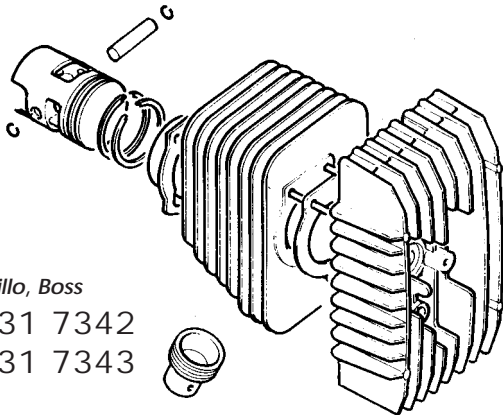




Ipermatic Replica

Cilindro ø 41 a 6 travasi, in ghisa, pistone in lega di alluminio al silicio con riporto di solfuro di molibdeno, mono segmento semitrapezoidale da 1,2mm in ghisa S10 cromato.



ø 41

Piaggio

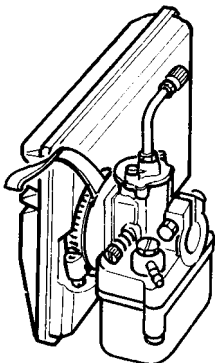
Si, Bravo, Grillo, Boss

sp. ø 10 31 7342

sp. ø 12 31 7343

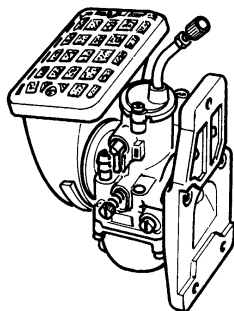
Impianti alimentazione

SHA 1



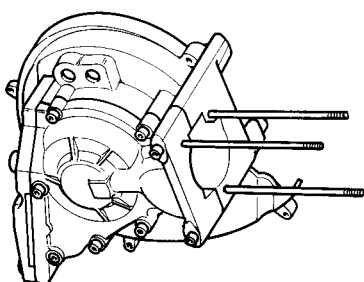
- Ciao 1610866
- Bravo 1610867
- Boxer 1610868
- Ciao Px 1610870
- Boss, si, Grillo 1610869

PHBG per carter Malossi



- Motore MP2
- PHBG 17 B 1610994

Carter Malossi



- accensione a puntine 57 6809
- accensione elettronica 57 6810
- kick starter
- accensione elettronica 57 6811

ISTRUZIONE 73-7342

PIAGGIO

Ciao, Si, Ciao Px, Boss,
Bravo, Superbravo, Grillo

Masse frizione



- per variatore 52 7003
- per modelli senza variatore 52 7005

Alberi motore H.c.p.

con distribuzione anticipata a masse volaniche circolari per carter originale



- sp. ø 10 53 3975
- sp. ø 12 53 3967

con volani a masse circolari per carter Reed Valve System

- sp. ø 12 53 1802

Variatore Multivar



- tutti i modelli 51 3863
- modello economico 51 7358

- Cinghia dentellata
- Bravo 61 7223
- Ciao 61 7227
- Grillo 61 7222
- Si, Boss 61 7314

Rapporti allungati H.t.q.



- per modelli con variatore 67 7021

Puleghe e cinghie dentellate:

modelli senza variatore

ø	PULEGGE NUDE	CINGHIE	PULEGGE + CINGHIE DENTELL.
65	61 3548.OB	61 7225	61 7359
70	61 3538.OB	61 7224	61 7360
80	61 7280.OB	61 7226	61 7361



PIAGGIO

Ciao, Si, Ciao Px, Boss,
Bravo, Superbravo, Grillo



Dear Sir, we thank you very much for the preference you have given us by choosing our products. The consent of our customers is the most important incentive for the creativity of our designers and of all our company. Right from the very beginning, the objective of Malossi srl has been to make products of higher quality, in a fully satisfying relationship with its customers. Malossi products are sold in 57 countries all over the world with a distribution system of 3500 sale points. This fills us with pride and leads us to an increasingly greater commitment to offering innovative products to everybody who uses two-wheeled vehicles. Our company and our technicians are at your complete disposal to offer you a modern and faultless service.

