SUPER ROK 2014

Specification Sheet No 158671/A
Dated 01/01/2014

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

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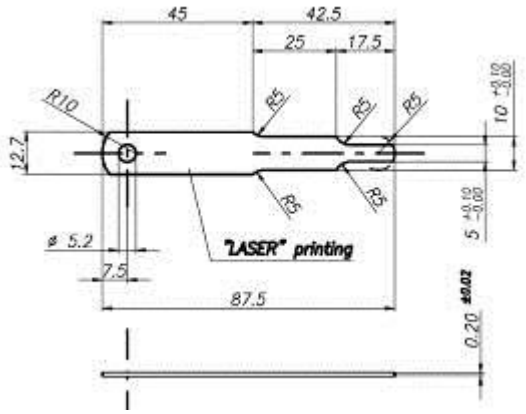
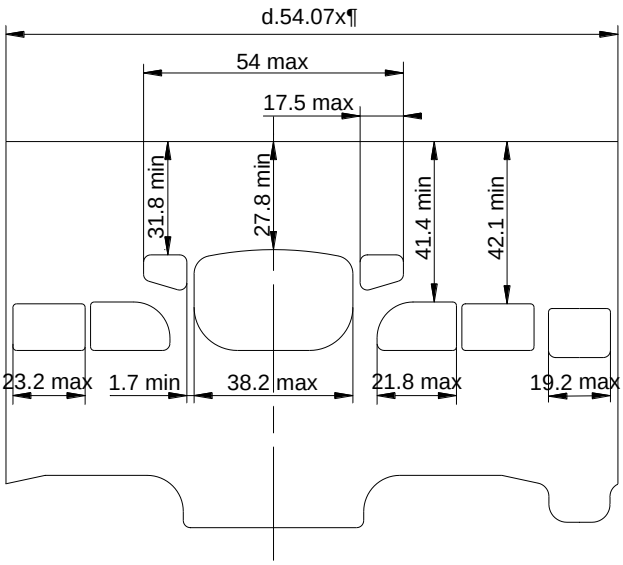
ORIGINAL BORE	54.07	mm
MAX ALLOWED BORE	54.30	mm
STROKE	54±0.2	mm
ORIGINAL DISPLACEMENT	123.99	cc
CONROD HOLES INTERAXLE	102±0.2	mm

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



CHORD READINGS

DESCRIPTION : CYLINDER WITH CAST IRON LINER

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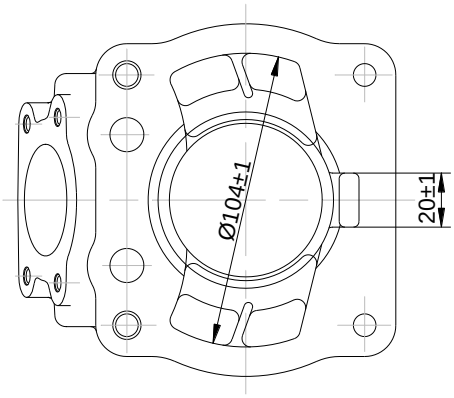
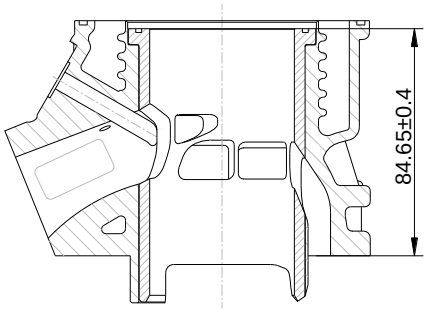
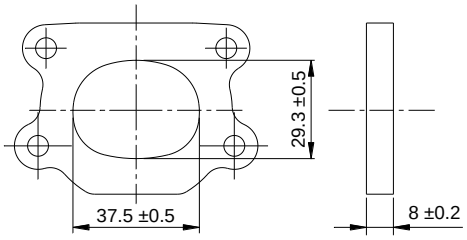
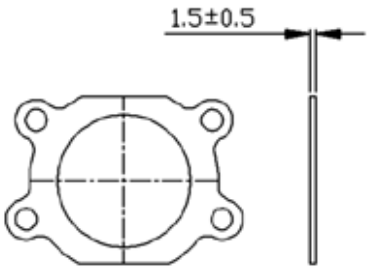
CYLINDER BASE (Ports finnish to be As Cast)	CYLINDER SECTION (May be machined to spec)
	

CYLINDER BASE	EXHAUST DUCT
	

EXAUST SPACER	EXHAUST GASKET (Only 1 gasket permitted on either side of the Exhaust Spacer)
	

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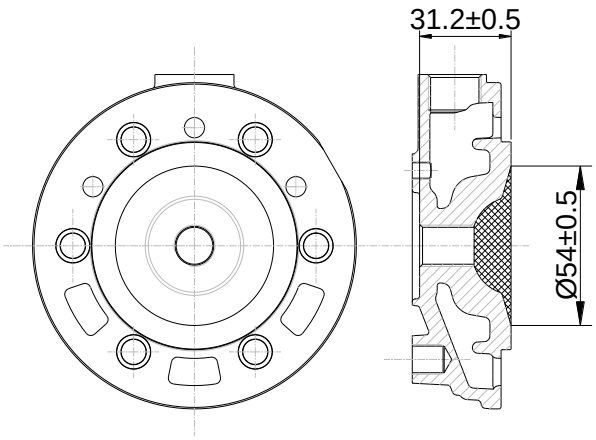
CYLINDERHEAD AND COMBUSTION CHAMBER UNTIL 2008

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

SQUISH THICKNESS – SQUISH - EPESSEUR DE SQUISH : **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

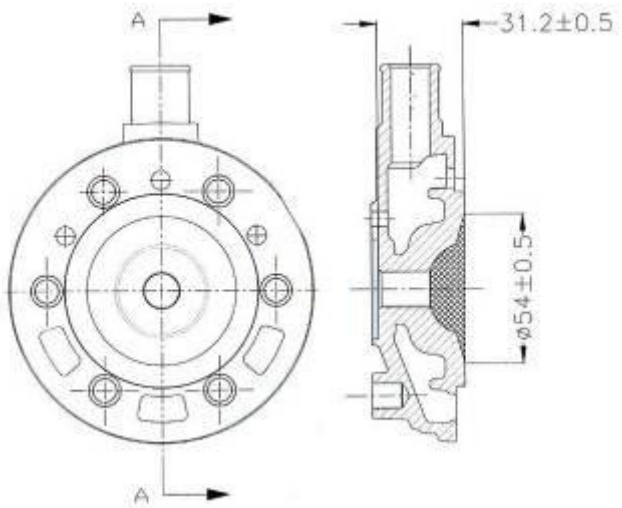


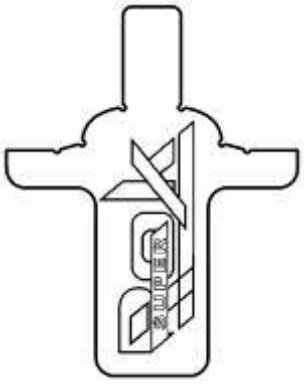
CYLINDERHEAD AND COMBUSTION CHAMBER 2009 MODEL

