

TO ALL MONTESA AGENTS

INSTRUCTIONS FOR USING THIS CATALOGUE

We would like that this catalogue could accomplish the aim of usefulness for – which it was intended, making easier your placing of spare parts orders.

It will no doubt be of great help if you make sure that every new modification on this model is added to this catalogue. You will receive information on such modifications in numbered MODIFIED SHEETS for each group of the motorcycle.

These MODIFIED SHEETS will be a photocopy of the original sheet concerning the affected group in which the modified items will be underlined, with indication of the serial number of the first affected motorcycle and also advising on the serial number of the first motorcycle in which modified part/parts can be used as spares.

We would advise you to place every MODIFIED SHEET before the one relating the affected group for you to easily find each modified part.

We will normally remit you as many MODIFIED SHEETS as catalogues priorly sent to you, but please feel free to ask us for as many extra copies as you need for maintaining up-to-date the catalogues of all your dealers. This will – – certainly help you, and your dealers as well, in the placing of the spare parts orders, thus benefiting every Montesa owner which is in conclusion our prime goal.

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INTRODUCTION

This Manual is intended to provide you with all necessary information so that --with your cooperation-- your machine may excel in the specific function for which it was -- purposely created -- MOTO-CROSS.

The technical data and practical advice furnished in this Manual is backed by our highly specialized technical team trained in years of continued research conducted both at the dyno rooms and, simultaneously, on the racing circuits by entering the prototypes in top World events.

The experience put together in this Manual is aimed firstly, to offer you a full, deep knowledge of your machine since an intimate acquaintance and identification is always indispensable when your bike is a thoroughbred racer; and -- secondly, to emphasize the most essential items worth of careful consideration for utmost performance of the machine at all times.

May we wish you outstanding sportive success with your -- new bike

PERMANYER, S.A.
MONTESA Motorcycles.

GENERAL DESCRIPTION

The two-stroke, single cylinder, 3 transfer ports engine displaces 350,4cc. with a bore of 83,5mm. and a stroke of 64 mm. Crankshaft mounted on two - bearings. Ignition by electronic flywheel magneto-alternator.

The engine is located on a frame of chrome-molybdenum alloy, stretched out without welding. Double cradle of great strength and lightness.

MARZOCCHI telescopic fork front suspension with duraluminum crowns. -
Rear suspension is of the swinging type on bronze bearings with two-way -
shock absorbers with settable initial load, very light and efficient.

The carburettor, rubber mounted, has a $\varnothing$ 36 mm. diffuser with air intake -
through a poliuretane filter element located under the seat, protected by a -
silencing box.

Four-speed gearbox, in sequence, with constant mesh gears.

The multiple steel discs clutch in oil bath with constant tension springs -
permits a high performance of the engine.

The size of the tyres is, 3.00" x 21" front and 4.50" x 18" rear.
Through-axle wheels with light alloy rims of high resistance.

The brakes, anchored by reaction rod, are of internal expansion type with
a braking surface of 130 mm. front and 150 mm. rear.

The vehicle in a whole is the result of a careful and devoted development in
the field of competition motorcycling. Each part and component has been -
thoroughly tested on the racing circuits during the Moto-Cross World -
series.

UTILISATION

FUEL

Use petrol mixed with oil at the rate indicated in the lubrication table at the end of this Manual.

The petrol used should not have an octane rating of less than 90.

TYRES PRESSURE

Owner can, to some extent, choose the tyre pressure according to the characteristics of the ground. --

However, the normal pressures are given below as a guide:

	Dry ground		Soft or muddy ground	
	Kg/cm ²	lbs. sq. in.	Kg/cm ²	lbs. sq. in.
Front wheel	0,9	13	0,7	10
Rear wheel	0,8	11	0,6	8,5

