




# **RMC ASIA FESTIVAL 2022**

## ***Technical Regulations Senior Max***


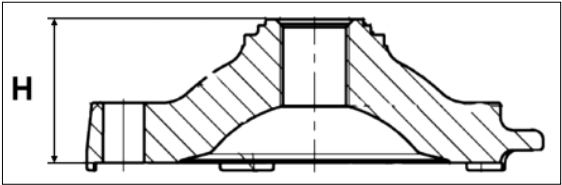



# Technical Regulations SENIOR MAX

<b>4.00 / Chassis</b>	Maximum 1 chassis per competitor per event (weekend). Only CIK/FIA homologated chassis after 2006 are allowed.		
<b>4.01 / Brakesystem</b>	Only hydraulic, CIK/FIA homologated brakes are allowed. Front brakes are not allowed. Between the master brake cylinder and the brake pedal an extra security brake cable is mandatory. Minimum 1.8 mm thickness. Also an extra security clip is mandatory at the brake pads. A ceramic brake disc is not allowed.		
<b>4.02 / Rear axle</b>			
<b>Diameter</b>	Ø40mm or Ø50 mm magnetic material, in a whole.		
<b>Wall thickness</b>	(40mm) minimum 2.9mm / (50mm) minimum 1.9mm (entire length).		
<b>4.03 / Rims</b>	Aluminium or magnesium / diameter 5 inch.		
<b>Dry</b>	Maximum 135/215mm / measured to the outside of the rim		
<b>Rain</b>	Maximum 130/180mm +/- 5mm / measured to the outside of the rim OR Dry rims		
	Any additions to the rims are not allowed. Except : adhesive balancing lead. Bead retaining screws are allowed.		
<b>Rear width</b>	Maximum 140cm / measured to the outside of the rim.		
<b>4.04 / Tyres</b>			
<b>Dry</b>	MOJO D5 CIK with barcode	Front: 4.5x10x5	Rear: 7.1x11x5
<b>Rain</b>	MOJO W5 CIK with barcode	Front: 4.5x10x5	Rear: 6.0x11x5
	<p>Slick and wet race tires will be given to the drivers from the race organiser.</p> <p>2 set of slick tires and 1 set of wet tires per event is allowed from qualifying practice. Tires must be mounted according to the direction of rotation defined on the tire. If it's detected on the pre-grid area that a driver has fitted his tires incorrectly (wrong direction) then he will be moved to the parc-ferme. The drivers has the possibility to assemble his tires correctly, with the help of one (1) mechanic;.Only putting the tires in the correct direction is allowed. It is not allowed to do other technical changes.</p> <p>Afterwards he may start, but only when the start is given. He is not entitled to participate in the formation laps. If the observation takes place after the race, the driver will be excluded from the relevant part of the competition.</p> <p>It is not allowed to modify the tires. The brand name, code number, barcode and the indications always need to be visible on the tires. Only normal air is allowed to fill the tires.</p>		
<b>4.05 / Rearbumper</b>	The plastic bumper must be homologated. And cover at least 2/3 of the rear wheels, and may not protude the rear tires. Allowed to have verticle movement only, horizontally is forbidden.		
<b>4.06 / Side-pods Front panel Front fearing</b>	<p>Only a complete homologated plastic spoiler set is allowed. The complete spoiler set should have the same homologation number. Using composite like carbon fiber is not allowed.</p> <p>Only plastic frame protection parts (left, right, front) is allowed. The complete set should be free of damage.</p> <p>A CIK front fearing bumper is mandatory for all type of chassis and has to be mounted according to the CIK regulations homologation 2021-2023.</p>		
<b>4.07 / Fuel tank</b>	The plastic fuel tank should be mounted in a correct way, at the appropriate place. All vents must be culminate in a reservoir.		
<b>4.08 / Age</b>	14 years (or reach the age of 14 in 2022) and above.		

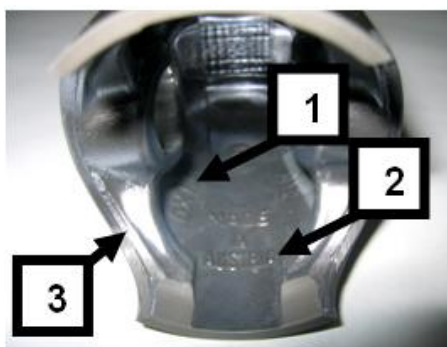
<b>4.09 / Weights and clothing</b>	<p>Minimum 162 kg on each moment of the event. Kart + complete race gear. A driver must be equipped and appear for inspection with the following gear: (see time table)</p> <p>Complete equipment must comply with the CIK regulations A turbo visor is allowed in case of rain Gloves which cover the entire hand High shoes that cover and protect the ankles.</p> <p>The responsible doctor on the event may, for safety reasons, disapprove certain types of breast, neck or rib protections.</p> <p>A neck protection is not required yet recommended.</p> <p>From the moment when the driver goes on track, he must wear the mandatory race gear as described in this article.</p>
<b>4.10 / Race numbers</b>	Yellow plate with black digits ( Numbers 301 to 399) (Front, rear, left and right sides)
<b>4.11 / Data systems</b>	<p>Data logging with or without a GPS module is allowed. Data from the GPS module may only be saved in a system which has been mounted on the kart. Every other form of telemetry or radio communication is not allowed. Transferring data during sessions to a device, other than the data logger on board is not allowed. 2 temperature sensors water/exhaust only allowed. Lambda/O2 sensors strictly forbidden.</p>
<b>4.12 / Seat</b>	The seat has to be fixed at minimum 4 places, 2 at the top (left and right) and 2 on the bottom (left and right). All seat supports have to be fixed with washers with a minimum thickness of 1.5 mm and a diameter of 40 mm. Additional seat stay is allowed maximum 2 on each side.
<b>4.13 / Lead</b>	<p>Drivers who are lighter than the required minimum weight shall attach extra weight on their kart, until they reach the prescribed weight. Lead may only be installed on the chassis or on the seat. The Technical Scrutineering can force each driver to mount the lead on another place.</p> <p>The lead shall be mounted so that everyone's security is guaranteed at all times:</p> <ul style="list-style-type: none"> <li>• Up to 3kg: at least with 2x M6 bolts including washer</li> <li>• Up to 6kg: at least with 2x M8 bolts including washer</li> <li>• Up to 10kg: at least with 4x M8 bolts including washer</li> </ul>
<b>4.14 / Camera's</b>	Camera is allowed during free practice only.
<b>4.15 / Composite materials</b>	<p>Composite materials (carbon-fiber etc.) are banned except for the seat and the floor tray. Alloys from different metals/substances are not considered as composite materials.</p>

