




COMER CX52 TECHNICAL REGULATIONS 2022 VERSION 1

<i>Category</i>	Bambino
<i>Manufacturer</i>	Comer Spa / EMR
<i>Model</i>	CX52
<i>Valid from</i>	01 January 2022
<i>Number of pages</i>	9

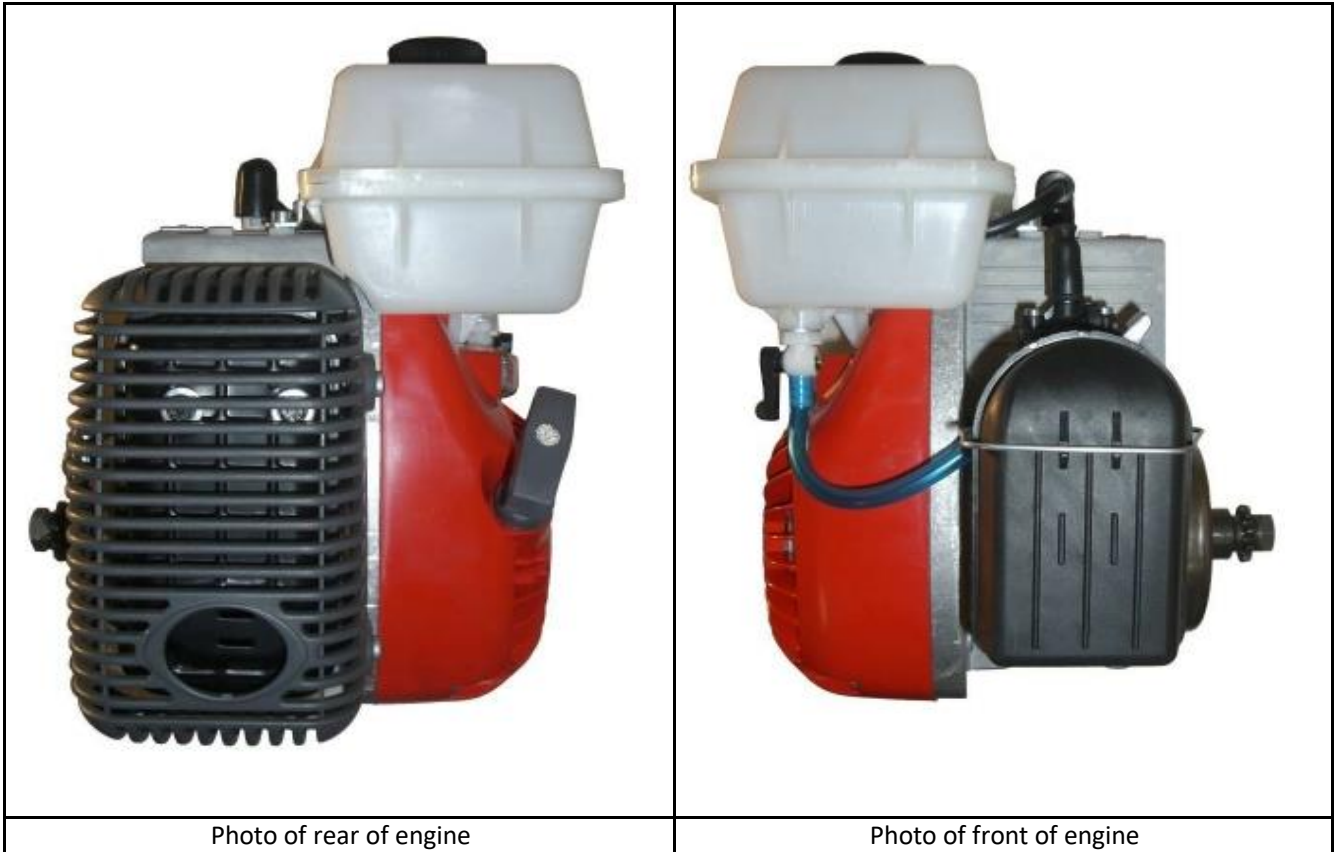
This Homologation Form reproduces descriptions, illustrations and dimensions of the engine at the moment of the MSA Homologation. This document may be supplemented by official amendment. This document must be read in conjunction with the appropriate Class Regulations.

