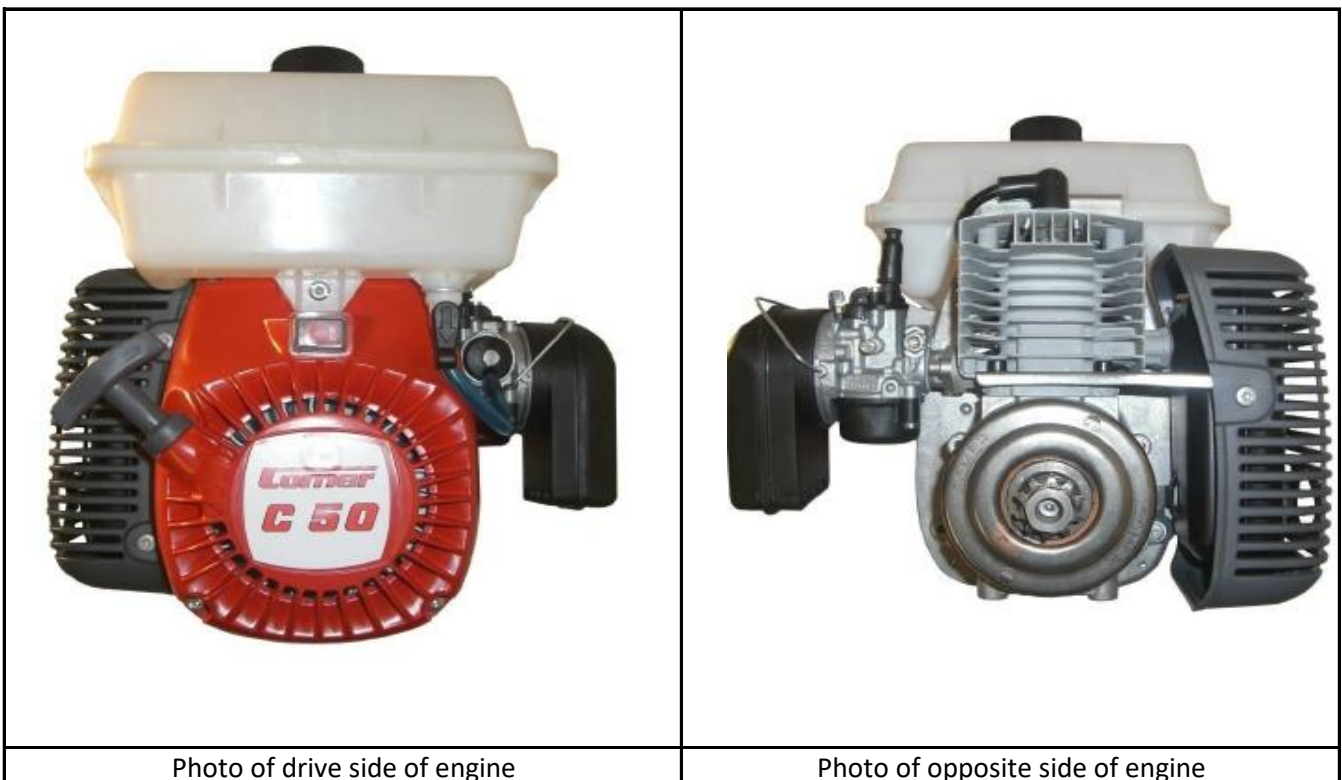



MSA COMER C50 TECHNICAL REGULATIONS 2021 VERSION 1

<i>Category</i>	Bambino
<i>Manufacturer</i>	Comer Spa
<i>Model</i>	C50
<i>Valid from</i>	01 January 2021
<i>Number of pages</i>	9