The motorcycle fitted out with this kit must only be used for competition on a closed track (it is strictly forbidden to use it on the road). This kit is indicated for the 70 cc series and higher series motorcycle competitions. Please, take note that to obtain optimum performance all mechanical parts of the vehicle must be in perfect condition and that the assembly instructions must be rigorously adhered to.

TECHNICAL FEATURES:

Ipermatic Replica cylinder kit Ø 41 mm.

Cylinder: with six transfer ports and two by-passes, 41 mm bore x 43 mm stroke, engine capacity 57 cc, compression ratio 12.5:1, made with high content, self-lubricating, laminar graphite cast iron.

Piston: aluminium alloy with a high silicon content, single piston ring groove coated with molybdenum sulphide.

Piston ring: 1.2 mm, semitrapezoidal, chromium plated, spherical, shock resistant cast iron.

Head: high silicon content, die-cast aluminium alloy. It is provided with concentric combustion chamber and spark plug.

Combustion chamber with calculated squish and supplied with 6.3 mm decompression valve.

STRAIGHT TOOTHED HTQ GEARS SET

Complete set formed of 4 gears for motorcycles fitted with a variator: total ratio 1:6.88 – teeth number 11 x 23 x 21 – 11x36 – These teeth are K2D steel made, cemented, tempered, ground to a very high mechanical resistance, made by absolute precision computerised machine tools

VARIATOR

MULTIVAR: "Third Generation" Variator.

The Malossi Multivar Variator can be fitted in all the motorcycles supplied with an original variator. Large range capacity. Strongly progressive cubic curve. Specific calibration for each vehicle with the possibility of modifying the speed at which it is used. It works completely dry, with self-lubricating movements.

It works on the speed ratio between the engine and the wheel, like a gear change with one or two extra gears compared to the original gear change. This is a big advantage, which uses the increased power of the modified engine in the best way. MULTIVAR is sold calibrated for engines with a high torque and it can be calibrated at will simply replacing the supplied rollers with others Malossi rollers of different weight.

Technical data:

Range of use from 28 mm to 88 mm medium diameter (dimension from 20 mm to 90 mm).

MACSI

FLUID COMPENSATOR WITH VARIABLE COMPENSATION CHAMBER FEATURES AND ADVANTAGES

- It optimises the power supply in a very wide range of engine speeds.
- It eases and reduces the lack of carburation due to the difficulties of feeding at critical engine speeds.
- It does not need any adjustment and is automatic and self-adjusting.
- Its is easy and quick to assemble.
- It saves fuel and increases performance.

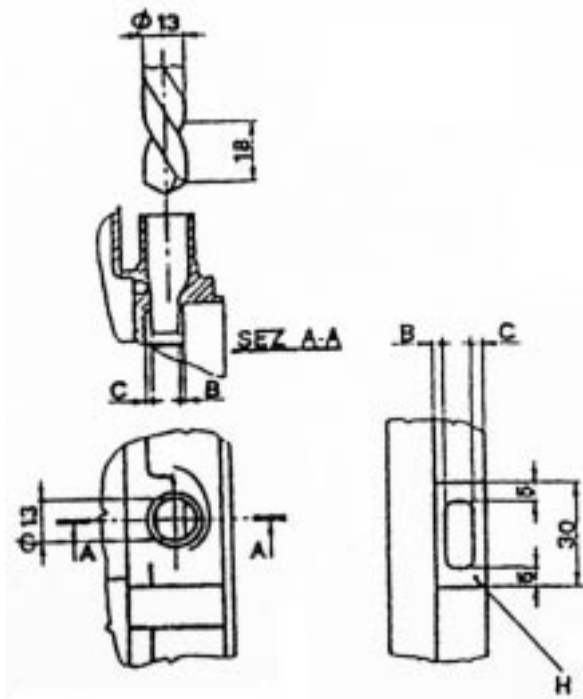
ASSEMBLY INSTRUCTIONS

Before starting work, carefully clean the motorcycle, above all the engine and the parts around it, then take the engine out of the frame. If with the cylinder kit, the Malossi reed valve crankcase has to be fitted too, please, follow the instruction enclosed with the crankcase.