	
Photo of drive side of engine	Photo of opposite side of engine

SIGNATURE AND STAMP OF MSA

	<p>Date: 1 January 2022</p> <p>Signed by: Allison Vogelsang</p>
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Genuine Comer components only that are specifically designed and supplied for the Comer CX52 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: CX52

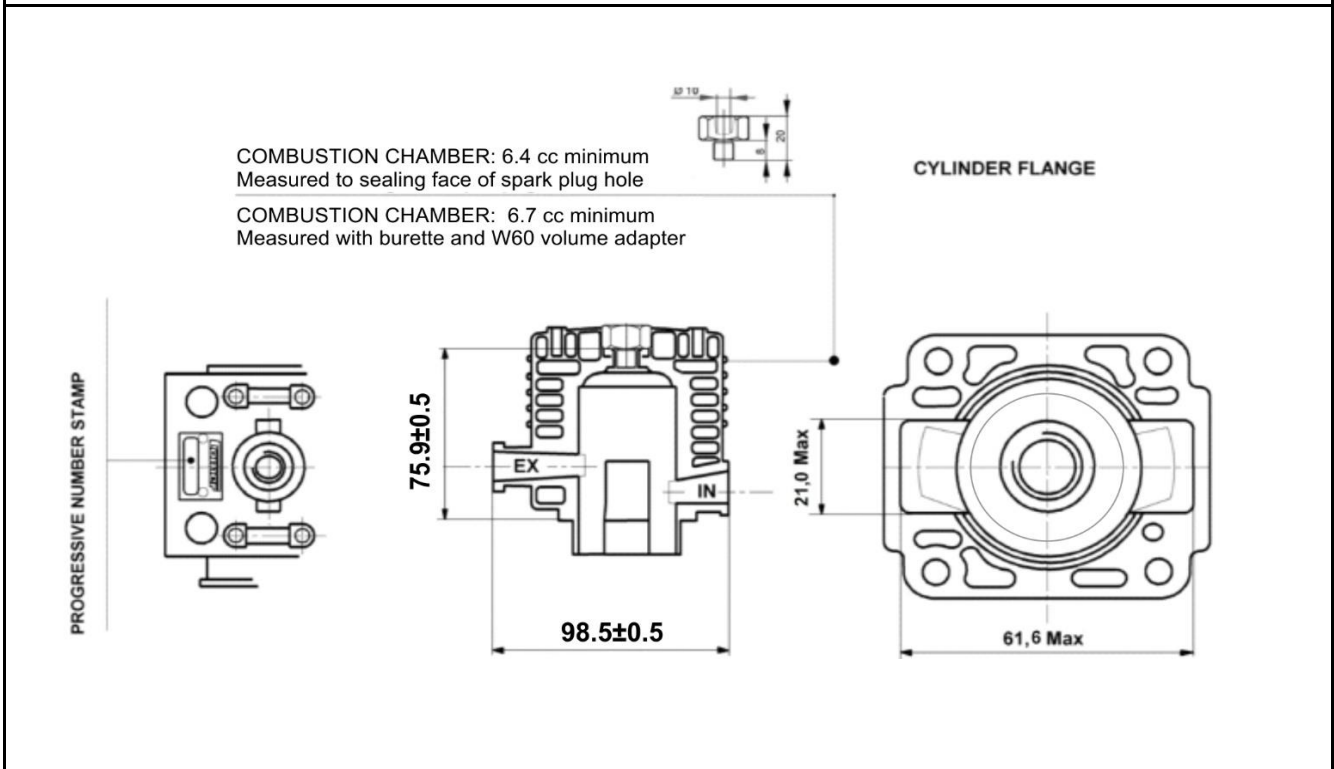


