system. The perforated tube must be fully inserted into the exhaust system (right picture). External protrusion of the outer sealing ring of the perforated tube (indicated by the red arrow) is forbidden.

• If the exhaust must be sealed, the seal must pass through a 4th hole (max. 4mm diameter) which avoids the leaking of exhaust gases (see picture right). The perforated tube must always be secured tightly to the exhaust at 3 points.

• Replacement of the isolating mat (only one original isolating mat may be fitted) inside the silencer and the silencer end cap with perforated tube within the limits described herein.MINI MAX must utilise isolating mat Rotax Part No. 297985. All other categories use Rotax Part No. 297982.

• For measuring the exhaust gas temperature it is allowed to weld a socket on top of the exhaust, 50-80 mm from the ball joint.

• Addition of a steel isolating mat (ROTAX part no. 297983) of square dimension 165 + 10 mm is legal to be assembled underneath the standard isolation mat in 125 JUNIOR MAX,125 MAX and 125 MAX DD2 only.

Clamp (1) must be fitted at a distance of 18 + - 2 mm, measured from the end of the tube (*pic right*).

Clamp (2) must be fitted at the end area of the steelisolation mat (*pic right*).

10-12mm is a specification for assembly purpose only. Both clamps (1 and 2)

















aremandatory and must be fitted and tightened.

5.16.1 Exhaust System 125 Micro MAX and 125 Mini MAX

A specific exhaust system (Rotax Part No. 273136) must be used for the 125 MICRO MAX engine while exhaust system (Rotax Part No. 273137) must be used for the 125 MINI MAXengine.

Note: the exhaust external body is the same for both systems but the internal components(inserts) differ.

The silencer must be mounted in a position where the direction of the 90° elbow outlet (direction of the hot exhaust gases) does not harm any component of the chassis. The exhaust must be mounted and secured in such a way to ensure a full sealing around the exhaust socket and the gasket ring.

The measurements in the diagram below are as follows:

(a) 580 mm +/- 5 mm (b) 299 mm +/- 5 mm (c) 42 mm +/- 3 mm



A steel ball with a 28.0 mm diameter ${\rm must}~{\rm not}$ pass through Section "A" (see right illustration).

A steel ball with a 26.0 mm diameter must be able pass through Section "A" from the inlet and through the 90-degree elbow completely. [Note: internalexhaust components must first be removed]

The inner measurement of the exhaust system silencer end (a) in the right illustration must be a maximum of 63.0 mm.

(Note: this is not a measurement of the perforated tube)No exhaust leakage is

allowed (no signs of oil).

The exhaust flange and socket shape must be concentric. The exhaust must be mounted so that it is centred on the exhaust socket with even spacing all around. No modification, damage or distortion of the exhaust pipe (and exhaust socket) is permitted.

The exhaust screws or rivets on the return end plate should be tightly fastened.

The exhaust must be installed firmly using either one rigid pipe mount or 2 separate rigidbrackets via 2 silent blocks (Rotax Part No. 660920 or 260657 – one per support lug).

The deflection of the 2 silent blocks is the only exhaust movement allowed. The pipe mustbe mounted in a neutral position (ideally horizontal) with no stress on the 2 silent blocks.















MENACHAMPIONSHI



5.16.2 125 MICRO MAX Perforated Tube (Rotax Part No. 273212)



The measurements illustrated above are as follows:

- (a) minimum 498 mm
- (b) minimum outside diameter 61 mm
- (c) maximum outside diameter of 26 mm
- (d) minimum length 63 mm

Minimum outside diameter (measurement (a) in the illustration right) is 26.0 $\,\rm mm$



The only legal isolating mat for 125 Micro MAX is Rotax Part No. 297982: New size minimum 480 x 270 mm (+/-10 mm) New weight 207g (176g – 238g) Used weight minimum 140g Used weight maximum 350g

5.16.3 125 MINI MAX Perforated Tube (Rotax Part No. 273211)



The measurements illustrated above are as follows:

- (a) minimum length not applicable
- (b) minimum outside diameter 61 mm
- (c) maximum outside diameter of 26 mm
- (d) minimum length 63 mm

Note: 125 MINI MAX perforated tube has a stamped ID marker " X " visible externally.

The only legal isolating mat for 125 MINI MAX is Rotax Part No. 297985: New size minimum 490 x 180 mm (+/-10 mm) New weight 141g (119g – 163g) Used weight minimum 110g Used weight maximum 350g















5.16.4 Exhaust System 125 Junior MAX and 125 MAX

The silencer must be mounted in a position where the direction of the 90° elbow outlet(direction of the hot exhaust gases) does not harm any component of the chassis.

To drill an extra hole in the exhaust retaining bracket (Rotax Part No. 651070 MAX) for attachment of a second exhaust spring is a legal modification.