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

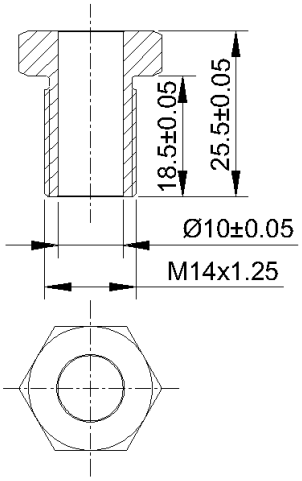
SQUISH THICKNESS – SQUISH - EPESSEUR DE SQUISH : **1.10 mm** MIN

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





TEMPLATE FOR CHECKING THE COMBUSTION CHAMBER PROFILE



SPARK PLUG INSERT FOR COMBUSTION CHAMBER VOLUME CHECK

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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

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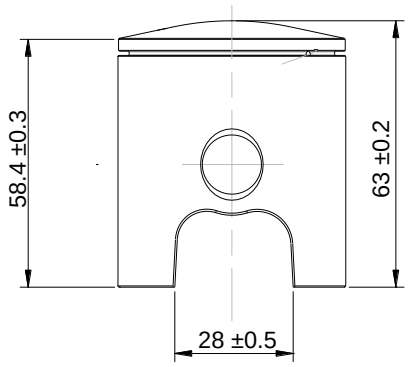
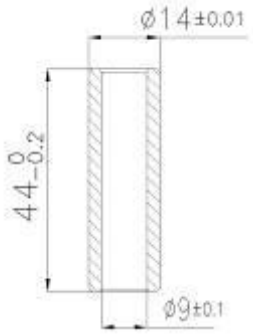
PISTON	PISTON PIN
 WEIGHT **125g / ±5g**	 WEIGHT **30g min**

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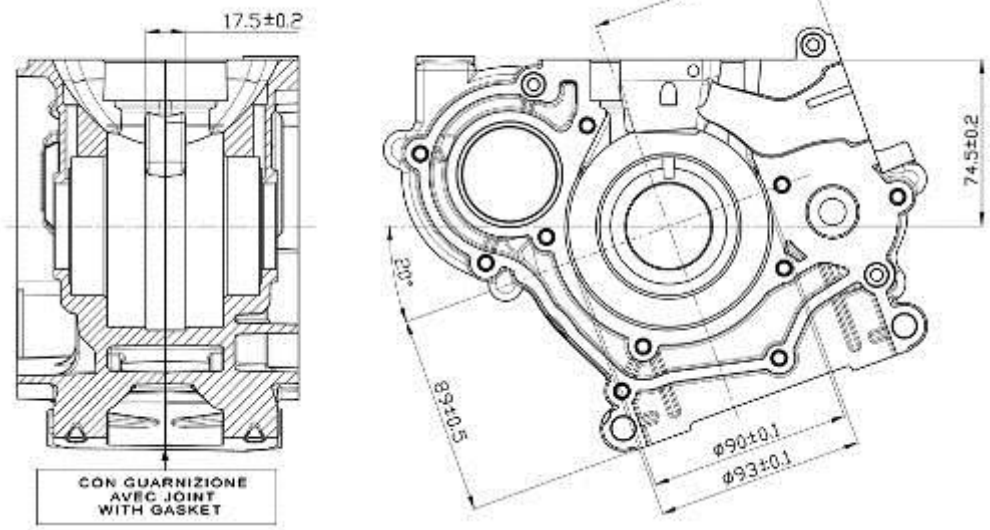
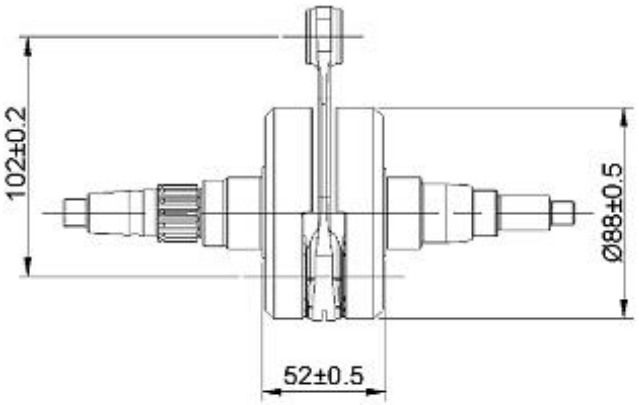
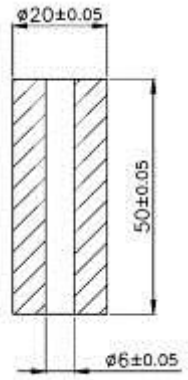
INTERIOR VIEW OF THE CRANKCASE



