



#### **IDENTIFICATION SHEET**

This Identification Sheet reproduces descriptions, illustrations and dimensions of the SUPER ROK engine to be used in the SUPER ROK CUP CLASS in SOUTH AFRICA









ANY MATERIAL ADDING OR REMOVAL (machining, burnishing, etc.) FROM ORIGINAL COMPONENTS IS FORBIDDEN UNLESS STATED IN THE RULES

#### Attention: ALL THE ENGINE PARTS MUST BE ORIGINAL BY VORTEX ROK.



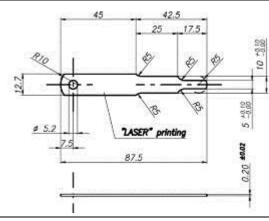
**CHORD READINGS** 

# **SUPER ROK 2015**



ORIGINAL BORE	54.07 mm
MAX ALLOWED BORE	54.30 mm
STROKE	54±0.2 mm
ORIGINAL DISPLACEMENT	123.99 cc
CONROD HOLES INTERAXLE	102±0.2 mm

#### CYLINDER SPECIFACTIONS



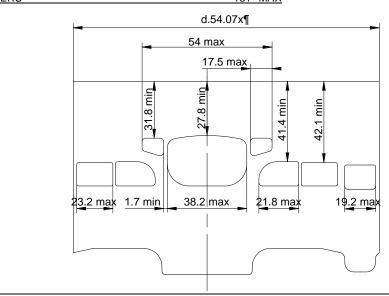
The exhaust angular reading must be measured with a 0,20 mm thick and 5 mm wide wedge. (see drawing beside).

 EXHAUST
 194° MAX

 BOOSTER
 179° MAX

 MAIN TRANSFERS
 135° MAX

 SECONDARY TRANSFERS
 131° MAX

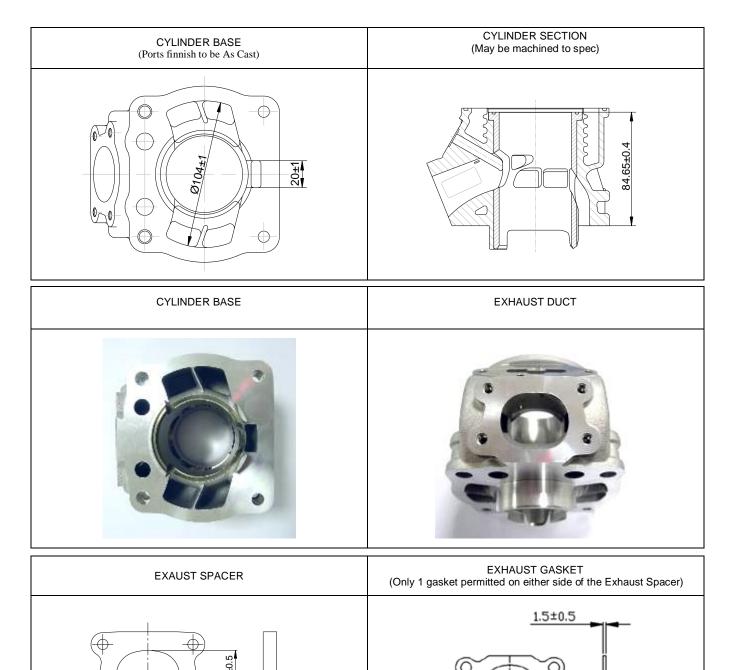


**DESCRIPTION: CYLINDER WITH CAST IRON LINER** 

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37.5 ±0.5

8 ±0.2





CYLINDERHEAD AND COMBUSTION CHAMBER UNTIL 2008

COMBUSTION CHAMBER VOLUME: MINIMUM MEASURED AT THE TOP EDGE OF THE CIK/FIA INSERT 9.5 cc MIN

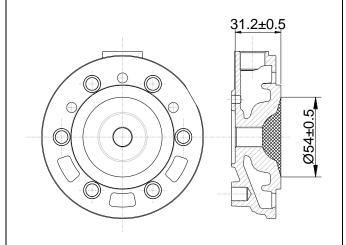
<u>SQUISH THICKNESS – SQUISH - EPESSEUR DE SQUISH :</u> **1.10** mm MIN

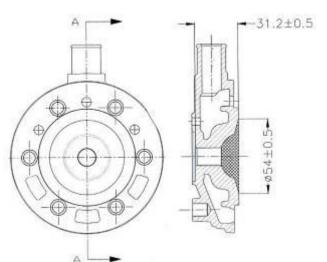
The squish face may be machined provided the specified dimensions are respected, the head volume is below the specification and the angle is the same as the head gauge template