To fit a 3rd original spring (crosswise at the ball joint connection between 180° elbow and



The only legal isolating mat for 125 JUNIOR MAX and 125 MAX is Rotax Part No. 297982: New size minimum 480 x 270 mm (+/-10 mm) New weight 207g (176g – 238g) Used weight minimum 140g Used weight maximum 350g

5.16.5 Exhaust System 125 MAX DD2

The silencer must be mounted in a position where the direction of the 90° elbow outlet (direction of the hot exhaust gases) does not harm any component of the chassis.

To drill an extra hole in the exhaust retaining bracket (Rotax Part No. 651075 DD2) for attachment of a second exhaust spring is a legal modification.

To fit a 3rd original spring (crosswise at the ball joint connection between 180° elbow and silencer) is an allowed option.

Length of inlet cone is 575 mm +/-5 mm Length of cylindrical part of exhaust pipe is 80 mm +/-5 mm Length of end cone: 240 mm +/-5 mm















The only legal isolating mat for 125 MAX DD2 is Rotax Part No. 297982: New size minimum 480 x 270 mm (+/-10 mm) New weight 207g (176g - 238g) Used weight minimum 140g Used weight maximum 350g

5.16.6 - ADDITIONAL SEAT SUPPORT (125 MAX DD2)

On the engine side a maximum of one additional seat support is allowed to be used.

The support must be fastened to the engine using the Allen screw (2) (*pic below left*). The distance sleeve (3) may be removed for this purpose.

For the DD2 category, the seat support on the engine side, must be mounted as in thefollowing picture. The uniball joint must always remain attached to the engine.

















6 Appendices – Permitted adjustments to chassis and engine options

6.1 APPENDIX A – Micro Max

125 Micro MAX – BirelART - Permitted adjustments to chassis and engine options

No.	Item	Specification
1	Carburation and gearing mandatory for the 1 st free practice.	108 Main Jet must be installed. Front sprocket 14, Rear sprocket 78 teeth. The correct main jet is installed
2	Carburation and gearing options for the 2 nd free practice through to the Finals	Any main jet from the kit supplied can be used (105, 106, 107, 108, 109, 110 & 111). Front sprocket 14; Rear sprocket 78.
3	Spark plug type and gap	NGK GR8DI. Filler gauge 1.20 mm must not fit in between the two electrodes.
4	Chain length and type	110 chain length only. Only chains as supplied at the event by the manufacturer are legal to be used.
5	Ride height	Standard ride height only (middle setting) at front and rear.
6	Camber and Castor	Kart must be used as supplied with standard assembled graduated bushing (0.5 upper; 0 lower)
7	Ackerman settings	Ackerman adjustment on the steering column is free
8	Seat supports	No seat supports are permitted
9	Seat fixing	All seat screws must be fitted and tight at all times
10	Other notes	All side bars and front bars (crash protection) are required to be secured tightly at all times
11	Rear bumper	It is allowed to loosen in the vertical plane only
12	Rear Wheelbase	Maximum 1100 mm
13	Optional parts	It is allowed to use one (maximum) additional plastic shim to change the steering wheel angle (10 degrees).

ROTAX recommended settings in relation to 2nd Non-qualifying practice will be communicated to all classes at Registration.













6.2 APPENDIX B – Mini MAX

125 Mini MAX – BirelART - Permitted adjustments to chassis and engine options

No.	Item	Specification
1	Carburation and gearing mandatory for the 1 st free practice.	120 Main Jet must be installed. Front sprocket 13, Rear sprocket 70 teeth. The correct main jet and gearing is installed
2	Carburation and gearing options for the 2 nd free practice through to the Finals	Any main jet from the kit supplied can be used (112, 113, 114, 115, 116, 117, 118, 119 & 120). Front sprocket 13; Rear sprocket 70 or 71 or 72
3	Spark plug type and gap	NGK GR8DI. Filler gauge 1.20 mm must not fit in between the two electrodes.
4	Chain length and type	106 chain length only. Only chains as supplied at the event by the manufacturer are legal to be used.
5	Ride height	Standard ride height only (middle setting) at front and rear.
6	Camber and Castor	Kart must be used as supplied with standard assembled graduated bushing (0.5 upper; 0 lower)
7	Ackerman settings	Ackerman adjustment on the steering column is free
8	Seat supports	No seat supports are permitted
9	Seat fixing	All seat screws must be fitted and tight at all times
10	Other notes	All side bars and front bars (crash protection) are required to be secured tightly at all times
11	Rear bumper	It is allowed to loosen in the vertical plane only
12	Rear Wheelbase	Maximum 1100 mm
13	Optional parts	It is allowed to use one (maximum) additional plastic shim to change the steering wheel angle (10 degrees).

ROTAX recommended settings in relation to 2nd Non-qualifying practice will be communicated to all classes at Registration.