TECHNICAL INFORMATION

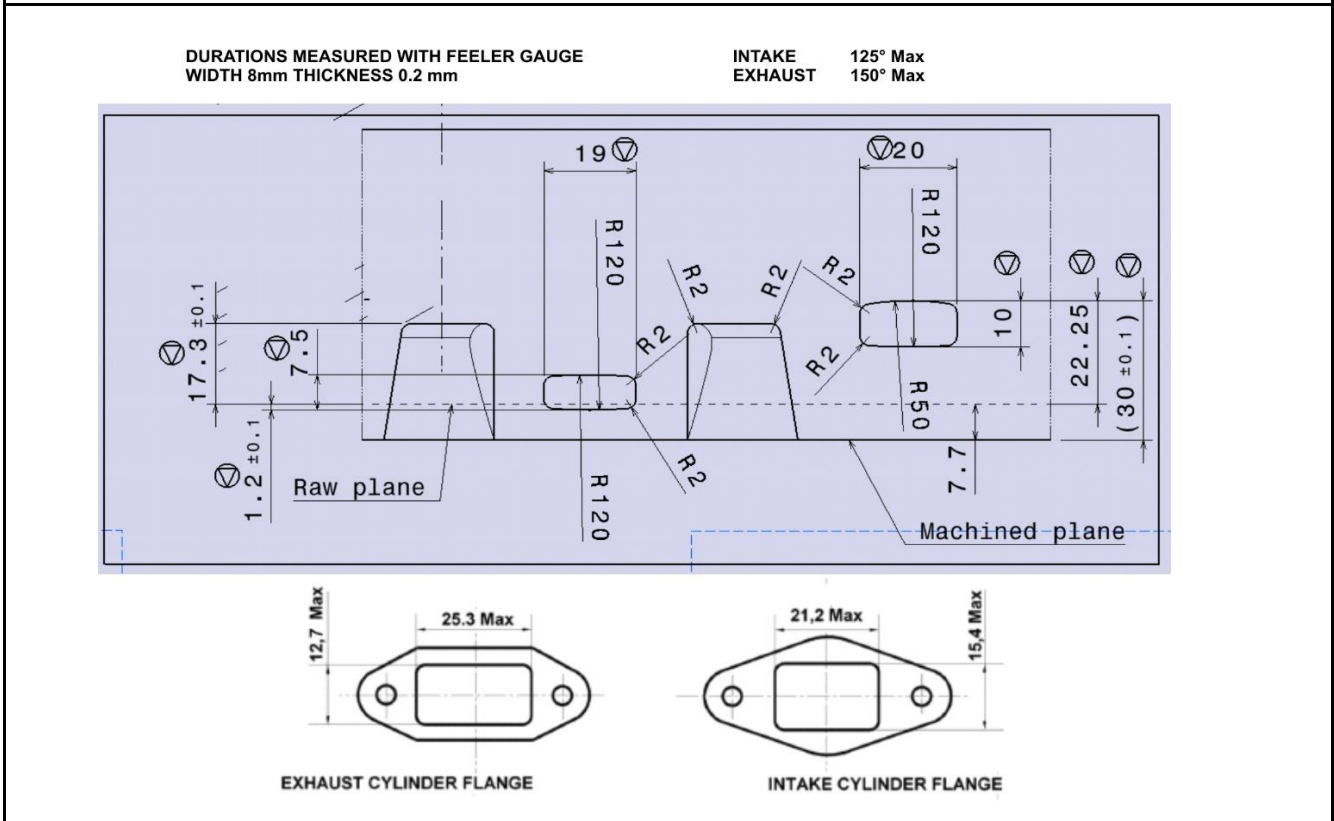
Bore	40 mm
Stroke	40 mm
Displacement	50.2 cc
Fuel / Oil	25:1 (95 Octane mixed with XPS Oil)
Ignition	Electronic
Clutch	Centrifugal 3 pieces
Front Sprocket	10 Z
Rear Sprocket	TBA
Carburettor	DELL'ORTO SHA - 14-12L
Cylinder	Aluminium / Nicasil or chromed - Replating forbidden
Spark Plug	CHAMPION RCJ7Y 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.

