





How to Use This MANUAL

In this Manual of Shop the technical characteristics and the procedures of service are described for the motorcycle CBX250.

To guarantee perfect conditions of operation of the vehicle, follow the recommendations of the Chart of Maintenance (Section 3). The realisation of the first programmed maintenance is extremely important, since he/she will go to compensate the initial waste that happens during the period of it relents.

The Sections 1 and 3 are applicable to the whole motorcycle.

The Section 2 present procedures of dis-assembly / installation of components that can be necessary to make the services described in the following sections.

GENERAL INDEX

| | GENERAL INFORMATION | 1 |
|------------|-------------------------------------|----|
| | CHASSIS/FAIRING/EXHAUST SYSTEM | 2 |
| | MAINTENANCE | 3 |
| | LUBRICATION SYSTEM | 4 |
| NOI | FUEL SYSTEM | 5 |
| SMISS | DISMANTLING/ ENGINE INSTALLATION | 6 |
| TRAN | CYLINDER HEAD/VALVES | 7 |
| AND | PISTON/CYLINDER | 8 |
| NGINE | CLUTCH/GEAR SELECTOR | 9 |
| Ш | ALTERNATOR/ CLUTCH START | 10 |
| | TRANSMISSION | 11 |
| | CRANKSHAFT/FLYWHEEL | 12 |
| S | FRONT WHEEL/ SUSPENSION/STEERING | 13 |
| HASSI | REAR WHEEL/SUSPENSION | 14 |
| Ū | HYDRAULIC BRAKE | 15 |
| | BATTERY/LOADING SYSTEM | 16 |
| /STEM | IGNITION SYSTEM | 17 |
| ECRICAL SY | SYSTEM OF ELECTRIC STARTER | 18 |
| | LIGHTS/INSTRUMENTS/ SWITCHES | 19 |
| ш | WIRING DIAGRAM | 20 |
| | FAULT FINDING | 21 |

SYMBOLS

The symbols used in this manual indicated procedures of service. The additional information relating to those symbols will be explained specifically in the text, without the use of the same.

| | Replace(s) piece(s) by a new before mounting. |
|---------|--|
| ACEITE | Use the motor oil recommended, unless otherwise specified another. |
| GEHE | Use the recommended solution of oil of molybdenum (mixture of motor oil and grease of molybdenum, in a ratio of 1:1). |
| GRASA | Use grease multipurpose (grease multi-function on the basis of lithium NGLI No. 2 Or equivalent). |
| | Use grease of carbon disulphide molybdenum (containing more than 3 percent of car- bon disulphide of molybdenum, LITHIUM No. 2 Or equivalent). Use pulp on the basis of carbon disulphide molybdenum (containing more than 40 percent of carbon disulphide of molybdenum, LITHIUM No. 2 Or equivalent). |
| | Use grease silicone-based. |
| TRABA | Apply firming agent (locks chemistry) with resistance to the average torque, unless otherwise specified another. |
| SELLADD | Apply liquid sealed (sealer). |
| FRENO | Use of fluid brake DOT 4. Use the fluid brake recommended, unless otherwise specified another. |
| ATF | Use fluid to fork or suspension. |

1. GENERAL INFORMATION

| SAFETY STANDARDS | 1-1 | Gear, outfit, kit |
|-----------------------------|------|-------------------------------------|
| SERVICE STANDARDS | 1-2 | LUBRICATION POINTS AND SEALS 1-16 |
| IDENTIFICATION OF THE MODEL | 1-3 | CABLES AND WIRING 1-18 |
| SPECIFICATIONS | 1-4 | SYSTEMS OF CONTROL OF EMISSION 1-24 |
| VALUES OF TIGHTENING torque | 1-13 | |

SAFETY STANDARDS

CARBON MONOXIDE In case of that is necessary to make some service with the engine running, make sure that the local is well ventilated. Never put the engine running in local closed.

ADVERTENCIA

The exhaust containing carbon monoxide poison. which can cause loss of consciousness and even death.

Run the engine in an open area. In the event that is necessary to operate in a local closed, make sure that this present a system extractor of exhaust gases. PETROL (gasoline) to work in a local well ventilated. Do not smoke. Avoid llamas or sparks in the area of work, or where the petrol (gasoline) is stored.

The petrol (gasoline) is extremely flammable and explosive under certain conditions. Keep out of the reach of children.

HOT Components ADVERTENCIA

The engine parts and exhaust system are heated too and thus remain for some time, even after the engine has ceased to function. Wear gloves with thermal insulation or wait until the engine and the exhaust system have been cooled, before handling these parts.

USED MOTOR OIL ADVERTENCIA

The used motor oil can cause skin cancer if comes into contact with the same during a long period. Although it is not likely to happen, unless it is handled used oil daily, it is advisable wash their hands with soap and water after manipulate it. Keep out of the reach of children.

ASBESTOS Never use a air hose or a dry brush to clean up the sets of brake. Use only a device for cleaning approved or an alternative method specially developed with the aim of reducing the damage caused by asbestos fibers.

ADVERTENCIA

The inhalation of asbestos fibers can cause damage to the respiratory system and cancer.

BRAKE FLUID

ATENCION

The shedding of fluid brake on pieces painted, of plastic or rubber can cause damage. Place a cloth on these pieces always perform services in the system. Keep out of the reach of children.

ELECTROLYTE AND HYDROGEN GAS FROM THE BATTERY

ADVERTENCIA • The battery produces explosive gases. Keep away from sparks and lit cigarettes. Provide adequate ventilation to the reload or use the battery in a local closed. •Battery contains sulphuric acid (electrolyte). If comes into contact with the skin or eyes may cause serious burns. Use protective clothing and protective mask. In the event that the electrolyte comes into contact with the skin, wash with plenty of water. In the event that the electrolyte comes into contact with the eyes. wash with water for at least 15 minutes and search medical relief immediately. • Electrolyte is poisonous. In case of ingestion drink a large amount of water or milk. Then drink milk of magnesia or vegetable oil and search medical relief immediately. Keep out of the reach of children.

SERVICE STANDARDS

1. Use only spare parts, oils and lubricants genuine HONDA or recommended by HONDA or their equivalents. The spare parts that do not respond to the specifications of HONDA can damage the motorcycle.

2. Use the tools specially designed for this vehicle, for which prevent damage or incorrect fitting.

3. Only use metric tools to make services to the motorcycle. The bolts, nuts and bolts metrics are not interchangeable with elements of fixing British. The use of tools and fixers incorrect can damage the motorcycle.

4. Install gaskets, rings o, smugglers hendidos and plates of locks new when carrying out the assembly.

5. By tightening bolts, screws or nuts in series, starting with the larger diameter or by the bolts or screws. Tighten value specified, gradually, and in sequence mixed, unless otherwise specified a different sequence.

6. Clean the pieces with solvent clean after the dismantling. Lubricate the surfaces of slippage before mount again.

7. After assembly, verify all the pieces with regard to its installation and operation.

8. Install all electrical cables as shown in the pages of 1-18 to 1-23, Past of Cables and Cabled .

IDENTIFICATION OF THE MODEL





The number of series of chassis is recorded in the right side of the steering column.



The number of identification of the carburetor is recorded in the left side of the carburetor, according to the illustration.



The number of series of the engine is recorded in the left side of the casing of the engine.

IDENTIFICATION NUMBER OF THE CARBURETOR

SPECIFICATIONS

GENERAL

| ltem | | Specifications | | | |
|-------------------------|----------------------------------|----------------|---|--------|--|
| Dimensions Total Length | | 2.031 mm | | | |
| | Total Width | | 746 mm | | |
| | Total Height | | 1.057 mm | | |
| | Wheelbase | | 1.369 mm | | |
| | Height of the saddle | | 782 mm | | |
| | Minimum ground clearance | | 162 mm | | |
| | Dry Weight | | 135 kg | | |
| | Weight in running order | | 154 kg | | |
| | Capacity of maximum load | | 150 kg | 150 kg | |
| Chassis | Type of chassis | | Cradle semi-double | | |
| | Front Suspension | | Telescopic Fork | | |
| | Race of the front suspension | 1 | 116 mm | | |
| | Rear Suspension | | Swing Arm | | |
| | Race of the rear suspension | | 100 mm | | |
| | Size of the front tire | | 100/80 – 17 52S | | |
| | Size of rear tire | | 130/70 – 17 62S | | |
| | Mark of the tires | | PIRELLI MT75 | | |
| | Front Brake | | A single disk, hydraulic | | |
| | Rear Brake | | A drum, mechanical type, with shoe | | |
| | | | simple expansion | | |
| | Inclination of the axle of pivot | | 25,5° | | |
| | Long progress | | 100 mm | | |
| | Capacity of fuel tank | | 16,5 <i>l</i> | | |
| | Reserve capacity of fuel | | 2,5 ℓ | | |
| Motor | Provision of the cylinder | | Single, with an inclination of 15 degrees (with regard to the vertical) | | |
| | Dara v Chroka | | 73.0 x 59.5 mm | | |
| | Cylinder canacity | | 2/9 0 cm ³ | | |
| | Compression ratio | | 9 3.1 | | |
| | | | DOHC Operated silent chain | | |
| | Intake | Se abre | 10° APMS (Opening 1 mm) | | |
| | intuke | Se cierra | 30° DPMI (Opening 1 mm) | | |
| | Escane valve | Se abre | 40° APMI (Opening 1 mm) | | |
| | | Se cierra | 0° DPMS (Opening 1 mm) | | |
| | Lubrication System | | Forced by oil pump and wet crankcase | | |
| | | | | | |
| | Cooling System | | Air cooled | | |
| | Air Filter | | Flement of viscous role | | |
| | Dry Weight of the engine | | | | |
| | Dry weight of the engine | | 35,3 Kg | | |

GENERAL (Continued)

| Item | | Specifications | |
|--------------|----------------------------|----------------|---|
| Carburettor | Туре | | Constant speed |
| | Diameter of the venturi | | 30,1 mm |
| Transmission | Clutch system | | Clutch with multiple drives oil bath |
| | Operating System of clutch | | Mechanical |
| | Transmission | | 6 Gears constantly geared |
| | Primary Reduction | | 3,100 (62/20) |
| | Final Reduction | | 2,846 (37/13) |
| | Gear Ratio | 1 ^a | 2,769 (36/13) |
| | | 2ª | 1,882 (32/17) |
| | | 3ª | 1,333 (28/21) |
| | | 4 ^a | 1,083 (26/24) |
| | | 5 ^ª | 0,923 (24/26) |
| | | 6ª | 0,814 (22/27) |
| | System of changing gears | | Return System operated with the left foot $1 - N$ -2 - 3 - 4 - 5 - 6 |
| Electrical | Ignition System | | CDI digital |
| System | Starting System | | Electrical |
| | Loading System | | Alternator three phase out |
| | Regulator/rectifier | | SCR short-circuiting/triphase, rectification of complete wave |
| | Lighting System | | Battery |

LUBRICATION SYSTEM

Unit: mm

| | ltem | Quantity | Limit of Use |
|---------------------|--|------------------------------------|--------------|
| Oil capacity of the | To drain | 1,5 <i>ℓ</i> | — |
| motor | To change the filter | 1,5 <i>ℓ</i> | — |
| | To disassemble | 1,8 <i>l</i> | — |
| Recommended | | MOBIL SUPERMOTO 4T | |
| motor oil | | Classification the Service API: SF | — |
| | | VISCOSILY. SAE 2000-50 | |
| Oil pump | Slack between the rotors internal and extern | nal 0,15 | 0,20 |
| | Slack between the external rotor and the body of the pump | 0,15 – 0,21 | 0,25 |
| | Slack between the rotors and flank of the body of the pump | 0,02 – 0,08 | 0,12 |

FUEL SYSTEM

| Item | Specifications |
|--|-----------------|
| Identification Number of the carburetor | VEA2A |
| Main Pump | 150 |
| Supplier of idling | 45 |
| Initial Opening of the idle screw | 2 1/4 Turns out |
| Level of float | 18,5 mm |
| Rotation of idling | 1.400 ± 100 rpm |
| Free Play of the grip of the accelerator | 2 – 6 mm |

CYLINDER HEAD/Valves

Units mm

| | ltem | Value | Service Limit | | |
|--|---|--|-----------------|-----------------|-------|
| Compression of t | he cylinder | 1.128 kPa (11,5 kgf/cm², 163,6 psi) a 400 rpm | _ | | |
| Twist the cylinder head | | | | _ | 0,10 |
| Camshaft | Camshaft Height of lobe of Camshaft | | ADM | 37,00 – 37,24 | 36,94 |
| | | | ESC | 37,03 – 37,27 | 36,97 |
| | Eccentricity of Camshaft | | | 0,02 | 0,10 |
| | External Diameter of the stum | ps | 24,959 - 24,980 | — | |
| | Internal diameter of the cylind | er head | 25,000 - 25,021 | — | |
| | Slack oil | | | 0,020 - 0,062 | 0,10 |
| Valves and valve | Valves and valve Valve slack | | ADM | 0,12 | — |
| guides | | | ESC | 0,15 | — |
| | External Diameter of body of the valve | | ADM | 4,975 – 4,990 | 4,96 |
| | | | ESC | 4,955 – 4,970 | 4,94 |
| | Internal diameter of the guide to | ernal diameter of the guide to the valve | | 5,000 - 5,012 | 5,03 |
| | Slack between the stem and the guide of the valve | | ADM | 0,010 – 0,037 | 0,07 |
| | | | ESC | 0,030 - 0,057 | 0,09 |
| | Width of the seat of the valve | | ADM/ESC | 1,0 – 1,2 | 2,0 |
| Valve springs | alve springs Free length Internal | | ADM/ESC | 33,77 | 32,36 |
| External | | ADM/ESC | 36,64 | 34,84 | |
| Valve actuation | External Diameter of actuator | | ADM/ESC | 25,978 – 25,993 | 25,97 |
| Internal diameter of accome of actuator | | dation | ADM/ESC | 26,010 – 26,026 | 26,06 |

CYLINDER / PISTON

Units: mm

| ltem | | | Value | Service Limit |
|-------------------------|---|----------------------------|--|---------------|
| Cylinder | Inside diameter | | 73,000 – 73,010 | 73,11 |
| | Ovalization | | | 0,05 |
| | Conicity | | | 0,05 |
| | Warp— | | | 0,05 |
| Piston and parts of the | Brand of leadership of piston | | Mark IN oriented toward the side of intake | — |
| piston | Mark IN oriented toward the | e side of intake | 72,950 – 72,970 | 72,87 |
| | Measuring Point of D. E. pis | ton | 16 mm desde el fondo | — |
| | D. I. the accommodation of | the cotter pin | 17,002 – 17,008 | 17,05 |
| | D. E. of cotter pin | | 16,994 – 17,000 | 16,97 |
| | D. I. the foot of the crank | | 17,016 – 17,034 | 17,06 |
| | Slack between the cylinder a | and the piston | 0,030 - 0,060 | 0,23 |
| | Slack between the piston an | nd the cotter pin | 0,002 - 0,014 | 0,07 |
| | Slack between the crank and | d the cotter pin | 0,016 - 0,040 | 0,09 |
| | Slack between the ring of piston and the slot | Ring upper | 0,015 – 0,050 | 0,12 |
| | | Ring secondary | 0,015 – 0,050 | 0,12 |
| | Opening of the limbs of os | Ring | 0,15 - 0,30 | 0,30 |
| | segments of piston | Ring secondary | 0,30 – 0,45 | 0,45 |
| | | Oil Ring (ring lateral) | 0,20 – 0,70 | 0,86 |
| | Brand of leadership of the rings of the piston Upper/secondary | | Mark oriented toward top | _ |

CLUTCH/SELECTOR GEARS

Unit: mm

| ltem | | | Value | Service Limit |
|---|-------------------------------|-------------------------------|-----------------|---------------|
| Clutch | Free Play of the lever clutch | Free Play of the lever clutch | | — |
| | Free length of spring | | 35,6 | 44,7 |
| | Thickness of the disk | | 2,92 - 3,08 | 2,69 |
| | Twist of the plate | | — | 0,30 |
| | D.I. de la campana del clutch | | 25,000 – 25,021 | 25,04 |
| | Guía de la campana del clutch | D.I. | 19,990 – 20,010 | 22,05 |
| | | D.E. | 24,959 – 24,980 | 27,90 |
| D. E. of the main axle to guide to the bell of the clutch | | | 19,959 – 19,980 | 21,91 |

Units: mm

Units: mm

ALTERNATOR/CLUTCH START

| Item | Value | Service Limit |
|---|-----------------|---------------|
| D. E. of highlight the spiral commanded the start | 45,660 - 45,673 | 45,63 |

TRANSMISSION

| ltem | | | Value | Service Limit |
|---------------|---|-----------|-----------------|---------------|
| Transmission | D.I. of the spring | M5 | 20,000 - 20,021 | 20,08 |
| | | M6 | 23,000 – 23,021 | 23,07 |
| | | C1 | 23,000 – 23,021 | 23,07 |
| | | C2 | 25,020 – 25,041 | 25,09 |
| | | C3 | 25,000 – 25,021 | 25,67 |
| | | C4 | 22,000 – 22,021 | 22,07 |
| | D.E. Of the hub of gear | C1 | 22,959 – 22,980 | 22,90 |
| | | C2 | 24,979 – 25,000 | 24,90 |
| | D.I. Of the hub of gear | C1 | 18,000 – 18,018 | 18,08 |
| | | C2 | 22,000 – 22,021 | 22,08 |
| | D.E. of the spacer | C3 | 24,959 – 24,980 | 24,90 |
| | | M6 | 22,959 – 22,980 | 22,92 |
| | D.E. of the main axis | AI M5 | 19,959 – 19,980 | 19,91 |
| | D.E. of the countershaft | AI C1 | 17,966 – 17,984 | 17,91 |
| | | AI C2, C4 | 21,959 – 21,980 | 21,91 |
| | Slack between gear and the hub | | 0,020 – 0,062 | 0,10 |
| | Slack between gear and the spacer | | 0,020 - 0,062 | 0,10 |
| | Slack between the axle and the hub | C1 | 0,016 - 0,052 | 0,10 |
| | | C2 | 0,020 - 0,062 | 0,10 |
| | Slack between the gear and the main axle | AI M5 | 0,020 – 0,062 | 0,10 |
| | Slack between gear and the AI C4 | | 0,020 – 0,062 | 0,10 |
| Fork, axle of | D.I. Of the range of changing gears | | 13,000 – 13,021 | 13,05 |
| the forks and | Thickness of the claw of the fork | L | 4,90 - 5,00 | 4,5 |
| drum of | | R, C | 4,93 – 5,00 | 4,5 |
| gears | D.E. The axle of the forks of the change | of gears | 12,966 – 12,984 | 12,90 |
| | D.E. Of the drum in the extremity rig | ght | 19,959 – 19,980 | 19,90 |
| | Stump drum of gears (Housing right engine) | | 20,000 - 20,033 | 20,07 |

Units: mm

CRANKSHAFT/FLYWHEEL

| Item | | Value | Service Limit |
|--------------------------------|---------------------------------------|-------------|---------------|
| Connecting | Slack Side of the head of the crank | 0,05 – 0,50 | 0,6 |
| Rod | Slack radial of the head of the crank | 0 - 0,008 | 0,05 |
| Eccentricity of the crankshaft | | _ | 0,02 |

FRONT WHEEL/SUSPENSION/STEERING

| | ltem | Value | Service Limit |
|--------------------------|--------------------------------------|---------------------------------|-----------------------------|
| Minimum Depth of tre | ead depth | — | Until the wear indicator |
| Cold tire pressure | Solo | 225 kPa (2,25 kgf/cm², 33 psi) | — |
| | With pillion | 225 kPa (2,25 kgf/cm², 33 psi) | — |
| Eccentricity of the axle | e | — | 0,20 |
| Eccentricity of the rim | Radial | — | 2,0 |
| of the wheel | Axial | — | 2,0 |
| Counterweight to bala | ince | — | Max. 60 g |
| Fork | Free length of spring | 434,4 | 428,4 |
| | Eccentricity of the tube of the fork | — | 0,20 |
| | Fluid recommended | Fork fluid (ATF) | — |
| | Fluid Level | 145 | — |
| | Capacity of fluid | 296 ± 2,5 cm ³ | — |
| Burden after the ball t | he steering column | 0,98 – 1,47 N (0,10 – 0,15 kgf) | |

REAR WHEEL/SUSPENSION

Γ

Service Limit

Units: mm

| Item | | Value | Service Limit |
|------------------------------|---|---|-----------------------------|
| Minimum Depth of tread depth | | | Until the wear |
| | | | indicator |
| Tyre Pressure | Solo | 225 kPa (2,25 kgf/cm ² , 33 psi) | — |
| (cold) | With pillion | 250 kPa (2,50 kgf/cm ² , 36 psi) | — |
| Eccentricity of the | axle | — | 0,20 |
| Eccentricity of the | Radial | _ | 2,0 |
| rim of the wheel | Axial | — | 2,0 |
| Counterweight to | balance | — | Max. 60 g |
| Chain of trans- | Size/links | 520 VD – 106 | — |
| misson | Slack | 15 – 25 | — |
| Brake | Free Play of brake pedal | 20 - 30 | — |
| | D.I. Of the drum rear brake | 130,0 – 130,2 | 131,0 |
| | Thickness of the lining of the rear brake | _ | Until the wear indicator |

Units: mm

HYDRAULIC BRAKE

Units: mm

| ltem | Value | Service Limit |
|---|-----------------|----------------|
| Fluid brake specified | DOT 4 | |
| Wear indicator of the pads of the brake | | Until the slot |
| Thickness of brake disc | 3,8 - 4,2 | 3,5 |
| Twist of brake disc | — | 0,10 |
| D.I. of the master cylinder | 11,000 – 11,043 | 11,055 |
| D.E. of the Piston master cylinder | 10,957 – 10,984 | 10,945 |
| D.I. The cylinder of the clamp | 25,400 – 25,450 | 25,460 |
| D.E. The piston caliper | 25,318 – 25,368 | 25,31 |

BATTERY/CHARGING SYSTEM

| Item | | Specifications | |
|--|----------------|------------------------|-------------------------|
| Battery | Capacity | | 12 V – 6 Ah |
| | Leakage | | Max. 0,1 mA |
| Voltage (20°C)Fully chargedNeed to load | | Fully charged | Superior a 12,8 V |
| | | Need to load | Inferior a 12,3 V |
| | Current burden | Normal | 0,6 A x 5 – 10 h |
| | | Rapid | Max. 3,0 A x 1,0 h |
| Alternator | Capacity | | 0,204 kW/5.000 rpm |
| Resistance of the coil load (20°C) Voltage regulated the regulator/rect | | oil load (20°C) | 0,1 – 1,0 Ω |
| | | he regulator/rectifier | 13,0 – 15,5 V/5.000 rpm |

IGNITION SYSTEM

| Item | | Specifications | |
|--------------------------------------|-------|------------------|--|
| Spark plug | | NGK | |
| | Value | CR8EH-9 | |
| Electrode gap | | 0,8 – 0,9 mm | |
| Voltage of peak of the ignition coil | | Minimum de 100 V | |
| Voltage peak pulse generator power | | Minimum de 0,7 V | |
| Point ignition (Mark "F") | | 8° APMS in idle | |

SYSTEM OF ELECTRIC Starter

Units: mm

| ltem | Value | Service Limit |
|---------------------------------|-------|---------------|
| Over the motor brushes of start | 12,5 | 8,5 |

LIGHTS/INSTRUMENTS/Switches

| ltem | | Specifications | | |
|--------|------------------------|----------------|--------------------|--|
| Lights | Light | High | 12 V – 35 W | |
| | | Low | 12 V – 35 W | |
| | Rear brake light | | 12 V – 5/21 W | |
| | Front indicator | | 12 V – 15 W x 2 | |
| | Rear indicator | | 12 V – 15 W x 2 | |
| | Instrument lights | | LED | |
| | Indicator of idicators | | LED | |
| | High beam indicator | | LED | |
| | Neutral indicator | | LED | |
| | Sidestand indicator | | LED | |
| Fuses | Main fuse | | 20 A | |
| | Auxillary fuses | | 10 A x 3, 15 A x 1 | |

VALUES OF TIGHTENING torque

| Type of fixing | Torque N.m (kg.m) | Type of fixing | Torque N.m (kg.m) |
|--------------------------------------|----------------------|---------------------------|----------------------|
| Screw hexagonal nut 5 mm | 5 (0,5) | Screw 5 mm | 4 (0,4) |
| Screw and hexagonal nut 6 mm | 10 (1,0) | Screw 6 mm | 9 (0,9) |
| (Including the screw with flange SH) | | Bolt flange and nut 6 mm | 12 (1,2) |
| Bolt hexagonal nut 8 mm | 22 (2,2) | (including NSHF) | |
| Bolt hexagonal nut of 10 mm | 34 (3,4) | Bolt flange and nut 8 mm | 26 (2,6) |
| Bolt hexagonal nut 12 mm | 54 (5,4) | Bolt flange and nut 10 mm | 39 (3,9) |
| | | | |

• The specifications of tightening torque listed below are for the fixers more important. • Other fixers must be tightened in accordance with the values of tightening torque Value above.NOTES:

- 1. Apply liquid sealed (sealer) to the thread.
- 2. Apply firming agent (locks chemistry) to the thread.

3. Apply olive carbon disulphide of molybdenum to the thread and to the surface of

settlement.