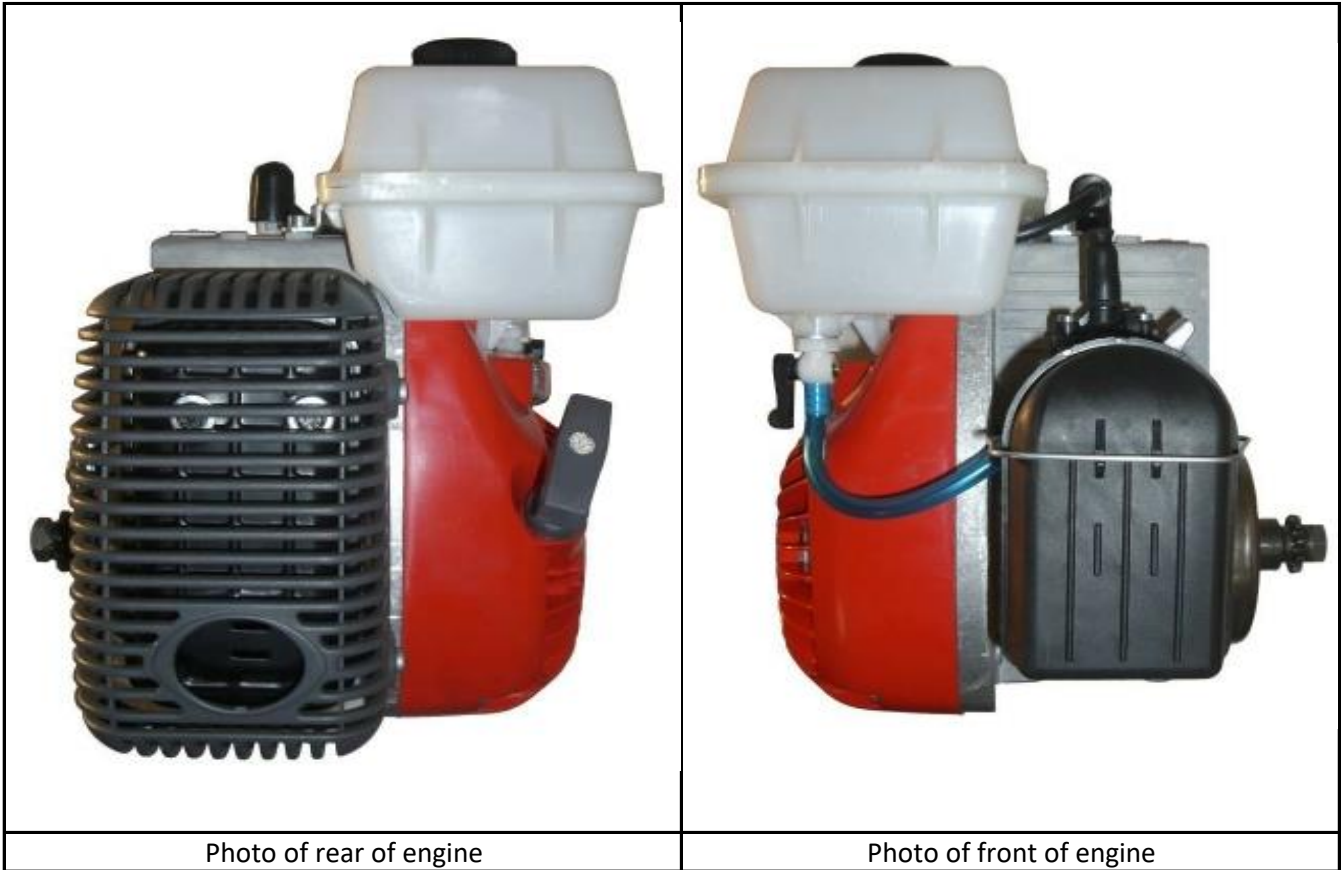
This Homologation Form reproduces descriptions, illustrations and dimensions of the engine at the moment of the MSA Homologation. This document may be supplemented by official amendment. This document must be read in conjunction with the appropriate Class Regulations.



SIGNATURE AND STAMP OF MSA

	<p>Date: 01 January 2021</p> <p>Signed by: Allison Atkinson</p> <p>Position: Sporting Coordinator</p>
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Genuine Comer components only that are specifically designed and supplied for the Comer C50 engine are legal, unless otherwise specified. ANYTHING WHICH IS NOT EXPRESSLY ALLOWED IN THE TECHNICAL REGULATIONS IS FORBIDDEN.