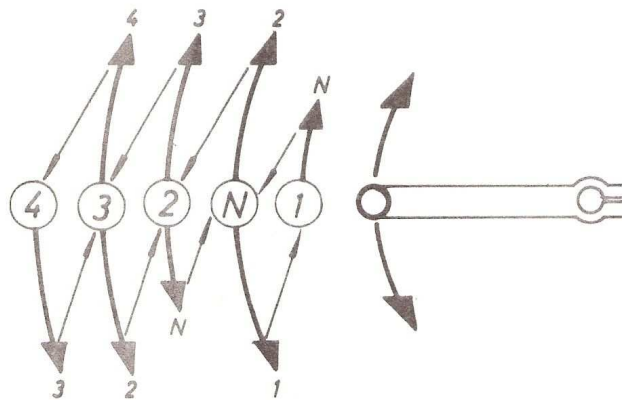
STARTING OF THE ENGINE

- Open the fuel taps.
- If the engine is cold, press the carburettor tickler until the fuel overflows.
- Turn the kick starter lever located on the right hand side of the engine - until it can be operated.
- Open the throttle to a maximum of 1/4 of its travel.
- Kick the lever strongly (the action will have much more effectiveness if - you previously try on the lever until matching with the moment in which - the piston is in its compression phase, presenting thus more resistance, - before kicking).

GEARBOX

The gearbox has 4 speeds obtained by constant mesh gears.

Selector pedal is found at the left hand side of the engine and has to be operated as per the figure hereunder:



RUNNING-IN PERIOD

Due to the particular racing specification of this vehicle, special care is already taken at the Factory level when building this machine, so that no intensive running-in period is needed at the owner's level.

It is however recommended that before entering the machine in hard -- competition, an adaptation period for the working elements be allowed. It is estimated that such a period should represent the equivalent to two -- training sessions at intervals of moderate and high regime of the engine.

PRACTICAL ADVICE

Similarly to what is said for the running-in period, before entering the machine in competition, it is recommended that,

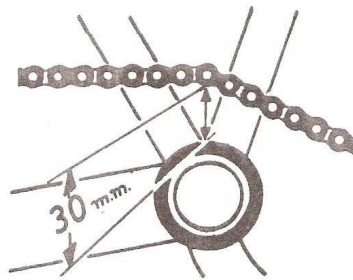
the spokes,

a/ should be retightened after a few laps of the first training session --to avoid undue stresses, all of them should be equally tightened-- , and

b/ repeat the same operations as in a/ after a bigger number of laps have been completed but still during the first training session.

the chain,

should be inspected on the opportunity of checking the spokes --as per above-- and, if necessary, be retightened. The vertical play at the crossing point with the rear arm axle should be of 30 mm. from the rubber sleeve on that arm. (see figure hereunder).



MAINTENANCE

To keep up the racing performance of this vehicle, it is highly recommended to observe the following Maintenance hints carefully.

CARBURETTOR

The only maintenance of the carburettor will consist of a thorough cleaning of all its components after each race or equivalent training session.

When cleaning or declogging the jets never use a wire or similar implement since this could damage the passage and alter the carburetion.

AIR FILTER

Inspection and cleaning of this component is vital for the performance and durability of the engine.

After cleaning with petrol, soak the filter element with SAE-20 oil before replacing the element in the air filter box.

Do it after each race heat or equivalent training session.

CLUTCH, GEARBOX AND FRONT SUSPENSION LUBRICATION

Replace the oil in these mechanisms after the first race and, thereafter, - every 3 races or equivalent training sessions.

Quantities and oil-types as indicated in the Lubrication Chart in this Book.

Levels should of course be checked often.

CYLINDER AND PISTON

These important components should be inspected periodically so as to make sure that the liner, piston and/or ring do not bear any damage or excessive wear.

Such inspection is recommended every 2 races including training.

To carry out that inspection proceed as follows:

Dismantling:

- Remove petrol tank, carburettor and exhaust system.
- Remove cylinder-head.
- Remove cylinder and protect the crankcases opening from dirt.
- Remove the piston ring.

Inspection:

Check the wear of the piston ring as follows:

- Lead of the ring into the lower part of the liner. If the gap between ends is of more than 0,85 mm. (0,033 in.), replace with a new set of rings.