CRANKSHAFT	CRANKSHAFT CRANKPIN	CONROD
		
COMPLETE WEIGHT **2.178g / ±10g**	WEIGHT **111 ±1gr**	WEIGHT **128g / ±5g**

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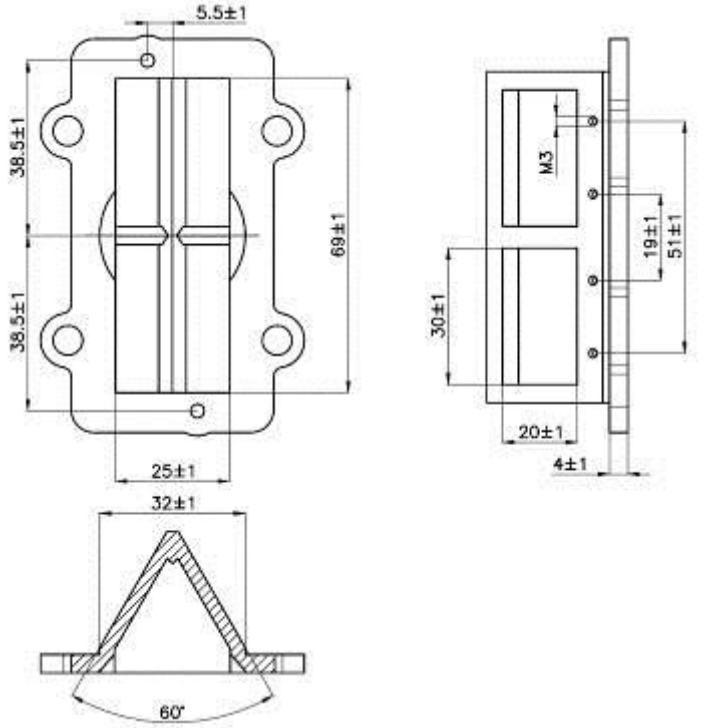
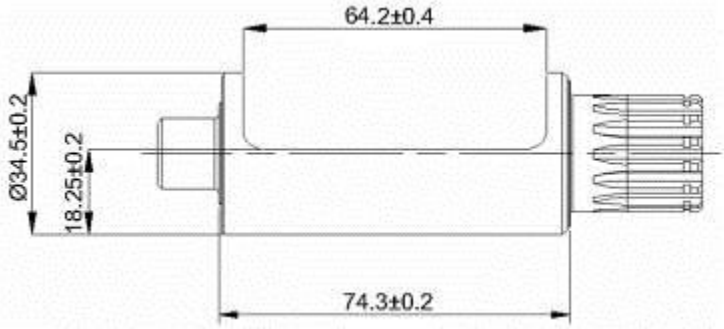
REED BLOCK AND CONVEYOR	REED VALVE COVER
	

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
	

PESO WEIGHT POID

435g / ±10g

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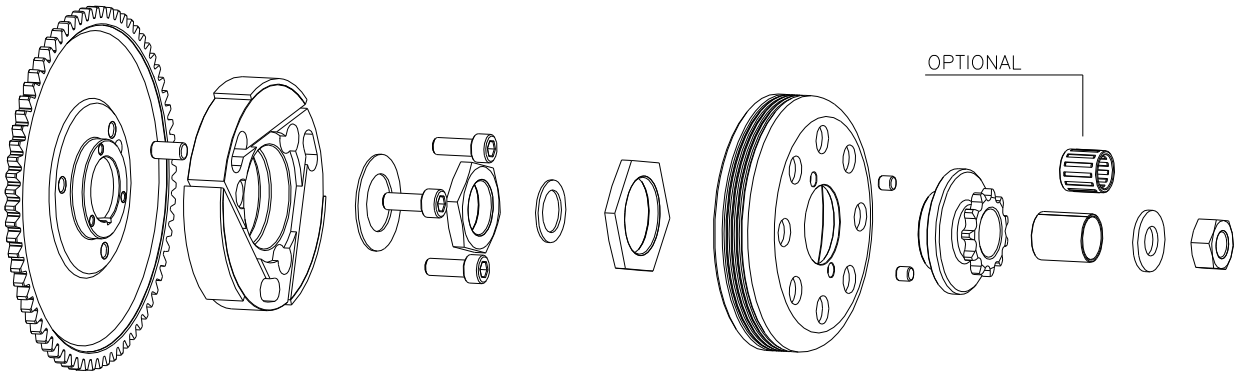
CLUTCH DESCRIPTION AND PARTS SKETCH