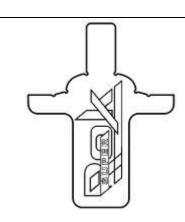
CYLINDERHEAD AND COMBUSTION CHAMBER 2009 MODEL

COMBUSTION CHAMBER VOLUME: MINIMUM MEASURED AT THE TOP EDGE OF THE CIK/FIA INSERT 9.5 cc MIN

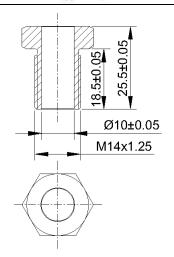
The squish face may be machined provided the specified dimensions are respected, the head volume is below the specification and the angle is the same as the head gauge template







TEMPLATE FOR CHECKING THE COMBUSTION CHAMBER PROFILE



SPARK PLUG INSERT FOR COMBUSTION CHAMBER VOLUME CHECK

Attention: ALL THE ENGINE PARTS MUST BE ORIGINAL BY VORTEX ROK.





#### PROCEDURE USED TO MEASURE THE VOLUME OF THE COMBUSTION CHAMBER

- Disassemble the engine from the chassis
- Wait until the temperature is ambient temperature
- Disassemble the cylinder head in order to verify the projection of the sparking plug inside the combustion chamber.
- Disassemble the sparking plug (verify the height of 18,5mm)
- Screw the "INSERT" at the place of the sparking plug (The insert on the cylinder head has not to
  overpass the superior part of the combustion chamber. It has to be fixed on the cylinder head in the
  same way the sparking plug of 18,5mm was fixed)
- Make it air tight and water tight with grease the upper part of the piston and the cylinder device
- Raise up the piston and stop the crankshaft
- Dry up the excess of grease
- · Be sure that the engine is on a flat surface
- Move up the cylinder head and tighten it to clamping
- Set the piston to TDC
- Fill up the combustion chamber (with a mixture composed by 50% of the oil used to make the mixture and the 50% of the fuel) using a graduated burette (mechanical or electrical) until the upper border of the insert.
- The measured volume must show a value which is complying with the minimum combustion chamber volume set on the engine identification sheet concerned.

#### PROCEDURE USED TO MEASURE the Port Durations

- a. The measuring will be done with a gauge as per the drawing under "cylinder specifications" in this document
- b. When placing the gauge into the port the gauge is not to be bent and must be held as per photograph below

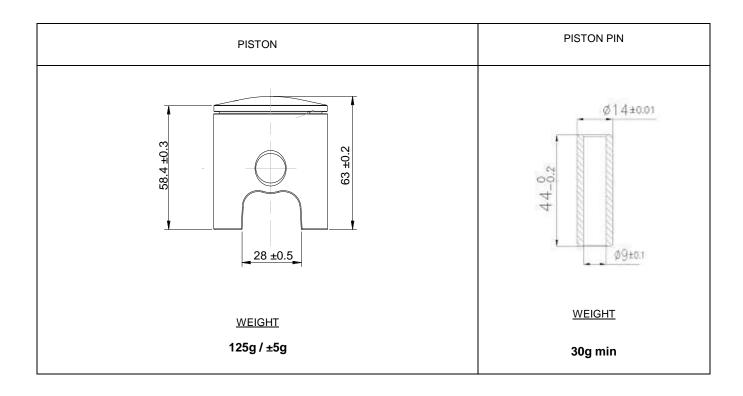


c. It must be inserted at 45° degrees on the wall, you should be able to move it forward and backward during this operation, it must not give the sensation that it is somehow blocked. Once the piston has bottomed out no pressure must be applied to the crankshaft to obtain the forward and backward movement of the gauge. The feeling should be the same as when "setting a tappet on a four stroke engine

Attention: ALL THE ENGINE PARTS MUST BE ORIGINAL BY VORTEX ROK.

