

# MALOSSI

## PIAGGIO

### PX 200 E COSA 200

#### FEATURES:

Cylinder, cylinder head and piston in special long-wearing high-strength alloys.

Bore: 68,5 mm; piston displacement 210 cc.; compression ratio 1:10,5.

Cylinder in alluminium alloy with silicon. C.V.F. distribution system (patented by Malossi = High speed Fluid Cycle) with 7 transfers. 4 main two-way ports and 3 additional ports. Cylinder barrel in nickel and silicon.

CVF II exralight and compact piston, with low noise profile and self-lubricating surface.

Two S10 cast-iron piston rings with half-tapered section.

IN ORDER TO GET THE CORRECT ASSEMBLY OF THIS KIT, ADDRESS YOURSELF TO A SPECIALIZED WORKSHOP WHICH MUST STRICTLY COMPLY WITH THE FOLLOWING INSTRUCTIONS, PAYING ATTENTION PARTICULARLY TO POINTS N. 1-2-3-4-5-11-15-16-17-18.

#### ASSEMBLY INSTRUCTIONS:

##### 1) STRIPPING THE ENGINE

Before stripping the engine, wash the frame and the engine; then remove the old cylinder, cylinder head and piston and clean carefully the face on which the cylinder rests. Clean all the conversion components with petrol and dry them with compressed air; make sure that the new cylinder transfer ports are perfectly clean and free from any residue. Finally lubricate, using motor oil, the conrod assembly, the piston pin, and the bearing cage (before lubricating the cage, carefully check it, and, if necessary, replace it).

##### 2) PISTON

Place the piston on the conrod with the arrow on the crown pointing to the exhaust port; insert the piston pin by hand and push it in, without forcing, using a dowel pin. Fit the piston pin circlips securely in their seats.

##### 3) INSERTION OF CYLINDER AND ALIGNMENT OF PISTON

Fit the base gasket and fit the piston, without its rings, into the cylinder. Make sure that the cylinder goes completely into the crankcase allowing a little clearance. If you feel excessive friction or any obstruction whatsoever, locate the cause and remove it.

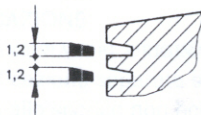
Tighten the four cylinder securing nuts, inserting some spacers in the cylinder head and check, using a feeler gauge, that the piston slides properly in the barrel.

In case the upper side of the piston tends to lean on one side of the cylinder, slide out this last one and straighten the conrod, using a pin

in the piston pin hole (repeat as often as necessary until you get the perfect alignment between barrel and piston).

#### 4) PISTON RINGS

Slide out the cylinder and fit the piston rings, as illustrated.



#### 5) CYLINDER

Fit the base gasket, make the ends of the piston ring meet at the ring peg on the piston and slide the piston into the cylinder, without forcing it.

#### 6) HEAD

On the original head, round off the corner formed by the combustion chamber and the head base to 45 degrees for 1,5 mm., to avoid that the piston hits on.

To obtain better performances, before doing the abovementioned operation, we suggest you lower 1 mm. the gasket face.

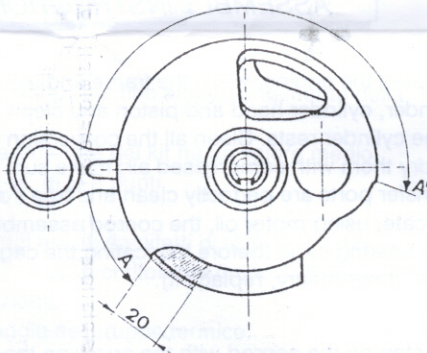
Then, reassemble the head with the relevant gasket, tightening the nuts in 1,8 kg/m in crosswise order.

**TO GET MAXIMUM PERFORMANCE, WE SUGGEST YOU TO FOLLOW THE FOLLOWING INSTRUCTIONS:**

#### 7) CRANKSHAFT

Fit a special crankshaft (or a modified original one) which has the characteristics shown in the illustration.