# ENGINE - Rotax SENIOR MAX EVO

<b>4.16 / Foreword</b>	<p>Only original spare parts which are manufactured by BRP-Rotax are legal to be used. Any modifications are not allowed.</p> <p>Eventually heliix reparations with heli coils and/or wire bushes are allowed.</p>
<b>4.17 / Engines</b>	<p>Driver is allowed to enter maximum 2 engines.</p> <p>The engine origin has to matched with his/her competition license nationality or using the engines supply by the regional distributors (Malaysia, Thailand or Phillipine) is allowed.</p>
<b>4.18 / Squish</b>	<p>Minimum 1.00 mm (including possible carbon deposits)</p>
<b>Method of measuring</b>	<p>The squish gap must be measured with a certified slide gauge and by using 2 mm tin wire (Rotax part no. 580 130).</p> <p>The crankshaft must be turned by hand slowly over top dead centre to squeeze the tin wire.</p> <p>The squish gap must be measured on the left and right side in the direction of the piston pin.</p> <p>The engine temperature below 30 degrees Celcius</p> <p>The average value of the two measurements counts.</p>
<b>4.19 / Combustion</b>	<p>Cast identification code has to be "223 389" or "223 389 1" or "223 389 2" or 223 389 2/1" or "223 389 2/2". Casted wording "ROTAX" and/or "MADE IN AUSTRIA" must be shown</p>  <p>Height of the combustion chamber insert has to be 28.80mm +/- 0.2mm (H)</p>  <p>The profile of the combustion chamber insert has to be checked with a template (ROTAX part no. 277 390). The crack of light between the template and the profile of the combustion chamber insert has to be the same over the whole profile.</p> 
<b>4.20 / Cylinder head cover</b>	<p>It is allowed to change the colour of the cylinderhead cover for identification.</p>

#### 4.21 / Piston with ring assembly

Original, coated, aluminium, cast piston with one piston ring. The piston has to show on the inside the cast wording "ELKO" (1) and "MADE IN AUSTRIA" (2)



Machined areas are:

- Top end of piston
- Outside diameter
- Groove for the piston ring
- Bore for the piston pin
- Inside diameter at bottom end of piston
- Some pre-existing factory removal (3) of flashing at the cut out of the piston skirt

All other surfaces are not machined and have cast surface. Any mechanical treatment or rework of the piston is forbidden, (e.g. removal of carbon deposits). Cleaning without changing the original surface is allowed. If carbon is removed it must be consistently removed across the entire surface without altering the profile of the piston itself.

Example : selectively removing carbon in the squish measurements areas is forbidden.

#### Piston ring

Original, magnetic, rectangular piston ring.

Ring height : 0.98 +/- 0.02 mm.

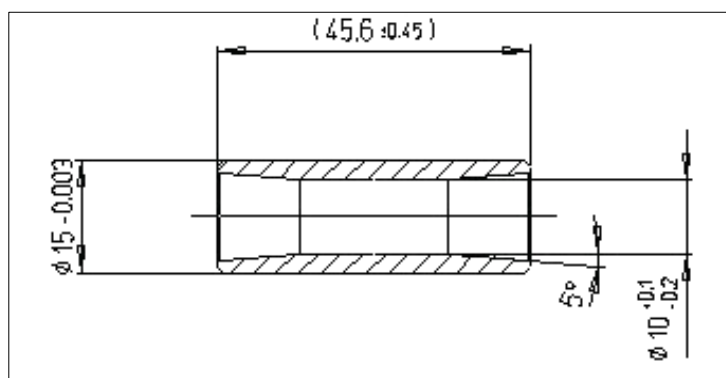
Piston ring is marked either with "Rotax 215 547", "Rotax 215 548", Rotax 215 548 X, or "I ROTAX 215548 X

The piston ring is legal also if just parts of the marking are still visible.



#### 4.22 / Piston pin

Piston pin is made out of magnetic steel. Dimensions must be according to the drawing. The minimum weight of the piston pin must not be lower than : 31.00 grams



#### 4.23 / Cylinder

Only cylinders marked (cast or machined) with identification code 223 993 + Rotax logo are legal to be used.

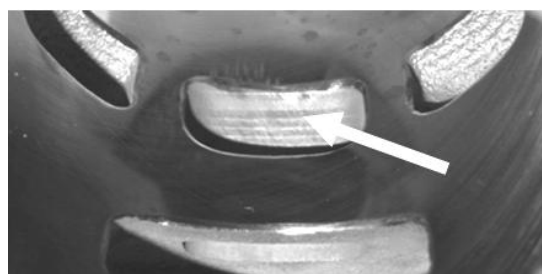
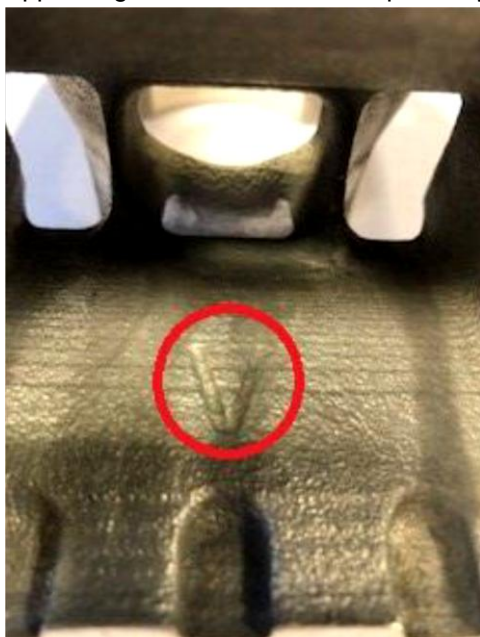
Type Senior with power-valve. Cylinder with one head exhaust port.