4. Thread left.

5. Lock.

- 6. Apply oil to the thread and to the surface of settlement.
- 7. Apply motor oil clean in the o ring.
- 8. Bolt UBS.
- 9. Nut U (capacity)
- 10. Bolt ALOC: replace it with a new one.
- 11. Apply grease. Engine

| Item | Number | Diameter of thread (mm) | Torque N.m (kg.m) | Note |
|--|--------|----------------------------|----------------------|------------|
| Maintenance | | | | |
| Spark Plug power | 1 | 10 | 12 (1,2) | |
| Top of the hole of the crankshaft | 1 | 30 | 8 (0,8) | Note 11 |
| Top of the hole of synchronisation | 1 | 14 | 10 (1,0) | Note 11 |
| Bolt drainage of engine oil | 1 | 12 | 30 (3,0) | |
| Cylinder head/Valves | | | | |
| Bolt the door of the cylinder head | 3 | 6 | 12 (1,2) | |
| Bolt the support of Camshaft | 8 | 6 | 12 (1,2) | Note 6 |
| Nut of the cylinder head | 4 | 10 | 45 (4,5) | Note 6 |
| Bolt of superior connection of the tube of oil from the cylinder hea | id 1 | 7 | 12 (1,2) | |
| Clutch/Gear selector | | | | |
| Nut of locks of the body of clutch | 1 | 16 | 108 (10,8) | Notes 5, 6 |
| Nut primary gear command | 1 | 16 | 108 (10,8) | Note 6 |
| Bolt arm limiter | 1 | 6 | 12 (1,2) | |
| Alternator/Clutch starter motor | | | | |
| Bolt of engine flywheel | 1 | 12 | 103 (10,3) | Note 6 |
| Bolt Torx clutch start | 6 | 6 | 16 (1,6) | Note 2 |
| Bolt for fixing the pulse generator power | 2 | 5 | 5 (0,5) | |
| Bolt of fixing the stator | 3 | 6 | 10 (1,0) | |
| Bolt of pin wiring stator | 1 | 6 | 10 (1,0) | |
| Transmission | | | 10 (1 0) | |
| Bolt to the plate of fixing of the bearing of the main axle | 2 | 6 | 12 (1,2) | Note 2 |
| Bolt ear of the spring of return of the drum of | 1 | 0 | 24 (2.4) | |
| gears Bolt connecting the bettern of the tube of ail from the aulinder be | | 8 | | |
| Bolt connecting the boltom of the tube of on from the cylinder nea | | 0 | 12 (1,2) | |
| Other fixers | 1 | | 10 (1 0) | Nata 2 |
| Bolt to the plate of cams of changing gears | 1 | 6 | | Note 2 |
| Boll of terminal breaker of deadlock | 1 | 4 | 2 (0,2) 12 (1 2) | |
| Bolt to the plate of fixing the enrocket of transmission | 2 | 6 | 10 (1 0) | |
| Top of the relief valve of the oil pump | 1 | 14 | 19 (1.9) | |
| | • | 1 T | 10 (1,0) | |

CHASSIS

| Chassis/Fairing/exhaust System 2 8 18 (1,8) Union Nut of the exhaust pipe 2 8 18 (1,8) Disfunct striker higher from the engine 1 10 44 (4,4) Bolls/nuts from support striker superior of the engine 2 8 26 (2,6) Boll/nut lower from tengine 1 10 44 (4,4) Bolts /nuts from transmiser 2 8 26 (2,6) Bolt/nut lower rear engine 1 10 44 (4,4) Bolts /nuts for fixing the support of higher engine 2 8 26 (2,6) Bolt/nut lower rear engine 1 10 44 (4,4) Bolts /nut lower rear engine 2 8 26 (2,6) Bolt /nut lower rear engine 1 10 44 (4,4) Bolts /nut for the support of higher engine 2 8 26 (2,2) Bolt /nut lower rear engine 1 10 44 (4,4) Bolt /nut lower rear engine 2 33 22 (2,2) Bolt /nut lower buffer 2 33 22 (2,2) Bolt fixing of th | ltem | Number | Diameter of thread (mm) | Torque N.m (kg.m) | Notes |
|---|---|--------|----------------------------|----------------------|---------|
| Dismantling/engine Installation Image: Constraint of the engine Image: Constraint of the engine <thimage: constraint="" engine<="" of="" th="" the=""> Image: Constrai</thimage:> | Chassis/Fairing/exhaust System Union Nut of the exhaust pipe | 2 | 8 | 18 (1,8) | |
| Bolt/nut striker higher from the engine 1 10 44 (4,4) Bolts /nuts from support striker supprior of the engine 2 8 26 (2,6) Bolt/nut ligher rear engine 1 10 44 (4,4) Bolts /nut ligher rear engine 2 8 26 (2,6) Bolt/nut ligher rear engine 1 10 44 (4,4) Bolts /nut for fixing the support of higher engine 2 8 26 (2,6) Bolt/nut superior engine 1 10 44 (4,4) Bolts /nut for fixing the support of higher engine 2 8 26 (2,2) Bolt funct of the fork 2 33 22 (2,2) 20 (2,0) Bolt funct of the fork 2 8 20 (2,0) Note 2 Bolt fixing of the higher bridge 2 8 22 (2,2) 20 (30,3) Bolt fixing of the bidge lower 2 10 38 (3,9) Note 9 Nut of the rear axle 1 12 58 (6,8) Note 9 Nut of the rear axle 1 10 36 (3,6) Note 9 Nut o | Dismantling/engine Installation | | | | |
| Bolts /ruts from support striker superior of the engine 2 8 26 (2,6) Bolt/nut higher rear engine 1 10 44 (4,4) Bolt /rut higher rear engine 1 10 44 (4,4) Bolt /rut lower froat engine 2 8 26 (2,6) Bolt /rut lower rear engine 1 10 44 (4,4) Bolt /rut lower rear engine 1 10 44 (4,4) Bolt /rut lower rear engine 1 10 44 (4,4) Bolt /rut lower rear engine 1 10 44 (4,4) Bolt /rut lower rear engine 1 10 44 (4,4) Bolt /rut lower rear engine 2 8 26 (2,6) Bolt /rut lower rear engine 1 10 44 (4,4) Fort Wheel/Suspension/Steering 2 33 22 (2,2) Bolt fixing of the higher bridge 2 8 22 (2,2) Bolt fixing of the higher bridge 2 10 39 (3,9) Nut of the crown of transmission 6 10 64 (6,4) Note 9 Nut of the crown of | Bolt/nut striker higher from the engine | 1 | 10 | 44 (4,4) | |
| Bolt/nut lower front engine 1 10 44 (4,4) Bolt/ nut ligher rear engine 1 10 44 (4,4) Bolts of rear support higher engine 2 8 26 (2,6) Bolt/ nut lower rear engine 1 10 44 (4,4) Bolts/nut soprior engine 2 8 26 (2,6) Bolt/ nut superior engine 2 8 26 (2,6) Bolt nut superior engine 1 10 44 (4,4) Front Wheel/Suspension/Steering 2 8 20 (2,0) Bolt hallen of the fork 2 8 20 (2,0) Not 2 801t hasupport of the handlebars 4 8 24 (2,4) Nut of the steering column 1 26 Refera la page 13-27 Bolt fixing of the higher bridge 2 8 22 (2,2) Note 9 Bolt of disk on the front brake 5 8 42 (4,2) Note 10 Rear ala page 13-27 Note 10 39 (3,9) Nut of the rear axle 1 12 59 (5,9) Note 9 Bolt fixing of the higher bridge 2 8 21 (2,2) Note | Bolts /nuts from support striker superior of the engine | 2 | 8 | 26 (2,6) | |
| Bolt/ nut higher rear engine 1 10 44 (4,4) Bolts of rear support higher engine 2 8 26 (2,6) Bolt/ nut lower rear engine 1 10 44 (4,4) Bolts/inuts for fixing the support of higher engine 2 8 26 (2,6) Bolt/ nut uperior engine 1 10 44 (4,4) From Wheel/Suspension/Steering | Bolt/nut lower front engine | 1 | 10 | 44 (4,4) | |
| Bolts of rear support higher engine 2 8 26 (2,6) Bolt/ nut lower rear engine 1 10 44 (4,4) Bolt/ nut lower rear engine 1 10 44 (4,4) Bolt/ nut superior engine 2 8 26 (2,6) Bolt/ nut superior engine 2 8 26 (2,6) Bolt Allen of the fork 2 8 20 (2,0) Bott Allen of the fork 2 8 20 (2,0) Nut of the steering column 1 24 103 (10,3) Adjustment Nut of the steering column 1 25 Refera 1a bolt fixing of the higher bridge 2 8 22 (2,2) Bott fixing of the higher bridge 2 8 22 (2,2) Bott fixing of the bridge lower 2 10 39 (3,9) Nut of the front brake 5 8 42 (4,2) Note 9 Bott of disk on the front brake 5 8 42 (4,2) Note 9 Nut of the rear axle 1 10 36 (3,6) Note 9 Nut of the ar | Bolt/ nut higher rear engine | 1 | 10 | 44 (4,4) | |
| Bolt/ nut lower rear engine 1 10 44 (4,4) Bolts/nuts superior of higher engine 2 8 26 (2,6) Bolt/ nut superior engine 1 10 44 (4,4) Front Wheel/Suspension/Steering | Bolts of rear support higher engine | 2 | 8 | 26 (2,6) | |
| Bolts/nuts for fixing the support of higher engine 2 8 26 (2, 6) Bolt/ nut superior engine 1 10 44 (4,4) Front Wheel/Suspension/Steering 2 33 22 (2,2) Bolt top of the fork 2 8 20 (2,0) Note 2 Bolt tabulance 1 24 103 (10,3) Adjustment Nut of the steering column 1 26 Refer a la page 13-27 Bolt fixing of the higher bridge 2 8 22 (2,2) Bolt fixing of the bridge lower 2 10 39 (3,9) Nut of the front brake 5 8 42 (4,2) Bolt of disk on the front brake 5 8 42 (4,2) Note 9 10 36 (3,6) Note 9 Nut of the crown of transmission 6 10 64 (6,4) Note 9 Nut lower buffer 1 10 36 (3,6) Note 9 Bolt/nut pivot swing arm 1 14 88 (8,8) Note 9 Nut of the crown of transmission 6 10 64 (6,4) Note 9 Bolt Adie to the drive chain 2 8 <t< td=""><td>Bolt/ nut lower rear engine</td><td>1</td><td>10</td><td>44 (4,4)</td><td></td></t<> | Bolt/ nut lower rear engine | 1 | 10 | 44 (4,4) | |
| Bolt/ nut superior engine 1 10 44 (4,4) Front Wheel/Suspension/Steering 2 33 22 (2,2) Bolt top of the fork 2 33 22 (2,0) Bolt Allen of the fork 2 8 24 (2,4) Nut of the steering column 1 24 103 (10,3) Adjustment Nut of the steering column 1 24 103 (10,3) Adjustment Nut of the steering column 1 26 Refer a la bolt fixing of the bridge lower 2 10 39 (3,9) Nut of the front axle 5 8 42 (4,2) Note 9 Bolt for disk on the front brake 5 8 42 (4,2) Note 9 Nut of the rear axle 1 16 88 (8,8) Note 9 Nut of the crown of transmission 6 10 64 (6,4) Note 9 Nut of the adjuster of the drive chain 1 14 88 (8,8) Note 9 Nut of the adjuster of the drive chain 2 8 21 (2,1) 10 Soft disk on the front brake 1 10 36 (3,6) Note 9 Nut of the rear | Bolts/nuts for fixing the support of higher engine | 2 | 8 | 26 (2,6) | |
| Front Wheel/Suspension/Steering 2 33 22 (2,2) Boit top of the fork 2 8 20 (2,0) Note 2 Boit Allen of the fork 2 8 20 (2,0) Note 2 Boit the support of the handlebars 4 8 24 (2,4) Nut of the steering column 1 24 103 (10,3) Adjustment Nut of the steering column 1 26 Refer a la page 13-27 Bolt fixing of the bridge lower 2 8 22 (2,2) Bolt fixing of the bridge lower 2 10 39 (3,9) Nut of the front axle 5 8 42 (4,2) Note 10 Rear Wheel/Brake/Suspension - - - - Nut of the crown of transmission 6 10 64 (6,4) Note 9 Nut of the arm of the damper 1 10 36 (3,6) Note 9 Nut of the arm of the drive chain 2 8 21 (2,1) - Nut of the arm of the drive chain 2 8 21 (2,1) - Screw wore | Bolt/ nut superior engine | 1 | 10 | 44 (4,4) | |
| Bolt top of the fork 2 33 22 (2.2) Bolt Allen of the fork 2 8 20 (2.0) Note 2 Bolt the support of the handlebars 4 8 24 (2.4) Nut of the steering column 1 24 103 (10.3) Adjustment Nut of the steering column 1 24 103 (10.3) Refera ta Bolt fixing of the higher bridge 2 8 22 (2.2) Note 9 Bolt fixing of the bridge lower 2 10 39 (3.9) Nut of the front axle 1 12 59 (5.9) Note 9 Bolt of disk on the front brake 5 8 42 (4.2) Note 9 Nut of the rear axle 1 16 88 (8.6) Note 9 Nut of the rear axle 1 16 88 (8.6) Note 9 Nut superior of the damper 1 10 36 (3.6) Note 9 Nut of the guide to the drive chain 1 14 88 (8.8) Note 9 Nut of the guide to the drive chain 1 10 36 (3.6) Note 9 Bolt /nut pivot swing arm 1 14 88 (8.8) Note 9 Bolt of the guide to | Front Wheel/Suspension/Steering | | | | |
| Bolt Allen of the fork 2 8 20 (2,0) Note 2 Bolt the support of the handlebars 4 8 24 (2,4) 1 Nut of the steering column 1 24 Refer a la page 13-27 Bolt fixing of the higher bridge 2 8 22 (2,2) Bolt fixing of the bridge lower 2 10 39 (3,9) Nut of the front axle 1 12 59 (5,9) Note 9 Bolt fixing of the bridge lower 2 10 39 (3,9) Note 9 Nut of the front axle 5 8 42 (4,2) Note 10 Rear Wheel/Brake/Suspension 1 16 88 (8,8) Note 9 Nut of the crown of transmission 6 10 64 (6,4) Note 9 Nut of the draper 1 10 36 (3,6) Note 9 Nut of the drive chain 2 8 21 (2,1) Note 9 Nut of the arm of the drive chain 1 5 4 (0,4) Against the adjuster of the drive chain 2 8 21 (2,1) Nut of the arm of the brake 1 10 10 (1,0) 10 10 (1,0) <td>Bolt top of the fork</td> <td>2</td> <td>33</td> <td>22 (2,2)</td> <td></td> | Bolt top of the fork | 2 | 33 | 22 (2,2) | |
| Bolt the support of the handlebars 4 8 24 (2,4) Nut of the steering column 1 24 103 (10,3) Adjustment Nut of the steering column 1 26 Refer a la page 13-27 Bolt fixing of the bridge lower 2 10 39 (3,9) Nut of the front axle 1 12 59 (5,9) Note 9 Bolt of disk on the front brake 5 8 42 (4,2) Note 10 Rear Wheel/Brake/Suspension 1 16 88 (8,8) Note 9 Nut of the rear axle 1 10 36 (3,6) Note 9 Nut superior of the damper 1 10 36 (3,6) Note 9 Nut lower buffer 1 10 36 (3,6) Note 9 Nut of the guide to the drive chain 1 10 36 (3,6) Note 9 Nut of the guide to the drive chain 1 10 36 (3,6) Note 9 Bolt/out pivot swing arm 1 10 36 (3,6) Note 9 Bolt of the guide to the drive chain 2 8 21 (2,1) Nut of the arm of the brake 1 10 10 (1,0) <td>Bolt Allen of the fork</td> <td>2</td> <td>8</td> <td>20 (2,0)</td> <td>Note 2</td> | Bolt Allen of the fork | 2 | 8 | 20 (2,0) | Note 2 |
| Nut of the steering column 1 24 103 (10,3) Adjustment Nut of the steering column 1 26 Refer a la page 13-27 Bolt fixing of the higher bridge 2 8 22 (2,2) Bolt fixing of the bridge lower 2 1 12 59 (5,9) Note 9 Bolt of disk on the front brake 5 8 42 (4,2) Note 10 Rear Wheel/Brake/Suspension 7 7 8 10 64 (6,4) Note 9 Nut of the crown of transmission 6 10 64 (6,4) Note 9 10 36 (3,6) Note 9 Nut of the adapter 1 10 36 (3,6) Note 9 11 36 (3,6) Note 9 Nut off the damper 1 10 36 (3,6) Note 9 11 10 36 (3,6) Note 9 Nut lower buffer 1 10 36 (3,6) Note 9 11 10 36 (3,6) Note 9 Bolt/nut pivot swing arm 1 14 88 (8,8) Note 9 11 10 10 (1,0) 10 11 10 10 12 (2,1) 11 1 | Bolt the support of the handlebars | 4 | 8 | 24 (2,4) | |
| Adjustment Nut of the steering column126Refer a la page 13-27Bolt fixing of the higher bridge2822 (2,2)Bolt fixing of the bridge lower21039 (3,9)Nut of the front axle11259 (5,9)Note 9Bolt of disk on the front brake5842 (4,2)Note 10Rear Wheel/Brake/Suspension11688 (8,8)Note 9Nut of the rear axle11036 (3,6)Note 9Nut of the crown of transmission61064 (6,4)Note 9Nut ower buffer11036 (3,6)Note 9Bolt of the guide to the drive chain11488 (8,8)Note 9Bolt of the guide to the drive chain154 (0,4)Against the adjuster of the drive chain2821 (2,1)Nut of the arm of the brake11010 (1,0)Brake System21034 (3,4)Bolt the support of the cylinder master striker2612 (1,2)Screw cap deposit of master cylinder241 (0,1)Screw breaker of the light of front brake141 (0,1)Bolt of bolt of the clamp front brake2826 (2,6)Bolt of bolt of the clamp front brake11018 (1,8)Bolt of bolt of the clamp front brake11018 (1,8)Careword and prost front brake11010 (1,0)Word the striker166 (0,6)Bolt fixing | Nut of the steering column | 1 | 24 | 103 (10,3) | |
| Bolt fixing of the higher bridge Bolt fixing of the bridge lower 2 8 22 (2,2) Bolt fixing of the bridge lower 2 10 39 (3,9) Nut of the front axle 1 12 59 (5,9) Note 9 Bolt fixing of the bridge lower 2 10 38 (3,9) Note 9 Nut of the front axle 1 12 59 (5,9) Note 9 Rear Wheel/Brake/Suspension 1 16 88 (8,8) Note 9 Nut of the crown of transmission 6 10 64 (6,4) Note 9 Nut of the damper 1 10 36 (3,6) Note 9 Nut ower buffer 1 10 36 (3,6) Note 9 Bolt of the guide to the drive chain 1 5 4 (0,4) Against the adjuster of the drive chain 2 8 21 (2,1) Nut of the arm of the brake 2 10 34 (3,4) Bolt braip of hose front brake 2 10 34 (3,4) Screw breaker of the light of front brake 1 4 10(1) Scr | Adjustment Nut of the steering column | 1 | 26 | Refer a la | |
| Bolt fixing of the higher bridge 2 8 22 (2,2) Bolt fixing of the bridge lower 2 10 39 (3,9) Nut of the front axle 1 12 59 (5,9) Note 9 Bolt of disk on the front brake 5 8 42 (4,2) Note 10 Rear Wheel/Brake/Suspension 1 16 88 (8,8) Note 9 Nut of the rear axle 1 10 64 (6,4) Note 9 Nut of the rear axle 1 10 36 (3,6) Note 9 Nut superior of the damper 1 10 36 (3,6) Note 9 Nut lower buffer 1 10 36 (3,6) Note 9 Bolt/nut pivot swing arm 1 14 88 (8,8) Note 9 Bolt of the guide to the drive chain 2 8 21 (2,1) Nut of the arm of the brake 1 10 10 10 Bolt banjo of hose front brake 2 10 34 (3,4) 2 Bolt banjo of hose front brake 1 4 10,1) 1 <tr< td=""><td></td><td></td><td></td><td>page 13-27</td><td></td></tr<> | | | | page 13-27 | |
| Bolt fixing of the bridge lower 2 10 39 (3,9) Nut of the front axle 1 12 59 (5,9) Note 9 Bolt of disk on the front brake 5 8 42 (4,2) Note 10 Rear Wheel/Brake/Suspension 1 16 88 (8,8) Note 9 Nut of the rear axle 1 16 88 (8,8) Note 9 Nut of the crown of transmission 6 10 64 (6,4) Note 9 Nut superior of the damper 1 10 36 (3,6) Note 9 Nut superior of the dimper 1 10 36 (3,6) Note 9 Bolt of the guide to the drive chain 1 14 88 (8,8) Note 9 Bolt of the guide to the drive chain 2 8 21 (2,1) Nut of the arm of the brake 1 10 10 (1,0) Brake System 2 6 12 (1,2) Screw cap deposit of master cylinder 2 6 12 (1,2) Screw breaker of the light of front brake 1 6 6 (0,6) Bolt p | Bolt fixing of the higher bridge | 2 | 8 | 22 (2,2) | |
| Nut of the front axle 1 12 59 (5,9) Note 9 Bolt of disk on the front brake 5 8 42 (4,2) Note 10 Rear Wheel/Brake/Suspension 1 16 88 (8,8) Note 9 Nut of the rear axle 1 16 88 (8,8) Note 9 Nut of the crown of transmission 6 10 64 (6,4) Note 9 Nut of the crown of transmission 6 10 36 (3,6) Note 9 Nut over buffer 1 10 36 (3,6) Note 9 Bolt of the guide to the drive chain 1 5 4 (0,4) Against the adjuster of the drive chain 2 8 21 (2,1) Nut of the arm of the brake 1 10 10 (1,0) Brake System 2 6 12 (1,2) Screw cap deposit of master cylinder 2 6 12 (1,2) Screw cap deposit of master cylinder 1 6 6 (0,6) Bolt the support of the light of front brake 1 4 1 (0,1) Screw cap deposit of master cylinder 1 6 6 (0,6) Bolt tixing of the | Bolt fixing of the bridge lower | 2 | 10 | 39 (3,9) | |
| Bolt of disk on the front brake5842 (4,2)Note 10Rear Wheel/Brake/Suspension11688 (8,8)Note 9Nut of the rear axle11688 (8,8)Note 9Nut of the crown of transmission61064 (6,4)Note 9Nut superior of the damper11036 (3,6)Note 9Nut lower buffer11036 (3,6)Note 9Bolt, nut pivot swing arm11488 (8,8)Note 9Bolt of the guide to the drive chain2821 (2,1)Nut of the arm of the brake11010 (1,0)Brake System2612 (1,2)Bolt banjo of hose front brake2612 (1,2)Screw breaker of the light of front brake1410,1)Nut pivot of the brake striker166 (0,6)Bolt pivot of the clamp front brake2826 (2,6)Note 10Bolt of bolt of the clamp front brake (assistant)1818 (1,8)Bolt of pads11018 (1,8)Cap bolt of pads11010 (1,0)Bolt of pads11010 (1,0) | Nut of the front axle | 1 | 12 | 59 (5,9) | Note 9 |
| Rear Wheel/Brake/Suspension 1 16 88 (8,8) Note 9 Nut of the rear axle 1 16 88 (8,8) Note 9 Nut of the crown of transmission 6 10 64 (6,4) Note 9 Nut superior of the damper 1 10 36 (3,6) Note 9 Nut lower buffer 1 10 36 (3,6) Note 9 Bolt /nut pivot swing arm 1 14 88 (8,8) Note 9 Bolt of the guide to the drive chain 1 5 4 (0,4) Against the adjuster of the drive chain 2 8 21 (2,1) Nut of the arm of the brake 1 10 10 (1,0) Brake System 1 10 10 (1,0) Bolt the support of the cylinder master striker 2 6 12 (1,2) Screw cap deposit of master cylinder 2 4 1 (0,1) Screw breaker of the light of front brake 1 4 6 (0,6) Bolt fixing of the clamp front brake 2 8 26 (2,6) Note 10 Bolt of bolt of | Bolt of disk on the front brake | 5 | 8 | 42 (4,2) | Note 10 |
| Nut of the rear axle11688 (8,8)Note 9Nut of the crown of transmission61064 (6,4)Note 9Nut superior of the damper11036 (3,6)Note 9Nut lower buffer11036 (3,6)Note 9Solt/nut pivot swing arm11488 (8,8)Note 9Bolt of the guide to the drive chain154 (0,4)Against the adjuster of the drive chain2821 (2,1)Nut of the arm of the brake11010 (1,0)Brake System11010 (1,0)Bolt banjo of hose front brake2134 (3,4)Bolt the support of the cylinder master striker2612 (1,2)Screw cap deposit of master cylinder241 (0,1)Screw breaker of the light of front brake141 (0,1)Nut pivot of the brake striker166 (0,6)Bolt pivot of the brake striker166 (0,6)Bolt fixing of the clamp front brake (assistant)1818 (1,8)Bolt of bolt of the clamp front brake (assistant)1818 (1,8)Bolt of pads11018 (1,8)2 (0,2)Valve to drain the clip of the brake15 (0,5)0Other fixers11010 (1,0) | Rear Wheel/Brake/Suspension | | | | |
| Nut of the crown of transmission61064 (6,4)Note 9Nut superior of the damper11036 (3,6)Note 9Nut lower buffer11036 (3,6)Note 9Bolt/nut pivot swing arm11488 (8,8)Note 9Bolt of the guide to the drive chain154 (0,4)Against the adjuster of the drive chain2821 (2,1)Nut of the arm of the brake11010 (1,0)Brake System11010 (1,0)Bolt banjo of hose front brake2612 (1,2)Screw cap deposit of master cylinder241 (0,1)Screw cap deposit of master cylinder241 (0,1)Nut pivot of the brake striker166 (0,6)Bolt pivot of the clamp front brake141 (0,1)Screw breaker of the light of front brake1818 (1,8)Bolt of bolt of the clamp front (main)1822 (2,2)Bolt of bolt of the clamp front brake (assistant)1818 (1,8)Bolt of pads11018 (1,8)Cap bolt of pads1102 (0,2)Valve to drain the clip of the brake150,5)Other fixers11010 (1,0) | Nut of the rear axle | 1 | 16 | 88 (8.8) | Note 9 |
| Nut superior of the damper11036 (3,6)Note 9Nut lower buffer11036 (3,6)Note 9Bolt/nut pivot swing arm11488 (8,8)Note 9Bolt of the guide to the drive chain154 (0,4)Against the adjuster of the drive chain2821 (2,1)Nut of the arm of the brake11010 (1,0)Brake System11010 (1,0)Bolt banjo of hose front brake2612 (1,2)Screw cap deposit of master cylinder241 (0,1)Screw breaker of the light of front brake141 (0,1)Nut pivot of the clamp front brake166 (0,6)Bolt pivot of the clamp front brake2826 (2,6)Nut pivot of the clamp front brake (assistant)1818 (1,8)Bolt of pads11018 (1,8)Cap bolt of pads1102 (0,2)Valve to drain the clip of the brake11010 (1,0)Bolt pivot of side stand11010 (1,0) | Nut of the crown of transmission | 6 | 10 | 64 (6,4) | Note 9 |
| Nut lower buffer11036 (3,6)Note 9Bolt/nut pivot swing arm11488 (8,8)Note 9Bolt of the guide to the drive chain154 (0,4)Against the adjuster of the drive chain2821 (2,1)Nut of the arm of the brake11010 (1,0)Brake System11010 (1,0)Bolt banjo of hose front brake21034 (3,4)Bolt the support of the cylinder master striker2612 (1,2)Screw cap deposit of master cylinder241 (0,1)Screw breaker of the light of front brake141 (0,1)Nut pivot of the brake striker166 (0,6)Bolt fixing of the clamp front brake2826 (2,6)Bolt of bolt of the clamp front brake2826 (2,2)Bolt of bolt of the clamp front (main)1818 (1,8)Bolt of pads11018 (1,8)Cap bolt of pads1102 (0,2)Valve to drain the clip of the brake15 (0,5)Other fixers11010 (1,0) | Nut superior of the damper | 1 | 10 | 36 (3.6) | Note 9 |
| Bolt/nut pivot swing arm11488 (8,8)Note 9Bolt of the guide to the drive chain154 (0,4)Against the adjuster of the drive chain2821 (2,1)Nut of the arm of the brake11010 (1,0)Brake System11034 (3,4)Bolt banjo of hose front brake2612 (1,2)Screw cap deposit of master cylinder241 (0,1)Screw breaker of the light of front brake141 (0,1)Nut pivot of the brake striker166 (0,6)Bolt fixing of the clamp front brake166 (0,6)Bolt of bolt of the clamp front brake2822 (2,2)Bolt of bolt of the clamp front brake (assistant)1818 (1,8)Bolt of pads11018 (1,8)2Cap bolt of pads1102 (0,2)Valve to drain the clip of the brakeBolt pivot of side stand11010 (1,0) | Nut lower buffer | 1 | 10 | 36 (3.6) | Note 9 |
| Bolt of the guide to the drive chain154 (0,4)Against the adjuster of the drive chain2821 (2,1)Nut of the arm of the brake11010 (1,0)Brake System211034 (3,4)Bolt banjo of hose front brake2612 (1,2)Screw cap deposit of master cylinder2612 (1,2)Screw breaker of the light of front brake141 (0,1)Screw breaker of the light of front brake146Bolt pivot of the brake striker166 (0,6)Bolt fixing of the clamp front brake2826 (2,6)Bolt of bolt of the clamp front brake (assistant)1818 (1,8)Bolt of bolt of the clamp front brake (assistant)11018 (1,8)Bolt of pads1102 (0,2)5 (0,5)Valve to drain the clip of the brake11010 (1,0) | Bolt/nut pivot swing arm | 1 | 14 | 88 (8,8) | Note 9 |
| Against the adjuster of the drive chain2821 (2,1)Nut of the arm of the brake11010 (1,0)Brake System11034 (3,4)Bolt banjo of hose front brake21034 (3,4)Bolt the support of the cylinder master striker2612 (1,2)Screw cap deposit of master cylinder241 (0,1)Screw breaker of the light of front brake141 (0,1)Nut pivot of the brake striker166 (0,6)Bolt pivot of the clamp front brake166 (0,6)Bolt fixing of the clamp front brake2826 (2,6)Bolt of bolt of the clamp front brake (assistant)1818 (1,8)Bolt of pads11018 (1,8)Cap bolt of pads1102 (0,2)Valve to drain the clip of the brake15 (0,5)Other fixers11010 (1,0) | Bolt of the guide to the drive chain | 1 | 5 | 4 (0,4) | |
| Nut of the arm of the brake11010 (1,0)Brake System11010 (1,0)Bolt banjo of hose front brake21034 (3,4)Bolt the support of the cylinder master striker2612 (1,2)Screw cap deposit of master cylinder241 (0,1)Screw breaker of the light of front brake141 (0,1)Nut pivot of the brake striker166 (0,6)Bolt pivot of the brake striker166 (0,6)Bolt fixing of the clamp front brake2826 (2,6)Bolt of bolt of the clamp front brake (assistant)1812 (1,2)Bolt of pads11018 (1,8)Cap bolt of pads1102 (0,2)Valve to drain the clip of the brake15 (0,5)Other fixers11010 (1,0) | Against the adjuster of the drive chain | 2 | 8 | 21 (2,1) | |
| Brake System21034 (3,4)Bolt banjo of hose front brake2612 (1,2)Screw cap deposit of master cylinder241 (0,1)Screw breaker of the light of front brake141 (0,1)Nut pivot of the brake striker166 (0,6)Bolt fixing of the clamp front brake166 (0,6)Bolt of bolt of the clamp front brake (assistant)1822 (2,2)Bolt of pads11018 (1,8)Cap bolt of pads1102 (0,2)Valve to drain the clip of the brake15 (0,5)Other fixers11010 (1,0) | Nut of the arm of the brake | 1 | 10 | 10 (1,0) | |
| Boilt barjo of hose front brake21034 (3,4)Bolt barjo of hose front brake2612 (1,2)Screw cap deposit of master cylinder241 (0,1)Screw breaker of the light of front brake141 (0,1)Nut pivot of the brake striker166 (0,6)Bolt fixing of the clamp front brake2826 (2,6)Bolt of bolt of the clamp front brake (assistant)1818 (1,8)Bolt of pads11018 (1,8)Cap bolt of pads1102 (0,2)Valve to drain the clip of the brake15 (0,5)Other fixers11010 (1,0) | Brake System | | - | | |
| Bolt bully of hold informationImage: Constraint of the cylinderImage: Constraint of the cylinderBolt the support of the cylinder master striker2612 (1,2)Screw breaker of the light of front brake141 (0,1)Nut pivot of the brake striker166 (0,6)Bolt fixing of the clamp front brake166 (0,6)Bolt of bolt of the clamp front brake2826 (2,6)Bolt of bolt of the clamp front brake (assistant)1818 (1,8)Bolt of pads11018 (1,8)Cap bolt of pads1102 (0,2)Valve to drain the clip of the brake15 (0,5)Other fixers11010 (1,0) | Bolt banio of bose front brake | 2 | 10 | 34 (3 4) | |
| Screw cap deposit of master cylinder indiction with a striker241 (0,1)Screw breaker of the light of front brake141 (0,1)Nut pivot of the brake striker166 (0,6)Bolt pivot of the brake striker166 (0,6)Bolt fixing of the clamp front brake2826 (2,6)Bolt of bolt of the clamp front brake (assistant)1822 (2,2)Bolt of pads11018 (1,8)Cap bolt of pads1102 (0,2)Valve to drain the clip of the brake15 (0,5)Other fixers11010 (1,0) | Bolt the support of the cylinder master striker | 2 | 6 | 12 (1 2) | |
| Screw breaker of the light of front brake141 (0,1)Nut pivot of the brake striker166 (0,6)Bolt pivot of the brake striker166 (0,6)Bolt fixing of the clamp front brake2826 (2,6)Bolt of bolt of the clamp front brake (assistant)1822 (2,2)Bolt of bolt of the clamp front brake (assistant)1818 (1,8)Bolt of pads11018 (1,8)Cap bolt of pads1102 (0,2)Valve to drain the clip of the brake15 (0,5)Other fixers11010 (1,0) | Screw can denosit of master cylinder | 2 | 4 | 1 (0 1) | |
| Nut pivot of the brake striker166 (0,6)Bolt pivot of the brake striker166 (0,6)Bolt fixing of the clamp front brake2826 (2,6)Bolt of bolt of the clamp front (main)1822 (2,2)Bolt of bolt of the clamp front brake (assistant)1818 (1,8)Bolt of pads11018 (1,8)Cap bolt of pads1102 (0,2)Valve to drain the clip of the brake15 (0,5)Other fixers11010 (1,0) | Screw breaker of the light of front brake | 1 | 4 | 1 (0,1) | |
| Bolt pivot of the brake striker166 (0,6)Bolt fixing of the clamp front brake2826 (2,6)Note 10Bolt of bolt of the clamp front main)1822 (2,2)8Bolt of bolt of the clamp front brake (assistant)1818 (1,8)Bolt of pads11018 (1,8)Cap bolt of pads1102 (0,2)Valve to drain the clip of the brake15 (0,5)Other fixers11010 (1,0) | Nut nivot of the brake striker | 1 | 6 | 6 (0,6) | |
| Bolt pivot of the clamp front brake2826 (2,6)Note 10Bolt of bolt of the clamp front (main)1822 (2,2)Bolt of bolt of the clamp front brake (assistant)1818 (1,8)Bolt of pads11018 (1,8)Cap bolt of pads1102 (0,2)Valve to drain the clip of the brake15 (0,5)Other fixers11010 (1,0) | Bolt pivot of the brake striker | 1 | 6 | 6 (0,6) | |
| Bolt of bolt of the clamp front brake1822 (2,2)Bolt of bolt of the clamp front brake (assistant)1818 (1,8)Bolt of pads11018 (1,8)Cap bolt of pads1102 (0,2)Valve to drain the clip of the brake15 (0,5)Other fixers11010 (1,0) | Bolt fixing of the clamp front brake | 2 | 8 | 26 (2,6) | Note 10 |
| Bolt of bolt of the clamp front brake (assistant)1818 (1,8)Bolt of pads11018 (1,8)Cap bolt of pads1102 (0,2)Valve to drain the clip of the brake15 (0,5)Other fixers11010 (1,0) | Bolt of bolt of the clamp front (main) | 1 | 8 | 22 (2,2) | |
| Bolt of pads11018 (1,8)Cap bolt of pads1102 (0,2)Valve to drain the clip of the brake15 (0,5)Other fixers11010 (1,0) | Bolt of bolt of the clamp front brake (assistant) | 1 | 8 | 18 (1.8) | |
| Cap bolt of pads11010 (1,0)Cap bolt of pads1102 (0,2)Valve to drain the clip of the brake15 (0,5)Other fixers11010 (1,0) | Bolt of pads | 1 | 10 | 18 (1.8) | |
| Value to drain the clip of the brake15 (0,5)Other fixers110Bolt pivot of side stand110 | Can bolt of pads | 1 | 10 | 2 (0 2) | |
| Other fixers 1 10 10 (1,0) | Valve to drain the clip of the brake | 1 | 10 | 5 (0 5) | |
| Bolt pivot of side stand 1 10 10 (1,0) | Ather fivers | | | | |
| | Balt nivet of side stand | 1 | 10 | 10 (1 0) | |
| Nut of locks the pivot bracket 1 10 39 (2.9) Note 9 | Nut of locks the nivet bracket | 1 | 10 | 39 (3 9) | Note 9 |
| Bolt breaker of bracket 1 6 10 (1 0) | Bolt breaker of bracket | 1 | 6 | 10 (1 0) | NOLE J |