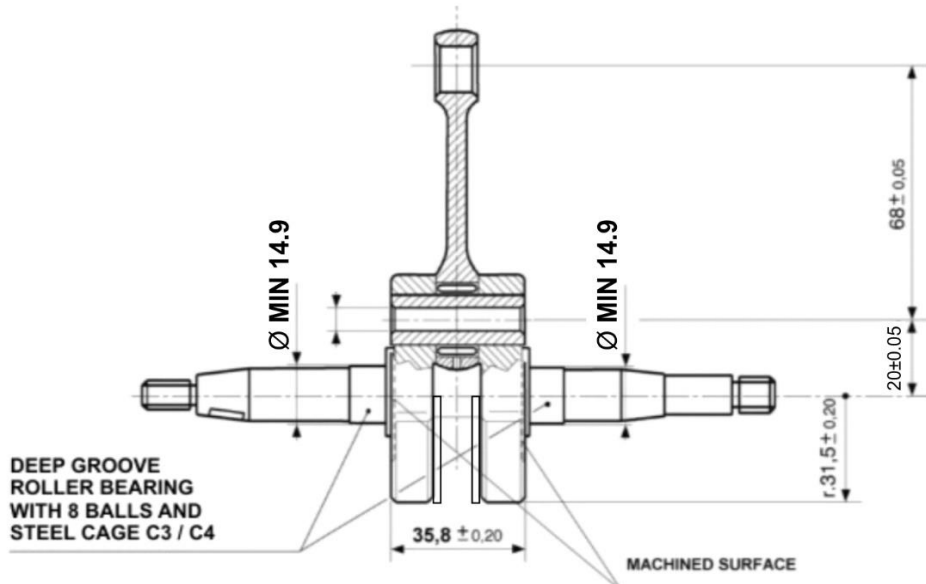
CYLINDER



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



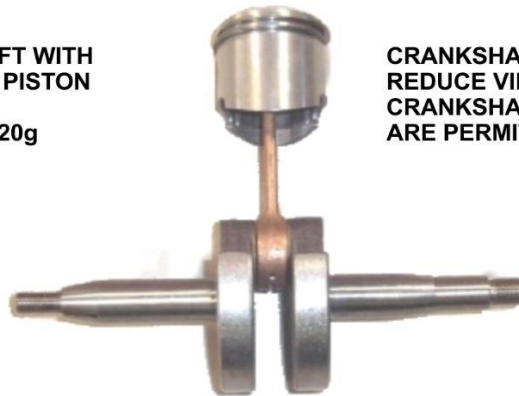
COMPLETE CRANKSHAFT



CRANKSHAFT WITH COMPLETE PISTON

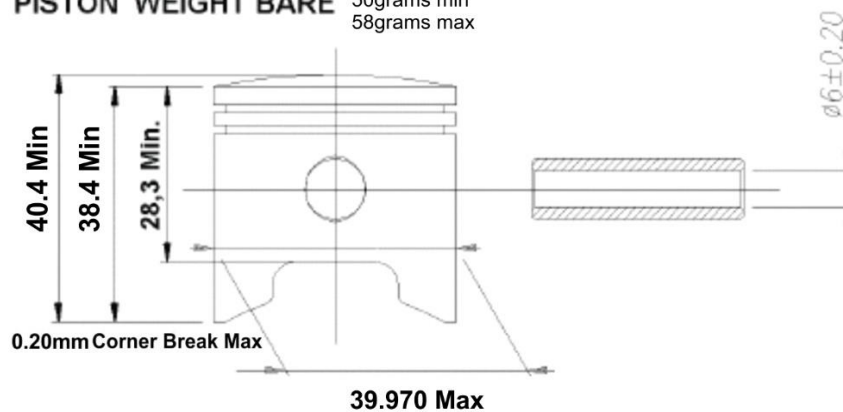
658g ± 20g

CRANKSHAFT IS MODIFIED TO REDUCE VIBRATION AND ONLY CX52 CRANKSHAFTS SUPPLIED BY EMR ARE PERMITTED




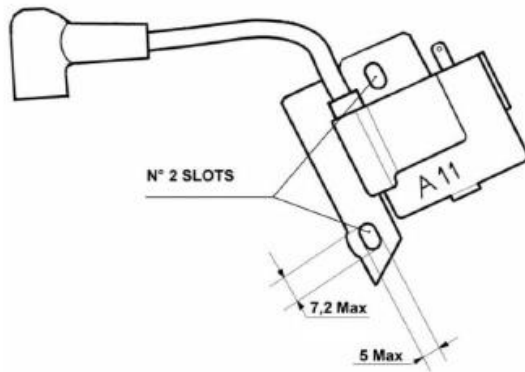
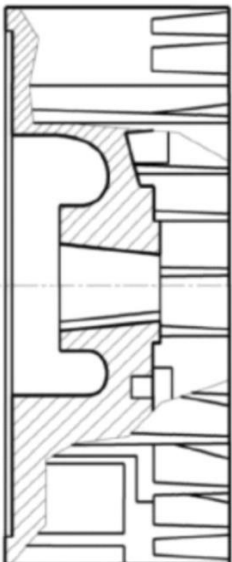
PISTON