6.3 APPENDIX C – Junior MAX

125 Junior MAX – Charles Leclerc - Permitted adjustments to chassis and engine options

No.	ltem	Specification
1	Carburation and gearing mandatory for the 1 ST free practice.	130 Main Jet must be installed. Front sprocket 12, Rear sprocket 78 teeth. The correct main jet and gearing is installed
2	Carburation and gearing options for the 2 nd free practice through to the Finals	Any main jet from the kit supplied can be used (124, 125, 126, 127, 128, 129, 130, 131, 132, 133 & 134). Front sprocket 12; Rear sprocket 78 or 79 or 80
3	Spark plug type and gap	NGK GR8DI. Filler gauge 1.00 mm must not fit in between the two electrodes.
4	Chain length and type	108 chain length only. Only chains as supplied at the event by the manufacturer are legal to be used.
5	Ride height	Standard ride height only (middle setting) at front and rear.
6	Camber and Castor	Kart must be used as supplied with standard assembled graduated bushing (0.5 upper; 0 lower)
7	Ackerman settings	Ackerman adjustment on the steering column is free
8	Seat supports	1 seat support on each side must be fitted and tightened at all times.
9	Seat fixing	All seat screws must be fitted and tight at all times
10	Other notes	All side bars and front bars (crash protection) are required to be secured tightly at all times
11	Rear bumper	It is allowed to loosen in the vertical plane only
12	Rear Wheelbase	Maximum 1400 mm
13	Optional parts	It is allowed to use one (maximum) additional plastic shim to change the steering wheel angle (10 degrees).
14	Middle bearing	Middle axle bearing has been supplied with cable ties. It is allowed to be tightened using manufacturer's bolts

ROTAX recommended settings in relation to 2nd Non-qualifying practice will be communicated to all classes at Registration.













6.4 APPENDIX D – Senior MAX

125 Senior MAX – BirelART - Permitted adjustments to chassis and engine options

No.	ltem	Specification
1	Carburation and gearing mandatory for the 1 st free practice.	130 Main Jet must be installed. Front sprocket 12, Rear sprocket 80 teeth. The correct main jet and gearing is installed
2	Carburation and gearing options for the 2 nd free practice through to the Finals	Any main jet from the kit supplied can be used (124, 125, 126, 127, 128, 129, 130, 131, 132, 133 & 134). Front sprocket 12; Rear sprocket 80 or 81 or 82
3	Spark plug type and gap	NGK GR8DI. Filler gauge 1.00 mm must not fit in between the two electrodes.
4	Chain length and type	108 chain length only. Only chains as supplied at the event by the manufacturer are legal to be used.
5	Ride height	Standard ride height only (middle setting) at front and rear.
6	Camber and Castor	Kart must be used as supplied with standard assembled graduated bushing (0.5 upper; 0 lower)
7	Ackerman settings	Ackerman adjustment on the steering column is free
8	Seat supports	1 seat support on each side must be fitted and tightened at all times.
9	Seat fixing	All seat screws must be fitted and tight at all times
10	Other notes	All side bars and front bars (crash protection) are required to be secured tightly at all times
11	Rear bumper	It is allowed to loosen in the vertical plane only
12	Rear Wheelbase	Maximum 1400 mm
13	Optional parts	It is allowed to use one (maximum) additional plastic shim to change the steering wheel angle (10 degrees).
14	Middle bearing	Middle axle bearing has been supplied with cable ties. It is allowed to be tightened using manufacturer's bolts

ROTAX recommended settings in relation to 2nd Non-qualifying practice will be communicated to all classes at Registration.















6.5 APPENDIX E – DD2 and DD2 Masters

125 MAX DD2 and DD2 Masters – BirelART - Permitted adjustments to chassis and engine options

No.	Item	Specification
1	Carburation and gearing mandatory for the 1 st free practice.	138 Main Jet must be installed. Gear ratio set 35:62 The correct main jet and gearing is installed
2	Carburation and gearing options for the 2 nd free practice through to the Finals	Any main jet from the kit supplied can be used (132, 135, 138, 140, 142 & 145). Optional gear ratio set 34:63 (must be purchased from Fast Track Showroom)
3	Spark plug type and gap	NGK GR8DI. Filler gauge 1.00 mm must not fit in between the two electrodes.
4	Ride height	Standard ride height only (middle setting) at front and rear.
5	Camber and Castor	Kart must be used as supplied with standard assembled graduated bushing (0.5 upper; 0 lower)
6	Ackerman settings	Ackerman adjustment on the steering column is free
7	Seat supports	1 seat support on each side must be fitted and tightened at all times.
8	Seat fixing	All seat screws must be fitted and tight at all times
9	Other notes	All side bars and front bars (crash protection) are required to be secured tightly at all times
10	Rear bumper	It is allowed to loosen in the vertical plane only
11	Rear Wheelbase	Maximum 1400 mm
12	Optional parts	It is allowed to use one (maximum) additional plastic shim to change the steering wheel angle (10 degrees).

ROTAX recommended settings in relation to 2nd Non-qualifying practice will be communicated to all classes at Registration.







