

Designed, tried and tested by Malossi engineers in the factory and on the race track, manufactured by leading experts in accordance with the very latest technology using extremely sophisticated machinery and top-quality hard-wearing steel.

## Specifications

half-shafts with monolithic rotating circular masse; in K2D forged steel, tempered, case-hardened, ground, coppered connecting rods in K2D forged steel with double heat treatment. Calculated, dynamic balancing for speeds of up to 16,000 rpm, high-speed connecting-rod bearings, excellent machining and concentric-locating tolerances.

### *Malossi High Quality*

1. The crankshaft is the heart of the endothermic engine.
2. It is an undeniable fact that all aspects of engine performance stem from the crankshaft.
3. One cannot obtain good engine performance and reliability unless a top-quality crankshaft is fitted.
4. This is why Malossi produces only the very best in crankshafts.



## GENERAL ASSEMBLY INSTRUCTIONS FOR MALOSSI CRANKSHAFTS

In order to correctly fit the crankshaft, the use of two high-speed bearings is recommended (grade C3) and the fitting of two new good-quality O rings.

Heat the crankcase using a hair-drier or electric cooker to a maximum temperature of 100-120 °C, fit the bearings ensuring that perpendicularity is maintained; on no account use steel hammers if a press is not available; never hit a metal hammer directly onto the bearings but tap lightly over an aluminium template or use a plastic hammer.

The crankcase can be brought into position by pulling the screws in a diagonal fashion; when tightening down the screws to complete fitting of the crankcase, carefully check that there are no signs of friction on the shaft since the minimum axial pressure on the bearings due to incorrect spacing would cause a notable loss in performance and the bearings would break after just a few kilometres.

Before completing the closure of the engine, check that with piston and cylinder fitted the shaft does not come into contact with other parts whilst rotating; should this not be the case, ascertain the points of collision and file off excess material from the static zones.

Thanks to the highly accurate dynamic balancing and optimum manufacturing precision, this new shaft represents another step forward by technology in the continuing bid to improve performance and reliability of Malossi engines.