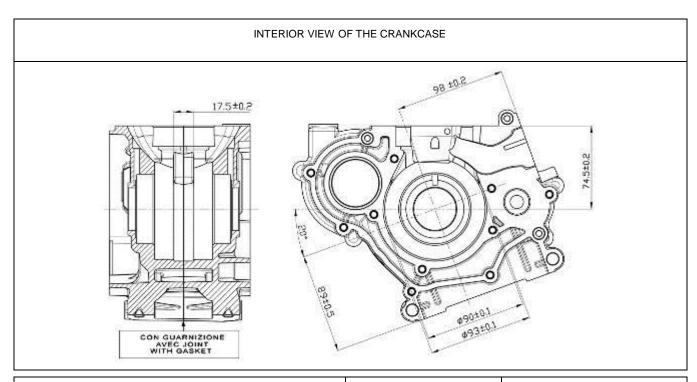


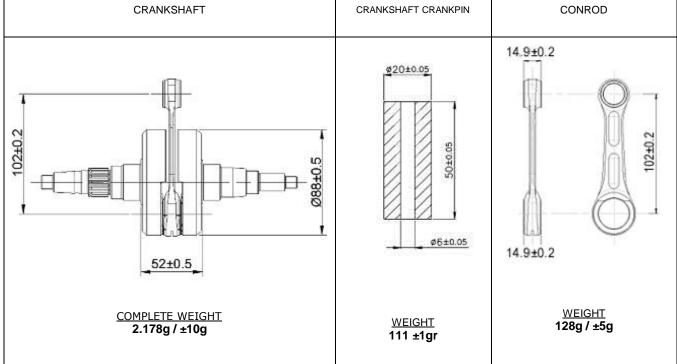








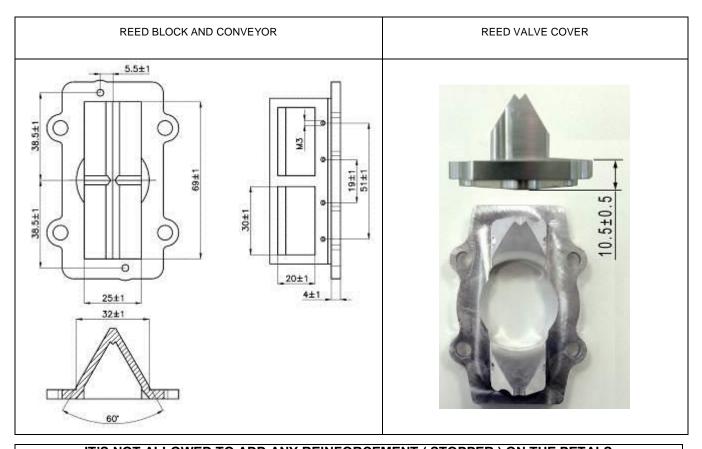




#### Attention: ALL THE ENGINE PARTS MUST BE ORIGINAL BY VORTEX ROK.







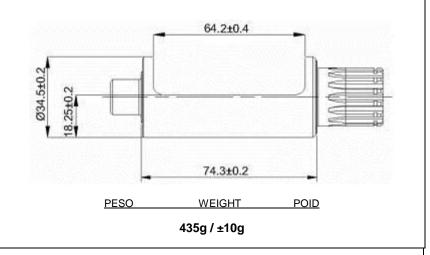
IT'S NOT ALLOWED TO ADD ANY REINFORCEMENT (STOPPER) ON THE PETALS Only the std 0.3mm ±0.2mm carbon reed supplied by vortex may be used.

INTAKE MANIFOLD BALANCER SHAFT

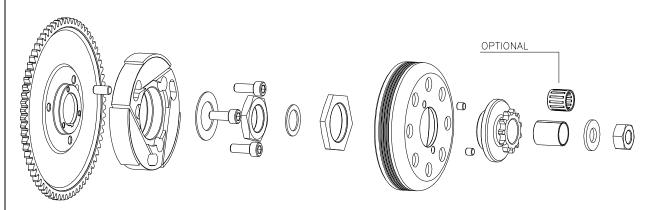








#### CLUTCH DESCRIPTION AND PARTS SKETCH



TOTAL PARTS NUMBER: 17

WEIGHT OF THE COMPLETE CLUTCH WITH STARTING GEAR 910 gr +/- 25gr

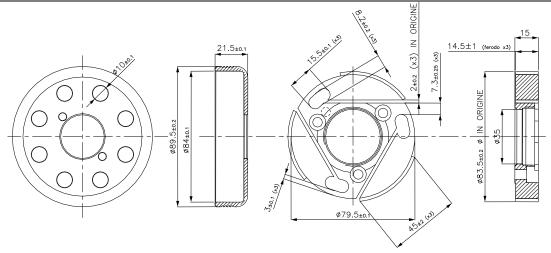
ENGAGEMENT SPEED (MAXIMUM) CAN BE VERIFIED AT ANY TIME DURING THE EVENT AND MAYNOT BE MORE THAN  $4000\ \text{RPM}$ 