How to modify the original crankshaft:  
remove the shaded section from the crankweb on the clutch side, being very, VERY careful not to damage the outer face between points A and A'.



#### 8) CRANKCASE

Widen the intake duct by removing the shaded areas shown in the illustrations below. The dimensions must be exactly like the ones shown.

When completed, surface H must have no scratches on it, as even the slightest blow-by through flywheel and crankcase is harmful to the engine.

Finally, match the transfer ports on the crankcase with those on the cylinder, using the base gasket as a template.



**PIAGGIO**  
Vespa Px 200  
Cosa 200

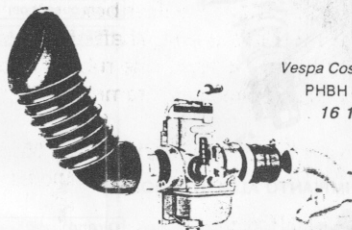
**CILINDRO COMPLETO**



CVF II  
Ø 68,5  
31 4049

**IMPIANTO ALIMENTAZIONE**

Diretto



Vespa Px 200  
PHBH 30 BD  
16 10701

Vespa Cosa 200  
PHBH 30 BD  
16 10940

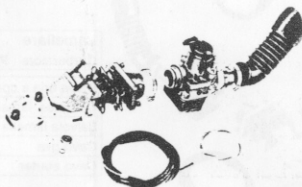
**TRASMISSIONI PRIMARIE**



67 3888  
Rapp. 23/64

67 5235  
Rapp. 24/63

Lamellare



Vespa Px 200  
PHBH 30 BD  
16 10903

Vespa Cosa 200  
PHBH 30 BD  
16 10941

29 4586

**MOLLE FRIZIONE RINFORZATE**





essential to replace the original gear set, fitting the primary transmission (23-64 straight teeth) art. 67 4084.

### **15) IGNITION**

Advance angle: 18 (B.T.D.C.).

### **16) SPARK PLUG**

NIPPONDENSO W 24 ES-U; W27 ES-U for heavy uses (or equivalent heat ratings).

### **17) FUEL and LUBRICATING OIL**

**MODELS WITH MIXER AND ORIGINAL CARBURETTOR:**

Check that the lubricating pump is in perfect condition and that the smoke coming out the exhaust is not excessive, but make sure that it is present in all revolution ratios and, most of all, when the engine is at full throttle.

**MODELS WITHOUT MIXER OR WITH PHBH 30 CARBURETTOR:**

Use super-premium gasoline/4 star with 3% of oil for 2 stroke engine

MOTUL: for normal or sport use MOTOLUBE (half-synthetic oil);

for heavy or special use MOTUL 600 (synthetic oil at 100%).

### **18) RUNNING-IN**

For the first 500 km (300 miles) do not exceed half throttle and avoid uphill climbs.

Between 500 and 1000 kms (300 and 600 miles) avoid continuous operation at full throttle.

If run in according to our instructions, the engine begins working at the best of its capacity after 1000 kms (600 miles).

### **19) MAINTENANCE**

Every 3000 kms (1850 miles), thoroughly clean the cylinder head, the piston crown and the exhaust port, freeing them from all carbon.

### **20) GENERAL WARNINGS**

Do not make maximum demanded of the engine until it has reached full operating temperature (after 20 minutes).

The maximum jet of the carburettor of the kit set at an average value. In the cold season, increase it by 5-8 points.

### **21) GUARANTEE**

The kit components are guaranteed free from manufacturing defects.

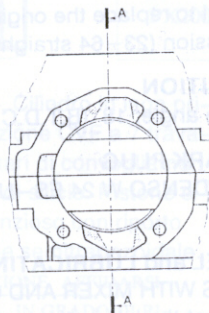
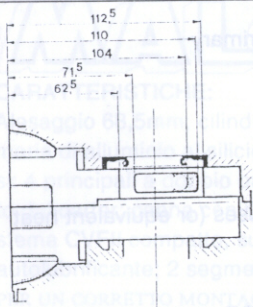
Parts claimed to be defective can be returned to us, freight prepaid, with our written approval only.