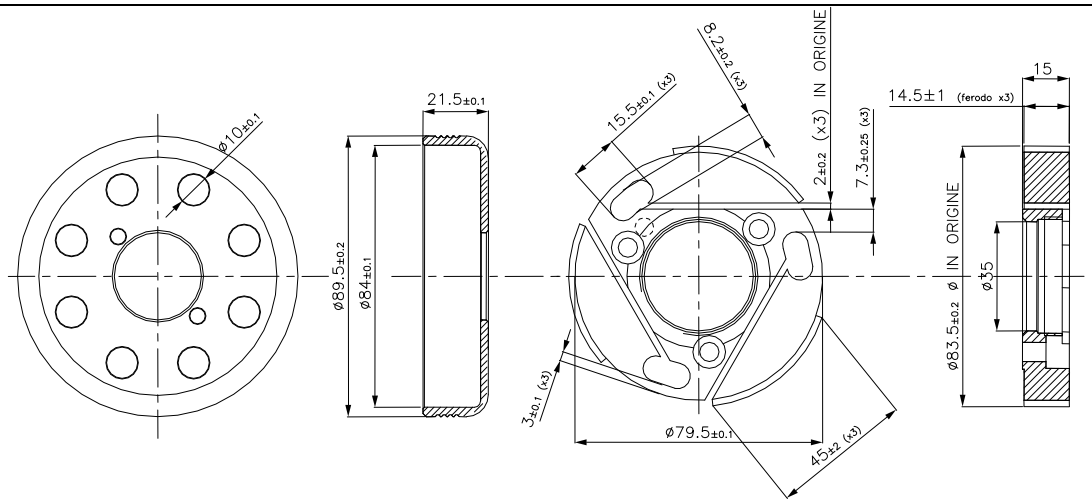


TOTAL PARTS NUMBER: 17

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 RPM

CLUTCH HOUSING / CLUTCH ROTOR



WEIGHT OF CLUTCH ROTOR
345 gr +/- 15gr

WEIGHT OF CLUTCH HOUSING
184 gr +/- 10gr

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

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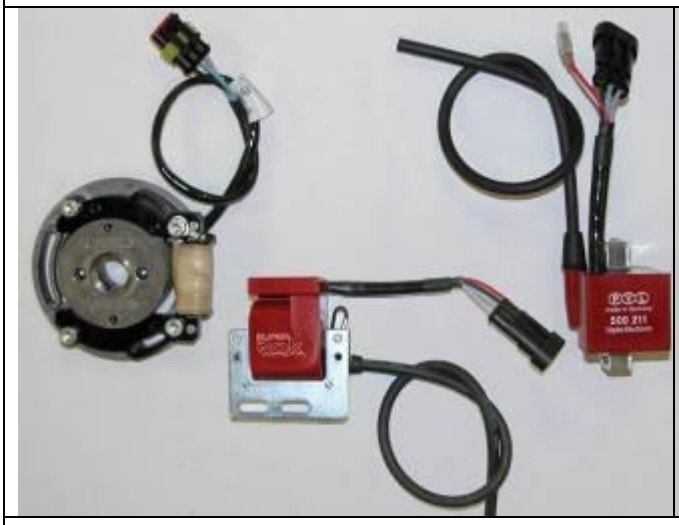
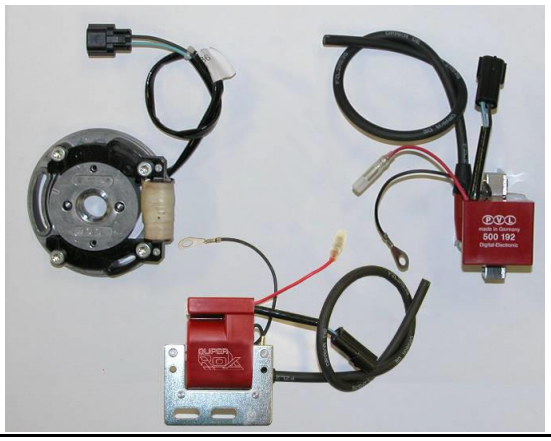
PVL IGNITION 500843/500980/500211/500192



MODEL YEAR 2012



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

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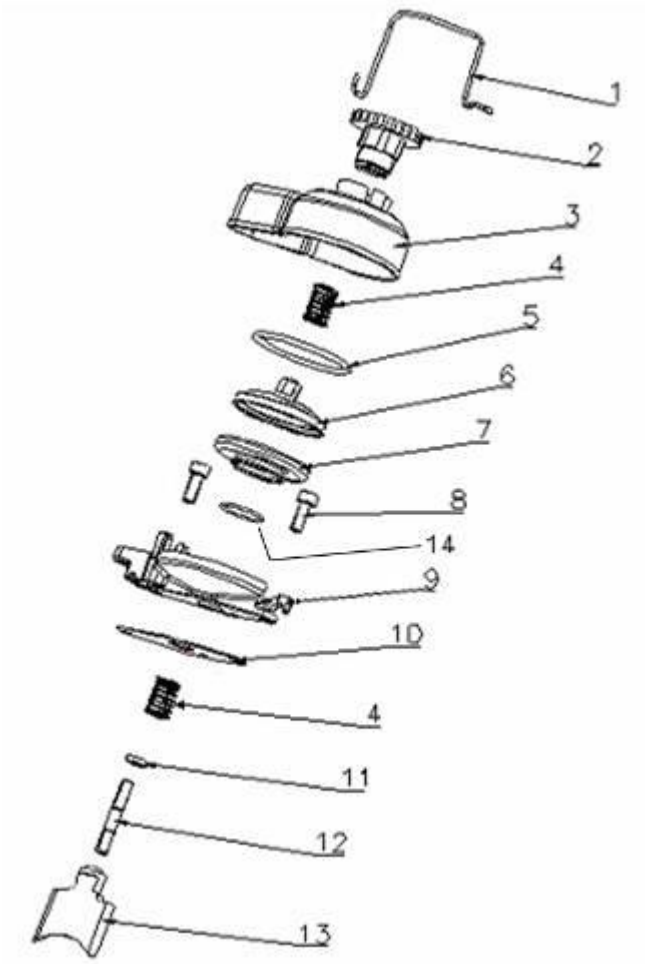
THE ONLY PNEUMATIC POWER VALVE PERMITTED IS MOD 2009 WITH DOUBLE COMPRESSION SPRING AS BELOW



1- FERMO VALVOLA
SPRING CUP
ARRET VALVE

2- VITE REGISTRO
ADJUSTMENT SCREW
VIS REGISTRE

3- COPERCHIO VALVOLA
VALVE COVER
CHAPE VALVE

4- DOPPIA MOLLA COMPRESSIONE
DOUBLE COMPRESSION SPRING
DOUBLE RESSORT COMPRESSION

5- MOLLA TENUTA
HOSE SPRING
RESSORT TENUE

6- PISTONCINO VALVOLA SCARICO
EXHAUST VALVE PISTON
PISTON VALVE ECHAP.

7- POLMONE
BELLOWS
POUMON

8- VITE
SCREW
VIS

9- ALLOGGIO VALVOLA
VALVE HOUSING
SIEGE VALVE

10- GUARNIZIONE
GASKET
JOINT

11- O-RING
O-RING
O-RING

12- PRIGIONIERO
STUD
GOUJON

13- VALVOLA SCARICO
EXHAUST VALVE
VALVE DE PUISSANCE

14 MOLLA TENUTA
HOSE SPRING
RESSORT TENUE

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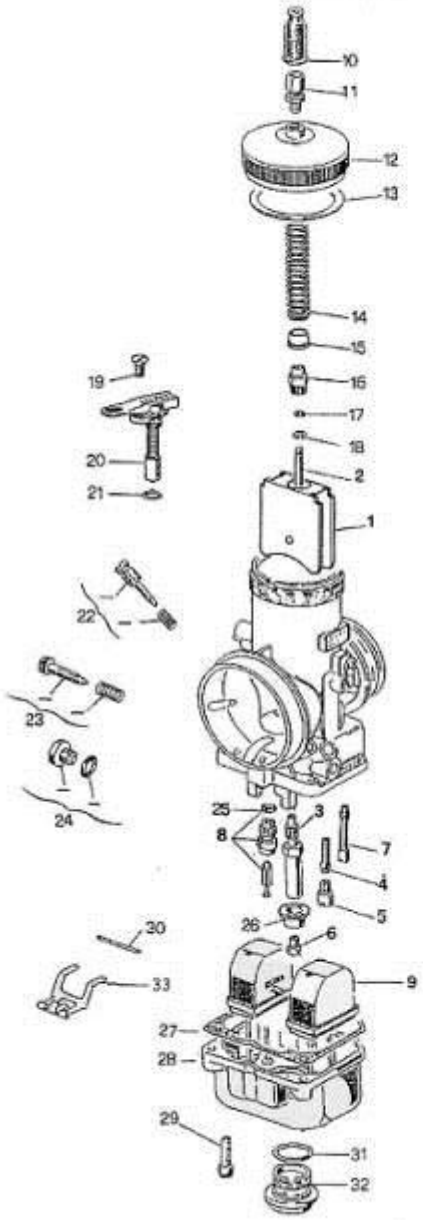
CARBURETTOR AND COMPONENTS