SPECIAL TOOLS

| | Part number | | Section |
|---|------------------|----------------|------------|
| Description | | Notes | de ref. |
| A 04 00 | 07740 0040700 | | 0.44 |
| Accessory, 24 x 26 mm | 07746-0010700 | | 9, 14 |
| Accessory, 28 x 30 mm | 0/946-18/0100 | | 14 |
| Accessory, 32 x 35 mm | 0//46-0010100 | | 12 |
| Accessory, 37 x 40 mm | 07746-0010200 | | 12, 14 |
| Accessory, 42 x 47 mm | 07746-0010300 | | 11, 13, 14 |
| Accessory, 52 x 55 mm | 07746-0010400 | | 11, 13 |
| Accessory, 72 x 75 mm | 07746-0010600 | | 12 |
| Head extractor of bearing, 17 mm | 07746-0050500 | | 13, 14 |
| Whole extractor of bearing, 12 mm | 07936-1660001 | | 11 |
| Head extractor of bearing, 15 mm | 07936-KC10200 | | 11, 13 |
| Axle extractor of bearing | 07746-0050100 | | 11, 13, 14 |
| Weight of extractor of bearing | 07741-0010201 | | 11, 12 |
| Extractor of tracks 34,5 mm | 07948-4630100 | | 13 |
| Extractor of tracks, 44.5 mm | 07946-3710500 | | 13 |
| Gauge the level of float | 07401-0010000 | | 5 |
| Support of the body of clutch | 07.IMB-MN50301 | | 9 |
| Support of the body of clutch | 07724-0050002 | | 9 |
| Spacer of mounting the casing of the engine | 07965-\/M00100 | | 12 |
| Ayle of mounting the casing of the engine | 07965-\/M00200 | | 12 |
| Driver | | | 0 11 12 |
| Diver | 07749-0010000 | | 3, 11, 12, |
| | 07046 M 100100 | | 13, 14 |
| Driving Axie | 0/946-IVIJ00100 | | 14 |
| Accessory of extractor of bearing, 22 mm | 0/GIVID-K1/0200 | | 14 |
| I ool of the drive chain | 0/HMH-MR10103 | | 3 |
| Support of the steering wheel of the engine | 07725-0040000 | | 10 |
| Extractor of the rotor | 0//33-0020001 | | 10 |
| Bar of extension of extractor | 07716-0020500 | | 10 |
| Driving force behind the checkpoint of the fork | 07747-0010100 | | 13 |
| Accessory of driver catch of the fork | 07747-0010600 | | 13 |
| Behind the steering column | 07946-MB00000 | | 13 |
| Adapter from the voltage of peak | 07HGJ-0020100 | Probador Imrie | 16, 17 |
| | | (model 625) | |
| Pilot, 12 mm | 07746-0040200 | | 12 |
| Pilot, 15 mm | 07746-0040300 | | 11, 14 |
| Pilot, 17 mm | 07746-0040400 | | 11, 13, 14 |
| Pilot, 20 mm | 07746-0040500 | | 11 |
| Pilot, 22 mm | 07746-0041000 | | 11, 14 |
| Pilot, 25 mm | 07746-0040600 | | 11 |
| Pilot, 28 mm | 07746-0041100 | | 12 |
| Key to nuts | 07HMA-MR70100 | | 12 |
| Protector of the accommodation of actuator 24 x 25.5 mm | 07HMG-MB70002 | | 7 |
| Key socket of the steering column 30×32 mm | 07716-0020400 | | 13 |
| Adapter for thread | 07965-\/M0020400 | | 12 |
| Extractor of boaring universal | 07621 0010000 | | 12 |
| Advagate of guides to value | 07031-0010000 | | 7 |
| Advocate of guides to valve | 07492-101A00000 | | 7 |
| Reamer of guides to valve, 5,0 mm | 07353 00100001 | | 7 |
| Compressor of springs of valve | 07757-0010000 | | 7 |
| Accessory of the compressor of springs | 0/959-KIVI30101 | | / |
| Fresas de asiento de valvulas | 07700 0010000 | | _ |
| – Fresa del asiento de la valvula, 27,5 mm (45° ADM) | 07780-0010200 | | 1 |
| – Fresa de asiento de la válvula, 24 mm (45° ESC) | 07780-0010600 | | 7 |
| – Fresa plana, 27 mm (32° ADM) | 07780-0013300 | | 7 |
| – Fresa plana, 24 mm (32° ESC) | 07780-1250000 | | 7 |
| – Fresa interna, 37,5 mm (60° ADM) | 07780-0014100 | | 7 |
| – Fresa interna, 26 mm (60° ESC) | 07780-0014500 | | 7 |
| – Soporte de fresa, 4,5 mm | 07780-0010600 | | 7 |
| Alicate para anillo de presión | 07914-3230001 | | 15 |

POINTS OF LUBRICATION AND SEALS

MOTOR

| Location | Material | Notes |
|---|---|---|
| Stumps and lobes of the camshaft failure surfaces of external actuating the valve Stem from the valve (area of slip of the guide of the valve and extremity of offspring of the valve) Surfaces of slipping internal and external of the guide of the bell of the clutch Outer Surface of the cotter pin Inner Surface of the foot of the crank surfaces of rotation of the workings of transmission slots of the forks of the change of gears of the workings of transmission Surface of bearing the crankshaft (bearing of needles) | Solución de aceite a base de bisulfuro de molibdeno (mezcla de 50% de aceite para motor con 50% de grasa a base de bisulfuro de molibdeno) | |
| Distribution Chain Thread and surface of seat of the nut of the cylinder head outer surface of the and accommodation of cotter pin Surface of the rings of the piston cavity of the cylinder drive shaft of the mechanism of clutch Guide for operating the clutch surfaces of lining of the disk of clutch Thread and surface of seat of the nut of locks of the body of clutch Thread and surface of seat of the nut of chain of command primary Thread and surface of seat of bolt the wheel of the engine Teeth and surface of rotation of the workings of transmission axle of the forks of the change of gears Spikes of guide and internal sur- faces of the forks of the change of gears slots of the drum of Gearbox Bearing Rings o Head of the crank Support of camshaft failure surfaces of the clutch of starter motor Tensile distribution chain and surface of slip of the guide | Motor Oil e piston | |
| Lips catch of oil | Multipurpose Grease | |
| Thread bolt of the plate of cam gears Thread bolt of the plate of fixing of the bearing of the main axle Thread bolt of the guide the tensile distribution chain Thread bolt Torx clutch unidirectional start | Firming Agent (Locks chemistry) | - Breadth of coverage 6,5 mm from the tip |
| Contact Area of the cylinder head | Liquid sealer | |

CHASSIS

| Location | Material | Notes |
|--|----------------------|-------|
| Pivot of the lever clutch | Multipurpose grease | |
| Surface of slip of the tube/handgrip accelerator | | |
| Slot guide of the cable accelerator | | |
| Pivot bracket | | |
| Pivot central support | | |
| Bearing wheels | | |
| Bearing of the steering column | | |
| Bearing pivot swing arm | | |
| Pivot brake pedal rear | | |
| Cmea and axle rear brake | | |
| Surface of slippage bolt of anchorage of the panel rear brake | | |
| Lips of dust cmea rear brake | | |
| Lips of each dust and lips of each lid of dust | | |
| Inside the gear box of the speedometer | | |
| Lips of dust of the steering column | | |
| Lips of dust pivot swing arm | | |
| Checkpoints and pistons of the cylinder master of the brake | Brake fluid DOT 4 | |
| Coveralls, stamps and pistons tweezers brake | | |
| Pivot of the lever of front brake | Silicon-based grease | |
| Inside the protective rubber cord accelerator | | |
| Internal Part of protective rubber cord clutch | | |
| Pistons tweezers | | |
| Surfaces of slip of the pins of the tweezers | | |
| Surfaces of slip of the pins of the supports of the tweezers | | |
| Lips catch of oil from the fork | Fork fluid | |
| Lips of dust of the fork | (suspension) | |
| O ring of bolt top of the fork | | |
| Internal surfaces of the grip of rubber of the handlebars | Adhesive Honda A o | |
| Contact Surface of the box of air filter/tube of connection | equivalent Cemedine | |
| | 540 | |
| Thread of bolt of disk on the front brake | Firming agent | |
| Thread bolt Allen of the fork | (Locks chemistry) | |
| Thread of bolt fixing of the clip of the brake | | |
| Thread of bolt of bolt of the clip of the brake and the bolt the | | |
| support of the clamp | | |
| Bolt connecting the exhaust pipe / silencer | | |

LAYOUT OF THE cables and wiring











DRAINAGE BREATHER TUBE FROM THE CASING OF THE ENGINE



SYSTEMS OF EMISSION CONTROL

EMISSION SOURCE

The combustion process produces carbon monoxide and hydrocarbons. The control of hydrocarbons is very important. Under certain conditions, when exposed to sunlight, hydrocarbons react to produce haze and photochemical smog. The carbon monoxide does not react in the same way. Still, is toxic.

Motor Honda da Amazonian Ltd. used mix settings of poor carburetor, as other procedures, in order to reduce the emission of carbon monoxide and hydrocarbons.

CONTROL SYSTEM OF ISSUING THE ENGINE CRANKCASE

The engine introduced a system of crankcase closed to avoid the discharge of their gases into the atmosphere. The gases emitted through the crankcase returning to the combustion chamber through the air filter and of the carburetor.



| INFORMATION SERVICE | 2-1 | REAR FENDERS | 2-3 |
|------------------------|-----|----------------|-----|
| RESEARCH OF BREAKDOWNS | 2-1 | PLATE SIDE PIT | 2-3 |
| SEAT | 2-2 | FUEL TANK | 2-4 |
| TOP SIDE | 2-2 | FRONT FENDERS | 2-4 |
| REAR GRIP | 2-2 | SILENCER | 2-5 |
| TAIL PIECE | 2-2 | | |
| | | | |

INFORMATION SERVICE

GENERAL Instructions

•The petrol (gasoline) is extremely flammable and explosive under certain conditions. Keep out of the reach of children. •Work on a local well ventilated. The presence of cigarettes, flames or sparks in the local labour or where stocks petrol (gasoline) can cause a fire or explosion. •In case of that is necessary to make services with the engine running, make sure that the local work is well ventilated. Never put the engine running in closed areas. The exhaust containing carbon monoxide poison, which can cause loss of consciousness and even death. Put the engine running in a local open, or in a local closed equipped with a ventilation system and extraction of gas. •Parts of the exhaust system, the engine and the engine oil heated too and thus remain for some time, even after the engine has ceased to function. Be careful not to burn. Wear gloves with thermal insulation. •Before dismantling or repair of any component Make sure that the exhaust system has cooled. Otherwise, they may occur serious burns.

• This section is the removing and installing the fairing, fuel tank and the exhaust system. •Always to disassemble the exhaust pipe of the engine, replace their gaskets. •To install the exhaust system, to keep loosened all its fixers. Always tighten first the clamps and then the fixers, or: bolts and / or nuts. Otherwise, the settlement of the exhaust pipe may prove to be wrong. •After installation, check provided the exhaust system with regard to leak.

VALUES OF TIGHTENING torque

Union Nut of the exhaust pipe

18 N.m (1,8 kg.m)

RESEARCH OF BREAKDOWNS

Escape with excessive noise

- Exhaust System damaged
- Flight of the exhaust

Poor Performance

- Exhaust System deformed
- · Flight of the exhaust
- Silencer obstructed

SEAT

DISMANTLING

Unlock the saddle using the key to the ignition of agreement with the illustration

Push the saddle backward, away the

hooks of the saddle hooks of the

INSTALLATION

Install the saddle, aligning the hooks of the saddle with hooks of the chassis

Push the extremity rear seat forward and firmly way down.

Try to remove the saddle to ensure that is firmly locked.

TOP SIDE

DISMANTLING/Installation

Remove the saddle (refer to the item

above). NOTE:

Be careful not to damage the projections the side covers. Remove the bolts of the tapas side. Besides the headlight and fuel tank. Immediately remove the cover side. The installation is performed in reverse order dismantling.

REAR GRIP

DISMANTLING/Installation

Remove the saddle (refer to the item above). Remove the two bolts of rear grip. Remove the two bolts and the spring of the support for the locks of the saddle. Remove the support of the saddle. The installation is performed in reverse order dismantling.

TAIL PIECE

DISMANTLING/Installation

Remove the saddle and tapas side (refer to the item above). Remove the two fixing bolts the tail piece. Apart from the projections of the tail piece and chassis. Remove the tailpiece. The installation is performed in reverse order dismantling.









REAR FENDERS

DISMANTLING

Remove the tail piece (page 2-2).

Disconnect the connector of the rear /

light of brake. Remove the three nuts,

washers and the connector of the rear / light

of brake. Disconnect the connectors of

the indicator rear. Remove

the four bolts. Remove the rear fenders

of the chassis.

DISMANTLING/INSTALLATION

Remove the two nuts, support, and the indicator rear. The installation and the assembly carried out in reverse order dismantling.





PLATE SIDE PIT

DISMANTLING/Installation

Remove the four screws of the plates baffles side. Remove

the plates baffles side.

NOTE

Be careful not to damage the plates baffles side during the dismantling / installation.

To installation is performed in reverse order dismantling.



CBX250

FUEL TANK

ADVERTENCIA

 The petrol (gasoline) is extremely flammable and explosive under certain conditions. Keep out of the reach of children. •Immediately Clean petrol (gasoline) in case of bloodshed. •Work on a local well ventilated. The presence of cigarettes, flames or sparks in the local labour or where stocks petrol (gasoline) can cause a fire or explosion.