TECHNICAL FICHE

Manufacturer: COMER SpA



Engine Type: C50

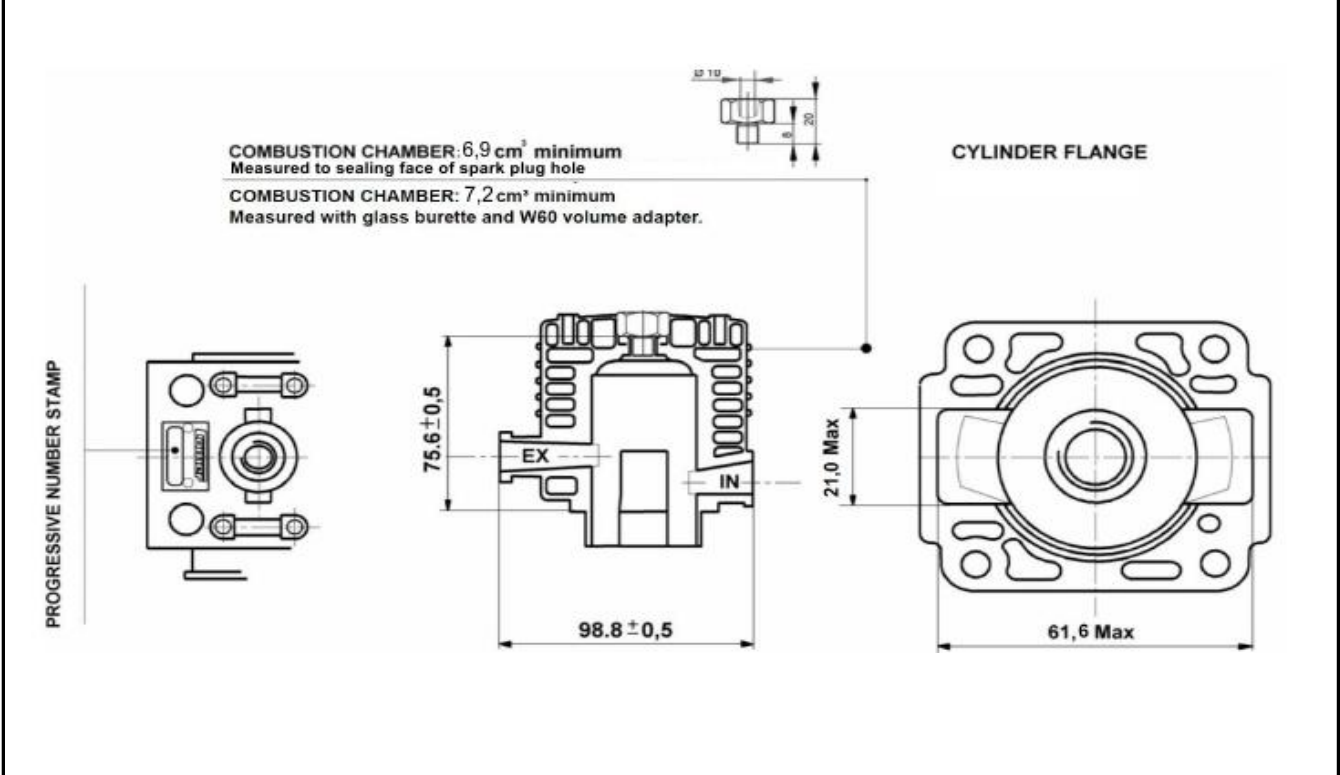


TECHNICAL INFORMATION

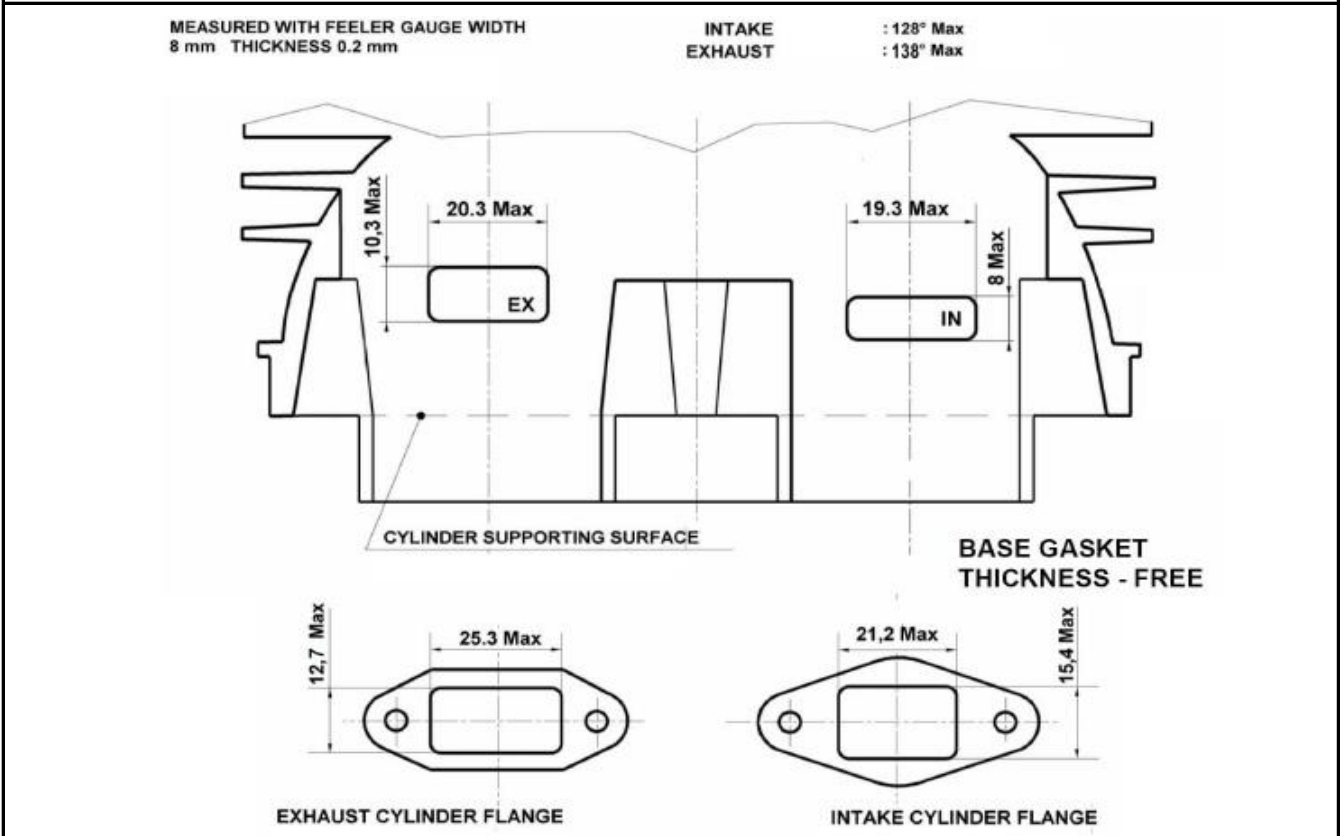
Bore	40 mm
Stroke	38 mm
Displacement	48 cc
Fuel / Oil	20:1 (95 Octane mixed with XPS Dye Oil)
Ignition	Electronic
Clutch	Centrifugal 3 pieces
Front Sprocket	10 Z
Rear Sprocket	76 Z
Carburettor	DELL'ORTO SHA - 14-12L
Cylinder	Aluminium / Nicasil or chromed - Replating forbidden
Spark Plug	CHAMPION RCJ7Y or NGK BPMR7A or BOSCH WS5F

Locking devices and fixtures may be replaced with non original parts. Helicoils may be used. A metal plate maximum 3mm thick may be added to aid engine alignment. An aluminium engine mount with under clamps may also be used to afix the engine to the chassis.

CYLINDER



CYLINDER DIAGRAM - Port sizes and timing using "as supplied" components NO GRINDING ALLOWED