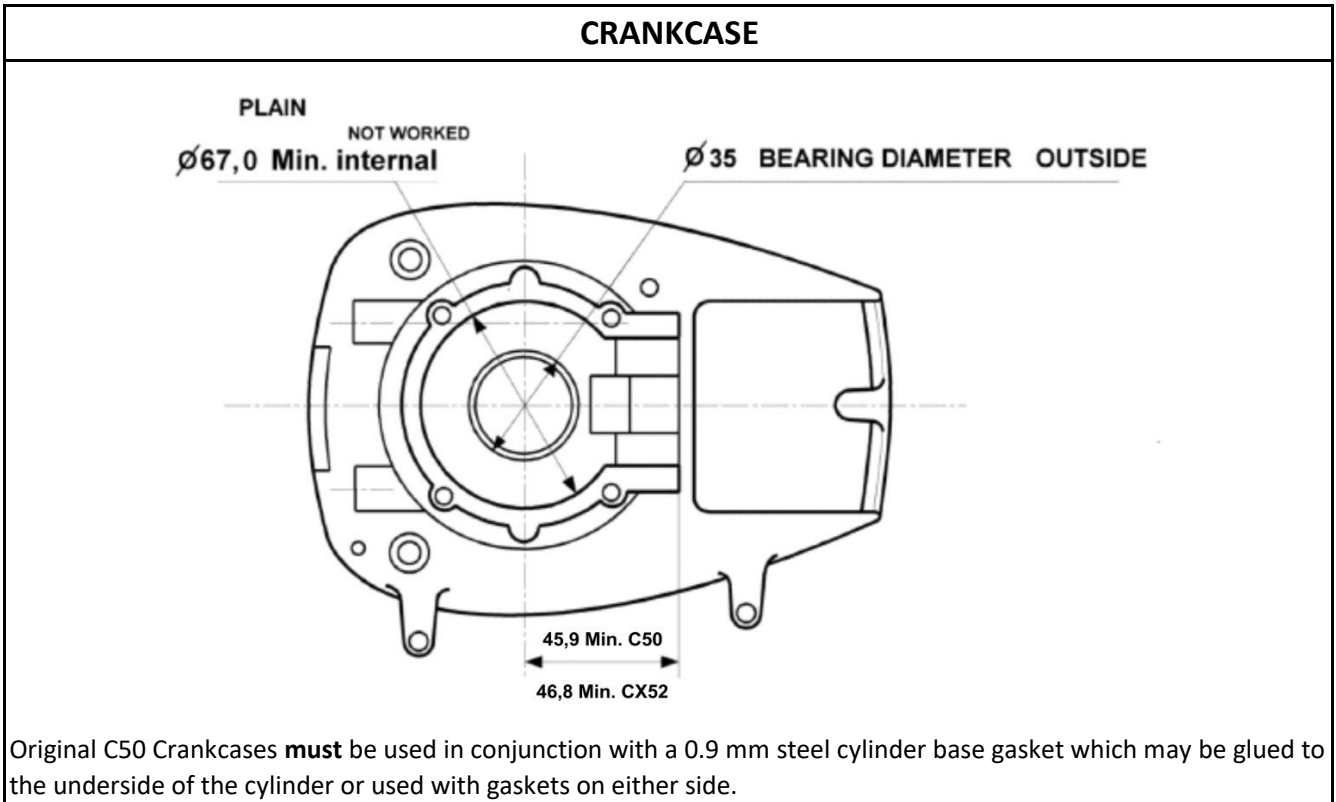
PISTON WEIGHT BARE 50grams min
58grams max