DISMANTLING/Installation

Remove the saddle (page 2-2). Remove the plates baffles side (p. 2-3). Closing the valve of fuel. Disconnect the tube of fuel valve of fuel.

NOTE

During the dismantling, be careful not to damage the connector 2P and sensor wiring of fuel level.

Remove the bolt fixing of tank and the collar. Then, apart from the projections of the lids and the side and gums of fuel tank. Disconnect the connector 2P sensor level of fuel. Besides the fuel tank and gum fixation, pulling the tank backwards. The installation is performed in reverse order dismantling.

NOTE

After the installation turn the valve of fuel for the position ON (open) and make sure that there is no fuel leaks.

FRONT FENDERS

DISMANTLING/Installation

Remove the screw and disconnect the cable from the gear box of the speedometer, located in the fork of the suspension. Remove the fixing bolts the fenders, the front fenders, support, and the pin of the hose front brake. The installation is performed in reverse order dismantling.

NOTE

Tighten fixing bolts the front fenders and the pin of the hose of the brake.







SILENCER

DISMANTLING

ADVERTENCIA

Not to make services in the exhaust system while the same is hot.

Remove the nuts and bolts of union of the exhaust pipe. Remove the two bolts / nuts of fixing and the exhaust pipe / silencer.



DISMANTLING

Remove the four bolts and separate the exhaust pipe, the gasket and the silencer.

ASSEMBLY

Mount the exhaust pipe, the new gasket and the silencer.

NOTE

Always replace the gasket of the silencer for a new.



INSTALLATION

Install the whole of the exhaust pipe and the silencer. Install temporarily all nuts and fixing bolts.

NOTE

Always replace the gasket of the exhaust pipe / muffler for a new.

Tighten the nuts and bolts of union of the exhaust pipe to the specified torque. Tightening Torque: 18 N. m (kg.m) Tighten bolts and washers for fixing the exhaust pipe / silencer.



NOTES

| |
|------|
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |

3. MAINTENANCE

| INFORMATION SERVICE | 3-1 | BRAKE FLUID | 3-18 |
|---------------------------------|---------------|------------------------------|------|
| TABLE OF MAINTENANCE | 3-3 | BRAKE PAD WEAR / BRAKE SHOE | 0.40 |
| FUEL LINE | 3-4 | WEAR | 3-18 |
| FUEL FILTER | 3-4 | BRAKING SYSTEM | 3-19 |
| OPERATION OF THE ACCELERATOR3-5 | ES- | SWITCH OF THE LIGHT OF brake | 3-19 |
| | 2-6 | HEADLIGHT ADJUSTMENT | 3-20 |
| | 3-0 2 C | CLUTCH SYSTEM | 3-20 |
| | 3 - 0 | FRAME | 3-21 |
| ENGINE CASING BREATHER | | SUSPENSION | 3-21 |
| VALVE CLEARANCES | 3 -7 7 | | 2_22 |
| SPARK PLUG | 3-8 | NOTS, BOLTS AND TIXENS | 5-22 |
| THE ENGINE OIL | 3-11 | WHEELS/TIres | 3-23 |
| OIL FILTER | 3-13 | STEERING COLUMN | 3-24 |
| ROTATION OF IDLING | 3-13 | | 0 24 |
| DRIVE CHAIN | 3-14 | | |
| | | | |

INFORMATION SERVICE

•The petrol (gasoline) is highly inflammable and explosive under certain conditions. Keep out of the reach of children. •Work on a local well ventilated. The presence of cigarettes, flames or sparks in the local labour or where stocks petrol (gasoline) can cause a fire or explosion. •In case of that is necessary to make services with the engine running, make sure that the local work is well ventilated. Never put the engine running in closed areas. The exhaust containing carbon monoxide poison, which can cause loss of consciousness and even death. Put the engine running in a local open, or in a local closed equipped with a ventilation system and extraction of gas. •Locate the motorcycle on a surface before starting any service.

SPECIFICATIONS

| ltem | | SPECIFICATIONS | |
|--|-----|----------------|--|
| Free Play of the grip of the accelerator | | 2 – 6 mm | |
| Spark Plugs | | CR8EH-9 (NGK) | |
| Spark plug gap | | 0,8 – 0,9 mm | |
| Valve clearances | ADM | 0,12 mm | |
| | ESC | 0,15 mm | |

| ltem | | Specification | | |
|-------------------------------|--------------------------|--|--------------------------------|--|
| Recommended motor oil | | MOBIL SUPERMOTO 4T Classification de service: API SF Viscosity: SAE 20W-50 | | |
| Oil capacity | Drain | | 1,5 <i>t</i> | |
| | Drain with new oil filte | er | 1,5 <i>l</i> | |
| | Dry | | 1,8 <i>e</i> | |
| Idle speed | | | 1.400 ± 100 rpm | |
| Slack in the drive cha | iin | | 15 – 25 mm | |
| Brake fluid recomme | nded | | DOT 4 | |
| Free Play of the lever clutch | | | 10 – 20 mm | |
| Tyre pressures | Solo | Front | 225 kPa (2,25 kgf/cm², 33 psi) | |
| (cold) | | Back | 225 kPa (2,25 kgf/cm², 33 psi) | |
| With Pillion | | Front | 225 kPa (2,25 kgf/cm², 33 psi) | |
| | | Back | 250 kPa (2,50 kgf/cm², 36 psi) | |
| Tyre dimensions | | Front | 100/80 – 17 52S | |
| | | Back | 130/70 – 17 62S | |
| Recommended type of tyre | | Front | PIRELLI MT75 | |
| | | Back | PIRELLI MT75 | |
| Minimum tread depth | | Front | Check wear indicator | |
| | | Back | Check wear indicator | |

TORQUE VALUES

| Spark plug | 12 N.m (1,2 kg.m) | |
|---|-------------------|-------------------------|
| Top of the hole of the crankshaft | 8 N.m (0,8 kg.m) | Apply oil in the o ring |
| Top of the hole of synchronisation | 10 N.m (1,0 kg.m) | Apply oil in the o ring |
| Bolt drainage of engine oil | 30 N.m (3,0 kg.m) | |
| Bolt the door of the cylinder head | 12 N.m (1,2 kg.m) | |
| Against the adjuster of the drive chain | 21 N.m (2,1 kg.m) | |
| Nut of the rear axle | 88 N.m (8,8 kg.m) | Tuerca U |
| | | |

SPECIAL TOOL

Tool of the drive chain

07HMH-MR 10103

MAINTENANCE TABLE

| Itom | Operations | Period | | | |
|----------------------------------|------------------------------|----------|----------|----------|----------|
| | Operations | 1.000 km | 3.000 km | 6.000 km | a cadakm |
| Fuel hoses | Check | | | | 3.000 |
| Fuel Filter | Clean | | | | 3.000 |
| Accelerator | Check & adjust | | | | 3.000 |
| Choke | Check & adjust | | | | 3.000 |
| Air filter | Clean (note 1) | | | | 3.000 |
| | Replace | | | | 18.000 |
| Respiro del motor | Clean (note 2) | | | | 3.000 |
| Spark plug | Clean & adjust | | | | 3.000 |
| | Replace | | | | 12.000 |
| Valve clearances | Check & adjust | | | | 3.000 |
| Motor oil | Replace | | | | 3.000 |
| Oil filter | Replace | | | | 6.000 |
| Carburettor | Check the idling | | | | 3.000 |
| | Clean | | | | 6.000 |
| Chain | Check, adjust, lubricate | | | | 1.000 |
| Lighting system & | Check | | | | 3 000 |
| indicators | | | | | 5.000 |
| Brake fluid | Check the level and complete | | | | 3.000 |
| | Change (note 3) | | | | 18.000 |
| Wear on the pads of the brake | Check | | | | 3.000 |
| Shoe/Drum rear brake | Clean | | | | 3.000 |
| Brake system | Check the operation | | | | 3.000 |
| Switch of the light of the brake | Check the operation | | | | 3.000 |
| Direction of focus of headlight | Adjust | | | | 3.000 |
| Clutch system | Check the operation | | | | 3.000 |
| Side stand | Check | | | | 3.000 |
| Suspension front & rear | Check | | | | 6.000 |
| Nuts, screws and fixers | Check and tighten | | | | 3.000 |
| Rims and Wheels | Check | | | | 3.000 |
| Tyres | Calibrate | | | | 1.000 |
| Turning of the steering column | Check, adjust, lubricate | | | | 6.000 |
| Instruments/Switches | Check the operation | | | | 3.000 |

Comments:

- 1. The need for service is more frequent when leads in moist areas or dusty.
- 2. The need for service is more common when driving under rain, or with maximum acceleration.
- 3. Replace every 2 years, or as indicated in the table of maintenance, whichever occurs first.
FUEL LINE

if necessary.

FUEL LINE



FUEL TAP



FUEL FILTER

SIEVE FILTER



Inspect the o ring and replace it with a new, if necessary. Install the filter, the new o ring and the body filter in the body of the valve of fuel. Make sure that the o ring is properly installed. Tighten the Cuba of fuel filter. Open the valve of fuel and make sure that there is no leakage. O Ring



FUEL FILTER

FUEL FILTER

🔔 ADVERTENCIA

• The petrol (gasoline) is highly inflammable and explosive under certain conditions. Keep out of the reach of children. •Work on a local well ventilated. The presence of cigarettes, flames or sparks in the local labour or where stocks petrol (gasoline) can cause a fire or explosion.

Inspect the line of fuel and connections with regard to deterioration, damage and leaks. Replace the line

Closing the valve of fuel. Remove the body of fuel filter, the o ring and the sieve. Drain the content of the body in a suitable vessel. Wash the sieve, and the body of fuel filter using a solvent that is not a flammable.

OPERATION OF THE ACCELERATOR

Check the cables of the accelerator and replace in the event that they are damaged, bent or damaged. Check if the grip of the accelerator operates smoothly. Check if the same returns in a complete and automatic, since the full open position, in all the positions of the handlebars. If the handgrip fails to return in an appropriate manner, lubricate the cables accelerator, dismantle and inspect the support of the accelerator. Procedure for lubrication of the cable: Disconnect the upper extremities of the cables accelerator. Lubricate totally the cables and their points of articulation with a lubricant of cabos commercially available or an oil of low viscosity. If the grip still fails to return properly, replace the cables accelerator.



ADVERTENCIA

The use of cables bent, damaged or twisted so abnormal can harm the operation of the accelerator and cause the loss of control during the conduct of the motorcycle.

With the engine idling, turn the handlebars completely to the right and left, to ensure that the idle does not alter.

Idle speed: 1.400 ± 100 rpm

In the event that the rotations of idle increase, check the free play of the grip of the accelerator and the cable connections.

Measure the play free in the flange of the grip of the accelerator.

Free play: 2 – 6 mm



The play free of the grip can be set in the adjuster the support of the accelerator. If necessary, loosen against and turn the adjuster for the play free. Check again the functioning of the accelerator. Replace any piece damaged, if necessary. After adjustment, tighten the firmly.



CHOKE

Inspect the cable of choke and replace in the event that is

worn, twisted or damaged. Check if the lever of choke

operates smoothly. If necessary, lubricate the cable of choke.

AIR FILTER

🔔 ADVERTENCIA

Do not allow the entry of foreign materials inside the box of air filter.

Remove the saddle (page 2-2). Remove the screws and the cover of the box of air filter. Remove the element of air filter. Clean the element multiplied compressed air from the inside. Replace, if necessary. Replace the element of air filter in accordance with the recommended intervals in the table of maintenance (page 3-3) or whenever it is too dirty or damaged. Install the pieces that have been removed.





BOLT

TOP OF THE

BOX OF AIR

FILTER

ENGINE BREATHER

NOTE

Perform services more frequent when driven in rain, with maximum acceleration or after washing or dump motorcycle. Make services in the event that the level of deposits can be seen in the section of transparent drainage breather tube.

Remove the cap drainage breather tube to clean any deposit. Install again the drain plug.

SPARK PLUG

ADVERTENCIA

While the engine is hot, use thermal gloves for not suffer burns.

Disconnect the noise dampening layer of the spark plug.

NOTE

Before removing the spark plug clean around the base using compressed air. Make sure that no foreign material between in the combustion chamber.

Remove the spark plug using the right tool. Inspect or replace the spark plug of turning on agreement with the recommended intervals in the table of maintenance (page 3-3).

NOTE

Use only the spark plug specified for this motorcycle.

INSPECTION

Inspect the following items and replace the spark plug in the event that required (spark plug power recommended: page 3-1). •Damage or cracks in the insulator •wear of the electrodes •Status of burning and colouring: The dark brown to clear indicates good condition. A color excessively clear indicates poor functioning of ignition system or lean. Deposits of black soot or moisture indicated a mixture too rich.

REUSE OF THE SPARK PLUG

Clean the electrodes with a brush of steel or with a cleaner of spark plugs. Check the opening between the central electrodes and side using a gauge of thicknesses of the type wire. In case of need, setting the opening doubling carefully the electrode side.

Spark plug gap: 0,8 – 0,9 mm

DRAINAGE BREATHER TUBE



Drain PLUG







ATENCION

To prevent damage in the cylinder head, tighten manually spark plug power before using the keys to spark plugs to tighten the pair specified.

Install again spark plug in the cylinder head and tighten manually. Then, tighten the pair specified.

TORQUE: 12 N.m (1,2 kg.m)

REPLACEMENT OF THE SPARK PLUG

ATENCION

Do not excessively tighten the spark plug

In case of need adjustment the opening of the spark plug agreement with the specification, using a gauge of thicknesses of the type wire. Install and tighten manually spark plug new in the cylinder head. After the washer ring has been settled in the accommodation of the spark plug, tighten approximately 1/2 drawing more. Install the noise dampening layer in the spark plug.



TOP OF THE CYLINDER HEAD

BOLT

VALVE CLEARANCES

INSPECTION

NOTE

Inspect and adjust the slack values while the engine is cold (down 35°C).

Remove the fuel tank (page 2-4). Remove the noise dampening layer of the spark plug. Remove the

bolts and the cover of the cylinder head. Remove the spark plug (page 3-7). Remove the covers of the hole of the crankshaft and the opening of synchronisation.





Turn the crankshaft clockwise and align the mark T in the steering wheel of the engine with the notch indicator at the top left side of the housing from the engine. Make sure that the piston is in the top dead in the race of compression.



Measure idle valves for intake and exhaust cylinder inserting a gauge of thickness between the actuating the valve and the lobe of camshaft.

| Valve clearances | ADM | 0,12 mm |
|------------------|-----|---------|
| | ESC | 0,15 mm |



GAUGE OF THICKNESSES

ADJUSTMENT

Remove the actuators valves and the shims (page 7-6).

NOTE

•The shims can retain in the interior of the actuators valves. Not the drop in the casing of the engine. •Bring all the actuators and shims to make sure they are installed in its original position. The •actuating the valve is removed easily with a place of windy or with a magnet. The • shims removed easily with a clip or with a magnet.

Clean the area of contact of fit with the actuating the valve using compressed air. In case of need adjustment, measure and take note of the thickness of each fit, to obtain a reference to the selection of shims.

NOTE

Are 60 and nine different thicknesses of shims available, from the most narrow (1.200 mm thickness) until the thicker (2.900 mm), with a difference of 0,025 mm between each.



ACTUATING THE valve





Calculate the thickness of the new shim using the equation:

A = (B - C) + D A: Thickness of the new fit B: Slack annotated valve C: Slack specified valve D: Thickness of old fit

NOTE

 Accurately Measuring the thickness of shim using a micrometer. •Rectify the seats of the valve, in case of a deposit of coal that total size greater than 2.900 mm. •Install the actuators of valves and the shims (if applicable) in their original positions.

Install the new shims selected retainers valves. Apply oil on the basis of carbon disulphide of molybdenum to the actuators valves. Install the actuators valves in their accommodation. Install the camshafts (page 7-19). Rotate the camshaft, turning several times the crankshaft clockwise. Check again the slack valves. Check the conditions of the gasket of the top of the cylinder head. Replace, if necessary. Install the cover of the cylinder head.

1,80 mm 1,825 mm 1,85 mm 1,875 mm

TOP OF THE CYLINDER HEAD



JUNTA

Install the washers of rubber and bolts of the lid of the cylinder head. Then, tighten to value specified.

TORQUE: 12 N.m (1,2 kg.m)



CBX250

Check the terms of the rings o. Install the covers of the holes in sync and the crankshaft.

Tighten the lids to the openings of timing and the crankshaft to value specified.

TORQUE:

Top of the hole of synchronisation Cover the hole in the stork 10 N.m (1,0 kg.m) 8 N.m (0,8 kg.m)



MOTOR OIL

VERIFICATION OF THE LEVEL OF OIL

Support for the motorcycle in vertical position, in a surface. Remove the cover of supply / rod measuring the level of oil and wipe with a clean cloth. Enter the rod measuring in the hole in supply, without turning. Remove the rod measuring and verify if the level of oil is among the brands of level above and below. In case of the level is below or near the line of lower level, serving with the oil recommended to reach the mark of a higher level.

Aceite de motor recomendado: MOBIL SUPERMOTO 4T Clasificación de Servicio API: SF Viscosidad: SAE 20W-50

Check the terms of o ring of the lid of supply / rod measuring the level of oil. Replace the o ring, if necessary. Install again the supply cover / rod measuring the level of oil.





CHANGING THE ENGINE OIL

NOTE

The oil change should be done with warm engine and with the motorcycle supported in the bracket, to ensure a drainage rapid and complete.

\rm ADVERTENCIA

 In the event that is necessary to make services with the engine running, make sure that the local work is well ventilated. Never put the engine running in closed areas. The exhaust containing carbon monoxide poison, which can cause loss of consciousness and even death. Put the engine running in a local open, or in a local closed equipped with a ventilation system and extraction of gas. •Parts of the exhaust system, the engine and the engine oil heated too and thus remain for some time, even after the engine haja ceased to function. Be careful not to burn. Wear gloves with thermal insulation.

The Hot engine to obtain the normal operating temperature. Stop the engine and remove the cover of supply / rod measuring the level of oil. Place a container below the engine to collect the oil. Immediately remove the bolt drainage and the washer seal. Drain completely the oil.

ADVERTENCIA

The used motor oil can cause skin cancer if comes into contact with the same during an extended period. Although it is not likely to happen unless it is handled used oil daily, it is advisable wash their hands with soap and water barely finish manipulate it. Keep out of the reach of children.

After the complete drainage of the oil, check the terms of the washer of sealing the bolt drainage. Replace, if necessary. Install and tighten the bolt drainage.

TORQUE: 30 N.m (3,0 kg.m)

Supplying the engine with the oil recommended (page 3-11).

Oil capacity: 1,5 litres (drain)

Install again the cover of supply / rod measuring the level of oil.

Run the engine and hold it in idle during 2 3 minutes.

Stop the engine and check again the level of oil.

Make sure that there is no leakage of oil.





CBX250

OIL FILTER

Drain the engine oil (page 3-12).

Remove the following components:

- Bolts of the lid of oil filter
- Top of filter of oil and o ring
- Oil Filter
- Spring

Apply motor oil in the new o ring. Install it into the groove on top of filter of oil.

Install the spring between the tabs of the new oil filter. Install the filter with the mark OUT-SIDE (external side) geared toward the outside.

Install the lid of oil filter tightening firmly the two bolts.

Supplying the engine with the oil recommended (page 3-11).

The installation of oil filter to the setback can seriously damage the engine.

ROTATION OF IDLING

ADVERTENCIA

In the event that is necessary to make services with the engine running, make sure that the local work is well ventilated. Never put the engine running in closed areas. The exhaust containing carbon monoxide poison, which can cause loss of consciousness and even death. Put the engine running in a local open, or in a local closed equipped with a ventilation system and extraction of gas.

NOTE

• Check and adjust the idle only after all other items of engine maintenance have been inspected and adjusted in accordance with the specifications. •Engine shall be hot for the inspection and adjustment of idle prove accurate. For this, sufficient ten minutes of progress with intermediate stops.

The Hot engine and put the transmission in neutral. Support for the motorcycle in the central support, in a surface. If necessary, turn the bolt acceleration, with a view to adjust the idle in accordance with the specifications.

Idle speed: 1.400 ± 100 rpm.



TOP OF FILTER/O Ring

BOLT





TRANSMISSION CHAIN

INSPECTION OF THE SLACK IN THE CHAIN

ADVERTENCIA

Never inspect or adjusted the slack in the drive chain with the engine running.

Stop the power switch, support the motorcycle in its central support on a surface and change the impasse. Check the slack in the chain in the lower section, in the mid-point between the crown and the pinion of transmission.

Slack in the drive chain: 15 – 25 mm ATENCION

A slack over exploitation of the drive chain (60 mm or more) can damage the chassis.

ADJUSTMENT

Besides the stem from the brake and the arm of the brake (page

14-3). Loosen the nut of the rear axle.Loosen the nuts of the two

adjusters in the drive chain. Turn the two nuts of

adjustment to obtain the slack correct of the chain of

transmission.Make sure that the ends of the two adjusters are aligned

with the same reference marks of swing arm.

Tighten the nut of the rear axle to the specified torque.

TORQUE: 88 N.m (8,8 kg.m)

Tighten the two nuts of the adjusters in the drive chain.

TORQUE: 21 N.m (2,1 kg.m)

Inspect again the slack in the drive chain and the free rotation of the wheel. Install the stem

rear brake (page 14-8).

CLEANING

Clean the drive chain using a brush soft and a solvent non-flammable. Then, tumble. Make sure that the chain totally dry, before lubricating. Inspect the drive chain with regard to damage and wear. Replace in the event that has roller damaged, links loose or any other irreparable harm. The installation of a new drive chain in crown and sprocket worn can cause the premature wear of the chain. Inspect and replace the crown and the pinion if necessary.









LUBRICATION

Lubricate the drive chain with oil gear SAE 80 90 or with a lubricant specially developed for chains with rings o. Remove excess oil or lubricant.

INSPECTION OF THE CROWN AND SPROCKET OF TRANSMISSION

Inspect the teeth of the crown and sprocket of transmission with regard to wear or damage. Replace the crown and the pinion if necessary. Never use a string of new transmission with gears eroded. The drive chain, as well as the crown and the pinion, must be in good conditions. Otherwise, the new piece is erode rapidly.

INSPECTION OF THE PLATE OF FIXING THE SPROCKET

Check the wear of the plate of fixing the sprocket in the region of the teeth ruffles, always to replace the sprocket. In the event that the thickness of teeth ruffles has reached the limit of service, replace the plate.

| | - |
|---------------|--------|
| Service Limit | 2,1 mm |

Check the bolts and nuts for fixing the crown and sprocket of transmission. If they are loose, tighten specified torque (Section 14).

REPLACEMENT

This motorcycle uses a drive chain with a link master. Loosen the drive chain (page 3-14). Arming the special tool in accordance with the illustration.

Special Tool: Special Tool de la cadena de transmisión

07HMH-MR10103

NOTE

When you use the special tool, follow the manufacturer's instructions.









MASTER LINK

Locate the extremes riveted to the pins link master in the external side of the chain. Remove the link using tool of the drive chain.

Special Tool: Special Tool de la cadena de transmisión

07HMH-MR10103

Remove the drive chain.



NOTE

Include the link teacher when count the links in the chain.

Specified Number of links: 106

Replacement string in the chain: DID 520 VD



ATENCION

Never reuse the chain, the link master, the plaque, or the rings o.

Install the new link master and rings o and plaque link using the tool specified.

ATENCION

Insert the link master since the inner side of the drive chain. Install the plate with an identification mark oriented toward the outside.

Arming and install the tool of the drive chain.

Special Tool: Special Tool de la cadena de transmisión

07HMH-MR10103

Make sure that the smugglers of master link installed correctly. Measure the length of the smugglers of link master projected toward the outside of the plate.

Length: DID 1,15 - 1,55 mm





CBX250

Rivet the smugglers of master link using the tool specified.

Special Tool: Special Tool de la cadena de transmisión

07HMH-MR10103

NOTE

To prevent a riveting rivet excessive gradually the pins, checking the diameter of the area riveted with a foot of underground.



To ensure that the pins link master are set correctly, measure the diameter of the area riveted with a foot of underground.

Diameter of the area riveted: DID 5,50 - 5,80 mm



After the riveting of master link, make sure the area riveted with regard to cracks. In case any are cracked, replace the link master, the rings o and the plate.

ADVERTENCIA

Should Not be used a drive chain with chain of locks.



BRAKE FLUID

ATENCION

Do not mix different types of fluid, since they may not be compatible. •Does Not allow foreign material entering the brake system during the supply of deposit.
•Avoid fluid drizzle in pieces painted, plastic or rubber. Place a cloth on these parts, provided that perform services in the brake system.

NOTE

•When the level of fluid is low, check the brake pads with regard to wear (as indicated below). The wear of the pads of the brake can cause a level of fluid low. With the wear of the pads of the brake, the pistons of the clamp is moving toward the outside, contributing to lower the level of fluid in the deposit. •In case of that pads are not eroded and the level of fluid is low, inspect all the brake system with regard to leaks (refer to the page following).

Check the level of fluid of brake through the viewfinder inspection of the shell of the cylinder master. In case of the level is near the mark below, check to see if the pads of front brake with regard to wear (refer to the item below).

Wear ON THE PADS/brake shoes

FRONT BRAKE PADS

Inspect the brake pads with regard to wear. Replace in the event that the slot limit of wear of one or both has been overtaken. Refer to page 15-4 to obtain information with regard to the replacement of the brake pads.

REAR BRAKE SHOES

Replace the pads of rear brake in case of the arrow in the arm of the brake it aligns with the reference mark , when you press the brake pedal. Refer to page 14-10 to obtain information with regard to the replacement of the brake pads of rear brake.