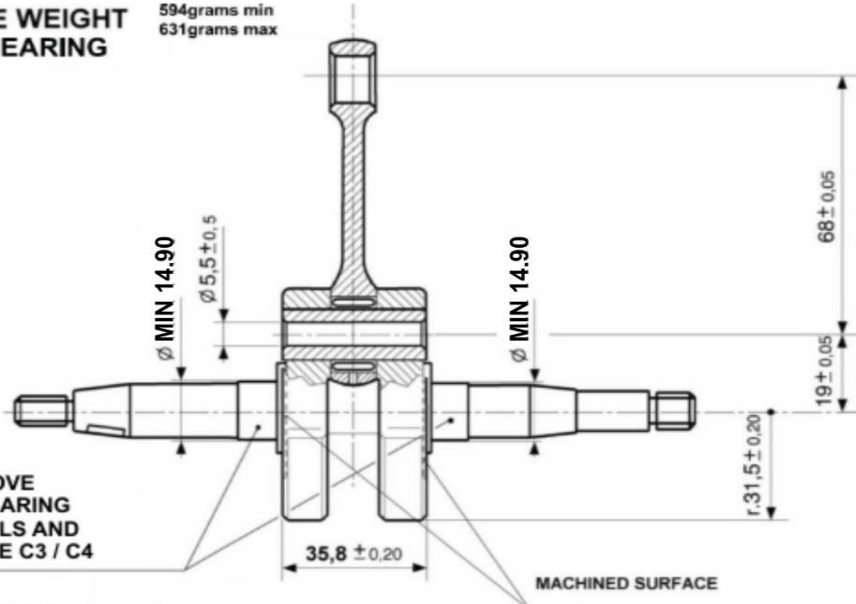
COMPLETE CRANKSHAFT

CRANKSHAFT BARE WEIGHT WITH SMALL END BEARING

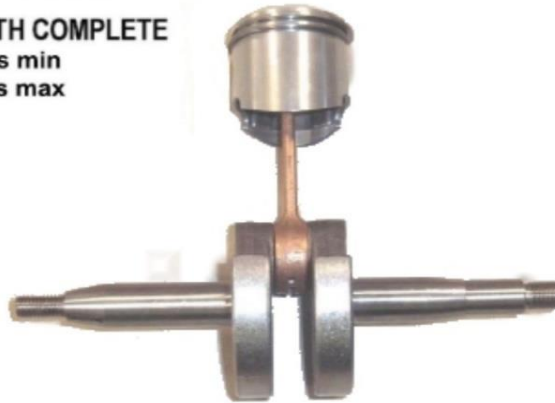
594grams min
631grams max

ORIGINAL OIL SEALS MARKED "COMER"

DEEP GROOVE ROLLER BEARING WITH 8 BALLS AND STEEL CAGE C3 / C4



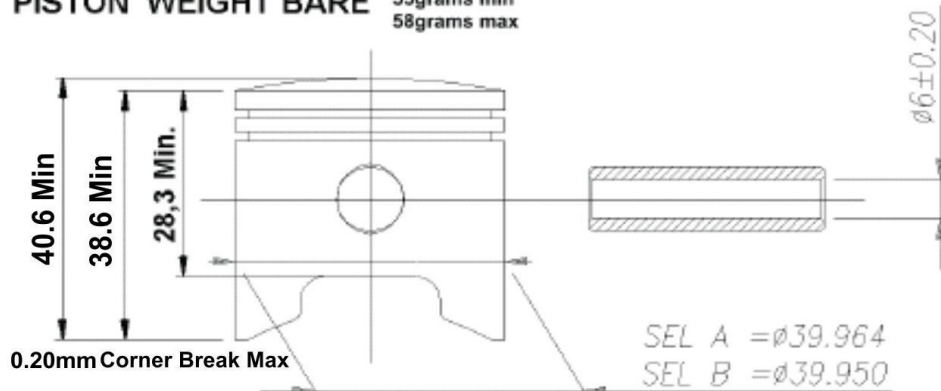
CRANKSHAFT WITH COMPLETE PISTON 669grams min
711grams max