**SCOOTER**

 spinotto  
ø 10

 spinotto  
ø 12

 spinotto  
ø 10

 spinotto  
ø 12

			spinotto ø 10	spinotto ø 12			spinotto ø 10	spinotto ø 12	
<b>APRILIA</b>	SR 94	50cc	53 7891	53 8009	<b>MBK</b>	CROSSER CR1	50cc	53 8631	
	AMICO	50cc	53 7621			FIREFOX	50cc	53 7891	53 8009
	GULLIVER (H2O)	50cc	53 7891	53 8009		PHANTOM LC	50cc	53 7891	53 8009
	GULLIVER	50cc	53 7891	53 8009		ACTIVE	50cc	53 8319	
	RALLY	50cc	53 7891	53 8009		BOOSTER	50cc	53 7621	53 8008
	SR REPLICA (H2O)	50cc	53 7891	53 8009		EVOLIS	50cc	53 7891	53 8009
	RALLY (H2O)	50cc	53 7891	53 8009		FIZZ	50cc	53 7891	53 8009
	SCARABEO	50cc	53 7891	53 8009		FORTE	50cc	53 7891	53 8009
	SR	50cc	53 7621			HOT CHAMP	50cc	53 7891	53 8009
	SR WWW H2O	50cc	53 7891	53 8009	NITRO	50cc	53 7891	53 8009	
<b>ATALA</b>	HACKER	50cc	53 8631		BOOSTER N.GEN.	50cc	53 7621	53 8008	
<b>BETA</b>	ARK H2O	50cc	53 7891	53 8009	OVETTO	50cc	53 7891	53 8009	
	CHRONO	50cc	53 7891	53 8009	ROCKET	50cc	53 7621	53 8008	
	QUADRA	50cc	53 7891	53 8009	SORRISO 96	50cc	53 7891	53 8009	
	TEMPO	50cc	53 7891	53 8009	SORRISO	50cc	53 8319		
<b>BSV</b>	AX	50cc	53 7891	53 8009	TARGET	50cc	53 8368		
	DIO GP	50cc		53 7814	<b>PEUGEOT</b>	BUXY	50cc		53 8619
	GZ	50cc	53 7891	53 8009		SC L METROPOLIS	50cc	53 8053	53 8123
	DIO SP	50cc		53 7814		BUXY RS	50cc		53 8619
	DIO ZX94/95	50cc		53 8417		SPEEDFIGHT	50cc		53 8619
	DIO ZX	50cc		53 7604		SPEEDFIGHT H2O	50cc		53 8619
				SPEEDAKE		50cc		53 8619	
<b>FANTIC</b>	BIG WHEEL	50cc	53 7621	53 8008		SQUAB	50cc		53 8619
<b>GARELLI</b>	PONY	50cc	53 8319			SV 50 GEO	50cc		53 8619
	SR	50cc	53 8319			ZENITH	50cc		53 8619
<b>GILERA</b>	EASY MOVING	50cc		53 7600	<b>PIAGGIO</b>	FREE	50cc		53 7600
	RUNNER	50cc		53 7600		MC2	50cc		53 7600
	STORM	50cc		53 7600		NRG	50cc		53 7600
	STALKER	50cc		53 7600		NTT	50cc		53 7600
	TYPHOON	50cc		53 7600		QUARTZ	50cc		53 7600
<b>HONDA</b>	DIO ZX94/95	50cc		53 8417		RESTYLING	50cc		53 7600
	DIO G	50cc		53 7814		SFERA	50cc		53 7600
	LEAD	50cc	53 8053	53 8123		VESPA ET (carbur)	50cc		53 7600
	SH 96	50cc		53 8624		ZIP FAST RIDER	50cc		53 7600
	SFX	50cc		53 8624	ZIP	50cc		53 7600	
	SGX SKY	50cc		53 8624	ZIP SP (H2O)	50cc		53 7600	
	SH	50cc	53 8053	53 8123	<b>RIZZATO</b>	VAMOS	50cc	53 8631	
	SJ BALI	50cc		53 8624		<b>SUZUKI</b>	ADDRESS AH	50cc	53 8631
	DIO SP	50cc		53 7814	AP		50cc	53 8631	
	DIO SR	50cc		53 7814	SEPIA		50cc	53 8631	
DIO ZX	50cc		53 7604	SEPIA ZZ	50cc		53 8631		
<b>HSC</b>	SC 01 L	50cc		53 7814	<b>YAMAHA</b>	AEROX	50cc	53 7891	53 8009
	SC 01	50cc		53 7814		AXIS	50cc	53 7891	53 8009
<b>ITALJET</b>	BAZOOKA	50cc	53 8319			BELUGA	50cc	53 8319	
	FORMULA	50cc	53 8631			BREEZE	50cc	53 7891	53 8009
	PISTA 2	50cc	53 7621			BWS	50cc	53 7621	53 8008
	PISTA	50cc	53 8319			CRZ	50cc	53 8368	
	SCOOP	50cc	53 7621			CT	50cc	53 8319	
	VELOCIFERO	50cc	53 8631			JOG ER	50cc	53 7891	53 8009
	YANKEE	50cc	53 7621			JOG	50cc	53 7891	53 8009
<b>KYMCO</b>	DJ Y	50cc		53 7604		JOG Z	50cc	53 7891	53 8009
<b>LEM</b>	FLASH	50cc	53 8319			NEO'S	50cc	53 7891	53 8009
	GHIBLI	50cc	53 8319			BWS NEXT GEN.	50cc	53 7621	53 8008
	TORNADO	50cc	53 8319			SPY	50cc	53 7621	53 8009
<b>MALAGUTI</b>	F10	50cc	53 7891	53 8009		ZEST	50cc	53 7891	53 8009
	F12 PHANTOM	50cc	53 7891	53 8009		ZUMA	50cc	53 7621	53 8008
	F15 H2O	50cc	53 7891	53 8009					
	CENTRO	50cc	53 7891	53 8009					