Light-alloy-cylinder with nikasil plating. Replating or modification is not allowed.



Cylinder types >2018, Rotax part nr. : 223 993 marked with the letter "V" into the inlet port are also allowed.

The upper edge of the central boost port may show factory machining. See pictures below



#### 4.24 / Maximum bore

Maximum bore of cylinder = 54.035 mm (measured 10mm above the exhaust port)

Light alloy cylinder with GILNISIL plating. Any re-plating of cylinder is not allowed.

#### 4.25 / Cylinder measurements

Height of cylinder should be 87.00 mm (-0.05 / + 0.10 mm)



### Exhaust port timing.

The "exhaust port timing" (distance from the top of the cylinder to the top of the exhaust port) has to be checked by means of the template (Rotax part no. 277 402).

Insert the template for Senior Max cylinder into the cylinder, and move the template (at the highest point of the exhaust port) as far as possible into the exhaust port.

In this position the template may not touch the cylinder wall (nikasil).

The horizontal and vertical dimensions of the exhaust port (cylinder 223 993 with fully CNC machined exhaust port only) have to be checked with the template (Rotax part no. 676 245).

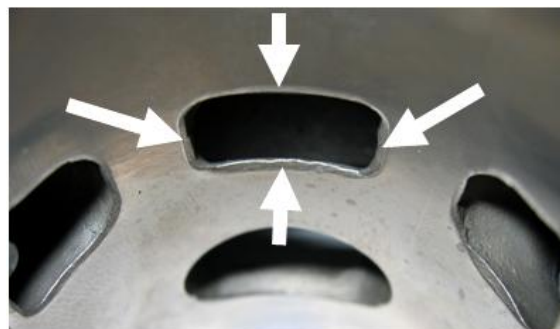
The template has to be moved in horizontal and vertical position as far as possible into the exhaust port. In both directions the template may not touch the exhaust socket flange.



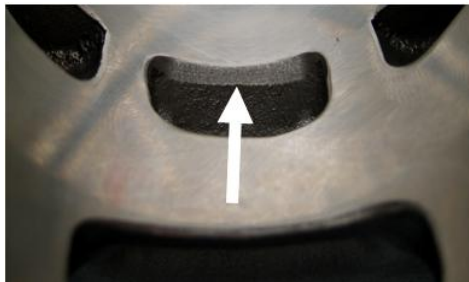
All transfer ports and passages have cast finish surface except some removal (done by the manufacturer) of cast burr at the inlet passage, exhaust port and passages.



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



The upper edge of the central boost port may show factory machining.



The top edge of exhaust port may show some pre-existing machining from the manufacturer.

Any modification is strictly forbidden!

**Sinle core / No  
single core**

**No single core cylinder :**

**The exhaust port is CNC machined, but not the entire length.**

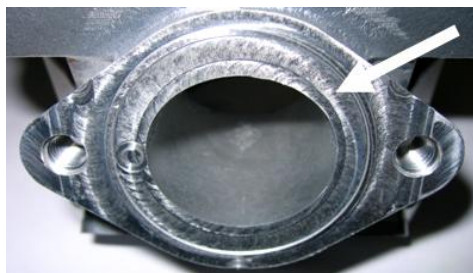


White surrounded : CNC machined  
Red surrounded : NOT CNC machined

**Single core cylinder :**

**The exhaust port is CNC machined over the entire length.**

The flange for the exhaust socket may show machined surface. Machined surface can be either flat or show a circular sealing bump.



Any modification is strictly forbidden!

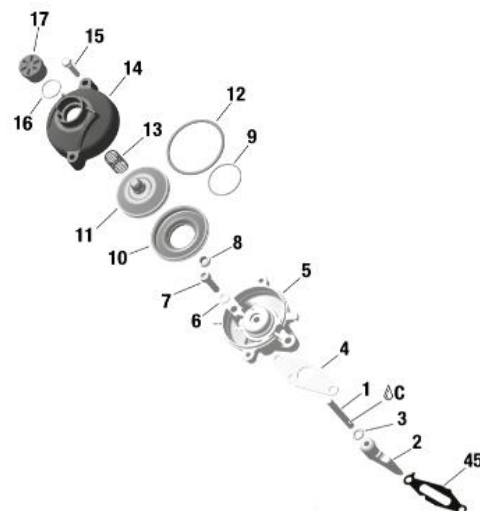
#### 4.27 / Power valve

Electronic timed system must be used only. System has to be used with all components fitted as shown in the illustration below.

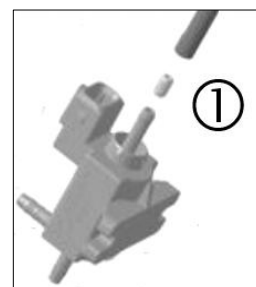
The cylinder protection plate (45) is mandatory to be installed and must have a minimum thickness of 0.08mm. It is possible for the cylinder protection plate (45) to show signs of wear or damage.

Bellow (10) must have green colour.

The original compression spring (13) has to be used.



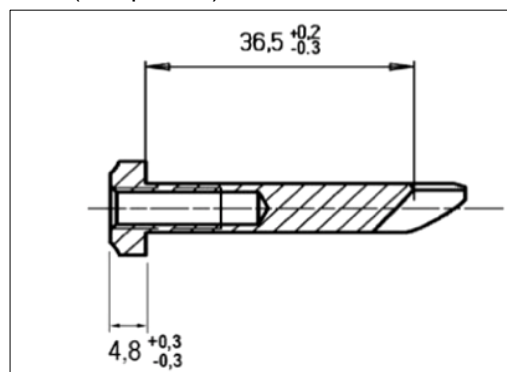
Fitting an original impulse nozzle (1) into the pressure hose in an allowed adjustment. The direction of the impulse nozzle inside the pressure hose is free.