#### CLUTCH HOUSING / CLUTCH ROTOR

#### Attention: ALL THE ENGINE PARTS MUST BE ORIGINAL BY VORTEX ROK.







CLUTCH MUST HAVE VORTEX OR PERFORMANCE MASTERS MARKINGS

WEIGHT OF CLUTCH ROTOR 345 gr +/- 15gr

WEIGHT OF CLUTCH HOUSING 184 gr +/- 10gr

TOTAL WEIGHT OF CLUTCH ROTOR AND HOUSING 519 gr +/- 15gr

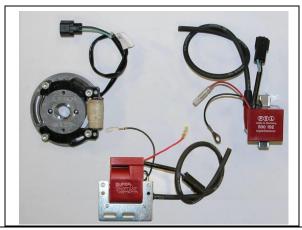




#### PVL IGNITION 500843/500980/500211/500192





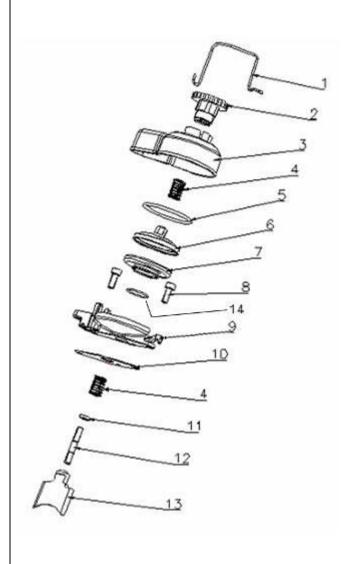


- 1. USE OF COILS MARKED SUPER ROK WILL BE ALLOWED, AS MENTIONED IN THE ABOVE PICTURES.
- 2. Both the 2 wire (192) and the 3 wire (211) ignition systems are allowed,
- 3. The Stator may be rewired
- 4. AS PER ART.2, PAR. 16.7 OF THE CIK/FIA TECHNICAL REGULATIONS, ON DECISION OF THE STEWARDS, IT WILL BE AUTHORISED TO INTERCHANGE ENTRANTS' IGNITION SYSTEMS FOR THE SYSTEMS SUPPLIED BY THE ORGANISERS (SAME HOMOLOGATED MODELS)
- 5. WIRING HARNESSES ARE FREE
- 6. THE BATTERY USED TO START THE ENGINE CAN BE FIXED ON THE SEAT OR ON THE CHASSIS.
- 7. THE SIZE OF BATTERY IS FREE





THE ONLY PNEUMATIC POWER VALVE PERMITTED IS MOD 2009 WITH DOUBLE COMPRESSION SPRING AS BELOW



- FERMO VALVOLA 1- SPRING CUP ARRET VALVE
- VITE REGISTRO
  2- ADJUSTMENT SCREW
  VIS REGISTRE
- COPERCHIO VALVOLA
  3- VALVE COVER
- VALVE COVER CHAPE VALVE
- DOPPIA MOLLA COMPRESSIONE
  DOUBLE COMPRESSION SPRING
  DOUBLE RESSORT COMPRESSION
- MOLLA TENUTA 5- HOSE SPRING RESSORT TENUE
  - PISTONCINO VALVOLA SCARICO
- 6- EXHAUST VALVE PISTON PISTON VALVE ECHAP.
  - POLMONE BELLOWS
  - POUMON VITE
- 8- SCREW VIS

7-

- 9- ALLOGGIO VALVOLA 9- VALVE HOUSING SIEGE VALVE
- GUARNIZIONE
- 10- GASKET JOINT
- O-RING 11- O-RING
  - O-RING PRIGIONIERO
- 12- STUD GOUJON
  - VALVOLA SCARICO
- 13- EXHAUST VALVE VALVE DE PUISSANCE
  - MOLLA TENUTA
- 14 HOSE SPRING RESSORT TENUE





#### CARBURETTOR AND COMPONENTS **DELL'ORTO VHSH 30** 1. GUILLOTINE THROTTLE VALVE 2. AIGUILLE MIXTURE NEEDLE 3. PULVERISATEUR SPARY NOZZLE 4. EMULSEUR MINIMUM **IDLE DIFFUSER** S. GICLEUR MINIMUM **IDLE JET** 6. GICLEUR MAXIMUM HIGH SPEED IFT 7. GICLEUR DEMARRAGE STARTER JET 8. POINTEAU NEEDLE VALVE 9. FLOTTEUR FLOATER 10. MANCHON CAP 11. VIS DE TENSION WIRE SCREW 12. COUVERCLE DU CORPS BODY COVER 13. JOINT COUVERCLE DE CHAMBRE COVER GASKET 14. RESSORT DE RAPPEL GUILLOTINE THROTTLE VALVE RETURN SPRING 15. ASSIETTE GUIDE RESSORT SPRING GUIDE PLATE 16. NEPPLO VALVE GAZ MIXTURE VALVE NIPPLE 17. RONDELLE WASHER. 18. ARRET DE L'AIGUILLE MIXTURE NEEDLE STOP 19. VIS DU DISPOSITIF DE DEMARRAGE STARTER FIXING SCREW 20. DISPOSITIF DE DEMARRAGE CHOKE 21. JOINT DISPOSITIF DEMARRAGE STARTER GASKET 22. KIT VIS DE REGLAGE DE L'AIR KIT AIR ADJUSTMENT SCREW 23. KIT VIS DE REGLAGE GUILLOTINE KIT MIXTURE VALVE ADJUSTMENT 24. BOUCHON FILTRE A ESSENCE FUEL FILTER PLUG 25. JOINT DU POINTEAU NEEDLE VALVE GASKET 26. ASSIETTE PLATE 27, JOINT DE LA CLIVE FLOAT VALVE GASKET 28. CUVE FLOAT CHAMBER 29. VIS FIXAGE DE LA CUVE FLOAT CHAMBER SCREW 30. AXE 31. JOINT DU BOUCHON DE CUVE FLOAT CHAMBER PLUG GASKET 32. BOUCHON DE LA CUVE FLOAT CHAMBER PLUG