3-18

BRAKING SYSTEM

FRONT BRAKE

Tap firmly the brake forward and make sure that there is no penetration of air in the system. In the event that the lever is too soft or elastic to be applied, carried the purge of air of the system. Inspect the hose brake and connections with regard to damage, cracks and signals to escape. Tighten the connections, in case of which are weak. Replace the hose and connections, if necessary. Refer to page 15-3 to obtain information with regard to the procedures of purge of the air brake system.

FREE PLAY OF THE BRAKE PEDAL

Check on the free play of the brake pedal.

Free play: 20 – 30 mm





In case of need adjustment through adjustment nut rear brake.

NOTE

After adjusting the free play of the brake pedal check on the functioning of switch of the light of rear brake. Setting the switch, if necessary.

SWITCH OF THE LIGHT OF brake

NOTE

•Adjustment breaker of the light of rear brake only after setting the play free of the brake pedal. •Switch on the light of front brake does not need adjustment.

Setting the switch of the light of rear brake so that the light to turn at the time that the pedal is pressed in 20 mm, immediately before the brake act effectively. In case of need, replace the switch or the defective parts of the system. Hold the body of the switch and turn the adjustment nut. Do not turn the body of the switch.





ADJUSTING THE AIM OF THE HEADLIGHT

ADVERTENCIA

An incorrect adjustment of the headlamp may impair vision of other drivers and even not illuminate the road to a safe distance.

NOTE

Adjust the focus of the light in accordance with the laws and standards of local transit.

Locate the motorcycle on a surface. Loosen the fixing bolts the casing of the headlight. Adjust the focus of the light vertically, aligning the lines of reference of the housing and housing.



CLUTCH SYSTEM

Check if the cable of the clutch is not bent or damaged. Lubricate, if necessary. Measure the play free at the end of the lever of clutch.

Free play: 10 – 20 mm

Minor adjustments are made through the adjuster higher in the lever clutch. Push the protective rubber backwards. Loosen against and turn the adjuster.

ATENCION

If the adjuster is very paragraph, with a minimum space for the docking of the thread, may be damaged.

If even after squeezing the adjuster near the ceiling do not get the play specified, push completely and retraced one lap. Tighten the and adjustment main, as described in the next page.





Greater adjustments are made through the nut lower adjustment in the arm of actuating the clutch, located in the engine. Loosen against and turn the adjustment nut with a view to adjust the free play of the clutch. Set firmly the adjustment nut while tighten the. Check the functioning of the clutch. In the event that do not get the play free specified, or that the clutch skate during the test of travel, clearing and inspect the clutch (refer to Section 9).



SIDE STAND

Support for the motorcycle on a level surface. Inspect the spring of bracket with regard to damage or loss of tension. Check if the whole bracket if you move freely. Lubricate the pivot, if necessary. Check the system of court power bracket: •sit in the motorcycle as outside lead. Lift the bracket. •Activates the engine with the transmission in neutral. Then gear a march, maintaining the lever clutch pressed. •Move the bracket totally downwards. The engine must stop at this time. Must be checked the switch of side stand, in case of a problem in the system (Section 19).



SUSPENSION

ADVERTENCIA

Parts of the suspension loose, worn or damaged adversely affects the stability and control of the motorcycle. Repair or replace all the components damaged before driving the motorcycle. Driving a motorcycle with the suspension defective increases the risk of accidents and injuries.

INSPECTION OF THE FRONT SUSPENSION

Check the action of the forks front brake front and compressing the suspension several times. Inspect the whole with respect to signals of leaks, damage or fixers loose. Replace the damaged that cannot be repaired. Tighten all the nuts and bolts. Refer to Section 13 to obtain information with regard to services in the forks.



INSPECTION OF THE REAR SUSPENSION

Support motorcycle firmly on a proper support and to lift the rear wheel of the soil. To verify the bearings of the articulation with regard to wear, hold the swing arm and trying move laterally the rear wheel. Check the bearings swing arm with regard to wear, holding the rear wheel and trying move the swing arm in all directions. Replace the bearing case observe any slack (refer to Section 14). Inspect the action of rear shock compressing the rear end several times. Inspect the whole of the damper with regard to leakages, damage or fixers loose. Replace the components that cannot be repaired. Tighten all the nuts and bolts. Refer to Section 14 to obtain information with regard to services in the damper.





NUTS, BOLTS AND FIXERS

Make sure that all the bolts and nuts chassis are tight to the pair of proper tightening (p. 1-13). Verify that all the pins hendidos, pins of security, clamps hoses and cable trays are located and fixed properly.

UIS, DULIS AND FIXERS



WHEELS/TYRES

To verify if the bearings of the wheels are worn. For that lock the wheels front / back and try move laterally. Replace the bearings in the event that loose (refer to Section 13 or 14). Hold the fork. Raise of the front wheel of soil and inspect with regard to idle. Turn the wheel and verify if their rotation is soft, without abnormal sounds. In case of wheel present a movement irregular or noise, inspect their bearings. Support motorcycle firmly in a proper support and to lift the rear wheel of the soil. Check the wheel, and the swing arm with regard to idle. Turn the wheel around and verify if their rotation is soft, without abnormal sounds. In case of wheel present a movement irregular or noise, inspect their bearings. If there are suspicions of abnormal conditions, check the bearings in the rear wheel.

NOTE

As the inspection swing arm is included in this procedure, be sure to confirm the location of the slack, or is: if the slack is presented in the bearings of the wheel or the pivot swing arm.

NOTE

It should inspect the pressure on the tires COLD.

Check pressure, using a pressure gauge for tires.

PRESSURE RECOMMENDED AND THE DIMEN-SION OF THE Tires

| | Front | Back |
|---|----------------|----------------|
| Dimension of tyre | 100/80 17 52 S | 130/70 17 62 S |
| Air pressure Solo | 225 (2,25; 33) | 225 (2,25; 33) |
| (cold) kPa With (kgf/cm², psi) pillion | 225 (2,25; 33) | 250 (2,50; 36) |
| Make/Model | Pirelli / MT75 | Pirelli / MT75 |

Inspect the tires with regard to cuts, nails

embedded or other damage. Check the alignment of the wheels front and rear (refer to the sections 12 and 14). Measure the depth of furrowed in the centre of the tires. Replace the tires in the event that the depth of furrowed

has reached the minimum Depth of Back: Front:

Until the wear indicator.

Until the wear indicator.



PRESSURE GAUGE FOR Tires





BEARING OF THE steering column

NOTE

Check to see if the control cables do not interfere in the movement of the handlebars.

Support motorcycle firmly and lift the front wheel of the soil. Check to see if the handlebars moves freely from one side to another. In the event that the handlebars move unevenly, presenting gridlock or a vertical movement, inspect the bearings of the steering column (Section 13).



NOTES

4. LUBRICATION SYSTEM

| DIAGRAM OF LUBRICATION | | SEIVE FILTER 4- | -7 |
|-------------------------------|-----|---------------------------------------|----|
| SYSTEM | 4-0 | | 0 |
| | | UIL RADIATOR 4- | -0 |
| INFORMATION SERVICE | 4-1 | TUBE OF OIL RADIATOR/ | |
| RESEARCH OF BREAKDOWNS | 4-2 | TUBE OF OIL FROM THE CYLINDER HEAD 4- | -9 |
| | | | |
| | 4-3 | | |
| | | | |

INFORMATION SERVICE

GENERAL INSTRUCTIONS

In case of that is necessary to make services with the engine running, make sure that the local work is well ventilated. Never put the engine running in closed areas. The exhaust containing carbon monoxide poison, which can cause loss of consciousness and even death. Activates the engine in a local open, or in a local closed equipped with a ventilation system and extraction of gas. The used motor oil can cause skin cancer if comes into contact with the same during an extended period. Although it is not likely to happen, unless it is handled used oil daily, it is advisable wash their hands with soap and water barely finish to manipulate it. Keep out of the reach of children.

•Services and misgivings in the oil pump can make with the engine installed in the chassis. •Procedures described in this section should be made after the drainage of engine oil. •Does Not allow dust or dirt entering the engine during dismantling or installation of the oil pump. •In case of any component of the oil pump is eroded beyond the limits of service specified, replace the pump as a whole. •After installation of the oil pump, make sure that there is no leakage and that the oil pressure is correct. •Refer to the page 3-11 to obtain information with regard to checking the level of oil. •Refer to the page 3-12 to obtain information with regard to the oil change. •Refer to the page 3-13 to obtain information with regard to change the oil filter.

SPECIFICATIONS

Unit: mm

| Item | | Value | Service Limit |
|-----------------------|--|--|---------------|
| Oil capacity of the | Drain | 1,5 <i>ℓ</i> | |
| motor | Drain and filter | 1,5 <i>ℓ</i> | _ |
| | Dry | 1,8 <i>ℓ</i> | |
| Recommended motor oil | | MOBIL SUPERMOTO 4T Clasificación de service API: SF Viscosidad: SAE 20W-50 | _ |
| Oil pump | Slack between the rotors internal and extern | nal 0,15 | 0,20 |
| | Slack between the external rotor and casing of the pump | 0,15 – 0,21 | 0,25 |
| | Slack between the rotors and flank of the casing of the bomb | 0,02 – 0,08 | 0,12 |

DIAGRAM OF LUBRICATION SYSTEM



RESEARCH OF BREAKDOWNS

Oil Level too low

- Normal Consumption of oil
- External Leakage of oil
- Wear or incorrect installation of the rings of the piston
- · Wear of the guide or catch of oil of offspring of the valve

Low oil pressure

- · Obstruction of the hole of oil
- Type of oil inadequate
- Obstruction of the filter of sieve
- Wear or damage to the oil pump
- Internal Leakage of oil
- Oil Level too low

Oil Pressure non-existent

- Oil Level too low
- Drive gears of the oil pump broken
- Damage in the oil pump (axle of the bomb)
- Internal Leakage of oil
- Relief Valve stuck in the open position

High pressure of oil

- · Blockage of oil filter, of the ducts or of the hole ring
- Type of oil inadequate
- · Relief Valve stuck in the closed position

Problems in the light of warning of oil pressure

• Refer to page 18-9.

OIL PUMP

DISMANTLING

Drain the engine oil (page 3-12). Remove the cover right side of the casing of the engine (page 9-3). Remove the gear commanded of the oil pump and the axle.

Remove the three bolts and the whole of the oil pump.

GEAR COMMANDED OF THE OIL Pump



AXLE

OIL PUMP



BOLT



O-RING

LOCATORS LOCATOR



DISMANTLING

Remove the ear of guide and the o ring.

Remove the two tenons guide.

Remove the three bolts and the lid of the oil pump.

Remove the rotors internally and

externally. Remove the two tenons guide.

INSPECTION

Service

Clean completely all the parts removed. Install temporarily the rotors internal and external in the casing of the oil pump. Install the axle of the oil pump. Measure the slack between the rotors internally and externally.

Limit

Measure the slack between the external rotor and casing of the pump.

0,20 mm

| Service Limit 0,25 mm |
|-----------------------|
|-----------------------|







EXTERNAL ROTOR

CBX250

Measure the slack between the rotors and flank of the casing of the bomb, using a gauge of thicknesses and a rule of precision.

Service Limit 0,12 mm

NOTE

In the event that some component of the oil pump is eroded beyond the limits of service, replace the pump as a whole.

ASSEMBLY





INSTALLATION

Before the assembly, clean completely all the parts removed with solvent and drain. Install the rotors external and internal in the casing of the pump. Supplying the pump with 0.5 1.0 cm3 of motor oil.

EXTERNAL ROTOR



INTERNAL ROTOR

Install the ears of guide and the lid of the oil pump.

GUIDE DOWELS



Install the two tenons guide.

Install the whole of the oil pump. Install the three bolts and tighten firmly.



GUIDE DOWELS







BOLT

Install the axle of the pump aligning the flat surfaces of the axle and the rotor.



AXLE OF THE OIL Pump



GEAR COMMANDED OF THE OIL Pump **O-RING**







SEIVE FILTER

Install the gear commanded of the oil pump, aligning the flat surfaces of the hole gear and the axle of the pump.

Install the ear of guide and the o ring in the connection of the oil pump.

NOTE

Always replace the o ring with a new one.

Clean the filter of sieve of oil (see the item below). Install the lid right side of the casing of the engine (page 9-13). After installation, supplying the engine with the oil recommended (page 3-12) and make sure that there is no leakage.

SEIVE FILTER

The drainage of engine oil (page 3-12). Remove the cover right side of the casing of the engine (page 9-3). Remove the filter of sieve of the casing of the engine. Clean completely the sieve filter using a solvent non-flammable. Inspect the sieve filter with regard to damage and obstruction. Then, install again the filter of sieve in the casing of the engine. Install the lid right side of the casing of the engine (page 9-13).

OIL RADIATOR

ATENCION

Be careful not to damage the fins of the radiator.

DISMANTLING

Remove the plates baffles side (page 2-3). The drainage of engine oil (page 3-12). Release bolts and the connections superiors of the tubes of oil of the radiator, removing the two bolts. Remove the fixing bolts the oil cooler and the spacers. Then, remove the radiator.

INSPECTION

Inspect the air ducts of oil cooler with regard to obstruction or damage. Straighten fins using a small screwdriver. Remove insects, mud or any other type of obstruction, using compressed air or water to low pressure. In case of the air flow is restricted in more than 20 percent of the surface of radiation, replace the radiator. Inspect the radiator and ducts of oil with regard to leak. Install the spacers and tighten fixing bolts the oil cooler.









Apply motor oil clean to the new rings o and install in the connections superiors of the tubes oil radiator. Install and tighten bolts of the connections of the tubes of oil radiator.

TUBE OF OIL RADIATOR/ TUBE OF OIL FROM THE CYLINDER HEAD

DISMANTLING

The drainage of engine oil (page 3-12). Remove the plates baffles side (page 2-3).

TUBE OF OIL RADIATOR

Remove the bolts of the connections superiors of the tubes of oil

of the radiator (next to the oil cooler / page 4-8). Remove the

bolts of the connections lower the tubes of oil of the radiator and

rings o of the lid right side of the casing of the engine. Remove

the tubes of oil.

TUBE OF OIL FROM THE CYLINDER HEAD

Remove the tube of oil from the cylinder head (page 7-8) and the casing of the engine (page 11-13).

INSPECTION

Tube of oil radiator

Inspect the tubes of oil radiator with regard to obstruction, cracks or damage.

Tube of oil from the cylinder head Inspect the tubes of oil from the cylinder head with regard to obstruction, cracks or damage.

INSTALLATION

Tube of oil radiator

Install the connections superiors of the tubes of oil of the radiator in the oil cooler (page 4-8). Apply motor oil to the new rings o. Install the rings o, the ears of guide and the tubes of oil of the radiator in the lid right side of the casing of the engine. Install and tighten bolts of the connections lower the tubes of oil radiator. Install the plates baffles side (page 2-3). Tube of oil from the cylinder head Install the tube of oil from the cylinder head in the cylinder head (page 7-19) and in the casing

of the engine (page 11-13). Supplying the engine with the oil recommended and check the level of oil (page 3-12).



BOLTS/TUBES OF OIL/RINGS O TUBES OF OIL RADIATOR:



TUBES OF OIL FROM THE CYLINDER HEAD:





BOLTS/TUBES OF OIL/RINGS O

5. FUEL SYSTEM

| SERVICE INFORMATION | 5-1 | ASSEMBLY OF THE CARBURETOR | 5-9 |
|-------------------------------|-----|--------------------------------|------|
| INVESTIGATION OF FAULTS | 5-3 | INSTALLATION OF THE CARBURETOR | 5-13 |
| BOX OF AIR FILTER | 5-4 | CHOKE VALVE | |
| DISMANTLING OF THE CARBURETOR | 5-5 | | 5-14 |
| DISASSEMBLY/INSPECTION | | SETTING THE idle screw | 5-14 |
| OF THE CARBURETOR | 5-5 | | |
| | | | |

SERVICE INFORMATION

GENERAL INSTRUCTIONS

ADVERTENCIA

Petrol (gasoline) is highly inflammable and explosive under certain conditions. Keep out of the reach of children.
In case of that is necessary to make services with the engine running, make sure that the local work is well ventilated. Never put the engine running in closed areas. The exhaust containing carbon monoxide poison, which can cause loss of consciousness and even death. Activates the engine in a local open, or in a local closed equipped with a ventilation system and extraction of gas. Control Cables twisted or bent not operate smoothly and can agarrotarse or bogged down, resulting in the loss of control of the motorcycle. Work in well-ventilated areas. The presence of cigarettes, flames or sparks in the local labour or where stocks petrol (gasoline) can cause fire or explosion.

ATENCION

•So that the diaphragms do not suffer damage, be sure to removing before cleaning the air ducts and fuel with compressed air. •Do not remove the connection of the tube of sub air filter, except by replacing it.

•Refer to the page 2-4 to obtain information with regard to removing and installing the fuel tank. •Prior to dismantling the carburetor, place a suitable below the bucket of float, release the screw drainage and drain the carburetor. •After removing the carburetor protects the inlet of the engine with a cloth or cover it with adhesive tape, with the aim of preventing the entry of foreign materials in the interior of the engine. •To dismantle the components of the fuel system, look for the location of the rings o. Replace them with new ones during installation.

NOTE

In case of motorcycle will remain inactive for more than a month, drain the tank of the float. If it leaves the fuel in the tank, the jets are may obstruct, hamper the start and damaging the management.



SPECIFICATIONS

| ltem | Specifications |
|--|-----------------|
| Identification Number of the carburetor | VEA2A |
| Main Pump | 150 |
| Supplier of idling | 45 |
| Initial Opening of the idle screw | 2 1/4 Turns out |
| Level of float | 18,5 mm |
| Rotation of idling | 1.400 ± 100 rpm |
| Free Play of the grip of the accelerator | 2 – 6 mm |

SPECIAL TOOL

Gauge the level of float

07401-0010000

INVESTIGATION OF PROBLEMS

The engine turn, but not starts • fuel is not in the tank • There is no fuel in the carburetor fuel Filter obstructed Line of fuel obstructed Level of float incorrect Relief fuel tank obstructed • Excess fuel in the engine air filter obstructed Carburetor flooded •false Penetration of air in the intake •Fuel contaminated / deteriorated •malfunction of choke •malfunction of the accelerator •No sparks in the spark plug (ignition system flawed) (refer to Section 17).

Mixture poor •refueller obstructed •valve in the float defective •Level of float too low •Restriction on the line of fuel Tube •relief carburettor obstructed •false Penetration of air in the intake •Piston defective vacuum

Mixture rich •Valve enrichment of start (IS) stuck in the open position •Jets of air obstructed •valve in the float defective •Level of float too high •dirty air filter •Piston defective vacuum

The engine stall, starts with difficulty or presents idling irregular •Restriction on the line of fuel •Mixture of fuel too rich / •poor Fuel contaminated / deteriorated •false Penetration of air in the intake •ldling maladjusted •idle screw maladjusted •air filter obstructed •Circuit of idle obstructed •Valve enrichment of start (IS) stuck in the open position • ignition system defective (refer to Section 17). • Level of float incorrect • Relief fuel tank Combustion obstructed delayed when used the brake engine • Mixture too poor in the circuit of idle • ignition system defective (refer to Section 17). Against explosions or fails in the combustion during acceleration • Mixture too poor • ignition system defective (refer to Section 17). Under performance (management) and excessive consumption of fuel • fuel System obstructed • ignition system defective (refer to Section 17).
BOX OF AIR FILTER

DISMANTLING/Installation

Remove the following components: Fuel tank (page 2-4) Fenders rear (page 2-3) Battery (page 16-4) Switch magnetic start (page 18-11) Remove the fuse box. Remove the two bolts and accommodation of the battery.

Remove the bolt and loosen the tube clamp of connecting the resonator. Remove the resonator.

Remove the two screws, the cover of the box of air filter and the air filter (page 3-6). Disconnect the tube of breathing the air filter. Loosen the screw on the tube clamp of connecting the carburetor.

Disconnect the breather tube from the casing of the

engine. Remove the highlight of the box of air filter of the

hub of rubber chassis

Remove the box of air filter. The installation of the pieces are performed in the reverse order to dismantling.



ACCOMMODATION OF THE BATTERY

BOLT



SCREW ON THE tube clamp

RESONATOR



Connection DEL TUBO DE CONEXIÓN TUBO DE RESPIRO DE LA CARCASA DEL MOTOR



Highlight/HUB OF RUBBER

FUEL SYSTEM

CHOKE

DISMANTLING OF THE CARBURETOR

Remove the following components: Fuel tank (page 2-4) Resonator (page 5-4) Remove the valve enrichment of start (IT). Remove the breather tube from the fund of air filter (page 5-4).

Loosen the screws of the clamp insulator and tube clamp of connection. Remove the cable clutch. Loosen the nuts of the adjusters cables accelerator and the adjusters. Remove the cables of the drum accelerator. Remove the body of the carburetor.

DISASSEMBLY/INSPECTION OF THE CARBURETOR

NOTE

Enter the location of each piece of the carburetor and then install again in its original position.

Remove the bolt of acceleration of the accelerator.

Remove the drainage tube of fuel / breather tube.



SCREW ON THE TUBE CLAMP RESONATOR CARBURETOR



SCREWS OF THE Clamps

BOLT OF ACCELERATION



DRAINAGE TUBE/BREATHER TUBE



VACUUM CHAMBER

Remove the four screws, the supports of the tubes and the lid of the vacuum chamber.

NOTE

The compression spring is very long. To remove the lid, be careful to the spring not jump the carburetor.

Remove the compression spring and the diaphragm / piston empty of the body of the carburetor.



SCREWS



DIAPHRAGM PISTON/VACUUM SUPPORT FOR THE NEEDLE



• Be careful not to damage the diaphragm. • Not push the needle piston to remove the support.

Turn the support of the needle in sense against opening hours while pressing it. Remove the flanges of support through slots in the piston vacuum. Remove the support of the needle, the spring and the needle piston vacuum.



DIAPHRAGM PISTON/VACUUM NEEDLE

Check the following:

- The needle is not too worn down
- That the piston vacuum is not worn or damaged
- The diaphragm is not chopped, deteriorated or damaged

NOTE

In case of the diaphragm present any type of damage, even that is only a peak, the air penetrate into the vacuum chamber.



FUEL SYSTEM

VALVE OF COURT OF AIR

Remove the two screws and the support of the adjusters cables.



TOP

Remove the cover of the valve, the spring and the diaphragm. NOTE

•The spring of the valve of court of air is under pressure. • To remove the lid, be careful to the spring not jump.



SCREWS SPRING

Remove the spring and the valve of court of air / diaphragm.

Check the following:

That the diaphragm is not chopped, deteriorated or damaged That the spring is not weakened the needle of the diaphragm is not frayed To the air ducts are not obstructed



Remove the four screws and the vial of float.





Remove the plate pit.

PLATE PIT







VALVE IN THE FLOAT

VALVE IN THE FLOAT







IDLE SCREW

Remove the bolt of float, the float and its valve.

Check the float with regard to damage, deformation or presence of fuel.

Check the following:

Valve and seat of the valve with regard to scratches, obstruction or damage.

Tip of the valve in the float in the area of contact with the seat, with regard to excessive wear or contamination. Valve Operation of the float.

Remove the main pump, the spray, the supplier of needle and the supplier of idling.

ATENCION

Be careful to manipulate the pumps, because these are very vulnerable to scratches.

Turn the idle screw toward the inside. Count the number of laps, until the idle screw nodding slightly. Enter this data and use as a reference to reinstall the idle screw.

ATENCION

If it is pressed excessively the idle screw, your seat may be damaged.

Remove the idle screw, the spring, the washer and the o ring.

Check the jets with regard to wear or damage. Replace, if necessary.

Check the idle screw with regard to wear or damage. Clean the jets with a cleaning solvent and blow out with compressed air.

CLEANING OF THE CARBURETOR

Remove the following components:

- Diaphragm piston/vacuum
- Main Pump, spray, supplier of needle and supplier of idling
- Idle screw
- Valve of court of air

ATENCION

Never use a piece of wire to clean the air ducts, because this may damage the body of the carburetor.

Blow all air ducts and fuel in the body of the carburetor with compressed air.Never use a piece of wire to clean the air ducts, because this may damage the body of the carburetor.

PARTS OF THE CARBURETTOR

ATENCION





FLOAT CHAMBER

Install the idle screw and retract toward its original position, according to the data recorded during the dismantling. In the event that has installed a new idle screw, carries out its setting (page 5-15).

ATENCION

If it is pressed excessively the idle screw, your seat may be damaged.

Install the supplier of needle, the spray, the main pump and the supplier of idling.

ATENOION

Be careful in handling the jets, as these can be marked or crossed easily.

Lace the valve in the float in the arm of the float.

Install the float, your valve and the bolt of float in the body of the carburetor.





FLOAT VALVE

Install the plate pit.

VERIFICATION OF THE LEVEL OF FLOAT

NOTE

Setting the gauge the level of float so that it is perpendicular to the surface of the tank, in the highest position of the float.

With the valve in the float settled and the arm of the float playing gently the valve, measure the level of float with the tool recommended.

Special Tool: Gauge the level of float

07401-0010000

Level of float: 18,5 mm

The float cannot be set.

In case of the level is out of the specified, replace the whole float.



GAUGE THE LEVEL OF FLOAT



FUEL SYSTEM

Install the new o ring in the slot of the vial of float.

O-RING

FLOAT CHAMBER



SCREW FLOAT CHAMBER

Install the vial of float and tighten the four screws.