PISTON


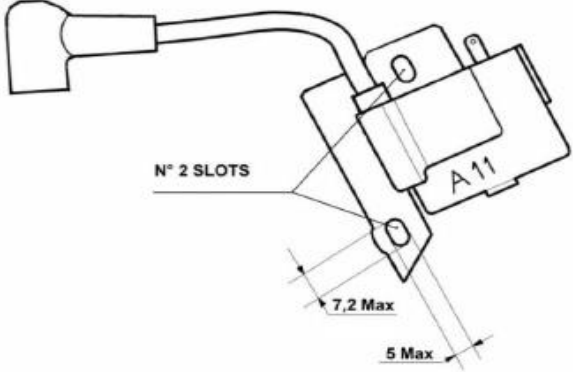
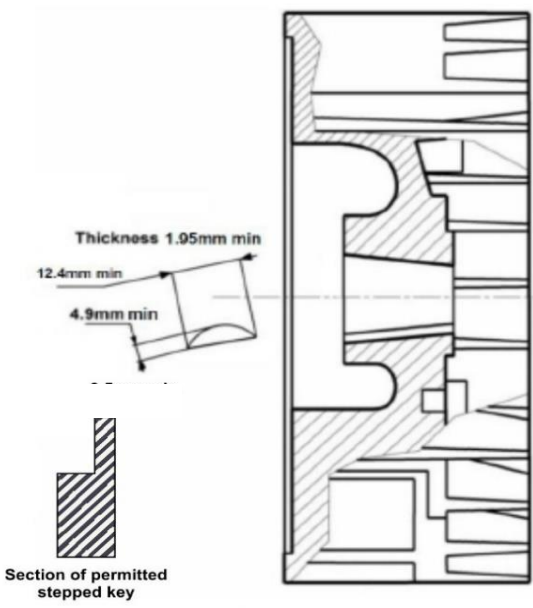
PISTON WEIGHT BARE

55grams min
58grams max

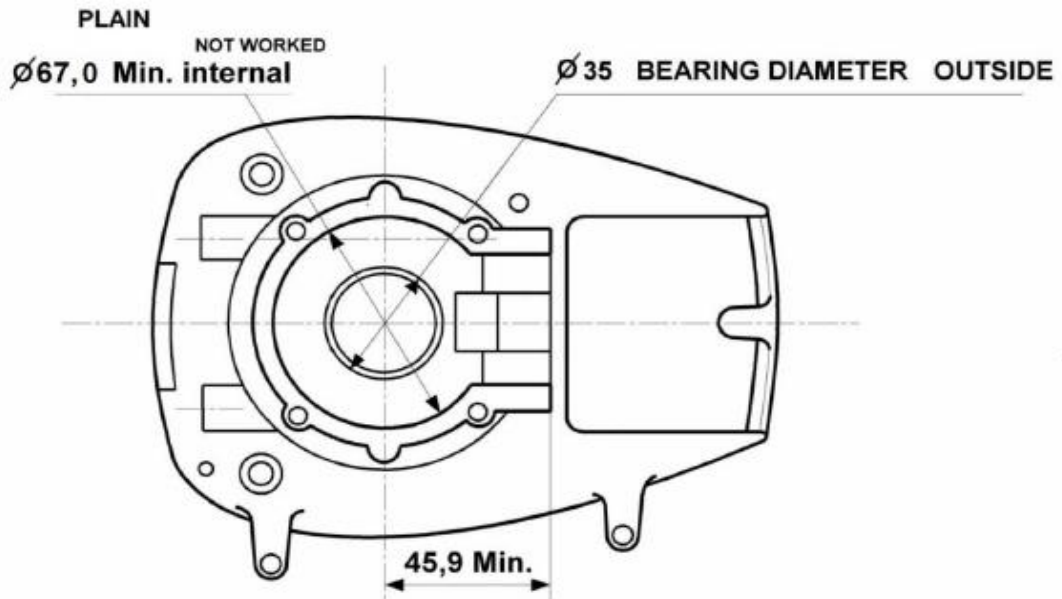


N° 2 Piston rings 1,48 \pm 0,02

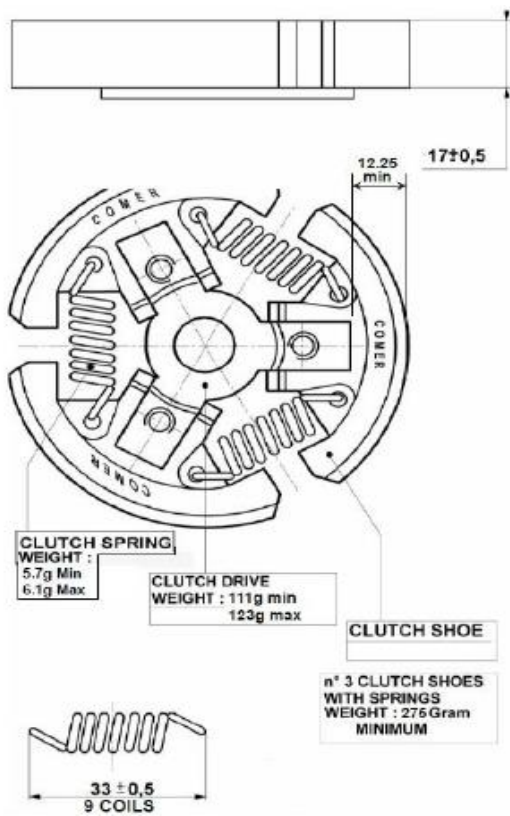
It is permitted to remove material from the piston skirt to achieve the minimum dimension.