DELL'ORTO VHSH 30



1. GUILLOTINE	THROTTLE VALVE
2. AIGUILLE	MIXTURE NEEDLE
3. PULVERISATEUR	SPARY NOZZLE
4. EMULSEUR MINIMUM	IDLE DIFFUSER
5. GICLEUR MINIMUM	IDLE JET
6. GICLEUR MAXIMUM	HIGH SPEED JET
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. NIPPLO 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 CUVE	FLOAT VALVE GASKET
28. CUVE	FLOAT CHAMBER
29. VIS FIXAGE DE LA CUVE	FLOAT CHAMBER SCREW
30. AXE	PIN
31. JOINT DU BOUCHON DE CUVE	FLOAT CHAMBER PLUG GASKET
32. BOUCHON DE LA CUVE	FLOAT CHAMBER PLUG
33. BALANCIER	FLOAT LEVER

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

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ONLY THE FOLLOWING JETS/INTERNAL PARTS ARE PERMITTED

Throttle Valve Slide	=	40
Mixture Needle Super Rok	=	K33
Spray Nozzle / Emulsion Tube	=	DP 268
Idle Diffuser	=	B45
Idle Jet	=	60
High Speed Jet / 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

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.
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

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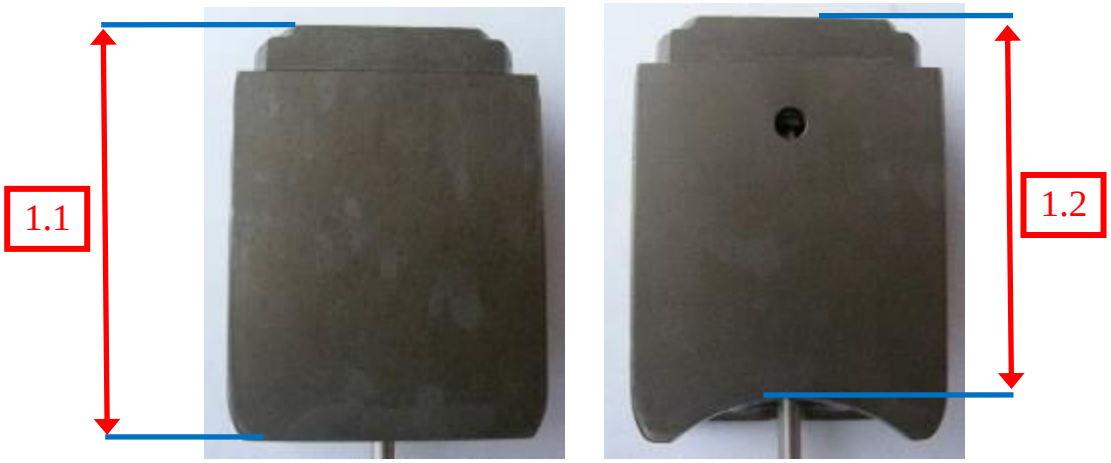
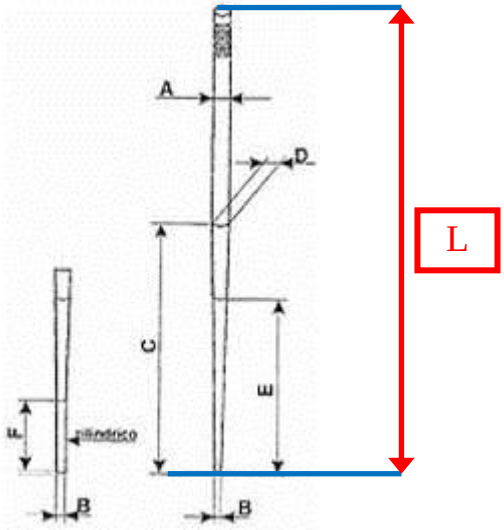
1. Throttle Valve Slide (40)

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)

Type	Value X	Characteristic expressed in millimeters						
		ØA	ØB	C	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 ± 0.05mm

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

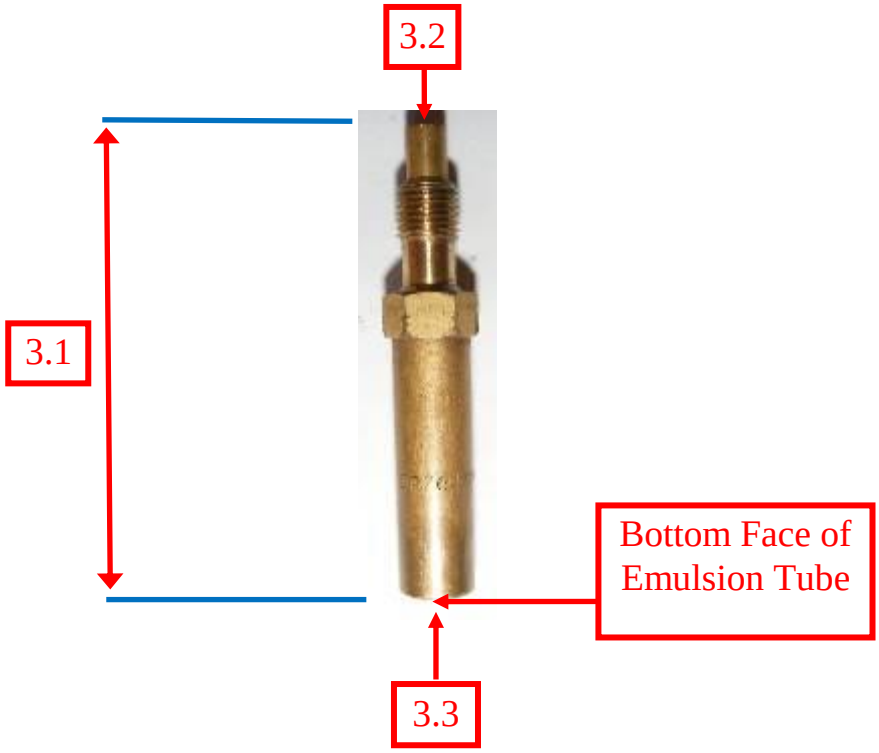
3. Spray Nozzle / Emulsion Tube **(Junior Rok: DP 264, Super Rok: DP 268)**

3.1 Length of Emulsion Tube
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)**

3.3 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)