## ALBERO MOTORE MALOSSSI speciali per scooter

GILERA  
PIAGGIO

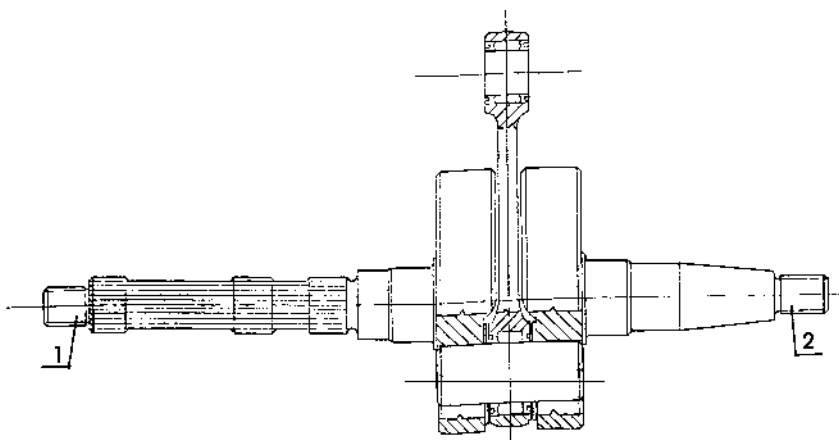
EASY MOVING, RUNNER, STORM, STALKER, TYPHOON 50cc  
FREE, MC2, NRG, NTT, QUARTZ, SFERA, RESTYLING, SFERA,  
ZIP FAST RIDER, ZIP, ZIP SP(H2O), VESPA ET(carburatore)

### ASSEMBLY

Carefully follow the general assembly instructions for Malossi crankshafts.

### WARNING

Using a torque wrench, tighten the nuts of the variable-speed drive and flywheel (1-2) to a torque setting of 40 N-m = (4 kgm).



BSV	DIO GP, DIO SP
HONDA	DIO G, DIO SP, DIO SR
HSC	SC 01 L, SC 01

### ASSEMBLY

Carefully follow the general assembly instructions for Malossi crankshafts.

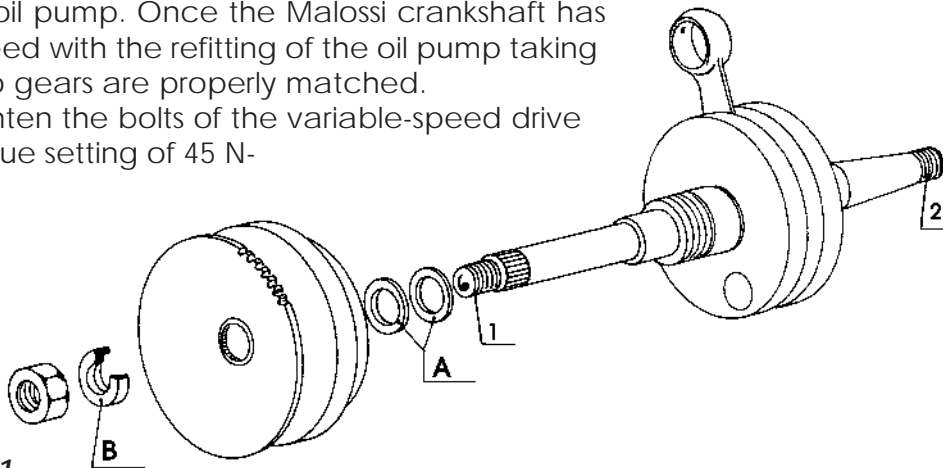
### WARNING

The first stage of operations for dismantling the original crankshaft consists of the removal of the oil pump. Once the Malossi crankshaft has been fitted, one can proceed with the refitting of the oil pump taking care to ensure that the two gears are properly matched.

Using a torque wrench, tighten the bolts of the variable-speed drive and flywheel (1-2) to a torque setting of 45 N-m = (1.2).

### WARNING

The two Malossi washers (A) 08 7816 and the special washer (B) 085394 should only be fitted to Honda scooters Dio Sp, Dio Sr and HSC Sc 01.



APRILIA	SR 94, GULLIV(H2O), GULLIVER, RALLY, SR REP(H2O), RALLY(H2O), SCARABEO, SR WWW H2O50cc
BETA	ARK H2O, CHRONO, QUADRA, TEMPO
BSV	AX, GZ
MALAGUTI	F10, F12 PHANT , F15 H2O 50cc, CENTRO, FIREFOX, PHANTOM LC
MBK	EVOLIS, FIZZ, FORTE, HOT CHAMP, NITRO, OVETTO, SORRISO 96
YAMAHA	AEROX, AXIS, BREEZE, JOG ER, JOG, JOG Z, NEO'S, ZEST