Check the wear of the cylinder:

- Lead one new piston ring into the stroke area of the liner. If the gap between ends is of more than 0,73 mm. (0,028 in.), the liner should be rebored and an oversize piston be fitted (piston oversizes availability is indicated in this Book under Chapter "GENERAL FEATURES AND DATA")

Mounting:

Reverse operation indicated for "Dismantling" bearing in mind to replace the cylinder gasket. Have the nuts of the cylinder and of the cylinder-head moderately fastened and the torque tighten them in an alternate manner according to the torque data indicated under Chapter "GENERAL FEATURES AND DATA" in this Book.

Before fitting the piston in the cylinder it is of course recommended to check the positioning of the rings in their grooves, particularly as to their stop pins.

To ease the leading of the piston into the cylinder, position of the piston should be at its low dead center.

Notice:

While in the process of the inspection just described, remove the carbon deposits in the cylinder-head, piston and exhaust port, periodically.

IGNITION

Since electronic ignition is fitted, no particular maintenance is required. The timing is set at the factory level and will not vary.

If for any reason removal of the rotor is needed, its original mounting position must be carefully observed when putting it back.

SPARK PLUG

It should be checked and cleaned very often. The electrodes gap must be of 0,5 mm.

Replacement is left to your judgement; from a theoretical but effective standpoint of view, It should be replaced before each race.

EXHAUST PIPE

Its rubber fixation to the frame must be inspected periodically since it is intended to absorb vibration which, otherwise, might damage either the pipe or the threaded attachment to the cylinder.

It is also recommended to check the tightening torque of the exhaust nut to the cylinder and the condition of the safety wire.

FRONT SUSPENSION

Carefully check the accordion-type rubber protectors for cracks or other damage which will allow dust and dirt to get in, ruining the oil seals with ensuing oil leakage.

WHEELS

Periodical inspection of the tyres' anchorings is needed. If inoperative, continued successive braking could rip away the tube valve.

SPOKES

As indicated under Chapter "UTILISATION", the spokes should be inspected and tightened evenly after each race heat or equivalent training session.

CHAIN

While in the process of removing the chain for thorough cleaning and lubrication, its condition must be carefully inspected.

Also, when mounted and tightened, the vertical play should be as described in page 5. A too tightened chain will cause problems.

The chain should be replaced every 3 to 4 races.

BRAKES

For efficacy, avoid excessive free play of the commanding hand lever and pedal using the stretchers, when needed, to compensate the wearing out of the brake linings.

The stretchers are found at the end of the operating rod -rear brake-, and at the top end of the cable cover at the handlebar -front brake.

After adjusting the free play conveniently, make sure that the wheels - rotate freely.

Periodically --after each race-- It is recommended to remove the wheels for cleaning the inside of the hubs, check the condition of the brake linings, and grease lightly the rotating, pivoting areas.

REAR SUSPENSION

It is important to keep the bronze bearings of the swinging arm permanently lubricated. Oil SEA-40 must be used.

It is therefore recommended to ensure this lubrication before each race - and frequently check the level of oil through the holes provided both for - filling and checking.

CABLES

Maintain them duly lubricated before each race using their oilers. Oil - SAE-40 must be used.

Replacement of the throttle cable is advised every 3 races.

TWIST GRIP

Check and grease before each race.

PETROL TANK

Although this item does not require any particular maintenance, it is - however important to inspect frequently its rubber mounting to the frame.

MISCELLANEOUS

Before each racing meeting, it is recommended to have all nuts, bolts, etc. of the machine inspected for correct tightening. Those relating to the - engine group and front suspension should be checked more frequently, that is, in each race heat or equivalent training session.

Logically, if before any of the checks above are conducted some deficiency of the vehicle is felt, the inspection of the trouble-area would be advanced to determine its scope and the need for repair.

GENERAL FEATURES AND DATA

ENGINE

Cycle	2 stroke
Cylinder	single
Bore	83,5 mm.
Stroke	64 mm.
Capacity	350,4 c.c.
Compression ratio	12:1

IGNITION

112 Electronic alternator flywheel	MOTOPLAT 9600194-1
Spark advance at t.d.c.	3 mm. (22° over flywheel)

SPARK PLUG

Bosch thermic grade	270
Electrodes gap	0,5 + 0,6 mm. (0,196 +
Thread	14M(x1,25)x1/2" 0,235 in.)