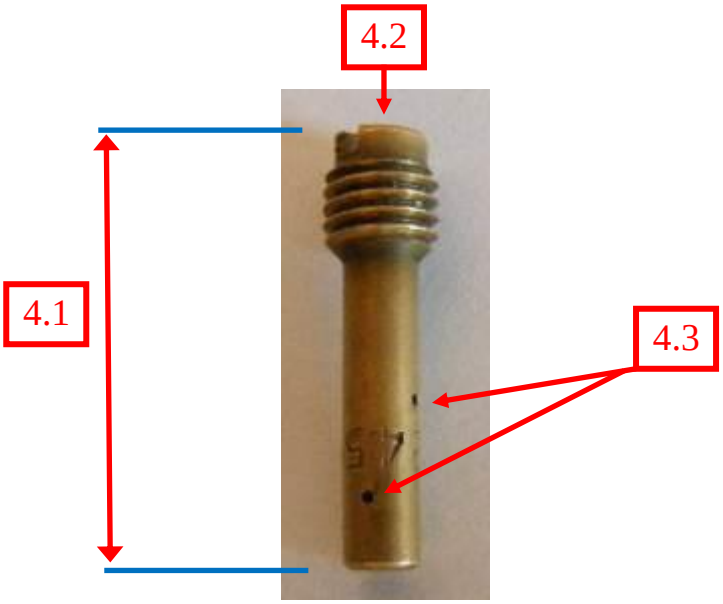


4. Idle Diffuser (B45)

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)**

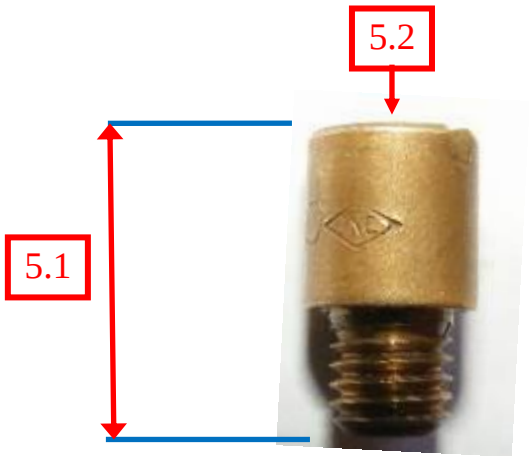
4.3 Internal Diameter for Side Holes (Total number of holes = 4)
GO Spec: 0.50 mm **(GO)**
NO GO Spec: 0.55 mm **(NO GO)**