Length of the exhaust valve : 36.50 mm + 0.20/ -0.30 mm (see picture)

Width of collar 4.80 mm ± 0.30 mm (see picture)

Any modification is not allowed.



Turn crankshaft until the piston closes the exhaust port totally it has to be able to put a special template (Rotax part no. 277 030) into the powervalue port.

This template must be at all times fully connected to the cylinder surface.

It should not be possible to put a filler gauge of 0.25 mm between.



Only the original gasket between cylinder and powervalue house is allowed. Modifications are not allowed.

#### 4.28 / Inlet system

The inlet manifold is marked with the name ROTAX and identification code 267 915 or 267 916



Some factory flash removal may be present at the conjunction of the inside contour and the carburettor stop mounting face. No additional grinding or machining is permitted.

#### Reed valve assy.

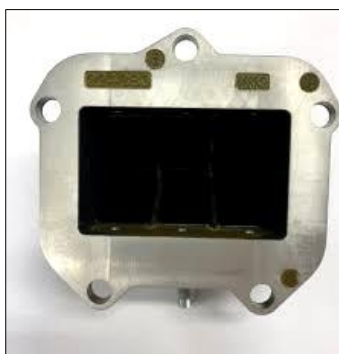
The reed valve assy. is equipped with 2 petal stops and 2 reeds, each having 3 petals. The thickness of the reeds is 0.60 mm +/- 0.10 mm.

Modification is not allowed.

Both reed valve assy. are legal to be used.

Part no. 224 380 (left picture)

Part no. 224 389 (right picture)



Reed valve stopper gap measurement  
MUST be between 18-22mm (inside measurement)

#### 4.29 / Conrod / Crankshaft

Stroke: 54.50 mm  $\pm$  0.1 mm Conrod has to show forged numbers "213", "365", "367" or "362" on shaft. (see pictures)



Shafts of conrods "213", "365" and "367" are not machined and are copper plated. Shaft of conrod "362" is not copper plated and is blank (grey/brown). Grinding or polishing of shaft of conrod is not permitted. Crankshaft has to be unprocessed and may not be damaged.

Ignition signal on crankshaft :

Fit the template (Rotax part no. 277 391) on the crankshaft. Align the hole in the template for the big end pin with the big end pin of the crankshaft. The two edges of the signal machining on the crankshaft must be in line (+/-0.5 mm) with the corresponding edges (MAX) of the template.



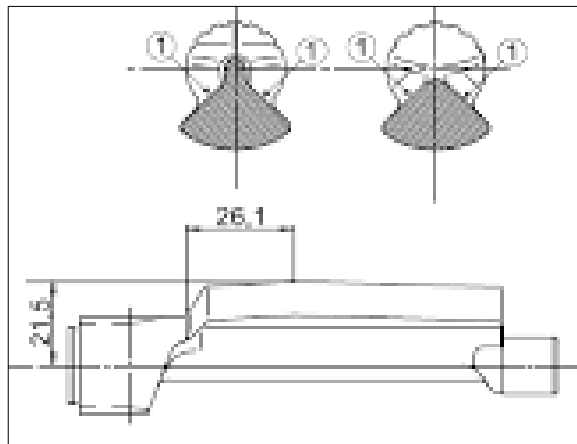
#### 4.30 / Balance shaft / drive

Balance shaft and balance gears must be installed.

Balance shaft must show casting code 6237948 or 6237949 on surface only is legal.

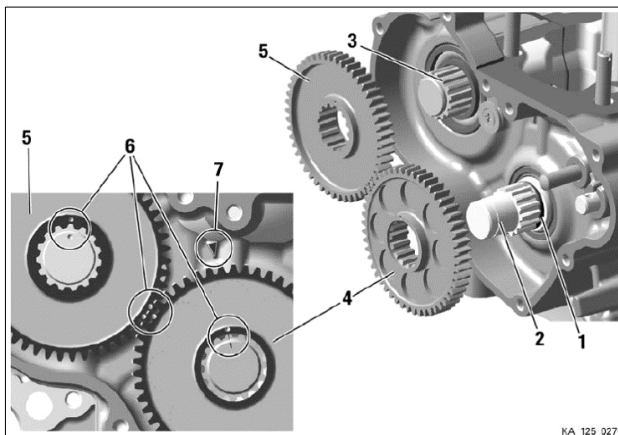
Surface (1) is not machined and must show cast surface. Measurement from centre of balance shaft to outer diameter of fly weight of balance shaft at defined length must not be lower than specified : (21.50 mm) see drawing.

The minimum weight of the dry balance shaft must not be lower than: 255 gram for balance shaft. (Rotax part no. 237 949)



#### Balance drive

Balance gears must be installed and must be aligned according to the instruction in the repair manual. Timing of the balance gears should be at any time correct as shown in the image below (see 6). Only the balance gears (Rotax part no. 234 435 (8.8 mm width)) are legal to be used.

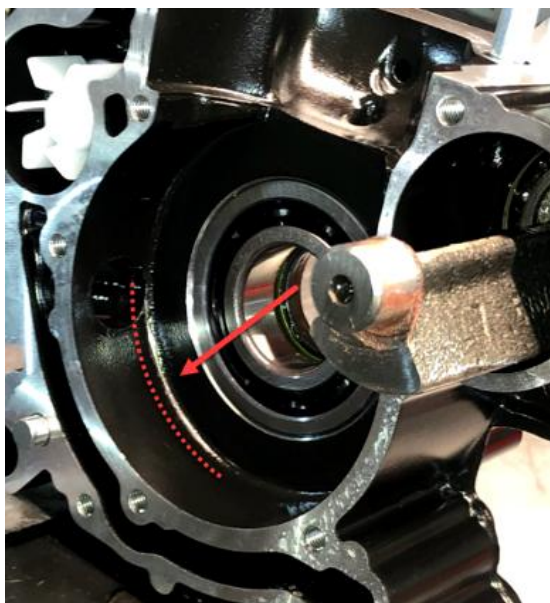


#### 4.31 / Crankcase

As supplied by the manufacturer. No grinding/polishing is permitted in the two main transfer passages as well as in the crank area.