DIAPHRAGM/VALVE OF COURT OF AIR

Install the diaphragm / valve of court of air and spring. Install and maintain fixed the lid of the valve.

NOTE

Be careful not to hold the diaphragm.

Install the lid and tighten the two screws.



DIAPHRAGM/VALVE OF COURT OF AIR LID



SCREWS

Setting the support of the adjusters the wires in the correct position, according to the illustration. Tighten the two screws.



DIAPHRAGM PISTON/VACUUM



SUPPORT FOR NEEDLE SUPPORT FOR NEEDLE





DIAPHRAGM PISTON/VACUUM

Align

VACUUM CHAMBER

Install the needle into the piston vacuum. Install the spring in support of the needle. Position the support of the needle into the piston vacuum.

Turn the support of the needle clockwise, while pressing it, until it is locked.

After the giro, make sure that flanges of support and slots in the piston are well fitted.

Install the diaphragm / piston vacuum in the body of the carburetor. Raise of the lower part of piston with your finger to adjust the tab of the diaphragm notching the body of the carburetor. Then, install the compression spring and the lid of the vacuum chamber. Be careful not to damage the spring.

ATENCION

Be careful not to hold the diaphragm below the top of the vacuum chamber.

Install the lid, the supports of the tubes and tighten the four screws.



SUPPORTING SCREWS DRAINAGE TUBE

Connect the tube of fuel, the tube of breathing space and the drainage tube.



BOLT OF ACCELLERATION

CARBURETTOR CLUTCH CABLE CABLES CABLES

SCREWS OF THE Clamps



Install the bolt of acceleration.

Install the body of the carburetor to the insulator and to the tube of connection. Install the cables accelerator at the drum accelerator. Install adjusters in housing. Install the cable clutch. The screw clamp insulator and screw tube clamp of connection. Install the casing for the filter of air (page 5-5). Install the breather tube in the box of air filter (page 5-4). Install the valve enrichment of the start ().

Install the following components: Resonator (page 5-4) Fuel tank (page 2-4)



SCREW ON THE TUBE OF THE CLAMP RESONATOR



CHOKE

Remove the valve enrichment of start (IS) (page 5-5). Inspect the valve enrichment of start (IS) with regard to brands, scratches or wear. Check the seat of the tip of the valve with regard to excessive wear. Replace the whole of the valve is, if necessary. The installation of the pieces are performed in the reverse order to dismantling. After installation, check to see if the lever of the valve works gently (page 3-5).

ADJUSTING THE IDLE SCREW

PROCEDURE FOR ADJUSTMENT OF THE ROTATION OF IDLING

\rm ADVERTENCIA

 In case of that is necessary to make services with the engine running, make sure that the local work is well ventilated. Never put the engine running in closed areas. The exhaust containing carbon monoxide poison, which can cause loss of consciousness and even death. Activates the engine in a local open, or in a local closed equipped with a ventilation system and extraction of gas.

NOTE

•Screw driver is previously-set in the factory and does not need adjustments, unless it has been replaced, or that the carburetor has been disassembly. •Hot engine until the normal operating temperature, to obtain an adjustment. Ten minutes of progress with intermediate stops are sufficient. •Use a tachometer with gradations of 50 rpm or less, which indicated correctly variations of 50 rpm in the rotation of the engine.



IDLE SCREW

1. Turn the idle screw clockwise, until nodding slightly. Then turn it against opening hours, until it reaches the specification.

ATENCION

If it is pressed excessively the idle screw, your seat may be damaged.

Initial Opening: 2 1/4 laps oriented outside.

- 2. The Hot engine to obtain the normal operating temperature.
- 3. Stop the engine and connect the tachometer, following the manufacturer's instructions.
- 4. Activates the engine and adjust the rotation of idle through the bolt of acceleration.

Idle speed: 1.400 ± 100 rpm

- 5. Kink or unscrew slowly the idle screw for maximum rotation of the engine.
- 6. Adjustment again the rotation of idle according to the specified value through the bolt of acceleration.
- 7. Make sure that the rotation of the engine keep stable. Repeat steps 5 and 6 until the rotation of the engine increase gently.
- 8. Adjustment again the rotation of idle through the bolt of acceleration.



BOLT OF ACCELERATION

SERVICE INFORMATION

DISMANTLING OF SPROCKET OF TRANSMISSION 6-3

6-1

DISMANTLING/ENGINE Installation 6-4 Installing the SPROCKET OF TRANSMISSION 6-5

SERVICE INFORMATION

GENERAL INSTRUCTIONS

- •Used a crane or a proper support to support the motorcycle during dismantling and installation of the engine. •Use a cat of flat or other support adjustable to support and bosoms motor.
- •Encape the area around the chassis with adhesive tape before removing and installing the engine.
- •Repairs and maintenance of the following components can be made with the engine installed in the chassis.

Alternator (Section 10) camshaft (Section 7) Carburetor (Section 5) Clutch / Selector gears (Section 9) Cylinder head / valves (Section 7) pulse generator power (Section 17) starter Motor / clutch start (Section 18) Cylinder / piston (Section 8) oil pump (Section 4)

•To make repairs or maintenance in the following components must remove the engine. Crankshaft / flywheel (Section 12) Fork of the change / drum selector of gears (Section 11) Transmission (Section 11)

•The following components must be removed before they remove the engine. Exhaust pipe / silencer (Section 2) Fuel tank (Section 2) Tubes of oil (Section 4) Carburetor (Section 5) Cable clutch (Section 9) Support the pedal support right (Section 14) Connectors 3P and wiring of pulse generator of ignition / switch of deadlock (Section 17) motor Cable start (Section 18) Breather TUBE from the casing of the engine (Section 18) Wiring breaker of deadlock (Section 17)

•After installing the engine, setting the following components: Cable clutch (page 3-20) drive chain (page 3-14) Cables of the accelerator (page 3-5) Level of engine oil (page 3-11)



SPECIFICATIONS

| Item | Specifications |
|---|----------------|
| Weight of the engine (dry) | 35,3 kg |
| Oil Capacity of the engine to dismantle | 1,8 <i>ℓ</i> |

TORQUE VALUES

| Bolt to the plate of fixing the sprocket of transmission | 10 N.m (1,0 kg.m) |
|--|-------------------|
| Bolt/nut striker higher from the engine | 44 N.m (4,4 kg.m) |
| Bolts/nuts from support striker superior of the engine | 26 N.m (2,6 kg.m) |
| Bolt/nut lower front engine | 44 N.m (4,4 kg.m) |
| Bolt/nut higher rear engine | 44 N.m (4,4 kg.m) |
| Bolts of rear support higher engine | 26 N.m (2,6 kg.m) |
| Bolt/nut lower rear engine | 44 N.m (4,4 kg.m) |
| Bolts/nuts and bolts of upper stand of the engine | 26 N.m (2,6 kg.m) |
| Bolt/nut superior engine | 44 N.m (4,4 kg.m) |
| | |

DISMANTLING OF SPROCKET OF TRANSMISSION

Remove the two bolts, the cover of sprocket and the protector of the drive chain. BOLTS PROTECTOR OF THE CHAIN



TOP SPROCKET





CHAIN PLATE FIXING BOLTS

PLATE OF FIXING

SPROCKET OF TRANSMISSION

Through the left flank of the motorcycle, Loosen the nut of

the rear axle, against and the adjustment nut of the drive chain.

Through the right flank of the motorcycle, loosen the against and adjustment nut of the drive chain. Remove the stem rear brake arm of the brake (page 14-3). Push the rear wheel forward and loosen completely the drive chain.

Remove the bolts of the plate of fixing the sprocket of transmission. Remove the plate of fixing and the pinion of transmission.



DISMANTLING AND INSTALLING THE ENGINE

DISMANTLING

NOTE

Refer to the page 6-1 to obtain information with respect to the parts that must be removed before the dismantling of the engine.

Locate a cat of flat or other support adjustable below the

engine. Remove the lids of bolt/nut pivot swing arm. NOTE

The height of the cat must be adjusted continuously, to relieve the pressure and facilitate the removal of the bolts.

A. Remove the bolt/nut striker higher from the engine.

B. Remove the bolts/nuts from support striker superior of the engine.

- C. Remove the bolt/nut striker lower from the engine.
- D. Remove the bolt/nut superior of the engine.
- E. Remove the bolts/nuts and bolts of upper stand of the engine.
- F. Remove the bolt/nut rear superior of the engine.
- G. Remove the bolts of rear support higher from the engine.
- H. Remove the bolt/nut lower rear engine. Remove the engine

of the chassis.

Watch closely the installation sequence of the bolts / nuts from the stands and plates of fixing.





INSTALLATION

NOTE

•Locate the cat of flat or other support adjustable below the engine. •Must be adjusted continually the height of the cat of flat, with the aim to alleviate the pressure and facilitate the installation of the bolts.

Place the engine in the chassis. Install, without squeezing, all the bolts, nuts and plates of fixing. Tighten all the nuts and bolts to the specified torque.

TORQUE:

1. Bolt / nut lower rear engine

| | 44 N.m (4,4 кg.m) |
|--|-------------------|
| 2. Bolt / nut higher rear engine | |
| | 44 N.m (4,4 kg.m) |
| 3. Bolts / nuts from rear support | |
| higher engine | 26 N.m (2,6 kg.m) |
| 4. Bolt / nut superior engine | - |
| | 44 N.m (4,4 kg.m) |
| 5. Bolts / nuts and bolts of upper stand | |
| of the engine | 26 N.m (2,6 kg.m) |
| 6. Bolt / nut lower front engine | |
| · · · · · · · · · · · · · · · · · · · | 44 N.m (4,4 kg.m) |
| 7. Bolt / nut striker higher from the | |
| engine | 44 N.m (4,4 kg.m) |
| 8. Bolts / nuts from support striker su- | |
| perior of the engine | 26 N.m (2,6 kg.m) |
| | |

Installing the SPROCKET OF TRANSMISSION

Install the sprocket of transmission in the countershaft. Install the drive chain in the sprocket of transmission. Install the plate of fixing the pinion, according to the illustration.

Install and tighten bolts of the plate of fixing the sprocket of transmission to the specified torque.

TORQUE: 10 N.m (1,0 kg.m)



CHAIN

FIXING PLATE



SPROCKET





Install the protector of the chain and the lid of sprocket of transmission. Tighten bolts of the lid of sprocket.



TOP SPROCKET





Install parts removed (page 6-1).

Setting the slack in the drive chain (page 3-14).

Install the stem rear brake (page 14-8).

| NOTES |
|-------|
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |

7. CYLINDER HEAD/Valve

| SERVICE INFORMATION | 7-1 | REPLACEMENT OF GUIDES TO valve | 7-12 | |
|------------------------------------|-----------|-------------------------------------|---------|-----|
| INVESTIGATION OF PROBLEMS | 7-3 | INSPECTION/RECTIFICATION OF | | |
| Compression OF THE CYLINDER | 7-4 | VALVE SEATS | 7-13 | |
| DISMANTLING OF THE LID OF THE CYLI | NDER HEAD | ASSEMBLY WITH THE CYLINDER HEAD | 7-16 | |
| DISMANTLING OF CAMSHAFT | 7-5 | INSTALLATION OF THE CYLINDER HEAD | 7-19 | |
| DISMANTLING OF THE CYLINDER HEAD | 7-8 | Installing the CAMSHAFT | 7-19 | |
| DISMANTI ING/INSPEC- | | INSTALLATION OF THE LID OF THE CYLI | INDER H | EAD |
| TION OF THE CYLINDER HEAD | 7-9 | | | |

SERVICE INFORMATION

GENERAL INSTRUCTIONS

•In this section describes procedures of service of the cylinder head, valves and camshafts.

•Repairs and services in the cylinder head, valves and camshafts can be carried with the engine installed in the chassis.

•During the disassembly, identify each piece removed after reinstallation in its original position.

•Wipe each piece removed with cleaning solvent. Then sóplela with compressed air before inspection.

•Lubrication of camshaft is through to the tubes of oil from the cylinder head. Clean these channels before arming the cylinder head end the cylinder head. •To adjust the

timing of the valves, does not turn the camshaft before installing the supports of the camshafts. •Lubricate the stumps and lobes of the camshafts with grease on the basis of carbon disulphide of molybdenum, to ensure the initial lubrication.



SPECIFICATIONS

Unit: mm

| ltem | | | | Value | Service Limit |
|-----------------------------|---------------------------------------|----------|--|-----------------|---------------|
| Compression of the cylinder | | | 1.128 kPa (11,5 kgf/cm², 163,6 psi) a 400 rpm | _ | |
| Twist of the cylinder head | | | | _ | 0,10 |
| Camshaft | Height of the lobes | | ADM | 37,00 – 37,24 | 36,94 |
| | | | ESC | 37,03 – 37,27 | 36,97 |
| | Eccentricity | | | 0,02 | 0,10 |
| | D.E. of the stump | | | 24,959 - 24,980 | — |
| D.I. Of the cylinder head | | | 25,000 – 25,021 | | |
| Slack oil | | | | 0,020 - 0,062 | 0,10 |
| Valves and | d Valve slack | | ADM | 0,12 | — |
| guides of | | ESC | 0,15 | — | |
| the valves | es D.E. The offspring of the valve | | ADM | 4,975 – 4,990 | 4,96 |
| | | | ESC | 4,955 – 4,970 | 4,94 |
| | D.I. The guide to the valve | | ADM/ESC | 5,000 - 5,012 | 5,03 |
| | Slack between the stem and the | | ADM | 0,010 – 0,037 | 0,07 |
| valve guide | | ESC | 0,030 - 0,057 | 0,09 | |
| | Width of the seat of the valve | | ADM/ESC | 1,0 – 1,2 | 2,0 |
| Valve springs | Free length | Interno | ADM/ESC | 33,77 | 32,36 |
| | | External | ADM/ESC | 36,64 | 34,84 |
| The actuator | D.E. The actuating the valve | | ADM/ESC | 25,978 – 25,993 | 25,97 |
| of the valves | es D.I. The accommodation of actuator | | ADM/ESC | 26,010 - 26,026 | 26,06 |

TORQUE VALUES

Bolt the door of the cylinder head Bolt the support of Camshaft Nut of the cylinder head Bolt of superior connection of the tube of oil from the cylinder head 12 N.m (1,2 kg.m) 12 N.m (1,2 kg.m) 45 N.m (4,5 kg.m) 12 N.m (1,2 kg.m)

Apply oil to the thread and to the surface of settlement Apply oil to the thread and to the surface of settlement

SPECIAL TOOLS

| Valve spring compressor | 07757-0010000 |
|---|---------------|
| Accessory of the compressor of springs | 07959-KM30101 |
| Driving guide of valves, 5.0 mm | 07942-MA60000 |
| Protector of the accommodation of accinador, 24 x 25.5 mm | 07HMG-MR70002 |
| Reamer of guides to valve, 5.0 mm | 07984-MA60001 |
| Valve seats | |
| Seat of the valve, 24 mm (45° ESC) | 07780-0010600 |
| Seat of the valve, 27,5 mm (45° ADM) | 07780-0010200 |
| – Fresa plana, 24 mm (32° ESC) | 07780-1250000 |
| – Fresa plana, 27 mm (32° ADM) | 07780-0013300 |
| – Fresa interna, 26 mm (60° ESC) | 07780-0014500 |
| – Fresa interna, 37,5 mm (60° ADM) | 07780-0014100 |
| Soporte de fresa, 4,5 mm | 07781-0010600 |
| | |

INVESTIGATION OF PROBLEMS

•The problems of the top of the engine generally affect the performance. That can be diagnosed through the compression test, or da use of a stethoscope to detect noises in the engine. •In case of the performance is deficient abajas rotations, check to see if there are white smoke in the breather tube from the casing of the engine. If the tube presents smoke, verify if any ring of the piston is jammed (page 8-6).

| Compression too low, start difficult or poor performance at | Excessive Noise |
|---|---|
| low rotation. | Cylinder head: |
| Valves | Incorrect Setting valves |
| Valves burned or bent | Valves stalled or springs of valves broken |
| Synchronisation | Camshaft damaged or worn |
| incorrect valves | Distribution Chain loose or worn |
| Spring of the valve broken | Distribution Chain damaged or worn |
| irregular Settlement of the valve | Tensile distribution chain worn or damaged |
| | Teeth the spiral of distribution worn |
| | Tumbler and/or axle of the rocker worn |
| Cylinder head Damage or leaks in the gasket of the cylinder | head – Actuating the valve damaged or worn |
| | Problems in the cylinder, piston or rings of the pis- |
| Cylinder head bent or cracked | ton (Section 8) |
| Spark plugof turning loose | Irregular Idling |
| | Cylinder with low compression |
| Problems in the cylinder, piston or rings of the piston (Sectio | n 8) |

Compression too high, overheating or timing

•Excessive Formation of carbon in the head of the piston or in the combustion chamber.

Excessive Smoke

- Cylinder head
- Stem or guide to valves worn
- Checkpoints of oil from the shoots damaged
- Problems in the cylinder, piston or rings of piston (Section 8)

Compression OF THE CYLINDER

ADVERTENCIA

In the event that is necessary to make services with the engine running, make sure that the local work is well ventilated. Never put the engine running in closed areas. The exhaust containing carbon monoxide poison, which can cause loss of consciousness and even death. Activates the engine in a local open, or in a local closed equipped with a ventilation system and extraction of gas.

The Hot engine to its normal operating temperature. The engine stop, remove the noise dampening layer and spark plug power. Install the adapter and the meter compression in the hole in the spark plug. Open completely the accelerator and operate the engine through the start system. NOTE

•Activates the engine through the system of start-up until the reading in the meter stop to climb. The maximum reading normally reaches within 4 7 seconds. •Does Not operate the engine through the start system for more than 7 seconds, to avoid the discharge of the battery.

Cylinder compression: 1.128 kPa (11,5 kgf/cm², 163,6 psi) a 400 rpm

If the compression is high, indicates excess deposits of carbon in the combustion chamber or in the head of piston. If the compression is low, pour 3 5 cm3 of motor oil clean in the cylinder, through the hole of the spark plug. Check again the compression. If the compression maintains the same previous value, to conduct a test of leakage. If the compression increases its value prior, inspect the cylinder, the piston and rings of the piston.

A low compression can be caused by: •Damage to the cylinder head gasket •Wear in the cylinder or rings of the piston •Wear in the cylinder and piston •Incorrect Setting valves

Leaks in the valves





DISMANTLING THE TOP OF THE CYLVINDER HE/

Remove the following components:

Fuel tank (page 2-4)

Tube of oil radiator (page 4-9)

Remove the noise dampening layer of the spark plug.

Remove the bolts of the lid, the washers of rubber and the cov er of the cylinder head.

Remove the gasket



GASKET



TOP OF CYLINDER HEAD

DISMANTLING OF CAMSHAFT

Remove the cover of the hole of timing, the cover of the hole of the crankshaft and rings o.

Turn the crankshaft in sense against opening hours to align the mark T of the steering wheel of the engine with the notch indicator of the hole of timing, in the top side of the casing of the engine.

Make sure that the piston is in the GPA (Top Dead) in the race of compression.





BOLTS

Loosen the screw cap on the trigger for the tensile, but not vet remove it.

Remove the trigger for the tensile distribution chain and the gasket, loosening alternately two bolts.

Remove the three bolts and the guide to the distribution chain.

ACUTATOR PLUG



TRIGGER FOR THE TENSILE/GASKET **GUIDE TO THE DISTRIBUTION CHAIN**



CHAIN BOLT

CAMSHAFT SUPPORTS



CAMSHAFTS

BOLT ACTUATING THE valve



SHIM

Remove the six pins and the supports of the camshafts.

Using a wire raise of the distribution chain, to prevent a fall in the casing of the engine.

Remove the camshafts.

Remove the actuators valves and the shims.

NOTE

•Be careful not to damage the accommodations to the actuators valves. The •shims can be caught inside the actuators valves. Do not let it fall into the casing of the engine. •Write down the location of each fit and actuating valve to ensure that will be reinstated in its original position. •The actuators valves can be removed easily with a place of windy or a magnet. The •shims can be removed easily with a clip or a magnet.

INSPECTION

Camshafts

Inspect the surface of the stumps of the supports of camshaft with regard to excoriations, scratches or signs of lubrication deficient.

Inspect the holes of oil from the stands with regard to obstruction.



Height of lobe of Camshaft

Inspect the surfaces of the lobes of the camshaft with regard to excoriations, scratches or signs of lubrication deficient.

Use a micrometer to measure the height of each lobe of camshaft.

| Service | ADM | 36,94 mm |
|---------|-----|----------|
| Limit | ESC | 36,97 mm |

In the event that the lobe is damaged or excessively worn, inspect the following:

Eccentricity of Camshaft

Support the two ends of camshaft in blocks type V. Check the eccentricity of camshaft using an indicator of quadrant.

| | Service | Limit | 0,10 mm |
|--|---------|-------|---------|
|--|---------|-------|---------|





Slack oil cam

Remove the support of camshaft (page 7-6).

Wipe any residual oil of the stumps of the cylinder head, cam and housing cam.

Place the camshaft in the cylinder head and put a band of plastigage in each stump.



CYLINDER HEAD/VALVES

NOTE

Do not turn the camshaft during the inspection.

Install carefully the supports of the camshafts and guide to the supply chain.

Tighten bolts in sequence crusade, in several steps.

TORQUE 12 N.m (1,2 kg.m)



Remove the supports of the camshafts and measure the width of each plastigage compressed. The wide more indicates the generosity of oil.

| Service | Limit | 0,10 mm |
|---------|-------|---------|
| | | |

In the event that the limits of service are exceeded, replace the camshaft and check again the generosity of oil. In the event that the slack oil still exceed the limit of service, replace the cylinder head and the supports of the camshafts as a whole.



NUT

DISMANTLING OF THE CYLINDER HEAD

Remove the following components:

Camshafts (page 7-5).

Exhaust pipe (page 2-5)

Carburetor (page 5-5)

Carefully Remove the four screws, washers and two bolts.

NOTE

Be careful to the bolts and nuts do not fall within the casing of the engine.

Remove the bolt of the superior connection of the tube of oil from the cylinder head together with the washer seal.

Remove the cylinder head.

NOTE

Be careful not to damage the contact surfaces.



BOLTS



GUIDE TO THE DISTRIBUTION CHAIN GASKET

Remove the guide to the chain of distribution of the cylinder.

Remove the pins and the insulator of the carburetor.

Remove the gasket and the ears of guide.



SPIKES OF GUIDE



DISMANTLED/INSPECTION OF CYLINDER HEAD

NOTE

During the disassembly, identify each piece removed after reinstallation in its original position.

Install the protector in the accommodation of actuating the valve.

Special tool:

Protector of the accommodation of ac- 07HMG–MR70002 tuator, 24 x 25,5 mm

One can make an equivalent tool from a packing tape photographic (film) of 35 mm, according to the illustration.





Remove the keys of the valves, retainers springs, springs and valves, using the special tools, according to the illustration.

Special tool: Valve compressor

Accessory to valve compressor

07757–0010000 07959–KM30101

ATENCION

To avoid loss of tension, not compress the springs more than was necessary to remove the keys.

Remove the checkpoints of oil from the shoots of the valves and the seats of the springs.

NOTE

During the disassembly, identify each piece removed after reinstallation in its original position.



VALVE COMPRESSOR AND ACCESSORY



DISTRIBUTION CHAIN GUIDE



Check the guide to the distribution chain with regard to excessive wear or damage. Replace, if necessary.

GUIDE TO THE DISTRIBUTION CHAIN

CYLINDER HEAD

Remove the deposits of carbon of the combustion chamber.

Check the area of the hole of the spark plug and valves with regard to cracks.

Check the cylinder head with regard to twist using a rule of precision and a gauge of thicknesses.

0,10 mm

Service

Limit

NOTE

Be careful not to damage the surface of the gasket.



ACCOMMODATION OF ACTUATING THE valve

Check the accommodation of each actuating the valve with regard to scratches, damage or abnormal wear.

Measure the D. I. of each accommodation of follower of tumbler.

| Limit | 26,06 mm |
|-------|----------|
| | |
| | Limit |



ACTUATING THE valve

Check every actuating the valve with regard to scratches, dam age or abnormal wear.

Measure the D. E. of each actuating the valve.

| Service Limit 25,97 mm | |
|------------------------|--|
|------------------------|--|



VALVE SPRINGS

Measure the free length of the springs of valve internally and externally.

| Límite de Servicio | Spring internal | 32,36 mm |
|-----------------------|-----------------|----------|
| | Spring external | 34,84 mm |

In case of that the springs are lower than the limit of service, replace.

VALVE/GUIDE TO THE valve

Inspect each valve with regard to twist, burns or

abnormal wear on the stem. Check if the valve moves

gently in the guide. Measure and enter the D. E. of

each stem.

| Límite de Servicio | ADM | 4,96 mm |
|-----------------------|-----|---------|
| | ESC | 4,94 mm |





REAMER OF GUIDES TO valve

Use the reamer of guides to valve to eliminate potential deposits of carbon, before measuring the guides. Insert the reamer in the cylinder head on the side of the camshafts. Turn the reamer always clockwise.

Special tool:

Reamer of guides to valve, 5,0 mm 07984–MA60001



Measure and enter the D. I. of each guide to valve.

| Service Lim | it ADN | 1/ESC | 5,03 mm |
|-------------|--------|-------|---------|
| | | | |

Avoiding external diameter of each stem valve in the inner diameter of the guide corresponding to obtain the slack between the stem and the guide.

| Límite de Servicio | ADM | 0,12 mm |
|-----------------------|-----|---------|
| | ESC | 0,14 mm |

If the slack is incorrect, check to see if a new guide with dimension Value can reduce the slack to the limit of service specified. In this case, replace the guides as required, and escárielas so that fit perfectly.