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)**

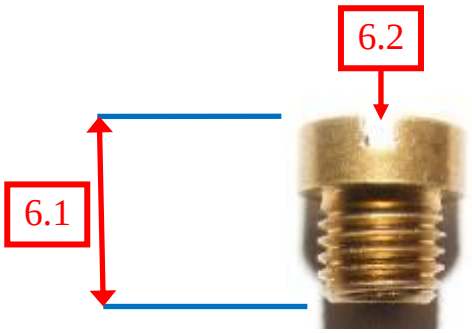


6. High Speed Jet / Main Jet

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: 8.2mm ± 0.15mm

6.2 Internal diameter of smallest hole inside the Idle Jet
Spec: Free

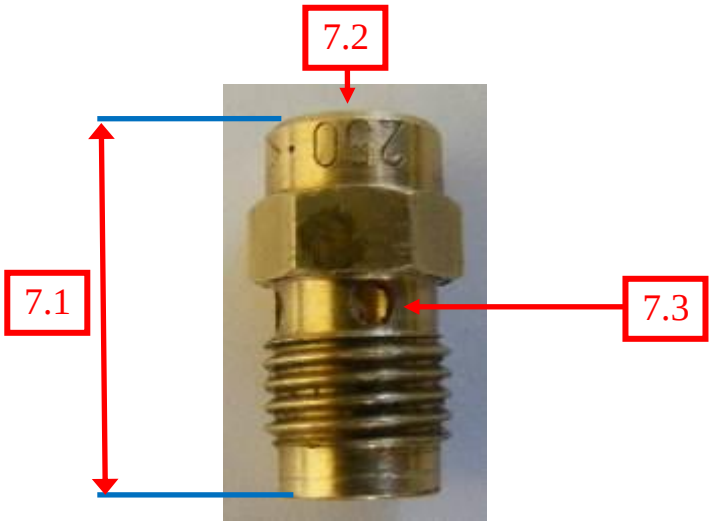


8. Needle Valve

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: 30.0mm ± 0.1mm

A.2 Diameter of hole A2 as illustrated

GO Spec: 0.50 mm **(GO)**

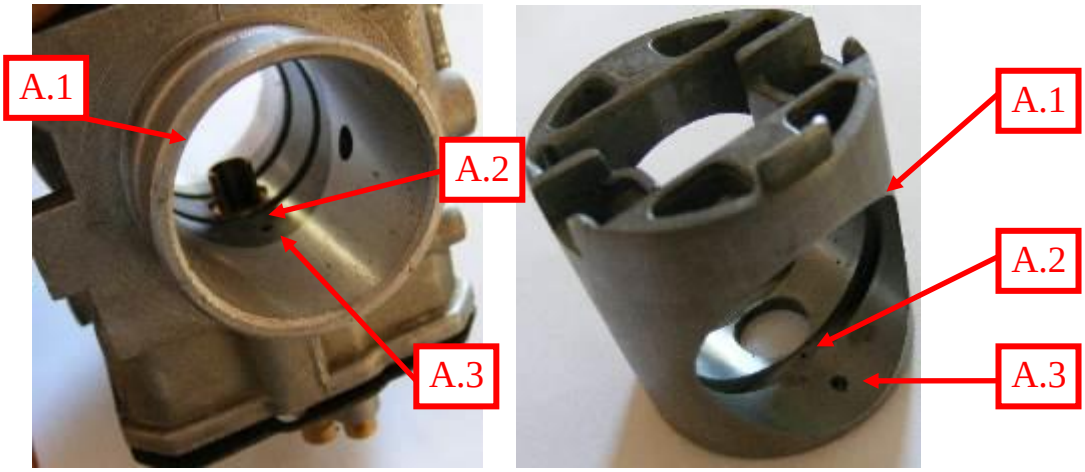
GO Spec: 0.55 mm **(GO)**

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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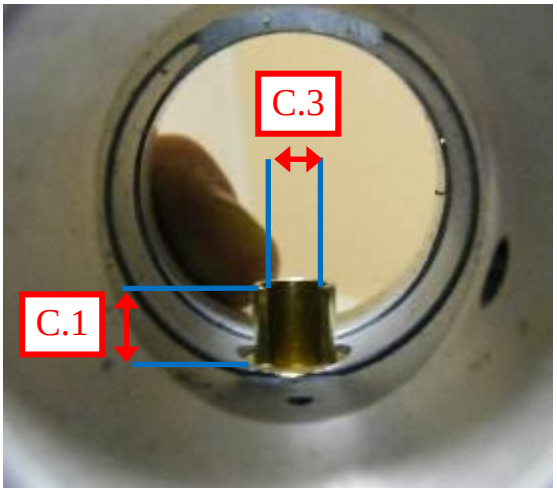
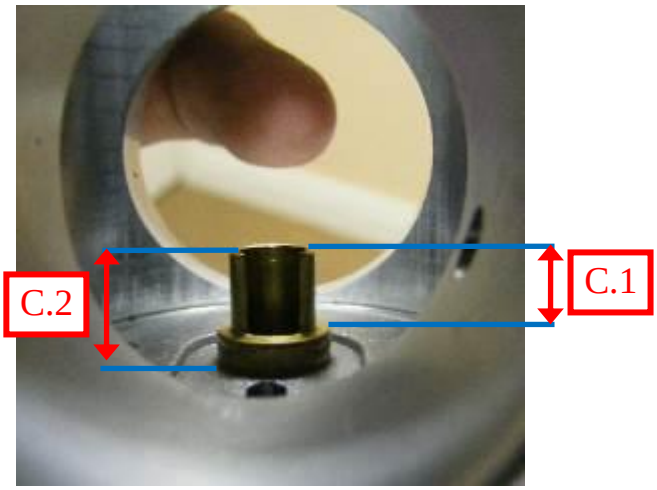
C) Brass Insert

C.1 Height of Stick Out
Spec: 7.0 ± 0.2mm

C.2 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.

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

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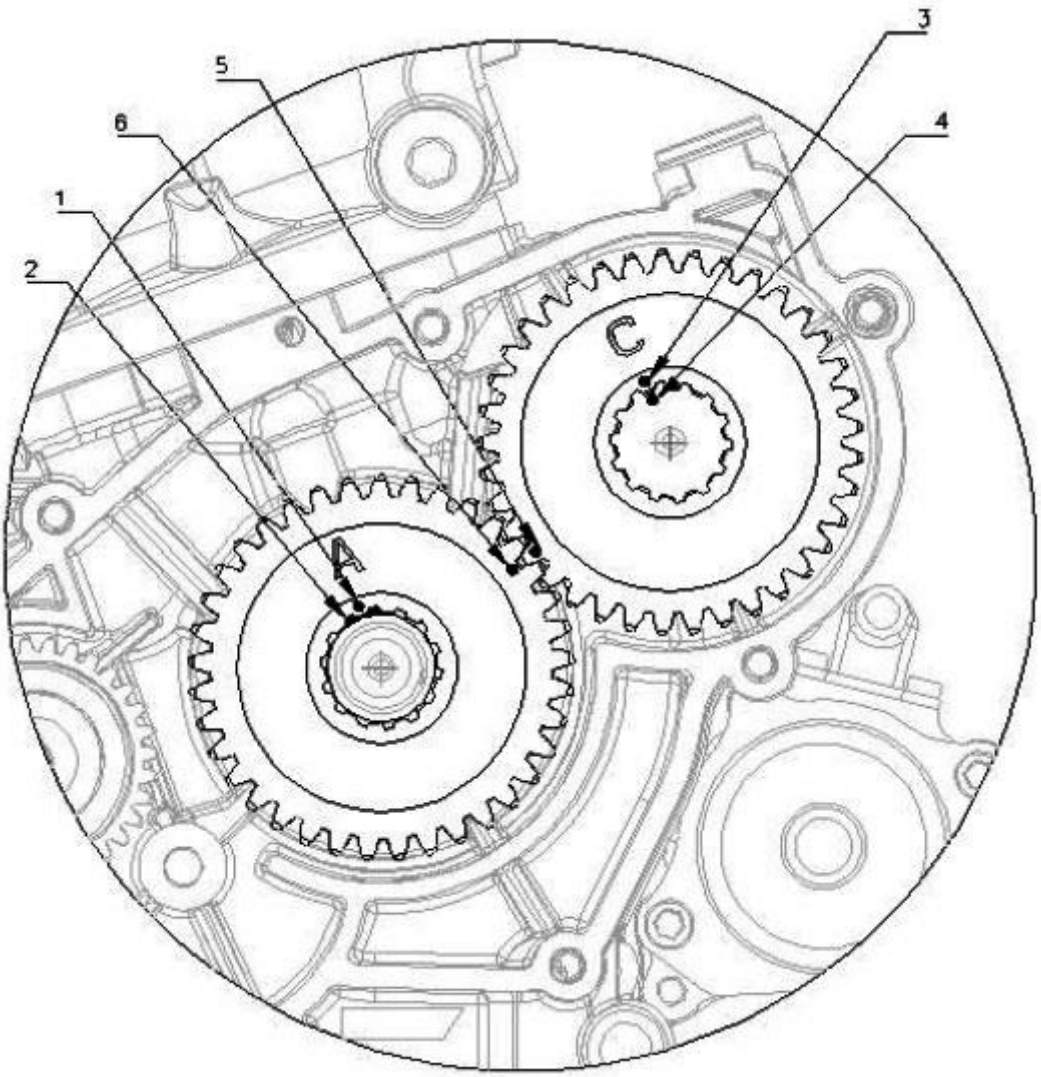
BALANCER SHAFT PHASING.

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.