THE CARBURETTOR ADJUSTMENTS ARE ALLOWED ONLY EMPLOYING ORIGINAL DELL'ORTO PARTS

33.BALANCIER

**FLOAT LEVER** 

#### Attention: ALL THE ENGINE PARTS MUST BE ORIGINAL BY VORTEX ROK.





#### ONLY THE FOLLOWING JETS/INTERNAL PARTS ARE PERMITTED

Throttle Valve Sli	de =	40	
Mixture Needle S	Super Rok =	K33	
Spray Nozzle / En	nulsion Tube =	DP 268	
Idle Diffuser	=	B45	
Idle Jet	=	60	
High Speed Jet / I	Main Jet =	Free	
Needle Valve	=	250	
Float	=	4.0g	

ALL OTHER MEASURMENTS MUST CONFORM AS BELOW

#### Annex JNR&SUPER ROK /5/ 2013

#### **ROK CARBURETOR SPECIFICATIONS FOR JUNIOR AND SUPER ROK:**

**Note:** Please note that there have been **NO** changes to the carburetor specifications. This document is used to clarify the Standard homologated carburetor and jets.

No machining or drilling of jets is allowed on the carburetor and its internal parts. The carburetor must remain standard as supplied by the Vortex Rok Importer.

Specified Carburetor Specifications for all South African 125cc Rok Classes for 2013 until further notice.

#### **DELL'ORT VHSH 30**

	O. C. T. 1011 OC		
1.	Throttle Valve Slide	=	40
2.	Mixture Needle Junior Rok	=	K28
2.	Mixture Needle Super Rok	=	K33
3.	Emulsion Tube (Junior Rok)	=	DP 264
3.	Emulsion Tube (Super Rok)	=	DP 268
4.	Idle Diffuser	=	B45
5.	Idle Jet	=	60
6.	High Speed Jet / Main Jet	=	Free
8.	Needle Valve	=	250
9.	Float	=	4.0g
A.	Slide Insert	=	See section A
B.	Slide Insert Rubber Gasket	=	See Section B
C.	Brass Insert	=	See Section C
D.	Fuel Filters	=	See Section D



#### Measuring of components:

Some components will be measured with aid of a vernier.

#### Attention: ALL THE ENGINE PARTS MUST BE ORIGINAL BY VORTEX ROK.





#### Measurement of Diameters applicable to the entire document:

Diameters of jets / holes will be measured using GO / NO GO gauges.

Special Tools / Drill bits will be used to measure some holes and used as GO / NO GO gauges.

These gauges can be verified with use of a 0-25mm micrometer.

"GO" Gauge will be required to slide into the required hole.

"NO GO" Gauges must not be able to slide into the required hole.

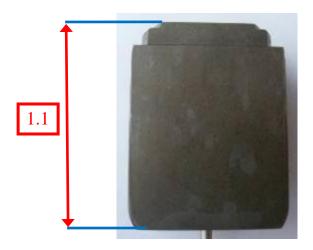
Should a part be found to be out of spec, it will be impounded for further measurement if required

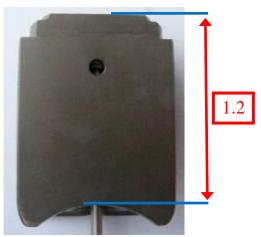
#### 1. Throttle Valve Slide (40)

1.1 Length of Throttle Valve Slide **Spec:** 42.7.00mm ± 0.15mm

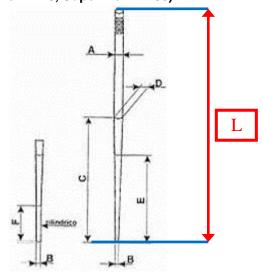
1.2 Length of Cut Away to the top of the Throttle Valve Slide

Length of Throttle Valve Slide **Spec:** 38.2mm ± 0.15mm





#### 2. Mixture Needle Rok (Junior Rok=K28, Super Rok = K33)



2.1 Table of Needle Specifications as per Supplier Chart (Dellorto)
(Also as per Master Sample K28 and K33 needle from the Vortex Rok Importer)