IGNITION	
FLYWHEEL	COIL
FJ MODEL	FJ MODEL A11 - Code FJ A11 20-07
	 <p>It is permitted to extend the ignition lead to A maximum length of 160 mm between the coil and the start of the plug cap SPARE PART CODE: C050-452-02</p>
Code FJ 20-07	IGNITION TIMING
 <p>Weight= 378 min 402 max without key</p>	<p>It is recommended to modify the original woodruff key by removing approximately 1.5mm of the thickness of the section that protrudes from the crankshaft. This allows the flywheel to be installed in a position advanced from the original position (i.e. rotated clockwise seen from the fin side relative to the crankshaft). It is permitted to omit the woodruff key but retaining a modified key make setting the timing quick and easy.</p> <p>It is recommended that the timing be set at 3.6mm btdc using the leading edge of the trailing magnet (second magnet) lined up with the left hand side of the long lamination leg as reference.</p> <p>The maximum advance allowed is 3.8mm btdc with no tolerance.</p> <p>It is recommended that an appropriate "locktite" is used on the tapered surfaces and that the nut is torqued to 25Nm.</p>
SPARE PART CODE: C050-453-02	

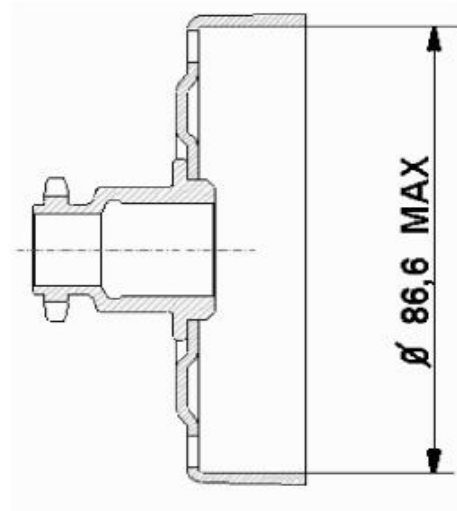
CRANKCASE



CLUTCH



SPROCKET

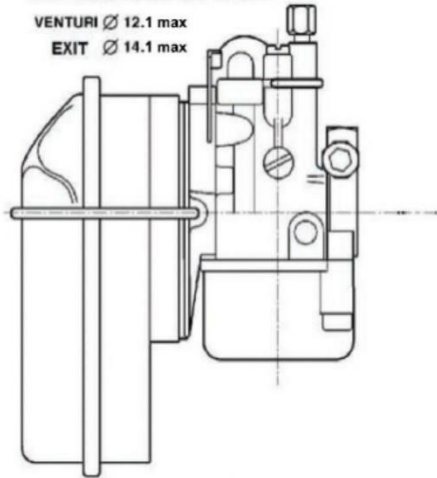


SPROCKET "COMER" 10 TEETH PITCH 219

CARBURETTOR

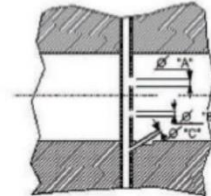
DELL' ORTO SHA 14-12L ORIGINAL

VENTURI \varnothing 12.1 max
EXIT \varnothing 14.1 max



Emulsion Tube ID 1.80 max
Slide No:7 (6108)
Float 3.5gr
Needle Seat ID 1.5max
Main Jet FREE