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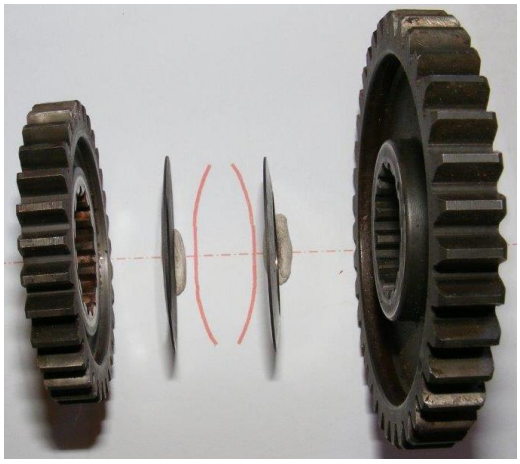
0.5mm maximum may be removed to aid the addition of a 2nd bell washer

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



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Cooling System

1. Only the Radiator supplied as original may be used
2. Water pipes are free
3. The thermostat may be removed
4. Mounting Brackets are free

EXHAUST MUFFLER, SILENCER AND COMPONENTS

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EXTERNAL CHORD READING
A=825+/-7mm

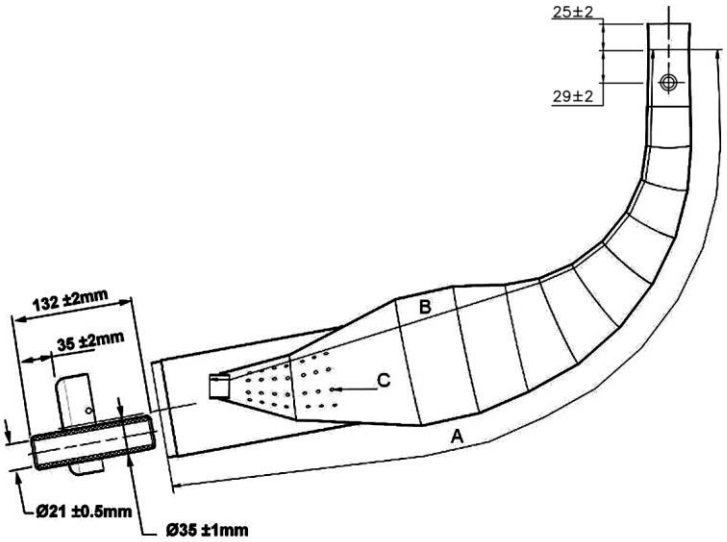
INTERNAL CHORD READING
B=655+/-7mm

NUMBEROF HOLES
C = 56 ø 4±0.5

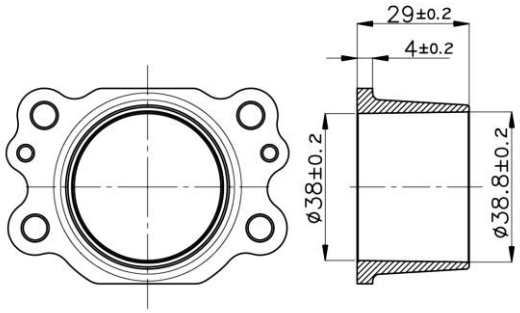
WEIGHT
2.158 g. ± 5%

IMPORTANT

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



EXHAUST MANIFOLD



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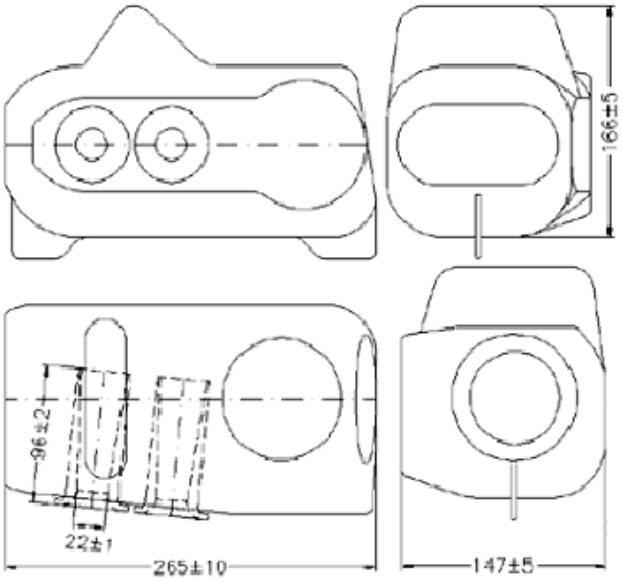
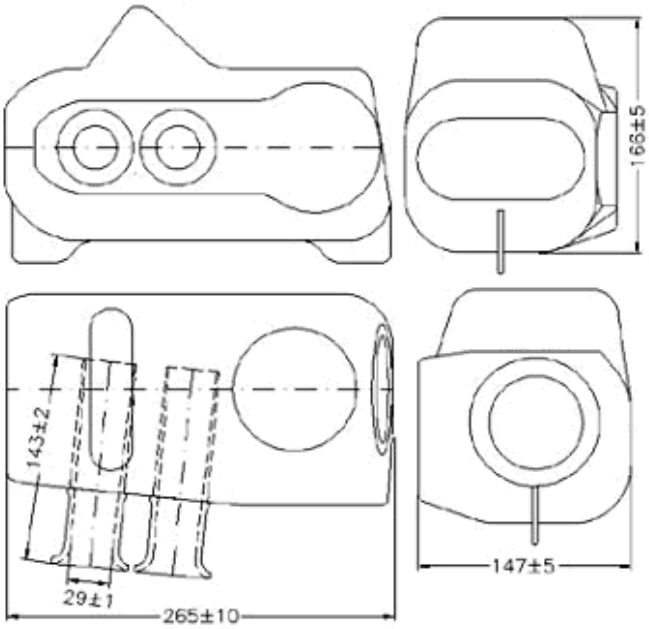
INLET SILENCER	
MODEL TYPE	**ARROW, C**
	

MODEL TYPE	**ARROW, G**
	

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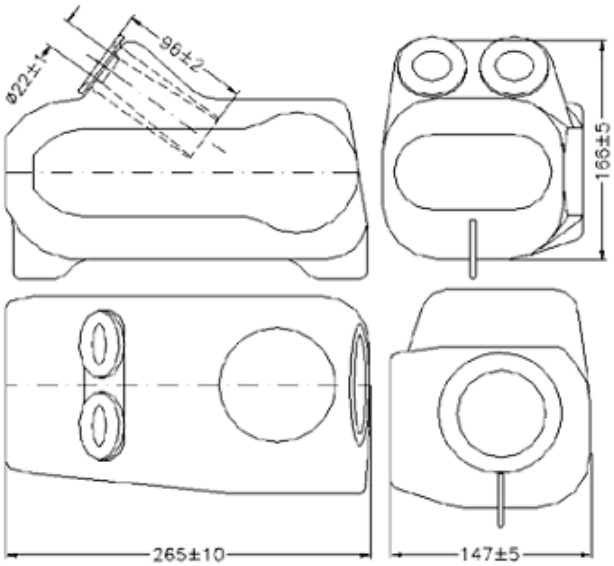
INLET SILENCER	
MODEL TYPE	**ARROW, F**
	
MODEL TYPE	**ARROW, E**