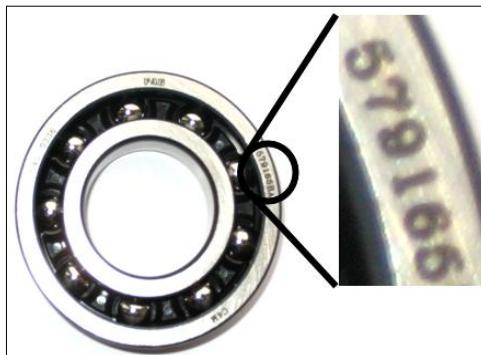
Machining maybe evident in the crankcases in the area identified in the picture.

Only black coated crankcases are legal to be used.



#### 4.32 / Crankshaft main bearings

Crankshaft main bearing 6206 from FAG is only allowed to use. The bearings must be marked with 579165BA or Z-579165.11.KL or Z-579165.21.KL (see picture)

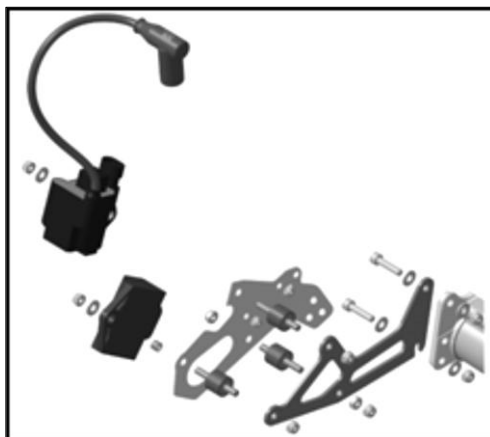


#### 4.33 / Ignition system

Dellorto ignition system is legal to be used only.

Ignition coil with separate electronic ECU box (Rotax part no. 666 815). The ECU box is still legal to be used if the sticker is removed.

Ignition coil and ECU box have to be fitted with all components according to the illustrations below. Two different mounting versions (left illustrations and right illustration) are legal.



At the mounting version as shown in the left illustration, the ground cable of the cable harness has to be connected to the lower rubber buffer of the support plate. Removing the black coating of the gearbox in specific areas, for mass connection between cable harness and engine, is a legal modification.

In case the mounting bracket is in conflict with a chassis component, the additions of 2 spacers, one per mounting hole, with a maximum thickness of 20 mm between the mounting bracket and the gearbox cover is allowed.

The visual appearance of the ignition coil must be identical with the pictures below:



Ignition coil must show two pins at the terminal. The ignition coil is labelled with two stickers : "BRP 666820" and "NIG 0105". The ignition coil is still legal to be used if one or both stickers have disappeared.

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

The organization reserves the right at all times to exchange ignitions coils and / or ECU boxes with ignition coils and or ECU boxes from the organization.

The ECU box can be checked with the ECU box tester (Rotax part no. 276 230)

Start the test by pressing the button . After approx. 3 seconds the type of ECU box that is actually tested will be indicated in the second line of the display. After approx. 30 seconds the result of the test will be indicated in the first line of the display.

The ECU box tester has to indicate following results:

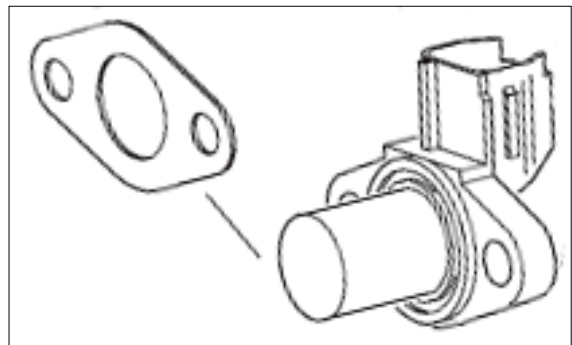
**125 MAX category**

1. 666815MAX

2. !! Test OK !!

The marking of the pick-up must show the following numbers in the first line : 029600-0710.

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



Additional gasket, Rotax part no. 431 500, gasket thickness = 0.8 mm are allowed to be fitted. Maximum two gasket (Rotax 431 500) are allowed to be fitted.

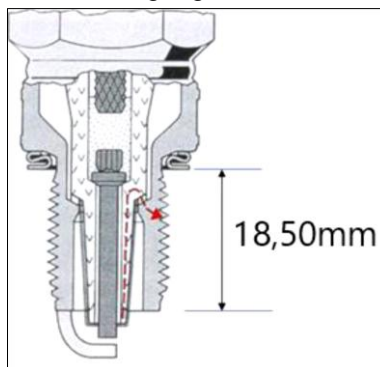
It is not necessary to install any additional gaskets with the exception of the rubber sealing ring on crankcases with the machined sealing surface for the pick-up sensor.

**4.34 / Spark plugs / Caps**

Following spark plugs are legal to be used :

NGK GR8DI / NGK GR9DI

Electrode distance maximum 1.00 mm. Filler gauge 1.00 mm must not fit in between the two electrodes.



Maximum spark plug shaft including ring : 18.50 mm.

Two versions of spark plug caps are legal to be used :

Version 1. Red, marked with "NGK"

Version 2. Red, marked with "ROTAX"



#### 4.35 / Battery

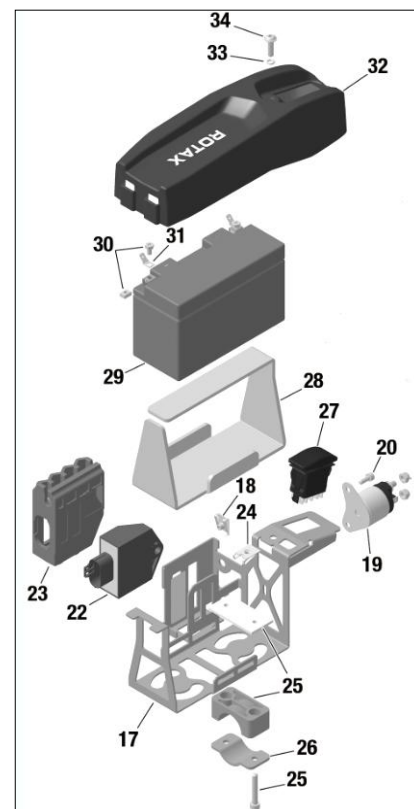
Original batteries with following specifications are legal to be used :

- YUASA YT7B-BS
  - Light weight battery is allowed to be use ONLY the driver doesn't have any leads on the kart.
- Specifications of the batteries should be readable at all times.