If on the other hand, the cylinder kit has to be fitted to the original crankcase, disassemble the old cylinder and before assembling the new one, check that the play on the connecting rod and on the roller bearings is not excessive. In this case, do the sealing test on the oil seal ring on the flywheel, as follows.

Fill the engine crankcase with petrol and observe whether it passes around the crankshaft. If it does so, the oil seal ring does not work. If just one of the above mentioned parts is not in perfect condition, make sure you replace it with Malossi original parts. If you want to increase the power and keep the original crankcase, it is necessary to modify them as follows.

These products are reserved solely for races in locations reserved for those purposes and in accordance with the regulations issued by the competent authorities for sports events. We decline any and all responsibility for improper use.



ORIGINAL ENGINE CRANKCASE.

Widen the intake pipe with an 13 mm diam. helicoidal bit up to 18 mm of depth (see figure)

Widen the intake pipe in the crankcase taking care not to change the level B (see figure). Finally, join the intake pipe and the rectangular opening on the crankcase.

The surface H must be free of scratches, since even the smallest leakage between flywheel and crankcase would prejudice the correct working of the engine.

When the modifications are completed, carefully clean all the engine parts, washing them with petrol and blowing them with compressed air.

CRANKSHAFT

In engines with the original crankcase, in order to have the best performance it is necessary to assemble the Malossi enlarged diagram crankshafts, art 53 3975 for pin Ø 10, or art. 53 3967 for pin Ø 12. For the engine with reed valve crankcase, crankshaft art. 53 1802 is recommended.

Assembly does not require special skills, apart from good mechanical ability. Then close the crankcases with new gaskets, repeating the actions done during the disassembly in reverse order. Be sure that the crankshaft has the maximum fluency when the locking screws of the crankcase are tightened.

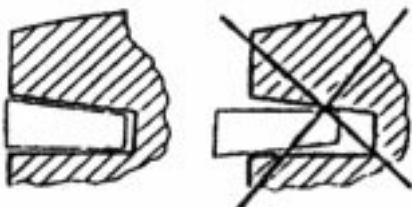
PISTON

Fit the well-lubricated roller cage into the connecting rod small end and fit the piston onto the latter with the opening on the skirt facing the rear transfer ports. Fit the gudgeon pin into the piston by hand and push it towards the cage without forcing it, using the relevant tool. Fit the gudgeon pin circlips making sure that they are well fitted and locked in their seats.

FITTING THE CYLINDER AND LINING UP THE PISTON

Fit the base gasket and feed the piston, without its ring, into the cylinder. Push it down to the cylinder block, making sure that it enters completely and without any friction and that there is still a minimum of play in the in the crankcase seat. If this is not so, look for the causes of any resistance and remedy them. Then secure the cylinder to the cylinder block with the relative nuts, putting in the spacers instead of the head. Turn the engine over a few times by hand and observe whether the piston slides well lined up in the cylinder. Check with a feeler gauge on the gudgeon pin axis whether there is a difference in the gap between the cylinder liner and the piston on the two opposite sides. If the top part of the piston on the gudgeon pin axis tends to rest on one side of the cylinder all the time, remove the cylinder and check that the engine crankcase on the bottom of the cylinder is not dented or has residues of gaskets, or that they are not well lined up, which forms a step preventing the cylinder from sitting perpendicular. If everything is perfect, it means that the connecting rod is bent. If you do not want to replace it, we recommend you proceed as follows: insert a pin in the gudgeon pin hole end and lever it slightly to straighten the rod.

Refit it and check it. If necessary repeat the operations already mentioned until the cylinder liner and the piston are perfectly lined up. Remove the cylinder again and proceed to the following operations.