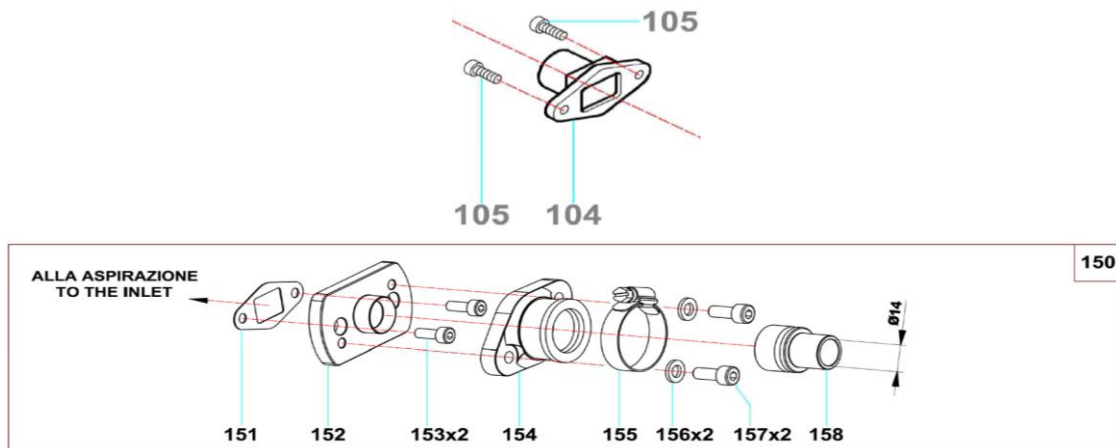
\varnothing "A" = 1,25 mm
 \varnothing "B" = 0,80 mm
 \varnothing "C" = 0,80 mm



AIR BOX WITH 1 FILTER MIN
AIR BOX ORIENTATION FREE

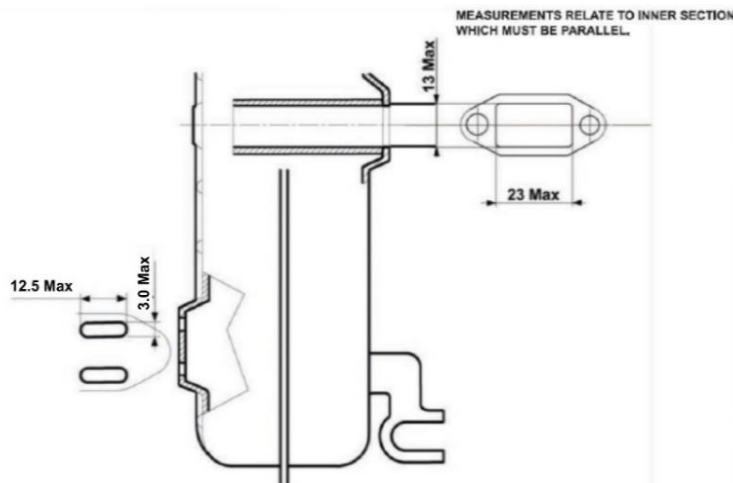
VERIFY CARBURETTOR NOZZLE WITH
NO GO GAUGE 0.01 MM LARGER THAN
NOMINAL SIZE

INLET MANIFOLD



Either the original die cast inlet manifold or the rubber inlet manifold is to be used and may not be machined.

MUFFLER



- * Original Comer gasket to be fitted
- * All exhaust gasses must exit via the two outlet slots ie, any additional holes / loose exhaust will lead to exclusion
- * Outlet slots may be filed to the maximum dimensions corners may be radiused or square.
- * A pin with diameter not less than 3.05mm may not enter the slots anywhere.
- * No other alterations permitted
- * Heat shield is optional.



PORT TIMINGS

Port timing measurements will be done with either a digital degree wheel or a graduated disc of minimum 280mm diameter and a pointer that is sharpened to a knife edge. To avoid arguments over parallax errors the pointer should be less than 3mm from face of the degree wheel where the reading is taken. The sharp point must clearly be on the line defining the maximum measurement. The measurement will be taken with all the slack in the system taken up i.e. the crankshaft will be rotated until it firmly stops against the feeler gauge.

The feeler gauge will be 0.2mm thick and 8.0mm wide. The feeler gauge will follow the angle on top of the piston for exhaust port measurement and be held flat on the bottom of the inlet port.

Inlet Port duration maximum 128 degrees no tolerance

Exhaust Port duration maximum 138 degrees no tolerance

GENERAL

Fuel system: It is permitted to remove the sieve in the fuel tank and enlarge the hole. An inline fuel filter is permitted. It is permitted to use an o-ring as an additional fixation for the fuel tank.