#### Attention: ALL THE ENGINE PARTS MUST BE ORIGINAL BY VORTEX ROK.





Trung	Value X	Characteristic expressed in millimeters						
Type		ØA	ØВ	С	ØD	E	F	L
K28	28	2.5	1.8	41	-	-	-	73.5 ±0.2
K33	33	2.5	1.8	44	-	-	-	70.5 ±0.2

2.2 The Technical Consultant may also compare the needle to a master sample supplied by the Vortex Rok Importer.

**Spec:** Tolerances on the above tabulated diameters is  $\pm 0.05$ mm

- 2.2 There must be 1 mixture needle stop (Circlip, #18 on page 2) fitted to the needle.
- 2.3 There must be only 1 Washer (17) fitted either under or on top of the circlip). The Washer must be in place. Only 1 washer is permitted.
- 2.4 Thickness of Washer **Spec:** 0.5mm ± 0.10mm

#### 3. Spray Nozzle / Emulsion Tube (Junior Rok: DP 264, Super Rok: DP 268)

3.1 Length of Emulsion Tube

3.3

**Spec:** 51.00mm ± 0.15mm

3.2 Internal Diameter from side 3.2 (Junior Rok DP 264)

GO Spec: 2.64mm (GO) NO GO Spec: 2.67mm (NO GO)

3.2 Internal Diameter from side 3.2 (Super Rok, DP 268)

GO Spec: 2.68mm (GO) NO GO Spec: 2.71mm (NO GO) Internal Diameter from side 3.3

GO Spec: 3.1mm (The 3.1mm drill bit will go in 41.3mm ± 0.5mm from the bottom face of

the emulsion tube)

Reference: 3.2 mm (The 3.2mm drill bit will go in ± 16.5mm from the bottom face of the

emulsion tube. It should not go all the way to the bottom of the hole)

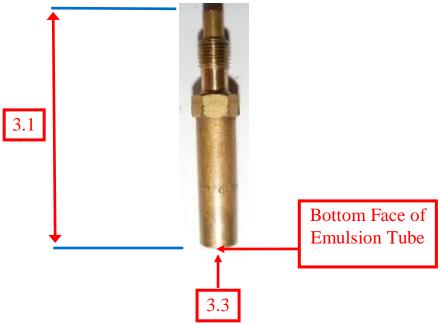
NO GO Spec: 3.3mm (NO GO) (The 3.3mm drill bit must not enter into the hole below the

thread in the emulsion tube)









#### 4. Idle Diffuser (B45)

4.1 Length of Idle Diffuser

**Spec:** 18.60mm ± 0.15mm

4.2 Internal Diameter of Smallest hole inside the Idle Diffuser

GO Spec: 0.45 mm (GO) NO GO Spec: 0.5 mm (NO GO)

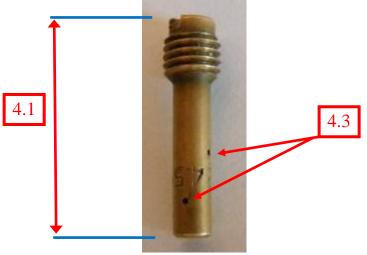
4.3 Internal Diameter for Side Holes (Total number of holes = 4)

**GO Spec:** 0.50 mm **(GO) NO GO Spec:** 0.55 mm **(NO GO)** 









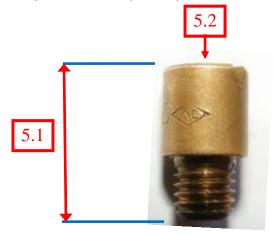
#### 5. Idle Jet (60)

5.1 Length of Idle Jet

**Spec:** 12.10mm ± 0.15mm

5.2 Internal Diameter of Smallest hole inside the Idle Jet

**GO Spec:** 0.60 mm (**GO**) **NO GO Spec:** 0.65 mm (**NO GO**)







#### 6. High Speed Jet / Main Jet

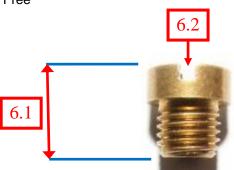
The anti surge plate fitted between the emulsion tube and the main may be removed.