Recommended types:

CHAMPION	N-60R
N.G.K.	B-8ENP
K.L.G.	FE-265
LODGE	RL47
BOSCH	W270T17

CARBURETTOR

Make	BING 54
Type	11.612/0
Diffuser diameter	36mm.
Main jet	165
Low speed jet	40 - 80
Gas valve	0
Sprayer	6,5x1,5(long-splitted)
Needle gauge	+ 2,88
Needle	Nº 3
Needle positioning	

ADJUSTMENTS AND TIGHTENING TORQUE

Minimum diametral clearance between piston-	
-cylinder	0,07mm. (0,0029 in.)
Maximum whipping crankshaft ends mounted on	-
-the crankcase	0,03 mm. (0,0012 in.)

Recommended tightening torque:

	m. Kp.	ft.-lbs.
- Cylinder fixing nuts	2 to 2,5	14,5 to 18
- Cylinder head fixing nuts	3,5 to 4	25,5 to 29
- Crankshaft pinion nut	8	58
- Magneto flywheel nut	8	58
- Spur gear nut for primary transmission	2 to 2,5	14,5 to 18
- Pinion nut shift outlet	8	58
- Entrance tube fixing nut	2	14,5

PRIMARY DRIVE

Type	by gearings
Pinion crankshaft	22 teeth
Primary transmission spur gear	45 teeth
Transmission ratio	2,045

GEARBOX

Number of speeds 4

Pinion	Primary	Secondary	Ratio
1st gear	12 teeth	22 teeth	1,833
2nd "	14 "	20 "	1,428
3rd "	16 "	18 "	1,125
4th "	17 "	16 "	0,941

SECONDARY TRANSMISSION

Counter sprocket	12 teeth
Toothed gear on rear hub	56 teeth
Chain (pitch)	15,875mm. (5/8")
-roller diameter	10,16 mm. (0,400")
-face between plates	6,48 mm. (0,255")

WHEELS

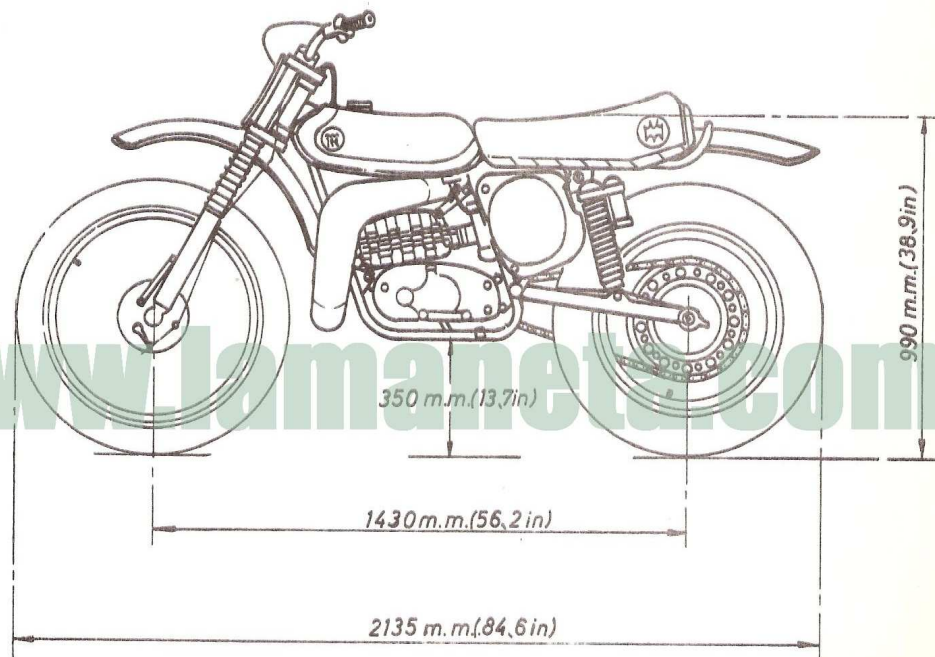
		Spokes		Tyres	
		Quantity	Dimensions(mm)	Type	Dimensions
Front wheel	WM1/1,6	18	3,5x224(l. s.)	cross	3" x 21"
		18	3,5x238(r. s.)		
Rear wheel	WM3/2,15	18	4x224(l. s.)	cross	4,5"x18"
		9	4x197(r. s.)		
		9	4x206(r. s.)		