Battery must be fitted with the original battery clamp and battery cover (according to illustration) and must be fixed to the chassis with both clamps (4 screws). Battery clamp with or without cable support is legal for use. Battery clamp must be mounted on the left side of the seat.

It is an allowed option to mount rubber buffers (4 pieces) between 24 and 26.

It is an allowed option to mount rubber buffers (4 pieces) between 17 and 25.



## Wiring harness

Two versions of the wiring harness are allowed to be used.

The differences between the two versions can easily be identified by the key points listed.

Wiring Harness (666 835)

## ECU Connector



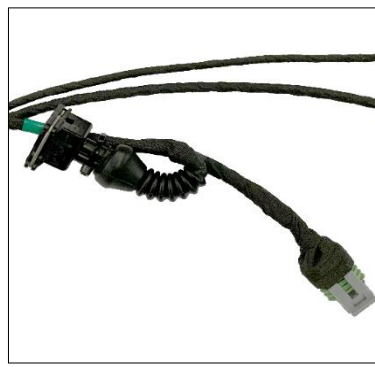
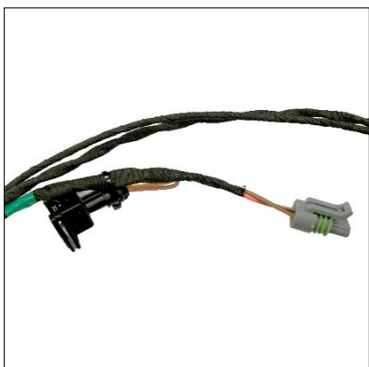
Wiring Harness (666 836)



## Connector



## Solenoid Connector



Only original plugs from the Rotax wiring harness are legal to be used.

#### 4.36 / Carburettor

DELLORTO Type VHSB 34. Housing has to show the cast wording "VHSB 34".  
Carburettor housing is stamped with "XS".

The complete inlet bore of the carburettor must show cast surface.  
Carburettor slide shows digits "45" in casting



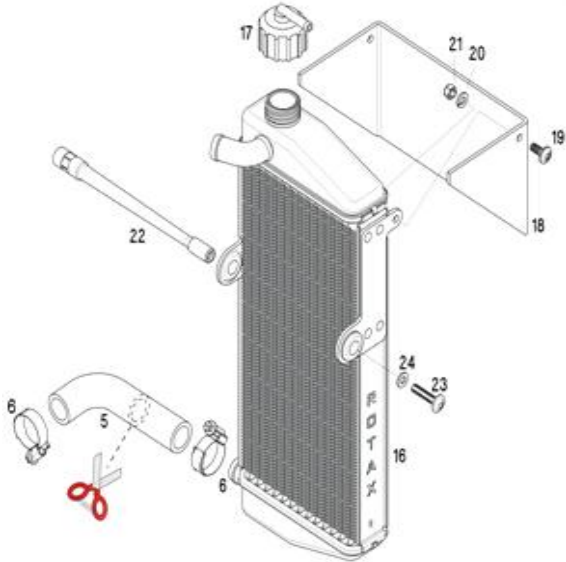
Following specifications:

- Carburettor venturi insert 12,5.
- Needle jet stamped with "DP267".
- Jet needle stamped with "K57".
- Start jet stamped with "60".
- Idle jet stamped with "60".
- Idle emulsion tube stamped with "45".
- Float lever according template (Rotax part no. 277 400.)
- Floats marked "4.0 gr" are legal to be used only.
- Needle valve assembly stamped "150". Needle of needle valve marked with diamond symbol "INC" only.
- All jets must be correctly seated and securely fitted at any time (tightened)!
- Settings of the carburettor adjustment screws (idle and idle air) are free.
- Settings of main jets is free.
- Optional carburettor plug (Rotax part no. 261 030) is legal to be used.
- Using the fuel sieve in the carburettor is not mandatory. (see picture)



Only original Dellorto parts are legal to be used.

**See checklist DELLORTO for further info.**

4.37 / Fuel pump	<p>MIKUNI fuel pump, type DF 44-210 is mandatory. Fuel pump must be mounted on the bottom side of the support bracket for the intake silencer.</p> 
4.38 / Fuel filter	<p>It is <b>mandatory</b> to mount a fuel filter, but if a fuel filter is mounted only the version showed in the picture below is allowed. Rotax part no. 274 161.</p>  <p>Except the fuel line, the fuel pump and the original fuel filter no additional parts are legal to be mounted between the fuel tank and carburettor.</p>
4.39 / Radiator	<p>Only the original radiator, with (ROTAX part no. 295 923) is legal to be used.</p> <p>Cooling area : Height: 290 mm Width: 138 mm Thickness of radiator: 34 mm To remove the original flap is an allowed modification.</p>  <p>The removal of the thermostat from the cylinder head cover is an allowed modification. Radiator must be mounted with all components. The removal of the radiator flap is an allowed option.</p> <p>To apply tape (neutral tape without advertising only) around the radiator is an allowed modification to control the air flow through the radiator.</p> <p>Tape may not be removed or loosen from the radiator during operation on the track. Any other non-original device to control the air flow through the radiator is prohibited. Using a plate to control the air flow is not an allowed option.</p> <p>The radiator has to be mounted on the right side of the engine.</p>