### ASSEMBLY

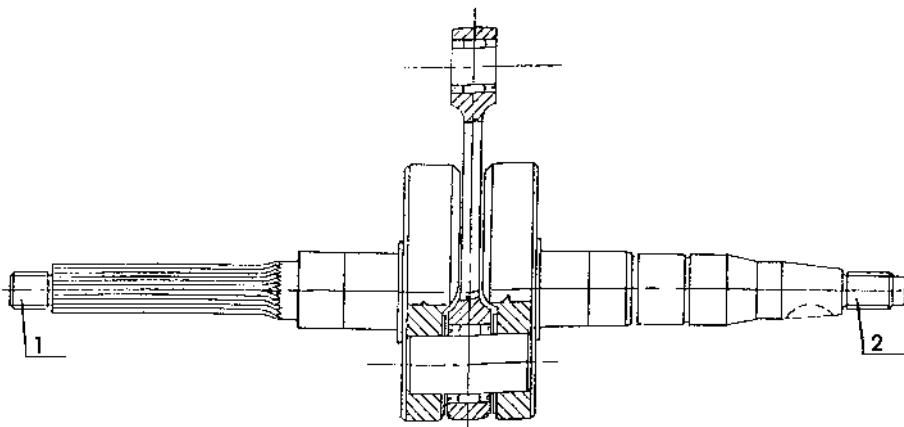
Carefully follow the general assembly instructions for Malossi crankshafts.

### WARNING

Using a torque wrench, tighten the nuts of the variable-speed drive and flywheel (1-2) to a torque setting of 40 N-m = (4 kgm).

### WARNING

*Fit the special Malossi washer 08 5394 in the direction indicated in the diagram below; this should occur whilst assembling the variable-speed drive and before fitting the stop nut of said drive.*





## CRANKSHAFT for mopeds

Designed, tried and tested by Malossi engineers in the factory and on the race track, manufactured by leading experts in accordance with the very latest technology using extremely sophisticated machinery and top-quality hard-wearing steel.

### Specifications

1. Material 18 Ni Cr Mo5
2. Half-shafts with forged monolithic rotating masse.
3. Manufactured using high-precision machine tools.
4. All components are subjected to 5 heat-treatment operations
5. Excellent surface finish for improved reliability.
6. Dynamic balancing for speeds of up to 16,000 rpm
7. Coppered connecting rod in forged 18 Ni Cr Mo5, connected to engine with precision roller bearing for high speeds.

### *Malossi High Quality*

1. The crankshaft is the heart of the endothermic engine.
2. It is an undeniable fact that all aspects of engine performance stem from the drives shaft.
3. One cannot obtain good engine performance and reliability unless a top-quality crankshaft is fitted.
4. This is why Malossi produces only the very best in crankshafts.

## CRANKSHAFT for mopeds

53 3975 Crankshaft for piston pin  $\varnothing$  10

53 3967 Crankshaft for piston pin  $\varnothing$  12

### WARNING

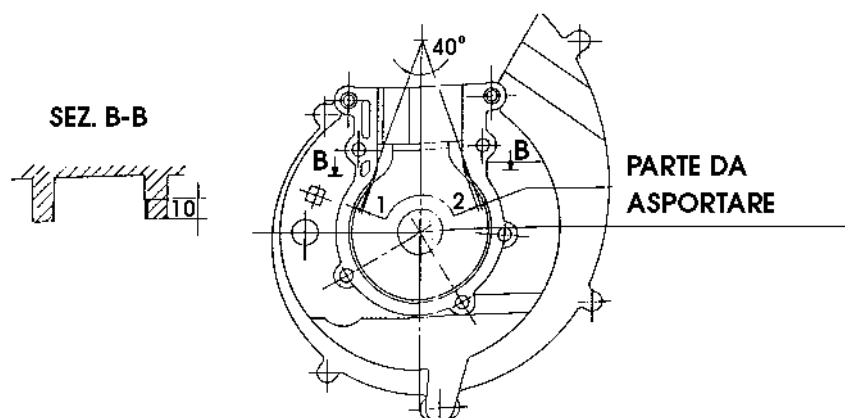
These reinforced shafts have a double-T connecting rod with reinforced section.

Before completing the closure of the engine, check that during the course of normal movement the big end or side of the connecting rod does not interfere with the crankcase or the cylinder barrel (see diagram below).

In case of contact remove excess metal from crankcase or cylinder using a small file or pneumatic appliance. Having completed this operation, clean carefully using compressed air and check correct functioning of crankshaft with cylinder and piston fitted to crankcase on ignition side, keeping all parts between the hands and proceeding to fully complete the assembly only when satisfied that all problems have been resolved.