This guarantee does not cover seizure of the cylinder or piston.

We cannot accept responsibility for accidents or damages due to improper use of our products.

We thank for having chosen one of our products and take the opportunity to wish you **MANY HOURS OF TRUE ENJOYMENT.**

**N.B. FOR COMPETITION ONLY.**



### 9) ORIGINAL CARBURETTOR KIT

Replace the main jet with one of d. 125.

### 10) MALOSS I CARBURETTOR KITS PHBH 30 BD ART. 16 10701

Disassemble the original carburettor, the filter box (with incorporated lubricating pump) and take the little driving shaft off the crankcase.

Then fit the new gasket, the inlet manifold, the rubber and the carburettor, connecting this last one to the frame using the apposite coupling rubber.

The carburettor must have a lateral inclination of 30–35 degrees (without causing carburation problems) to avoid friction on the frame.

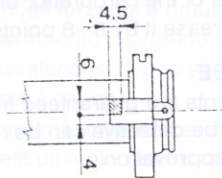
### 11) CARBURETTOR SETTING

CARBURETTOR	EXHAUST	MAIN JET	PILOT JET	NOZZLE	NEEDLE	THROTTLE VALVE	SETTIN KIT
SI 24/24	original	125	55/160	BE3	—	04	
	Malossi	130	55/160	BE3	—	04	
PHBH 30 BD	original	122	63	266AS	X1 1/A	70	68 4639
	Malossi	125	63	266AS	X1 1/A	70	68 4639

Using an advanced crankshaft, increase the main jet of 5–7 points.

### 12) THROTTLE CONTROL

To enable the PHBH 30 carburettor to open completely it is essential to remove from the throttle control the shaded area shown in the illustration.



### 13) CLUTCH

Check that the disks are in perfect conditions, otherwise replace them. Moreover replace the original springs with the special reinforced ones art. 29 4586.

### 14) PRIMARY TRANSMISSION

To enable full power provided by the conversion system, it is



**PIAGGIO**  
Vespa Px 200  
Cosa 200

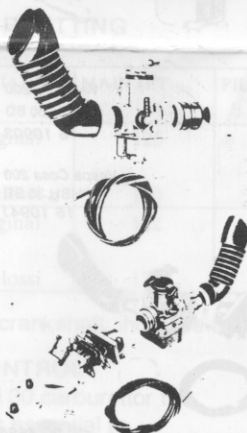
**MALLOSI**

**CVF II**



Cilindro completo CVF II Ø 68,5	31 4049
Pistone completo	34 4035 • Ø 68,5
Segmento	35 7068 2 stp. S10 cr - 68,5 x 1,2
Complessivo spinotto	23 4492
Busta guarnizioni	11 4038
• SELEZIONI: A - B - C - H	

**IMPIANTO ALIMENTAZIONE**



Diretto	16 10701 Ø 30 Vespa Px 200	16 10940 Ø 30 Cosa 200
Carburatore	72 5658 PHBH 30 BD	72 6177
Soffietto presa d'aria	13 2561	
Collet. d'aspirazione	02 2158 Ø 30	
Manicotto	13 1433	
Cavo gas	22 2519	
Cavo starter	22 2406	22 6168

Lamellare	16 10903 Ø 30	16 10941 Ø 30
Carburatore PHBH 30 BD	Vespa Px 200	Cosa 200
Prese aria a cornetto	20 5782	
Comples. lamellare	20 5458	20 6195
Valvola lamella	27 4235 VL6	
Cavo gas	22 2519	
Cavo starter	22 2406	22 6168

**TRASMISSIONI PRIMARIE**



67 3888	67 5235
Rapp. 23/64	Rapp. 24/63
Dischi e molle di ricambio	07 4084