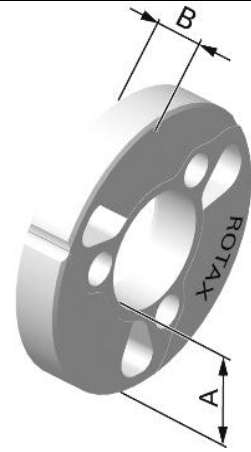
<p><b>4.40 / Engine coolant</b></p>	<p>Plain water without any additives has to be used.</p> <p>The venting of the radiator should end in a reservoir.</p>
<p><b>4.41 / Clutch</b></p>	<p>Engagement speed of centrifugal clutch at maximum 4,000 rpm (the kart without driver must start to move).</p> <p>Latest clutch version.</p> <div data-bbox="539 414 1295 1039" data-label="Image"> <p>An exploded view diagram of a Rotax clutch assembly. The components are numbered 1 through 16. Part 1 is a large gear. Part 2 is a small nut. Part 3 is a washer. Part 4 is a small pin. Part 5 is a small pin. Part 6 is a small pin. Part 7 is a large gear. Part 8 is a small pin. Part 9 is a small pin. Part 10 is a small pin. Part 11 is a small pin. Part 12 is a small pin. Part 13 is a small pin. Part 14 is a small pin. Part 15 is a chain. Part 16 is a small pin. The diagram shows the assembly sequence and the relative positions of the parts.</p> </div> <p>Only original Rotax clutch parts with Rotax logo are legal to be used. Clutch Rotax part no. 659 907</p> <p>Clutch must be mounted with bearing 15x19x17 (Rotax part no. 632 415) including O-ring (Rotax part no. 950 815)</p> <p>In case of using engine sprocket 11T the nylon plain bearing 15x17x17,6 (Rotax part no. 233 855), including O-ring (Rotax part nr. 950 815) has to be used. To avoid any type of grease within the clutch we recommend to use not any grease!</p> <p>Signs of any emulsion from the needle/plain bearing into the clutch drum may not exceed the picture below. Contact area between clutch and clutch drum has to be dry at any time. No lubrication allowed.</p> <div data-bbox="454 1525 927 1944" data-label="Image"> <p>A close-up photograph of a clean, dark-colored clutch drum. The central hub area is visible, showing a hexagonal shape with a central hole. The surface is smooth and free of any oil or emulsion.</p> </div> <div data-bbox="959 1525 1377 1944" data-label="Image"> <p>A close-up photograph of a clutch drum that has been contaminated with oil emulsion. The central hub area is visible, but the surrounding surface is covered in a thick, light-colored, foamy substance that has hardened in some areas. This is the maximum level of contamination allowed.</p> </div>

Clutch specifications at any time :

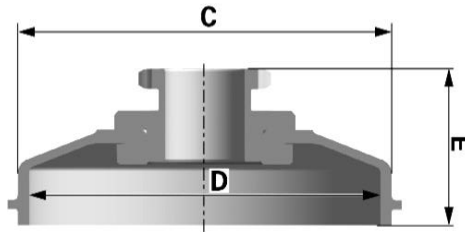
Thickness of clutch shoe (A) :  
minimum : 24.10 mm

Measurements must be done at the 3 open ends of the clutch,  
5 – 10 mm from the machined groove (all clutch shoes must be  
completely closed at measurement – no gap).

Height of clutch (B) :  
Minimum : 11.45 mm



Clutch drum : (Rotax part no. 659 930 and Rotax part no. 659 937) are legal to be used.



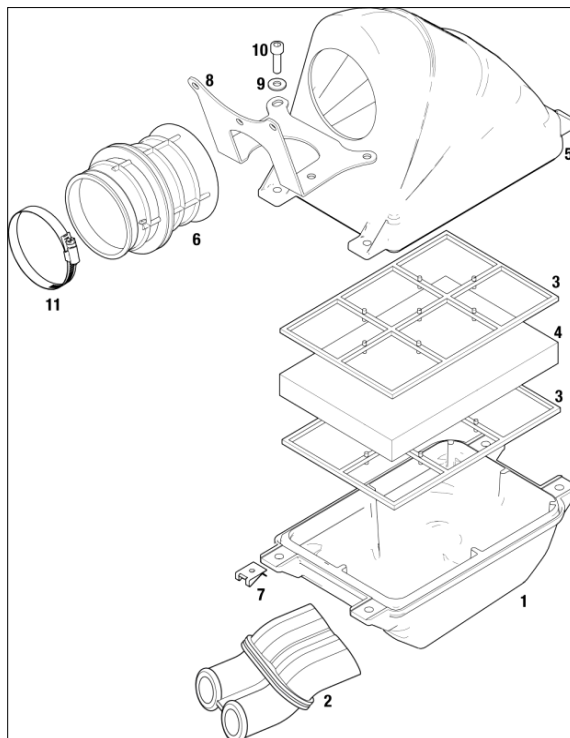
The outer diameter of the clutch drum (C) : minimum 89.50 mm. Diameter has to be measured with  
a sliding calliper just beside the radius from the shoulder. (Not at the open end of the clutch drum).

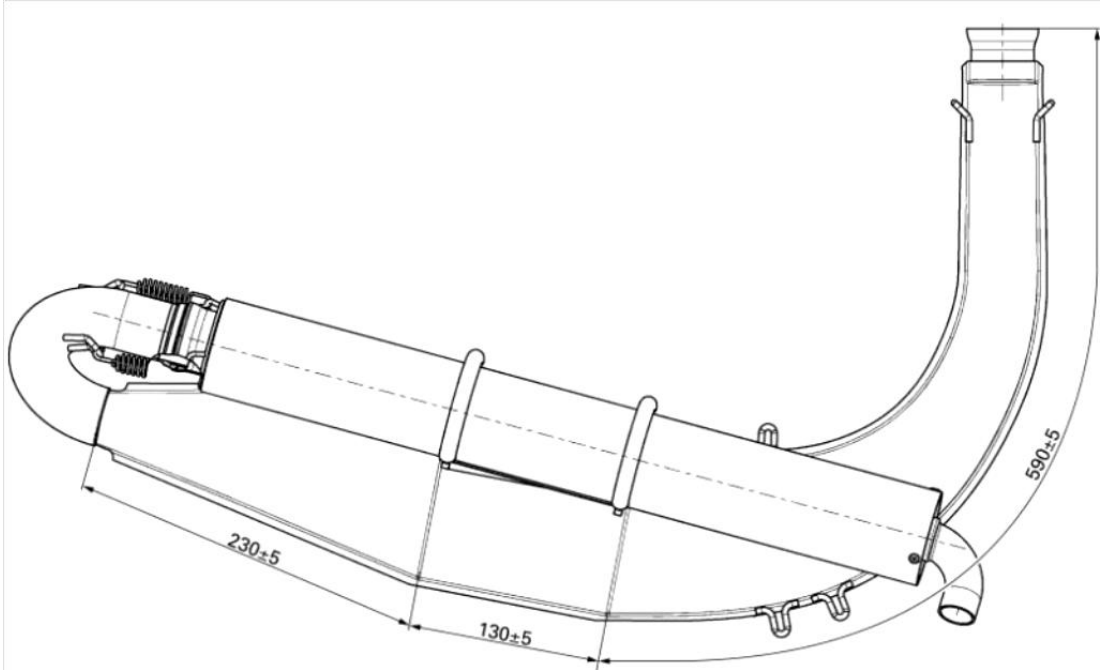
The inner diameter of the clutch drum (D) : maximum 84.90 mm. The inner diameter has to be  
measured with a sliding calliper. The measurement has to be done in the middle of the clutch  
drum (in the contact area between clutch and clutch drum).