6.1 Length of High Speed Jet / Main Jet

**Spec:**  $8.2 \text{mm} \pm 0.15 \text{mm}$ 

6.2 Internal diameter of smallest hole inside the Idle Jet

Spec: Free



#### 8. Needle Valve

7.1 Length of Needle Valve

**Spec:** 17.50mm ± 0.15mm

7.2 Internal Diameter of Smallest hole inside the Needle Valve

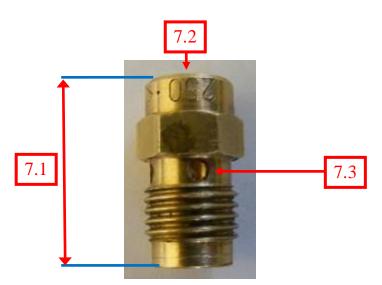
**GO Spec:** 2.45 mm **(GO)** 

GO Spec: 2.50 mm (GO) (Very Tight fit)

NO GO Spec: 2.60 mm (NO GO)

7.3 Internal Diameter for Side Holes (Total number of holes = 4)

GO Spec: 2.0 mm (GO) NO GO Spec: 2.1 mm (NO GO)







9. Float

9.1 Weight of Float

**Spec:** 4.0grams (As on the bottom of the float)



#### A) Slide Insert

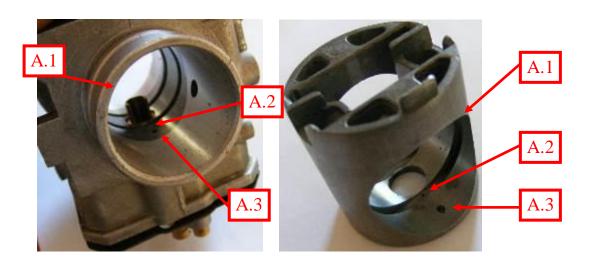
A.1 Diameter of Throat of the Insert and the Carburetor

**Spec:**  $30.0 \text{mm} \pm 0.1 \text{mm}$ 

A.2 Diameter of hole A2 as illustrated

GO Spec: 0.50 mm (GO)
GO Spec: 0.55 mm (GO)
NO GO Spec: 0.6 mm (NO GO)

A.3 Diameter of hole A2 as illustrated GO Spec: 0.62 mm (GO) NO GO Spec: 0.7 mm (NO GO)



#### B) Slide Insert Rubber Gasket

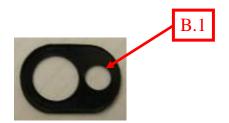
The gasket may not be cut to improve the fitment. The gasket must remain standard as supplied.

B.1 Diameter of small hole cut out

Spec: 5.7mm ± 0.2mm

B.2 Thickness of Gasket

Spec: 0.4mm ± 0.1mm



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#### C) Brass Insert

C.2

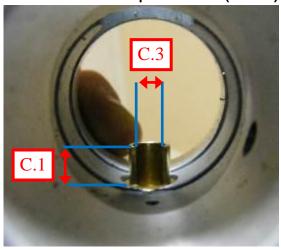
C.1 Height of Stick Out

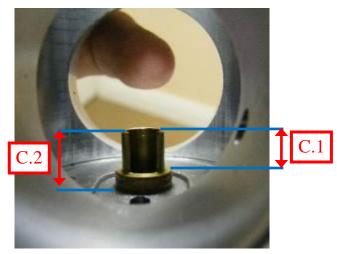
**Spec:**  $7.0 \pm 0.2$ mm Height of Stick Out

**Spec:** 9.6mm ± 0.2mm

C.3 Width of Opening

**GO Spec:** 4.5 mm (**GO**) **NO GO Spec:** 5.0 mm (**NO GO**)





#### D) Filters

- D.1 A fuel filter may be used on the side of the carburetor.
- D.2 A main jet filter may also be used around the main jet.







D.2

Please Note: This is a working document and will be updated as and when required.

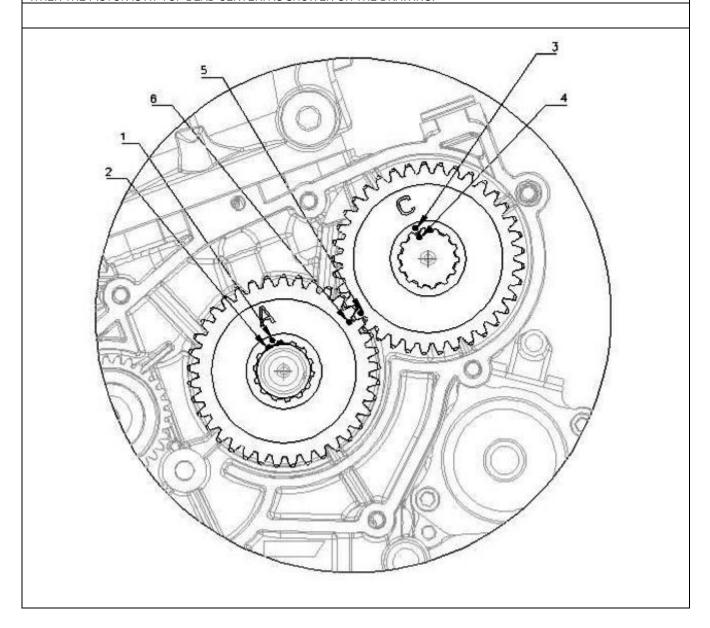




#### BALANCER SHAFT PHASING.

IN THE DRAWING BELOW, WE SHOW YOU IN DETAILS THE ORIGINAL POSITION (TO BE RESPECTED) OF THE BALANCER SHAFT PHASING IN THE ROK ENGINE.