BEARING DIMENSIONS

	Quantity	Type	Dimensions	Number
Crankshaft	2	radial	30x72x19	6306
Main shaft, right side	1	angular interface	15x35x11	7202
Main shaft, left side	1	radial	20x47x14	6204
Secondary shaft, right side	1	radial	20x47x14	6204
Secondary shaft, left side	1	radial	15x35x11	6202
Front wheel	2	radial(C-3 set)	17x40x12	6203/C-3
Rear wheel	2	radial(C-3 set)	17x40x12	6203/C-3

GENERAL DIMENSIONS

Tank capacity	7L. {1, 83 USA gal.) (1, 52 imp. gal.)
Weight	99 Kg. (218, 2 lbs.)



RECOMMENDATIONS FOR SERVICE

Although the observance of the Maintenance guidelines already provided in this Book will positively help to keep the machine trouble-free, repairs - will be needed from time to time and consequently the following is advised:

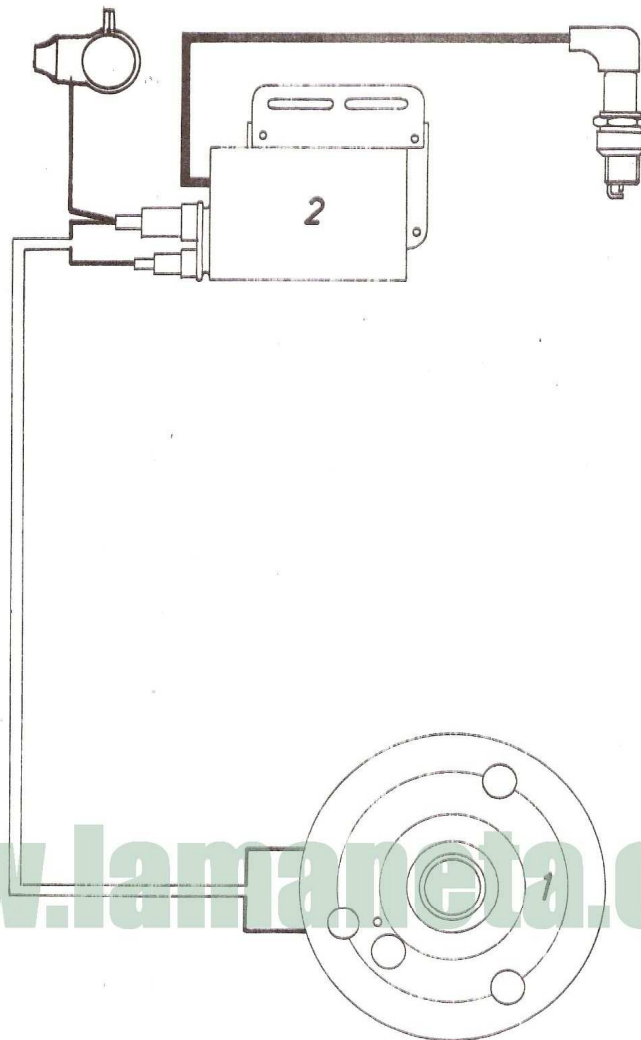
- Any specialized service or repair should be conducted at a duly - authorized Montesa Service Shop.
- To secure the best performance and durability of the machine, - only **MONTESA** genuine spare parts should be used,
- When ordering spare parts,
 - a/ Order by item number as easily found in the exploded draw- ings in this Book, and
 - b/ Mention the serial number of the machine as appears on the engine case and on the frame.

Notice:

All the information --both written and graphical-- contended in this Manual is merely descriptive and parts and/or components of the machine herein - described may change at any time.

INSTALACION ELECTRICA-WIRING DIAGRAM-PLAN DE CABLAGE

1	Volante magnético	Magneto flywheel	Volant magnétique
2	Conversor	Ignition coil	Bobine d'allumage



CAPRA 360 VB

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