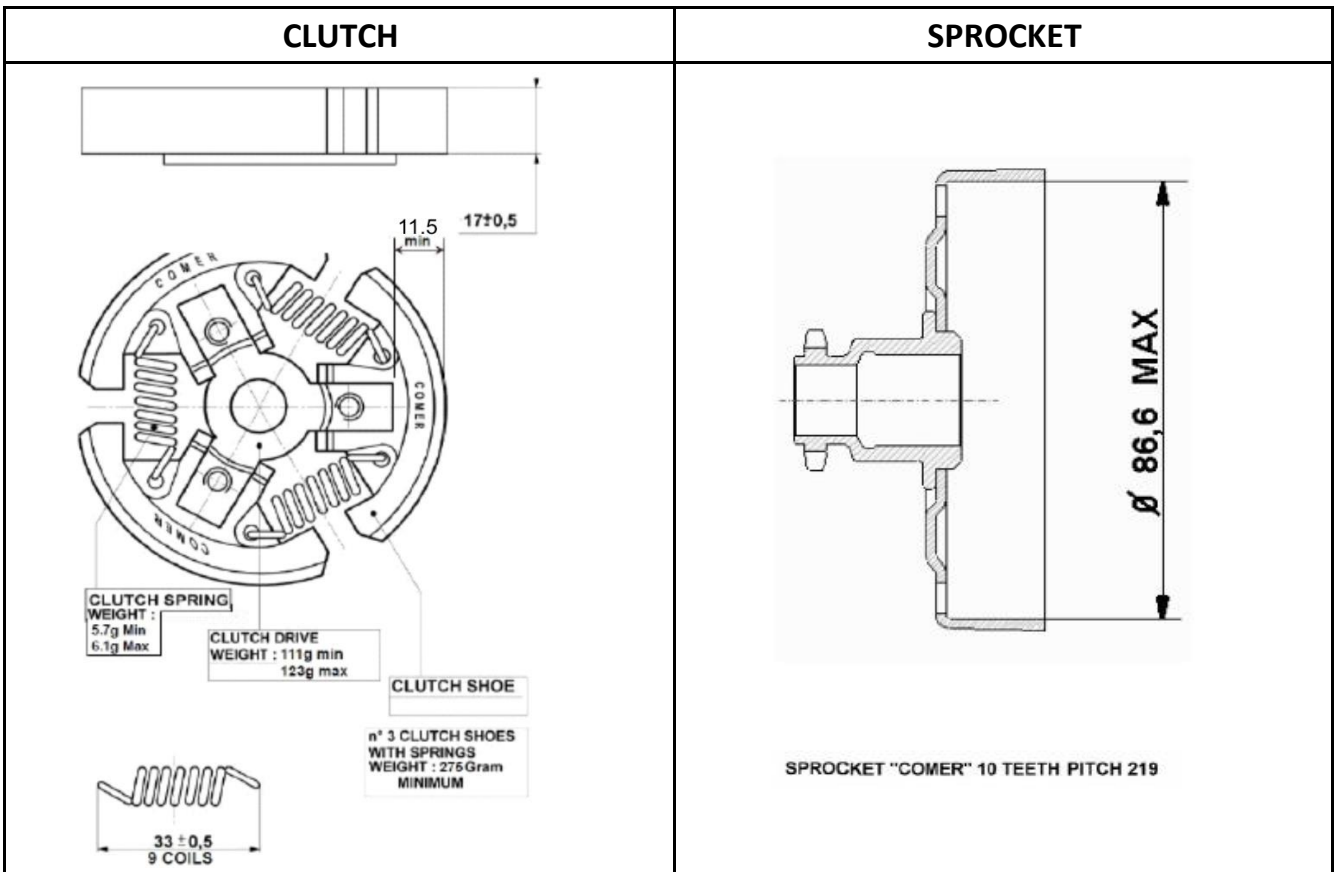
N° 2 Piston rings 1.45 ± 0.05

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 style="text-align: center;">It is permitted to extend the ignition lead to A maximum length of 180 mm between the coil and the start of the plug cap and alternate plug cap may be used. SPARE PART CODE: C050-452-02</p>
Code FJ 20-07	IGNITION TIMING
 <p style="margin-top: 20px;">Weight= 378 min without key 402 max</p>	<p>It is permitted to omit the woodruff key.</p> <p>It is recommended that the timing be set at 4.00 mm 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 4.20 mm btdc with no tolerance.</p> <p>It is recommended that that the nut is torqued to 25Nm.</p> <p>No removal of metal whatsoever.</p>
SPARE PART CODE: C050-453-02	



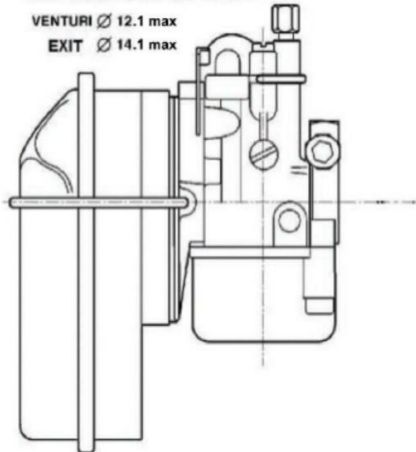
Original C50 Crankcases **must** be used in conjunction with a 0.9 mm steel cylinder base gasket which may be glued to the underside of the cylinder or used with gaskets on either side.