NOTE

Inspect and rectify the valve seats always to install new guides (page 7-16).

If you with a new guide the slack still exceeds the limit of service, replace also the valve.

REPLACEMENT OF GUIDES TO valve

Cool guides to valve in a freezer for about an hour.

ADVERTENCIA

To manipulate the cylinder head hot, use gloves with heat insulator to avoid burns.

Hot the cylinder head at a temperature of 130 140°C, using a hot iron or a furnace. Not hot the cylinder head to more than 150oC. To ensure that the cylinder head is heated, use a rod indicator of temperature available in the trade material from welding.



REAMER OF GUIDES TO valve



Advocate of guides to valve

ATENCION

• Do not use torch to flame to heat the cylinder head, because this can cause the twist in the same. •Be careful not to damage the contact surfaces of the cylinder head.

Support for the cylinder head and use the special tools to remove the guides to valve and the rings o their accommodations, from the side of the combustion chamber of the cylinder head.

Special tool:Advocate of guides to valve, 5,0 mm079

07942-MA60000

Apply motor oil to the new rings o and install in the new guides of valve. With the cylinder head hot, use the special tools to install the new guidelines at the cylinder head, from the side of the camshafts.

Special tool: Advocate of guides to valve, 5,0 mm

07942-MA60000

Let the cylinder head cool to room temperature.

Upgraded the new guides of valve.

Special tool: Reamer of guides to valve, 5,0 mm 07984–MA60001

NOTE

•Be careful not to tilt the reamer in the guide while escaria. On the contrary, the valve installed inclined, thus causing leaks of oil through the checkpoint oil stem and inappropriate contact of the seat of the valve. Thus, it will not be possible to make the rectified the seat of the valve. •Insert the reamer in the cylinder head on the side of the combustion chamber, always turning clockwise. •Lubricant applies for blades to the reamer during this operation.

Clean completely the cylinder head after boring and rectify the valve seats, to remove the particles of metal.

INSPECTION/RECTIFIED OF SEATS OF valve

INSPECTION

Clean completely valves for intake and escape to remove the deposits of carbon. Apply a hand of Prussian blue in each contact area of the valve. Using a hose of rubber or a place in windy, hit the valve against the seat several times, without turning, to raise a roll clear of transfer of ink and check whether the contact at the valve with the seat is correct.



Advocate of guides to valve



REAMER OF GUIDES TO valve



OUT OF WINDY



Remove the valve and inspect the surface of your seat.

The surface of the seat of the valve must be in agreement com the width specified and uniform in all its circumference.

ATENCION

The valves may not be rectified. If a valve is burned or excessively worn down, or presents unequal contact with the seat, replace it.

Inspect the surface of the valve with regard to:

Wide unequal in the seat: stem from the valve leaf or replace damaged the valve and rectify the seat.
Contact Area of the valve damaged: Replace the valve

and rectify the seat.Contact Surface (too high or too low): the Rectification of the seat of the valve.





Inspect the width of the seat of each valve.

The surface of the seat of the valve must be in agreement with the width specified and uniform in all its circumference.

| Value | Service Limit |
|--------------|---------------|
| 1,0 – 1,2 mm | 2,0 mm |

In the event that the width of the seat of the valve is not in agreement with the specification, or this rebated, rectify (page 7-16).

RECTIFYING THE SEAT OF THE valve

NOTE

•Follow the instructions of operation equipment manufacturer rectifier.

- •Be careful not to rectify the seat more than was
 - necessary.





It recommends the use of strawberries / rectifiers specific to valve seats, for the correction of seats worn. The Rectification of the seat of the valve with a strawberry 45° always to replace the guide. In the event that the surface of contact is too high, use a strawberry flat 32TH to lower the seat. In the event that the surface of contact is too low, use a strawberry internal 60TH to raise the seat. Using a strawberry finished 45TH rectification of the seat of agreement with the specifications. Using a strawberry 45° remove any roughness or irregularities of the seat of the valve.

Special tool: Strawberry seat of valves, 27,5 mm (45° ADM)





Strawberry seat of valves, 24 mm (45º ESC) Support for strawberry, 4,5 mm

Using a strawberry flat 32 degrees remove 1/4 of existing material in the seat of the valve.

Special tool: Fresa plana, 27 mm (32º ADM) Fresa plana, 24 mm (32º ESC) Soporte de fresa, 4,5 mm

07780-0013300 07780-1250000 07781-0010600

07780-0010200

07780-0010600

07781-0010600



Using a strawberry internal 60° remove 1/4 of existing material in the seat of the valve.

| Special tool: | |
|----------------------------------|---------------|
| Fresa interna, 37,5 mm (60º ADM) | 07780-0014100 |
| Fresa interna, 26 mm (60º ESC) | 07780-0014500 |
| Soporte de fresa, 4,5 mm | 07781-0010600 |


Using a strawberry finished 45 degrees, rectify the seat to the wide specified. Be sure to have removed any roughness and irregularities. Rectified once again the seat of the valve, if necessary.

NOTE

The correct location of the seat with regard to the surface contact of the valve is essential to ensure a good seal.

After rectify the seats valves, clean completely the cylinder head to remove all particles of metal.

Apply composed of polish in the surface of the valve.

Then polish, pressing valve slightly.

 Excessive pressure to polishing may distort or damage the seat. •Change frequently the angle of the cape of windy to avoid burnout unequal in the seat. The •composed of polish can cause damage if penetrates into the guides.

After the polish, remove totally residues of composed of the cylinder head and the valve. Check again the contact surface of the seat.

ASSEMBLING THE CYLINDER HEAD



CBX250

WIDTH OF

THE SEAT

45°

OUT OF WINDY





Clean the whole of the cylinder head with solvent and blow with compressed air through each through oil.







Install the valve springs and retainers of springs. The side of the springs with spires closest should be directed at the combustion chamber.

Install the protector in the accommodation of actuating the valve.

Special tool: Protector of the accommodation of actuator 07HMG-MR70002





NOTE

Grease applies to the keys to facilitate the installation.

Install the keys in the valves using the special tools in accordance with the illustration.

Special tool: Valve compressor Accessory for valve compressor

07757–0010000 07959–KM30101

ATENCION

To avoid loss of tension not compress the springs more than was necessary to install the keys.

Hit the shoots of valves gently with two plastic hammers to settle the keys firmly, in accordance with the illustration.

ATENCION

Support for the cylinder head on media at a higher level on the bench of work to prevent possible damage to the valves.

Install a new gasket

GASKET

Install the insulator and tighten the two bolts.









INSTALLATION OF CYLINDER HEAD

Remove any waste material from gasket of the contact surfaces of the cylinder. Install the guide to the distribution chain in the cylinder head. Make sure that the projections of the guide to the distribution chain will fit into the slots in the casing of the engine and the cylinder. Install the ears of guide and a new gasket.



GUIDE SPIKES

CYLINDER HEAD



Guided the chain of distribution through the cylinder head and install the cylinder head in the cylinder.

Install the tube of oil from the cylinder head in the same.

Tighten the bolt of superior connection of the tube of oil from the cylinder head to the specified torque.

TORQUE: 12 N.m (1,2 kg.m)

Apply motor oil to the threads and surfaces of settlement of the nuts and bolts of the cylinder head. Install and tighten the screws and washers.

TORQUE: 45 N.m (4,5 kg.m)

Install the exhaust pipe (page 2-5).

Install the carburetor (page 5-13).

Installing the CAMSHAFT

Lubricate the external surfaces of the actuators valves with oil on the basis of carbon disulphide of molybdenum.

Install the shims and the actuators valves in their respective positions and accommodations originals. Be careful not to damage the surfaces of slip of the actuators and accommodations.



BOLTS

ACUTUATOR OF THE VALVES



SHIM

Apply olive carbon disulphide of molybdenum to stumps of the camshafts in the cylinder head, the camshafts and their respective supports. Install the camshafts in the cylinder head. Install the distribution chain in the wheels of distribution.

Make sure that the reference marks in the wheels of distribution (IN for intake and EX to escape) is being aligned with the upper surface of the cylinder head and oriented toward outside (according to the illustration), when the mark T in the steering wheel of the engine is aligned with the notch indicator in the top side of the casing of the engine. Install the supports of the camshafts and guide to the supply chain.

Tighten the bolts to the specified torque.

TORQUE: 12 N.m (1,2 kg.m)



SYCHRONISATION HOLE

DISTRIBUTION CHAIN



Align





Installing the TRIGGER FOR THE TENSILE DISTRIBU-**TION CHAIN**

Remove the cap the trigger for the tensile.

Check the functioning of trigger for the tensile: The axle of tensor should not enter the body, when pressed. When revolved clockwise, with a screwdriver, the axle of tensor should retract into the body. The axle skipped toward outside the body, driven by the spring, just remove the screwdriver.

Make a limiting tool of the axle of tensor with a fine piece of steel (0.8 mm thickness), as a sign the diagram.

Using the limiting tool rotate the axle of actuator clockwise, to make retract the tensile and prevent damage to the distribution chain. Then insert totally the limiting tool to hold the tensile in that position.

Install a new gasket in the trigger for the tensile distribution chain. Install the trigger for the tensile in the cylinder and tighten the fixing bolts.













O-RING

Remove the tool of limiting trigger for the tensile.

Install a new o ring in the accommodation of trigger for the tensile.

Install the screw cap on the trigger for the tensile.

Tighten the screw cap on the trigger for the tensile.

Check again if the reference marks in the spiral of distribution remain aligned with the upper surface of the cylinder head while the trademark T of the steering wheel of the engine is aligned with the notch indicator in the top side of the casing of the engine (refer to the page 7-5).



BOLTS

ACTUATOR PLUG ACTUATOR PLUG



INSTALLATION OF THE LID OF THE HEAD

Clean completely contact surfaces of the cylinder head and the lid.

Pour engine oil in the pockets of the cylinder head.



Apply sealer liquid to the rebated semicircular cylinder head, according to the illustration



7-22

CYLINDER HEAD/VALVES

Install a new gasket at the top of the cylinder head.



HEAD COVER WASHER RUBBER/BOLT

Install the new washers of rubber and tighten the bolts of the lid of the cylinder head to the specified torque.

TORQUE: 12 N.m (1,2 kg.m)

Install the noise dampening layer of the spark plug.

Install the fuel tank (page 2-4).



8. PISTON/CYLINDER

| SERVICE INFORMATION | 8-1 | DISMANTLING THE PISTON | 8-4 |
|--------------------------|-----|-------------------------|-----|
| INVESTIGATION OF FAULTS | 8-2 | INSTALLING THE PISTON | 8-6 |
| DISMANTLING THE CYLINDER | 8-3 | INSTALLING THE CYLINDER | 8-8 |

SERVICE INFORMATION

GENERAL INSTRUCTIONS

•Before services of repair in the cylinder / piston remove the engine.

•Be careful not to damage the cylinder wall and the piston.

•When using a screwdriver to remove the cylinder, be careful not to damage the contact surfaces.

•To remove the piston clean the deposits of carbon and mud in the upper part of the cylinder. .

•During the disassembly, identify and save each piece removed after reinstallation in its original position.

SPECIFICATIONS

Unit: mm

| ltem | | Value | Service Limit | |
|--|---|------------------------|---|-------|
| Cylinder | D.I. | | 73,000 – 73,010 | 73,11 |
| | Ovalización | | | 0,05 |
| | Conicidad | | | 0,05 |
| | Alabeo | | | 0,05 |
| Piston, cotter p and piston | inMark of leadership of piston | | Marca "IN" oriented toward the side of intake | |
| rings | D.E. of the piston | | 72,950 – 72,970 | 72,87 |
| | Measuring Point of D. E. piston | | 16 mm From the bottom | — |
| | D. I. the hole in the cotter pin | | 17,002 – 17,008 | 17,05 |
| | D. E. of cotter pin | | 16,994 – 17,000 | 16,97 |
| | D. I. the foot of the crank | | 17,016 – 17,034 | 17,06 |
| | Slack between the cylinder and th | ne piston | 0,030 - 0,060 | 0,23 |
| | Slack between the piston and the | cotter pin | 0,002 - 0,014 | 0,07 |
| Slack between the crank and the cotter pin | | 0,016 - 0,040 | 0,09 | |
| | Slack between the rings and | Superior | 0,015 - 0,050 | 0,12 |
| | the slot | Secondary | 0,015 - 0,050 | 0,12 |
| | Opening of the extremities | Superior | 0,15 – 0,30 | 0,30 |
| of the rings | Secondary | 0,30 - 0,45 | 0,45 | |
| | Anel oil ring (side |) 0,20 – 0,70 | 0,86 | |
| | Marca de direction del Ring del piston | Superior/ Secondary | Mark oriented toward top | |



INVESTIGATION OF FAULTS

Compression too low, start difficult or poor performance at low rotation

•Cylinder head gasket damaged

•Rings of the piston worn, damaged or stuck

•Cylinder piston or worn or damaged

•Twist valves, or valve seats damaged

Compression too high, overheating or timing

• Excess deposits of carbon in the piston or in the combustion chamber

Excessive Smoke

•Cylinder, piston or rings of the piston worn

•Incorrect installation of the rings of the piston

•Walls of the cylinder or piston worn or scratches •rings of the piston stuck or broken

Excessive Noise (piston)

•Cotter pin / Hole of accommodation of cotter pin worn

•Cylinder, piston or rings of the piston worn

•Foot of the crank worn

•Twist the crank

DISMANTLING THE CYLINDER

Remove the cylinder head (Section 7). Remove the cylinder. Not hit

cylinder excessively. When using a screwdriver during the

dismantling, be careful not to damage the surface contact.

Avoid damage the contact surfaces of the gasket.

Clean completely the upper part of the cylinder. ATENCION

Remove the ears of guide and the gasket.

INSPECTION Inspect the cylinder wall with regard to wear or damage. Measure and enter the D. I. the cylinder on three levels, in the axles X and Y. Considers the most reading to determine the wear and tear.



CYLINDER

GASKET

| Service | Limit | 73,11 mm |
|---------|-------|----------|
|---------|-------|----------|

Calculate the cylinder with regard to ovalization at three levels, in the axles X and Y. Considers the most reading to determine the ovalization.

| Service Limit | 0,05 mm |
|---------------|---------|
| | |

Calculate the cylinder with regard to conicity at three levels, in the axles X and Y. Considers the most reading to determine the conicity.

| Service | Limit | 0,05 mm |
|---------|-------|---------|
|---------|-------|---------|

In the event that the limits are exceeded, rectify the cylinder and replace the piston by a new, of size sobrexcedido. The pistons of size sobrexcedido are available in the following dimensions: 0.25 mm and 0.50 mm. The Rectification of the cylinder so that the slack piston of size sobrexcedido is 0.020 0.060 mm.





Use a rule of precision and a gauge of thicknesses to verify the upper part of the cylinder with regard to twist.



PISTON



COTTER PIN/BRA OF COTTER PIN

PISTON



RINGS

DISMANTLING THE PISTON

NOTE

Before the dismantling, place a clean cloth around the crank to prevent the clips of cotter pin fall within the casing of the engine.

Remove the clips of cotter pin, using a pliers. Remove the cotter pin from the piston. Remove the piston of the crank. Inspect the movement of the rings of the piston, making twist while the press. The rings should move freely in the slots, without becoming bogged down. Open each ring of the piston and remove, tilting upwards, from the point opposite to the opening of their limbs.

ATENCION

•Do not open too the extremities of the rings of the piston, not to harm them. •Be careful not to damage the piston to remove the rings.

Remove the deposits of carbon piston.

NOTE

Use a ring already ruled out to clean up the deposits of carbon of the slots in the rings of the piston (according to the illustration). Never use a brush with steel, because it hurt the slots in the rings.



INSPECTION

Inspect the piston with regard to cracks or other damage. Inspect slots in the piston with regard to excessive wear and formation of deposits of cinder.

Measure the D. E. of piston.

NOTE

Measure external diameter of the piston in a point to 16 mm from the base of the skirt and 90 from the hole in the cotter pin.

| Service | Limit | 72,87 mm |
|---------|-------|----------|

Calculate the slack between the piston and the cylinder. Consider the maximum reading to determine the slack (Refer to the page 8-4, to obtain information to respect the Inner diameter cylinder).

| Service Limit | 0,23 mm |
|---------------|---------|
|---------------|---------|

Measure the D. I. the opening of accommodation of cotter pin from the piston in the axles X and Y. Considers the maximum reading to determine the D. I.

|--|

Measure the D. E. of the cotter pin in three points, in accordance with the illustration.

| Service Limit | 16,97 mm |
|---------------|----------|
|---------------|----------|

Calculate the slack between the piston and the cotter pin.

| Service | Limit | 0,07 mm |
|---------|-------|---------|
|---------|-------|---------|

Measure the D. I. the foot of the crank.

| Service Limit | 17,06 mm |
|---------------|----------|
|---------------|----------|

Calculate the slack between the crank and the cotter pin from the pi

| Service Limit 0,09 mm |
|-----------------------|
|-----------------------|









NOTE

Replace always rings of the piston as a whole.

Inspect the rings of the piston and replace, if they are worn.

Reinstall temporarily rings of the piston (page 8-7) in their respective slots.

Press the ring of the piston until its external surface is practically leveled with a piston.

Measure slack between the slot and the ring of the piston, using a gauge of thicknesses.

| Límite de | Ring Superior | 0,12 mm |
|-----------|----------------|---------|
| Servicio | Ring Secondary | 0,12 mm |

Insert correctly each ring of the piston in the base of the cylinder, using the piston in accordance with the illustration. Measure the generosity of the extremities of the ring of the piston with a gauge of thicknesses.

| | Ring Superior | 0,30 mm |
|---------------|-----------------|---------|
| Service Limit | Ring Secondary | 0,45 mm |
| | Ringo de Aceite | 0,86 mm |

Installing the PISTON

Clean completely the head of the piston, the slots of rings and the skirt piston. Install carefully rings of the piston, with oriented brands upwards.

ATENCION

- Apply oil to the rings of the piston.
 Do not open too the extremities of the rings of the piston, not to harm them.
- •Be careful not to damage the piston and the rings during installation.





PISTON



PISTON RING

NOTE



NOTE

To clean the contact surface of the cylinder place a clean cloth in the opening of the cylinder, to prevent the entry of dust and dirt in the engine.

Wipe any residue of gasket of the contact surface of the casing of the engine with the cylinder.

NOTE

Place a cloth in the opening of the housing to prevent the clips of cotter pin fall within the casing.

Apply a solution of carbon disulphide of molybdenum to external surfaces of the cotter pin. Apply motor oil at the foot of the biela and in the hole in accommodation of cotter pin from the piston. Install the piston with the mark IN oriented toward the side of the intake. Install the cotter pin in the piston and in the crank.



PISTON

MARK "IN"



COTTER PIN

Install the new clips of cotter pin

ATENCION

Always use clips new. Never reuse the clips, because it can cause serious damage to the engine.

NOTE

•Make sure that the clips of cotter pin are firmly established. •Not align the extremities of the clips of the cotter pin with the lowering of the piston.

INSTALLATION OF THE CYLINDER

NOTE

To clean the surface of contact of the cylinder, place a cloth in the opening of the cylinder, to prevent the entry of dust and dirt in the engine.
Not reuse the gasket. Replace it with a new.

- .

Install the ears of guide and a new gasket.

ATENCION

Be careful not to damage the cylinder wall and the rings of the piston.

Guided the chain of distribution through the cylinder and install the cylinder on the piston while compresses the rings of the piston with your fingers.

Install the cylinder head (Section 7).



COTTER PIN CLIP



GASKET CYLINDER



DISTRIBUTION CHAIN

NOTES



| SERVICE INFORMATION | 9-1 | GEAR PRIMARY COMMAND | 9-10 |
|--|-----|---|------|
| INVESTIGATION OF FAULTS | 9-2 | GEAR SELECTOR/BOX | 9-11 |
| DISMANTLING THE COVER OF THE RHS CASING OF THE ENGING 9-3 | | INSTALLATION OF THE COVER ON RHS CASING OF THE ENGINE 9-12 | |
| CLUTCH | 9-4 | | |

SERVICE INFORMATION

GENERAL INSTRUCTIONS

•Services of repair in the clutch and selector gears can make with the engine installed in the chassis. •Viscosity and the level of engine oil directly affect the functioning of the clutch. It is not recommended the use of attachments. If the clutch not decouples or if the motorcycle vibrates with the clutch decoupled, inspect the engine oil and its level before make reservations in the system of clutch.

•In case of required to be made services in the transmission, drum of gears, calliper gearbox and axle of the forks, remove the engine and apart their casing (Section 11).

•Refer to Section 11 to obtain information with regard to repair the spindle of changing gears.

SPECIFICATIONS

Unit: mm

| Item | | Value | Service Limit | |
|---|-------------------------------------|-----------------|-----------------|-------|
| Clutch | Free Play of the lever clutch | | 10 – 20 | — |
| | Free length of the spring of clutch | | 35,6 | 44,7 |
| | Thickness of the disk clutch | | 2,92 - 3,08 | 2,69 |
| | Twist of the plate | | | 0,30 |
| | D. l. de la campana clutch | | 25,000 – 25,021 | 25,04 |
| | Guide to the bell of the clutch | D.I. | 19,990 – 20,010 | 22,05 |
| | | D.E. | 24,959 – 24,980 | 27,90 |
| D. E. of the main axle to guide to the bell of the clutch | | 19,959 – 19,980 | 21,91 | |

TORQUE VALUES

Nut of locks of the body of clutch

| Nut primary gear command | 108 N.m (10,8 kg.m) | Apply oil to the thread and to areas of set- tlement. Lock nut of locks. Apply oil to the thread and to areas of settlement. |
|--------------------------|---------------------|---|
| Bolt arm limiter drum | 12 N.m (1,2 kg.m) | |
| Bolt of the plate leva | 12 N.m (1,2 kg.m) | |
| | | |

108 N.m (10,8 kg.m)

TOOLS

| Support of the body of clutch | 07724-0050002 |
|-------------------------------|---------------|
| Support of the body of clutch | 07JMB-MN50301 |



INVESTIGATION OF FAULTS

Lever clutch too hard

Cable of the clutch dirty, stuck or damaged

- •Actualization incorrect cable of the clutch
- •Damage to the mechanism for operating the clutch
- •Bearing the clutch defective •incorrect installation of the guide for operating the clutch

The clutch not decouples or motorcycle vibrates with the clutch decoupled

•Free Play too much in the lever of clutch

•Twist the plates of clutch

•operating mechanism of the clutch defective

·Viscosity incorrect of engine oil or use of attachment

- •Level of engine oil too high •Nut of locks of the clutch loose
- •incorrect installation of the guide for operating the clutch

The clutch skate

Lever clutch play without free

operating mechanism of the clutch stuck

Disks bearings worn

 Sprints of clutch weakened •Use of attachment based on molybdenum or graphite in the engine oil

Difficulties to change the gears

| • | Malfunction of the clutch |
|----------------|---|
| | Viscosity incorrect engine oil |
| | incorrect Adjustment of the clutch |
| | Twist or damage in the spindle of gearbox |
| | Damage to the plate of cam gearbox |
| | •damage in the forks of the change of gears, axle of the forks and drum selector (Section |
| 11) | |
| | •Bolt of the plate of cam gearbox loose |
| | Damage to the plate of cam gear shifts and bolt of position |
| The gears slip | |
| • | Limiter arm of the drum of gearbox damaged |

Limiter arm of the drum of gearbox damaged

•Spring return the selector gears weak or broken

- •Damage or wear of the plate of cam gearbox
- •Twist of the axle of the forks or damage in the forks and drum selector of gears (Section 11) •wear on the slots or projections of docking gear (Section 11)

DISMANTLING OF THE LID RIGHT SIDE OF THE CASING OF THE ENGINE

Drain the engine oil (page 3-12). Remove the cable clutch. Remove the following components: Support of the pedal support right (page 14-18) Tubes of oil radiator (page 4-9)

Remove the bolts and washers sealing of the lower connections of the tube of oil from the cylinder head.

Remove the bolts and the lid right side of the casing of the engine.

Remove the stem operated.

Remove the gasket and the ears of guide.

CLUTCH CABLE



OIL RADIATOR TUBES





TOP RIGHT SIDE GUIDE SPIKES



GASKET

OFFSPRING OF DRIVE

ARM OF ACTUATING THE CLUTCH

Inspection

Remove the arm of actuating the clutch and spring for the return of the lid right side of the casing of the engine.

Check the spindle arm of actuating the clutch with regard to wear or damage.

Check the spring of return with regard to fatigue or damage.

Check the dust and the hub with regard to wear or

damage. Check if they are fixed in the right way.

Replace the defective parts.



DISMANTLING

Remove the cover right side of the casing of the engine (page 9-3). Remove the bearing of the clutch. Loosen the bolts springs of the clutch in sequence, mixed in several steps. Remove the bolts and springs. Remove the plate operated. Unlock the nut of locks of the body of clutch.

ATENCION

Be careful not to damage the thread of the main axle.

Set the body of clutch using the special tool. Then, Loosen the nut of locks.

Special tool: Support of the body of clutch

07JMB-MN50301

Remove and discard the nut of locks.



TOP RIGHT SIDE OF THE CASING OF THE ENGINE DUST COVER



INSERT BOLT/SPRING

CLUTCH BEARING



OPERATING PLATE SUPPORT OF THE BODY OF CLUTCH





CLUTCH/GEAR SELECTOR

Remove the washer conical and washer.

Remove the body of clutch.