### Specifications

Crankshaft in forged steel 18 Ni Cr Mo5, tempered, case-hardened and ground with monolithic flywheel and circular crank web; high-speed roller bearings with Racing diagram with notable increase in torque at medium and high speeds; dynamic balancing for high rotation speeds.



## MOPED

MBK	51 V	50cc	53 5505	44	13	
			53 5779	41,8	13	
MBK	88-89	50cc	53 5505	44	13	
			53 5779	41,8	13	
MBK	EV	50cc	53 5505	44	13	
			53 5779	41,8	13	
MBK	EW	50cc	53 5505	44	13	
			53 5779	41,8	13	
MBK	FX	50cc	53 5505	44	13	
			53 5779	41,8	13	
MBK	MAGNUM	50cc	53 5505	44	13	
			53 5779	41,8	13	
MBK	RACING	50cc	53 5505	44	13	
			53 5779	41,8	13	
MBK	ROCK	50cc	53 5505	44	13	
			53 5779	41,8	13	
PEUGEOT	103/4/5 SP	50cc	53 2593	39,6	13	
			53 3268	39,1	12	acc. elettronica
			53 4152	39,1	12	
			53 5509	41	12	
PEUGEOT	103 SPX	50cc	53 6471	39,1	12	acc.elettronica
PIAGGIO	BRAVO	50cc	53 1802	43	12	lamellare
			53 3967	43	12	
			53 3975	43	10	
			53 7313	43	10	
PIAGGIO	BOSS	50cc	53 1802	43	12	lamellare
			53 3967	43	12	
			53 3975	43	10	
			53 7313	43	10	
PIAGGIO	CIAO	50cc	53 1802	43	12	lamellare
			53 3967	43	12	
			53 3975	43	10	
			53 7313	43	10	
PIAGGIO	CIAO PX	50cc	53 1802	43	12	lamellare
			53 3967	43	12	
			53 3975	43	10	
			53 7313	43	10	
PIAGGIO	GRILLO	50cc	53 1802	43	12	lamellare
			53 3967	43	12	
			53 3975	43	10	
			53 7313	43	10	
PIAGGIO	SI	50cc	53 1802	43	12	lamellare
			53 3967	43	12	
			53 3975	43	10	
			53 7313	43	10	
PIAGGIO	SUPERBRAVO	50cc	53 1802	43	12	lamellare
			53 3967	43	12	
			53 3975	43	10	
			53 7313	43	10	

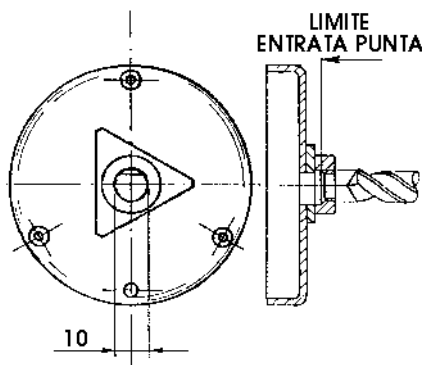
## MALOSSSI CRANKSHAFT reinforced with reed-valve distribution

**Art. 53 1802 Crankshaft designed for reed-valve crankcase with piston pin  $\varnothing$  12  
PIAGGIO BRAVO, BOSS, CIAO, CIAO PX, GRILLO, SI, SUPERBRAVO**

Crankshafts with circular flywheels with reinforced thread, 10 x 1.25 mm, fitted with special Malossi nut art. 19 6928; specially designed for Malossi crankcases with fitted reed valve and engines for Piaggio Racing mopeds.

### ASSEMBLY INSTRUCTIONS

When fitting the above-mentioned shafts to models without variable-speed drive, it is necessary to enlarge the hole of the clutch housing from 8 to 10 mm using a drill bit and being very careful not to touch the feed plane (see diagram below).



### WARNING

It is imperative that this crankshaft be connected to the flywheel using our special key that eliminates the problem of breakages to the original shafts due to fatigue. If losing the special key, on no account replace it with another but request art. Malossi 23 4809.

The clearance between key and seat in the flywheel should be between 0.05 and 0.2 mm.

Our components are guaranteed free from manufacturing defects. Allegedly defective parts can only be returned to us (carriage free) subject to our written approval.

**N.B. To be used exclusively for competition racing.  
Use on public highways is strictly forbidden**