CARBURETTOR

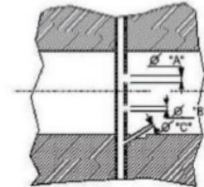
DELL' ORTO SHA 14-12L ORIGINAL

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

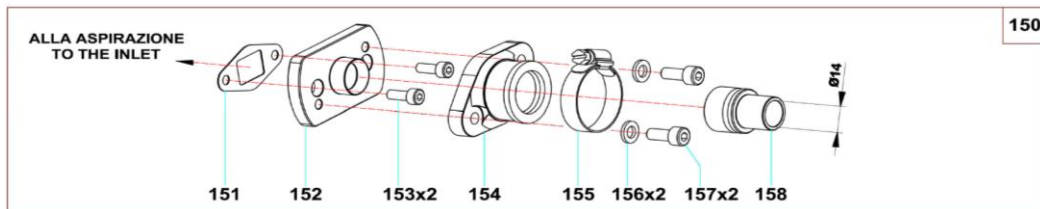


AIR BOX WITH 1 FILTER MIN
AIR BOX ORIENTATION FREE

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

No additional fixation, brackets, etc. allowed

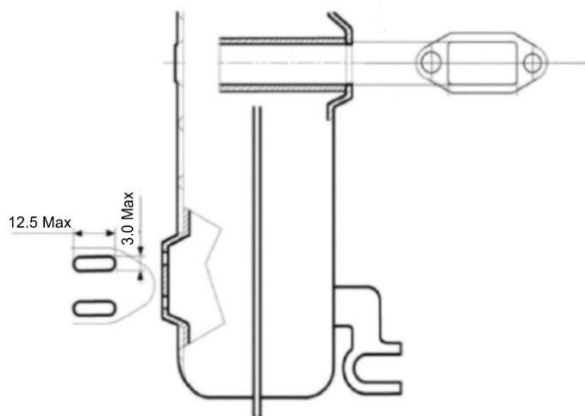
INLET MANIFOLD



Original C50 Rubber Inlet Manifold or EMR CX52 Manifold Assemblies are both permitted. No modifications allowed.

MUFFLER TYPE A PRE 2022

ORIGINAL EXHAUST ONLY



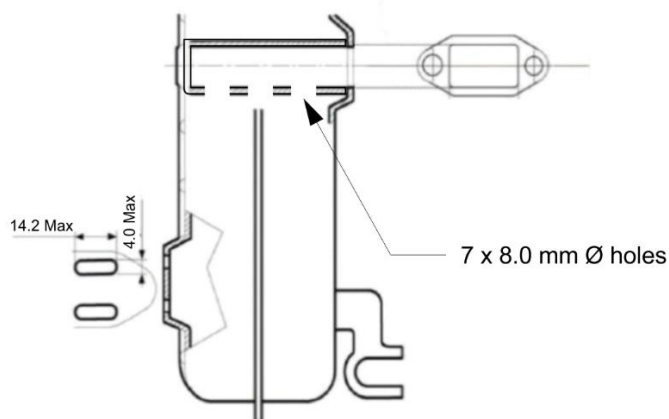
- * Original Corner gasket to be fitted
- * All exhaust gasses must exit via the two outlet slots ie, any additional holes / loose exhaust will lead to exclusion

- * Outlet slots may be filed to the maximum dimensions corners may be radiused or square.

- * Original part and no other alterations permitted
- * Plastic heat shield may be removed.

MUFFLER TYPE B 2022

ORIGINAL EXHAUST ONLY



- * 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.
- * Original part and no other alterations permitted
- * Plastic heat shield may be removed.

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 gently 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 **125** degrees no tolerance

Exhaust Port duration maximum **150** 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 or cable ties as an additional fixation for the fuel tank.

Clutch: The engine may not exceed 4 500 rpm before the kart starts to move forward.