Clutch drum height with sprocket (E) : minimum : 33.00 mm

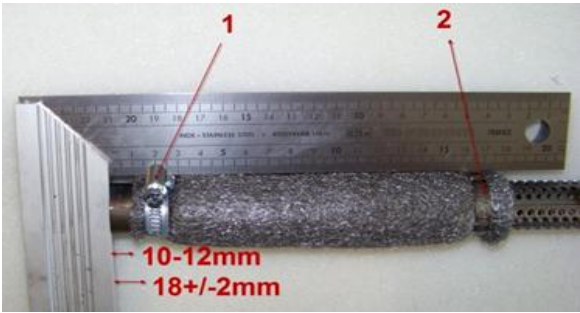
#### 4.42 / Airbox

Intake silencer with integrated, washable air filter has to be used with all parts. And has to be  
mounted, in the original shape, on the support bracket with two screws (in dry and wet conditions).



	<p>Intake silencer tube (pos2) and carburettor socket (pos 6) are marked with the wording "Rotax"</p> <p>Intake silencer case bottom is marked on the inside with the Rotax part no. 225 015.</p> <p>Intake silencer case, top is marked on the inside with the Rotax part no. 225 025</p> <p>The 'TWIN AIR' filter element is mandatory to use. (see picture) Using elements with the wording "Aprillia" is not allowed !</p> <p>Air filter (pos 4) must be installed as shown in the illustration between the two holders (pos 3) and must cover the complete area of the intake silencer case bottom (pos1).</p> <p>During wet condition, it is not allowed to attach anything to the air box to protect the air inlet from water spray.</p>
<p><b>4.43 / Exhaust system</b></p>	<p>Original exhaust system as supplied by Rotax is mandatory to be used. Exhaust system, Rotax EVO (Rotax part nr. 273 078) is mandatory.</p>  <p>Turned pipe with 180° elbow and silencer are two separate pieces. The silencer is fixed with two springs to the 180° elbow and two springs to the tuned pipe. To fit a 3rd original spring (crosswise at the ball joint connection between 180° elbow and silencer) is an allowed option. The silencer has to be mounted in a position where the direction of the 90° elbow outlet (direction of the hot exhausts gasses) does not harm any component of the chassis. The original design silencer end cap with 90° elbow is mandatory to be used.</p> <p>The original Rotax isolating mat (Rotax part nr. 297 981) is mandatory.</p> <p>Replacing the perforated cover and isolating mat are legal to be replaced by original Rotax parts.</p> <p>The isolating mat should cover the perforated cover at any time.</p> <p>Replacing the original rivets of the silencer end cap by 4mm metric screws and corresponding locking nuts is an allowed modification.</p>

Additional to the standard isolation mat a steel isolation mat (Rotax part nr. 297 983) of the square dimension of 165 (+10 mm) is legal (not mandatory) to be assembled underneath the standard isolating mat according to the illustration below :



Clamp (1) must be fitted at a distance of 18 (+/-2 mm), measured from the end of the tube.  
Clamp (2) must be fitted at the end of the perforated tube to the beginning of the steel isolating mat is a specification for assembly purpose only. The measurement 10-12 mm from the end of the perforated tube to the beginning of the steel isolating mat. Both clamps (1 and 2) are mandatory to be fitted and tightened.

The exhaust system should be mounted to the chassis by using the two original mounting brackets. Rubber buffers are mandatory to be placed between the system and chassis.

The use of maximum 4 pieces of original Rotax exhaust springs, to fix the exhaust system to the cylinder is allowed. Any other item is not allowed.

Welding a socket on the top of the exhaust system for measuring the exhaust gas temperature is an allowed modification. Distance : 50-80 mm from the ball joint.

It should be able that a steal ball with dimension of 27.50 mm can roll through the 180 degrees exhaust curve. The silencer has to fitted.

Welding at the exhaust system is only allowed in case of a repair. Modifications are not allowed.

The organization reserves the right at all times to change exhaust systems from the organization.

<b>Length of inlet cone</b>	590 mm +/- 5 mm
<b>Lenght of cyndrical part of exhaust pipe</b>	130 mm +/- 5 mm
<b>Length of cone</b>	230 mm +/- 5 mm (measured outside)
<b>Outside diameter 180° elbow pipe</b>	Maximum Ø 41 mm
<b>Diameter hole end of tube</b>	Maximum 22.50 mm
<b>Total length of exhaust pipe</b>	Minimum 500 mm +/- 1 mm

<b>4.44 / Exhaust restrictor</b>	<p>Only restrictor Rotax no. 273 190 including seal ring is legal to be used.</p> <p>The measurement (C) must be at least 15.50 mm</p> <div data-bbox="970 192 1110 577"> </div> <div data-bbox="1181 192 1458 577"> </div>
<b>4.45 / Gear</b>	<p>Engine sprocket : Dry condition 12T / Wet condition 11T with wording "Rotax"</p> <p>Rear sprocket type 219. Ratio is free.</p>







