AS THE TIMING SHOULD BE REGULAR THE NOTCHS OF THE GEARS AND THE BALANCER SHAFT SHOULD CORRESPOND WHEN THE PISTON IS AT TOP DEAD CENTER. AS SHOWEN ON THE DRAWING.



#### Attention: ALL THE ENGINE PARTS MUST BE ORIGINAL BY VORTEX ROK.







0.5mm maximum may be removed to aid the addition of a 2<sup>nd</sup> bell washer

Intermediate Gear

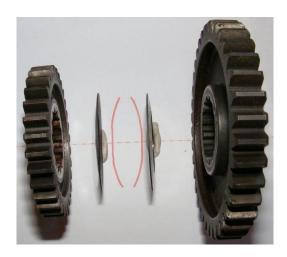


Bell/Thrust Washer that may be added

1. ONLY the Intermediate gear may be machined by removing a maximum 0.5mm on the inner matting surface to facilitate the fitting of a second bell washer to take up play/lash as per photo below







- ONLY the Intermediate gear may be machined by removing a maximum 0.5mm on the inner matting surface to facilitate the fitting of a second bell washer to take up play/lash
- 2. The following gears & parts may be removed to facilitate an EXTERNAL WATER PUMP
  - a. Water Pump Gear
  - b. Water Pump Shaft & Impeller
  - c. Water Pump Seals
  - d. Water Thermostat
  - e. A Welsh plug may be fitted were water pum seals have been removed
- 3. The EAR on the gear cover may be removed/cut off to enable ease to remove stater motor

Cooling System









The ear on the gear cover may be removed for ease of replacing starter motor

EXHAUST MUFFLER, SILENCER AND COMPONENTS





EXTERNAL CHORD READING <u>A=825+/-7mm</u>

INTERNAL CHORD READING B=655+/-7mm

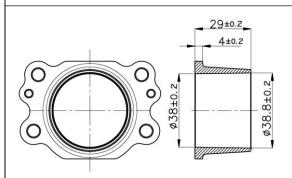
NUMBEROF HOLES  $C = 56 \quad \emptyset \ 4 \pm 0.5$ 

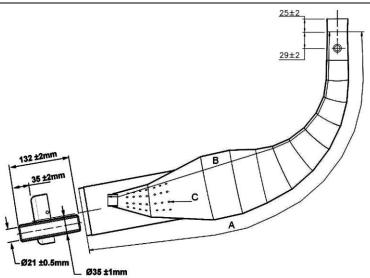
WEIGHT **2.158 g. ± 5%** 

#### **IMPORTANT**

DURING EXAMINATION, ON THE EXHAUST IT MUST BE INDICATED THE IDENTIFICATION LOGO SUPER ROK, IMPRINTED DIRECTLY BY THE MANUFACTURER.

#### **EXHAUST MANIFOLD**











#### AIR BOX

The only air box permitted is as per below

# FICHE D'HOMOLOGATION HOMOLOGATION FORM





### COMMISSIONINTERNATIONALE DE KARTING - FIA



#### SILENCIEUX D'ASPIRATION / INTAKE SILENCER

Constructeur Marque	Manufacturer Make	Righetti Ridolfi Righetti Ridolfi	
Modèle	M odel	NOX D.30	
Catégories	Categories	KZ & SKF	
Durée de l'homologation	Validity of the homologation	9 ans / 9 years	
Nombre de nages	Number of pages	3	

La présente Fiche d'Homologation reproduit descriptions, illustrations et dimensions du silendeux d'aspiration au moment de l'homologation CIK-FIA et du test d'homologation. Le Constructeur a la possibilité de les modifier seulement dans les limites fixées par le règlement CIK-FIA en vigueur. This Homologation Form reproduces descriptions, illustrations and dimensions of the intake silencer at the moment of the CIK-FIA homologation and of the homologation test. The Manufacturer may modify them, but only within the limits fixed by the CIK-FIA regulations in force.





PHOTO DE L'AVANT PHOTO OF THE FRONT PHOTO DE CÔTÉ PHOTO OF THE SIDE

Signature et tampon de l'ASN Signature and stamp of the ASN Signature et tampon de la CIK-FIA Signature and stamp of the CIK-FIA



Jungini;



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