ATTENTION:

This cylinder kit uses a special ring with a semitrapezoidal cross-section. When fitting it, follow the instruction in the diagram shown alongside.

PISTON RING

Put the piston ring into the piston groove and check that it does not jam.

Bring the ends of the piston ring together with the piston clamp, then insert the piston into the cylinder and push it down to the cylinder block without forcing it.

PIAGGIO

Ciao, Si, Ciao Px, Boss,
Bravo, Superbravo, Grillo



H.T.S.R HEAD

Head with hemispherical central combustion chamber and calculated squish.

In order to obtain good engine performance, it is essential to have a perfect compression seal and therefore to smooth the decompression valve before finally fitting it into the head. Use carborundum paste and rotate the valve clockwise and anticlockwise using a screwdriver and check for the perfect matching of the head seat and the valve head. The smoothing with carborundum paste is done between the valve and the head seat itself.

Verify that the return spring is efficient and that it has a good preload. Wash and dry everything with compressed air and then reassemble it well lubricated. Then check the sealing of the valve pouring petrol into the combustion chamber and blowing with low-pressure compressed air through the exhaust gases discharge hole. Check that the bottom is perfectly clean and that it is not dented. Fit the head with its gaskets. Tighten the nuts using the cross procedure to 1.2 Kgm.

IGNITION

Angle of lead 19 degrees (before TDC).

Model with points:

Check that the mountings are perfect; if they are not, replace them. Adjust the gap to 0.45 mm.

Model with electronic ignition:

The spark point fixed by the manufacturer does not need any modification.

SHA 13 -13 FUEL SYSTEM WITH E9 AIR FILTER

Replace the carburettor and the original filter with a MALOSSI system that is expressly calibrated and interchangeable with the original. When a shaft with a larger diaphragm is fitted, increase the jet size by 2 or 3 points.

EXHAUST SYSTEM

Use MALOSSI exhaust systems (see catalogue table)

IGNITION: Angle of lead 19 degrees (before TDC).

SPARKPLUG: NIPPONDENSO W 24 FS -U or BOSCH W 4 AC;

For heavy duty use NIPPONDENSO W 24 FS-U or BOSCH W 3 AC or equivalent heat grades.

FUEL AND LUBRICATION

Premium grade petrol with the addition of 3% Malossi engine and two-stroke oil.

For normal or sports use we recommend Malossi 7.3 semi-synthetic oil.

For special or prolonged use we recommend Malossi 7.1, 100% synthetic oil.

RUNNING IN

For the first 200 km do not exceed 50 km/h and avoid uphill stretches. After 200 km the engine has completed the running in stage and can begin to offer optimum performance (in any case, maximum performance will be had after 500 km).

MAINTENANCE

Every 2500 km remove incrustations of fuel residues from the head, the piston crown, the exhaust port and the silencer. Clean the air filter and its element periodically (lubricating it before refitting).

GENERAL CARE

Every time the cylinder kit is disassembled, replace the head and cylinder bottom gaskets with good quality gaskets in order to guarantee a perfect seal.

Never demand maximum performance from the engine until it has reached its optimum working temperature. The largest jet fitted to the carburettor is ideal for a temperature of 25-30 degrees centigrade; increase it by 3 to 5 points during the winter.

WARRANTY

The components for the modification are guaranteed free from manufacturing faults. Parts considered to be faulty can only be returned, post free, upon our authorisation. The warranty does not cover damage deriving from seizure of the cylinder kit or any other damage caused by this. We decline all responsibility for improper use of our products.

We hope that you have found the above instructions to be clear enough. If something is not clear to you, you can contact us by writing or by telephoning during office hours. Thank you in advance for the observations and suggestions that you may wish to make to us.

That's all from Malossi; we take the opportunity of congratulating you and we hope you have GOOD FUN.

GOOD LUCK.... until the next time.

These products are reserved solely for races in locations reserved for those purposes and in accordance with the regulations issued by the competent authorities for sports events. We decline any and all responsibility for improper use.