WASHER

BODY OF CLUTCH



WASHER conical



SUPPORT WASHER

BELL CLUTCH



GUIDE TO THE BELL OF THE CLUTCH



Remove the disks of friction and the plates of the clutch.

Remove the bell clutch, the plate and pressure washer of support.

Remove the guide to the bell of the clutch.

INSPECTION

Clutch Bearing

Inspect the bearing of clutch with regard to damage. Turn the internal track bearing the finger. The bearing must turn silently and soft, without noises or excessive play. Make sure that the track outside this play excessive in the plate of actuating the clutch. In case of the internal track not turn so smooth and noise, or the track outside this play excessive in the plate for the operating, replace the bearing.

Clutch Spring

Measure the free length of the spring of the

clutch.





| Service | Limit | 44,7 mm |
|---------|-------|---------|
| | | |

NOTE

Replace the springs of clutch as a whole.

Disks bearings

Check the disks of friction with regard to chafing or discolourment



DISK BEARINGS CLUTCH



NOTE

Replace the disks of friction and the plates of clutch as a whole.

Measure the thickness of the disks of friction.



Clutch plates

Check the plates of clutch with regard to discolourment.

Check the twist the plates of the clutch in a flat surface, using a gauge of thicknesses.

| Service | Limit | 0,30 mm |
|---------|-------|---------|
|---------|-------|---------|

NOTE

Replace the disks bearings and license plates as a whole.

Body of clutch

Check the body of clutch with regard to furrows, carvings or abnormal wear caused by the plates of the clutch. Replace, if necessary.



Clutch plate

Body of clutch



Bell clutch



GUIDE TO THE BELL OF THE CLUTCH



Bell clutch

Check the rebated de la campana of clutch with regard to

furrows, carvings or abnormal wear, caused by the disks of

friction. Check the teeth serrillados gear commanded

primary with regard to wear or damage. Guide of the bell of

the clutch Measure the D. E. and D. I. the guide to the bell of

| the clutch. Límite de | D.I. | 22,05 mm |
|--------------------------|------|----------|
| Servicio | D.E. | 22,90 mm |

Main Axle

Measure the D. E. of the main axle in the area of the surface of slip of the guide to the bell of the clutch.

| Service | Limit | 21,91 mm |
|---------|-------|----------|
|---------|-------|----------|

IINSTALLATION

Apply motor oil to the guide to the bell clutch and install it on the main axle.

Install the bell of the clutch. Install the plate

oil new to the disks of friction and to the

to the illustration. NOTE

and pressure washer of support. Apply motor

plates of the clutch. Install the disks of friction

and the plates of clutch alternately, according

Do not confuse the disks A and B of the clutch.

GUIDE TO THE BELL OF THE CLUTCH



SUPPORT WASHER

PRESSURE PLATE



BELL CLUTCH



NOTE

Install the tabs of the disk to external in the rebated less deep in the hood of the clutch.

Install the body of clutch.

Install the washer on the main axle.

Install the new washer conical with the mark OUT-SIDE geared toward the outside.

Apply motor oil to the thread and to the surface of set-

tlement of the new nut of locks. Then, install it on the

main axle. Use the special tool to fix the body of clutch.

Tighten the nut of locks to the specified torque.

TOOL: Support of the body of clutch: TORQUE: 108 N.m (10,8 kg.m)

07JMB-MN50301

Lock nut of locks in the slot on the main axle.

ATENCION

Be careful not to damage the thread of the main axle.

TAB AND CUTOUT LESS DEEP



DISK OF EXTERNAL CLUTCH MARK "OUT SIDE" BODY OF THE CLUTCH



SUPPORT OF THE BODY OF THE CLUTCH CONICAL WASHER







LOCKING NUT

CLUTCH/GEAR SELECTOR

CBX250

Install the springs of clutch, the plate operated and the respective bolts on the plate of pressure.

Tighten bolts in sequence, mixed in several steps. Then, tighten firmly.

Install the lid right side of the casing of the engine (page 9-12).

BOLT/SPRING

PLATE OPERATED



NUT AND WASHER



SUPPORT OF THE BODY OF CLUTCH GEAR PRIMARY COMMAND



WASHER STRIATED WIDE

BROADBAND SLOT



GEAR PRIMARY COMMAND

GEAR PRIMARY COMMAND

DISMANTLING

Remove the cover right side of the casing of the engine (page 9-3).

Remove the components of clutch (page 9-4).

Using the special tool remove the nut and washer gear primary command, according to the illustration.

Tool:

Support of the body of the clutch:

07724-0050002

Remove the washer and the primary gear command of the crankshaft.

INSTALLATION

Install the primary gear command aligning its slot wider with the striated more width of the crankshaft.

Install the washer

WASHER

Apply motor oil to the thread and to the surface

of settlement of the nut primary gear command.

Then, install it on the crankshaft. Using the spe-

cial tool fasten the nut gear primary command to

the specified torque. Tool: Support of the body of the clutch TORQUE: 108 N.m (10,8 kg.m)

07724-0050002

Install the following components: All the components of clutch (page 9-8) Lid right side of the casing of the engine (page 9-12)

GEAR SELECTOR

NOTE

Refer to Section 11 to obtain information with regard to services in the spindle of gears.

DISMANTLING

Remove the cover right side of the casing of the engine (page 9-3).

Remove the bolt and the plate of leva of changing gears.

Remove the bolt, the arm limiter drum gearbox, the washer and the spring of return.

Remove the ear of guide of the drum selector.

INSPECTION

Also Inspect the plate of cam change of gears and the arm limiter with regard to wear or damage. Check the spring of return of the arm limiter with regard to fatigue or damage.

INSTALLATION

Install the spring of return, the washer (between the arm limiter and spring), the arm limiter and the bolt. Tighten the bolt arm limiter to value specified.

TORQUE: 12 N.m (1,2 kg.m)



NUT PRIMARY GEAR COMMAND



SUPPORT OF THE BODY OF THE CLUTCH ARM LIMITER OF **CHANGING** gears

BOLT



RETURN SPRING

PLATE OF CAM gears





ARM LIMITER OF CHANGING gears BOLT Lift the arm limiter using a screwdriver. Install the ear of guide and the plate of leva of changing gears.

NOTE

Align the hole in the bolt on the plate leva, with the ear of guide of the drum of gears.

Apply locks chemistry to the thread of bolt to the plate of leva of changing gears.

Install and tighten the bolt to the plate of leva of changing gears.

TORQUE: 12 N.m (1,2 kg.m)

Install the lid right side of the casing of the engine (page 9-3).

INSTALLATION OF THE LID RIGHT SIDE OF THE CASING OF THE ENGINE

Apply grease to lip of the new dust and install in the lid right side of the casing of the engine.

GUIDE SPIKE PLATE OF CAM gears

Align

ARM LIMITER OF

CHANGING gears



PLATE OF CAM gears

DUST COVER



RETURN SPRING



SPINDLE ARM OF ACTUATING THE CLUTCH Edited with Infix PDF Editor

Install the spring of return in the spindle of the arm of actuating the clutch. Then, install the spindle in the lid right side of the casing of the engine.

NOTE

Set the spring of return in the lid right side of the casing of the engine.

CLUTCH/GEAR SELECTOR

Install the gear commanded of the oil pump in the axle of the bomb, aligning its flat surfaces. Apply motor oil to the new o ring and install it into the slot of the oil pump. Install the ears of guide and a new gasket.

Install the lid right side of the casing of the engine while turning the arm of actuating the clutch in the clockwise, to attach the slot on the spindle arm of operated by the flange of the guide for operating the clutch, according to the illustration.

Install the eleven bolts of the lid right side of the casing of the engine. Then, tighten firmly.

Install the new washers in sealing and tighten bolts of the connections of the tubes of oil from the cylinder head.

GASKET **GUIDE SPIKES**

GEAR COMMANDED OF Align THE OIL PUMP

O-RING



BOLT

SEALING WASHERS



CLUTCH CABLE



OIL TUBES

Install the cable clutch.

Install the following components: Tubes of oil radiator (page 4-9) Support the pedal support right (page 14-19) Supplying the engine with the motor oil recommended (page 3-12). Cable Adjustment of clutch (page 3-25).

| SERVICE INFORMATION | 10-1 | DISMANTLING OF THE FLY WHEEL | 10-3 |
|-------------------------|------|------------------------------|------|
| INVESTIGATION OF FAULTS | 10-1 | CLUTCH START | 10-4 |
| ALTERNATOR STATOR | 10-2 | INSTALLING THE FLY WHEEL | 10-6 |

SERVICE INFORMATION

GENERAL INSTRUCTIONS

•Services submitted in this section can be made with the engine installed in the chassis. •In this section describes procedures of service of stator alternator, driving the engine and clutch start. These components can be removed with the engine installed in the chassis. •Refer to Section 18 to obtain information in respect of services in the starter motor.

SPECIFICATIONS

Unit: mm

| ltem | Value | Limit de Servicio |
|---|-----------------|-------------------|
| D. E. of highlight the spiral commanded the start | 45,660 - 45,673 | 45,63 |

TORQUE VALUES

| Bolt of engine flywheel | 103 N.m (10,3 kg.m) | Apply oil to the thread and to the surface of settlement |
|--|---|--|
| Bolt Torx clutch start thread Bolt for fixing the pulse generator power Bolt of fixing the stator Bolt of pin wiring stator | 16 N.m (1,6 kg.m) 5 N.m (0,5 kg.m) 10 N.m (1,0 kg.m) 10 N.m (1,0 kg.m) | Apply locks chemistry to the |
| SPECIAL TOOLS | | |
| Support of the fly wheel of the engine Extractor of the rotor Extension bar | 07725-0040000 07733-0020001 07716-0020500 | |

INVESTIGATION OF FAULTS

The starter motor turns, but the motorcycle engine does not start. • Clutch defective start • damage in the machinery intermediate and spiral of reduction in the starter motor



ALTERNATOR STATOR

DISMANTLING OF THE LID LEFT SIDE OF THE CAR-CASS OF THE ENGINE

Remove the three bolts and the lid of intermediate gear boot.

Remove the gasket.

Remove the gear intermediate boot and the respective axle of the lid left side of the casing of the engine.

Remove the side cover (page 2-2).

Disconnect the connector 3P alternator and the connector 3P from the pulse generator power / switch of deadlock.

Remove the following components:

Top of piñon of transmission (page 6-3).

Cable breaker of deadlock (page 19-12).

Remove the bolts and the lid left side of the casing of the engine.

The cover of alternator (stator) is fixed magnetically behind the wheel of the engine. Be careful to remove.



INTERMEDIATE GEAR BOOT

GASKET



AXLE CONNECTOR 3P FROM THE PULSE GENERATOR POWER/SWITCH DEADLOCK



CONNECTOR 3P ALTERNATOR TOP SIDE LEFT.



BOLT

Remove the gasket and the ears of guide. Remove the spiral of reduction in the boot and the washer.

DISMANTLING THE STATOR/pulse generator power

Remove the screw the pin of cables and the pin.

Remove the two screws and the other pin.

Remove the three bolts stator and the hub of rubber cabling.

Then, remove the stator / pulse generator power of the lid left side of the casing of the engine.

DISMANTLING THE FLYWHEEL

Remove the cover left side of the casing of the engine (page 10-2). Hold the wheel of the engine, using the special tool. Then, remove the bolt the wheel of the engine.

Special tool: Flywheel support

07725-0040000

Remove the bolt the wheel of the engine and the washer special.

Remove the steering wheel of the engine using the special tools.

Special tool: Rotor extractor

Extension bar

07733-0020001 07716-0020500

Remove the washer and the chain of command of the boot.



GUIDE SPIKES

STATOR

BOLT HUB OF RUBBER



PULSE GENERATOR POWER/PIN CLASP/PIN

BOLT/WASHER



SUPPORT OF THE FLYWHEEL FLYWHEEL



ROTOR EXTRACTOR
Remove the bearing of needles, the spacer and cotter Woodruff of the crankshaft.



KEY



GEAR COMMANDED THE BOOT

BOLT TORX









CLUTCH BOOT

DISMANTLING

Remove the steering wheel of the engine (page 10-3).

Remove the gear commanded the boot, turning in the sense against opening hours.

Remove the washer.

Hold the wheel of the engine, using the special tool. Re-

move the bolts Torx clutch boot.

Special tool:

07725-0040000

Flywheel support Remove the whole of clutch of booting the steering wheel of the engine.

Remove the clutch unidirectional de la campana clutch of boot.

INSPECTION

Inspect the intermediate gear boot and the respective axle with regard to wear or damage.

Check the spiral of reduction with respect to wear or damage.



GEAR REDUCTION CLUTCH UNIDIRECTIONAL



BELL CLUTCH BOOT



CLUTCH UNIDIRECTIONAL



BELL CLUTCH BOOT

Check the bell clutch boot and clutch unidirectional with regard to abnormal wear, damage or irregular movements.

Inspect the inner surface of contact at the bell clutch unidirectional with regard to abnormal wear or damage.

Replace, if necessary.

Inspect the teeth gear commanded the boot with regard to wear or damage. Measure the D. E. of highlight the spiral commanded to boot.

| | Service | Limit | 45,63 mm |
|--|---------|-------|----------|
|--|---------|-------|----------|

INSTALLATION

Install the clutch unidirectional in the bell clutch boot with the side of the flange oriented toward the steering wheel of the engine.

Clean and implement locks chemistry to the bolt threads Torx of fixing the clutch boot. Install the whole of clutch boot on the steering wheel of the engine. Install the bolts Torx. Hold the wheel of the engine, using the special tool. Tighten the bolts Torx. **Special tool:** Flywheel support

07725-0040000

TORQUE: 16 N.m (1,6 kg.m)

Install the gear commanded the boot, together with the washer, making turn in the sense against opening hours.

Make sure that the gear commanded the boot gently turn in the sense against opening hours and that does not turn clockwise.

Install the fly wheel of the engine.

INSTALLING THE FLYWHEEL

Lubricate the bearing of needles with oil. Install the spacer and the bearing of needles in the crankshaft.

Wipe any residue of oil from sections of conical crankshaft and steering wheel of the engine.

Install the cotter Woodruff in the slot on the crankshaft.

Install the chain of command of the boot.

Install the steering wheel of the engine in the crankshaft, aligning the slot on the steering wheel with the cotter Woodruff.





SPACER

BALL NEEDLES



NOTCH CRANKSHAFT Clean FLYWHEEL



Align

SLOT OF THE fly wheel

Apply oil to the thread and to the surface of settlement of bolt the wheel of the engine. Then, install the washer special and the bolt. Hold the wheel of the engine, using the special tool. Then tighten the bolt to the specified torque.

Special tool: Flywheel support

07725-0040000

TORQUE: 103 N.m (10,3 kg.m)

Install the lid left side of the casing of the engine.

Installing the STATOR/pulse generator power

Place the stator / pulse generator power in the lid left side of the casing of the engine. Install the hub of rubber in the slot of the lid left side of the casing of the engine, in accordance with the illustration. Guided correctly the wiring and install the screw the pin of the cable. Press the pin against the cap on the local indicated, in a manner that precludes its turnaround. Then, tighten. Tighten the bolts from the pulse generator power together with the pin and the three bolts stator.

TORQUE: Bolt from the pulse generator power

5 N.m (0,5 kg.m)Bolt of fixing the stator10 N.m (1,0 kg.m)The Screw pin of cables10 N.m (1,0 kg.m)from the stator10 N.m (1,0 kg.m)

INSTALLATION OF THE LID LEFT SIDE OF THE CASING OF THE ENGINE

Apply oil to the washers and install in the machinery of reduction in the boot.

Install the spiral of reduction in the boot.

Install the ears of guide and a new gasket.

BOLT/WASHER SPECIAL



FLYWHEEL SUPPORT

STATOR

HUB OF RUBBER



PULSE GENERATOR POWER



SPIRAL OF REDUCTION IN THE BOOT/WASHERS



GUIDE SPIKES

CBX250

O-RING

Lubricate a new o ring with motor oil and install it into the slot on the starter motor.

Install the lid left side of the casing of the engine.

ADVERTENCIA

The cover of alternator (stator) is fixed magnetically behind the wheel of the engine. Be careful not to ignite the fingers during installation.

To install the lid left side of the casing of the engine be careful not to ignite the cable breaker of deadlock.

Install the eight bolts and tighten firmly.

Install the cable breaker of deadlock (page 19-12).

Install the intermediate gear boot in the machinery of reduction.

Apply oil to the axle of intermediate gear boot and install in gear.



TOP SIDE LEFT.



BOLT

INTERMEDIATE GEAR BOOT



GEAR REDUCTION INTERMEDIATE GEAR BOOT



AXLE

CBX250

O-RING

Lubricate a new o ring with motor oil and install in the top gear the boot.

Install the lid of intermediate gear boot and tighten the four bolts.



CONNECTOR 3P FROM THE PULSE GENERATOR POWER/SWITCH DEADLOCK



CONNECTOR 3P ALTERNATOR

Guide correctly the wiring to the alternator (page 1-21).

Plug the connectors alternator and the pulse generator power / switch of deadlock.

Install the following components: Top side (page 2-2). Lens piñon transmission (page 6-6).

| SERVICE INFORMATION | 11-1 | DISASSEMBLY OF THE THE TRANSMIS | SSION 11 4 |
|---------------------------------|--------|---------------------------------|-------------|
| INVESTIGATION OF FAULTS | 11-2 | ASSEMBLY OF THE TRANSMISSION | 11-8 |
| SEPARATION OF THE CASING OF THE | ENGINE | ASSEMBLY OF THE CASING OF THE | ENGINE11-11 |
| 11-3 | | | |

SERVICE INFORMATION

GENERAL INSTRUCTIONS

•In this section describes procedures of transmission service, even the forks, the drum selector and the spindle of changing gears. Refer to Section 12 to obtain information in respect of services in the crankshaft and flywheel. •The casing of the engine is must remove provided they are effected services of repair and maintenance in the transmission. For those services must remove the engine of chassis (Section 6). •Remove the following components before separating the casing of the engine: Cylinder head (Section 7) Cylinder and piston (Section 8) Clutch, gear primary command and selector gears (section 9) oil pump (Section 4) engine Flywheel (Section 10) • Be careful not to damage the contact surfaces of the casing of the engine to make the service.

SPECIFICATIONS

| | ltem | | Value | Service Limit |
|--|---|-----------------|-----------------|---------------|
| Transmission D L gear | | M5 | 20 000 - 20 021 | 20.08 |
| | 2 | M6 | 23.000 - 23.021 | 23.07 |
| | | C1 | 23.000 - 23.021 | 23.07 |
| | | C2 | 25.020 - 25.041 | 25,09 |
| | | C3 | 25,000 – 25,021 | 25,07 |
| | | C4 | 22,000 - 22,021 | 22,07 |
| | D. E. of the hub of gear | C1 | 22,959 – 22,980 | 22,90 |
| | | C2 | 24,979 – 25,000 | 24,90 |
| D. I. the hub of gear | | C1 | 18,000 – 18,018 | 18,08 |
| D. E. spacer | C2 | 22,000 – 22,021 | 22,08 | |
| | C3 | 24,959 – 24,980 | 24,90 | |
| | | M6 | 22,959 – 22,980 | 22,92 |
| | D. E. of the main axle | al M5 | 19,959 – 19,980 | 19,91 |
| D. E. of countershaft | al C1 | 17,966 – 17,984 | 17,91 | |
| | | al C2, C4 | 21,959 – 21,980 | 21,91 |
| | Slack between gear and the hub | | 0,020 - 0,062 | 0,10 |
| Slack between gear and the spacer | | | 0,020 - 0,062 | 0,10 |
| | | C1 | 0,016 – 0,052 | 0,10 |
| | | C2 | 0,020 - 0,062 | 0,10 |
| Slack between the gear and the main axle | | al M5 | 0,020 – 0,062 | 0,10 |
| | Slack between gear and the countershaft | al C4 | 0,020 – 0,062 | 0,10 |

Unit: mm



locks chem-

| | ltem | | Value | Service Limit |
|---------------------------------|---|------|-----------------|---------------|
| Gear change | D.I. of the gear change fork | | 13,000 – 13,021 | 13,05 |
| fork, axle of the | Thickness of the claw of the gear | L | 4,90 - 5,00 | 4,5 |
| forks and drum change fork R, C | | R, C | 4,93 - 5,00 | 4,5 |
| selector | D. E. shaft of the gear change fork | | 12,966 – 12,984 | 12,90 |
| | D. E. of drum selector in the extremity right | | 19,959 – 19,980 | 19,90 |
| | Stump drum selector (Right side of the casing of the engine) | | 20,000 – 20,033 | 20,07 |

TORQUE VALUES

| Bolt to the plate of fixing of the bearing of the main axle | 12 N.m (1,2 kg.m) | Apply locks che istry to the thr | em- ead. |
|--|-------------------|-------------------------------------|-------------|
| Bolt ear of the spring of return of the drum of gears | 24 N.m (2,4 kg.m) | | |
| Bolt connecting the bottom of the tube of oil from the cylinder head | 12 N.m (1,2 kg.m) | | |
| TOOLS | | | |
| Head extractor of bearing, 15 mm | 07936-KC10200 | | |
| Axle extractor of bearing | 07746-0050100 | | |
| | | | |

| Weight of extractor | 07741-0010201 |
|-----------------------|---------------|
| Driver | 07749-0010000 |
| Accessory, 42 x 47 mm | 07746-0010300 |
| Accessory, 52 x 55 mm | 07746-0010400 |
| Pilot, 17 mm | 07746-0040400 |
| Pilot, 20 mm | 07746-0040500 |
| Pilot, 22 mm | 07746-0041000 |
| | |

INVESTIGATION OF FAULTS

Excessive noise

· Spiral of transmission worn, stuck or damaged

• Ball transmission worn or damaged

Difficulty to change the gears

•Incorrect Adjustment of the clutch; free play of the lever clutch too wide

•Twist the fork of the change of gears

•Twist of the axle of the forks of the change of gears

•damage in the slot of guide of the drum of gearbox

•damage in the ear of guide to the fork of the change of gears

•damage in the arm limiter drum •Twist of the spindle gear changing

The gears slip

•Projections or rebated coupling of the gears worn •damage in the slot of guide of the drum of gearbox •wear of the ear of guide to the range of gearbox •wear of the slots in the forks of the change of gears in the gears

SEPARATION OF THE CASING OF THE MOTOR

Remove the starter motor (page 18-4) and the cylinder head (page 7-8).

Remove the bolts of the lower connections of the tube of oil from the cylinder head, washers and sealing the tube of oil from the cylinder head.

Refer to the Information Service (page 11-1) to obtain information in respect of the parts that must be removed before the disassembly to the casing of the engine.

Remove the distribution chain and the chain of command of distribution.

Remove the bolt, the guide of tensile distribution chain and the washer.

Remove the bolt and the plate of relief.

Remove the bolt from the right half of the casing of the engine.

Remove the bolts on the left half of the casing of the engine.

Place the whole of the casing of the engine with the left side downwards. Hit the casing of the engine at different points, using a hammer of rubber. Besides carefully the right side and the left half of the casing of the engine.

NOTE

Never use a screwdriver or a lever to separate the halves of the housing.



OIL TUBE BOLT/SEALINIG WASHER CYLINDER HEAD PLATE OF RELIEF/ BOLT



BOLT FROM THE RIGHT HALF OF THE CASING OF THE ENGINE BOLT TO THE CASING OF THE ENGINE



RIGHT HALF OF THE CASING OF THE ENGINE



Remove the gasket and the ears of guide.

GUIDE SPIKES



GASKET

DISMANTLING THE TRANSMISSION

DISMANTLING

Release the plate gear selector of the drum of gears, separating the drum and removing the spindle of gears.

Pull the axle of the forks, away from the forks of the change of gears.

Remove the drum of gearbox and the forks.

Remove the main axle and the countershaft as a whole.

Dismantle the whole of the main axle and countershaft.



PLATE OF THE GEAR SELECTOR DRUM OF THE GEARS AXLE OF THE FORKS



COUNTERSHAFT

MAIN AXLE



INSPECTION

Gears

Inspect the projections and rebated coupling of the gears with regard to excessive wear or damage.

Inspect the teeth of the gears with regard to excessive wear or damage.

Measure the D. I. of each gear.

| Cara ing kingit | M5 | 20,08 mm |
|-----------------|----|----------|
| | M6 | 23,07 mm |
| | C1 | 23,07 mm |
| Service Limit | C2 | 25,09 mm |
| | C3 | 25,07 mm |
| | C4 | 22,07 mm |

Bushes

Inspect the bushes with regard to wear or damage. Measure the D. E. of each bush.

| Service Limit | Buje C1 | 22,90 mm |
|---------------|---------|----------|
| Corvice Linit | Buje C2 | 24,90 mm |

Measure the D. I. of each bush.

| Service Limit | Buje C1 | 18,08 mm |
|---------------|---------|----------|
| | Buje C2 | 22,08 mm |

Main Axle/Countershaft

Inspect the striated and the surfaces of slippage of the main axle and the countershaft with regard to abnormal wear or damage. Measure the D. E. shaft and countershaft in areas of the areas of slip of the hubs and gears.

| Service | Main Axle (the bush M5) | 19,91 mm |
|---------|-----------------------------------|----------|
| Limit | Countershaft (the bush C1) | 17,91 mm |
| | Countershaft (the bush C2 and C4) | 21,91 mm |

Calcule la holgura entre cada engranaje y su respectivo buje; cada buje y el eje; y cada engranaje y el eje.

| Service | Slack between gear and the bush | 0,10 mm |
|---------|--|-----------|
| LIIIII | Slack between the hub and the axle C1/C2 | 2 0,10 mm |

Drum of gearbox/Stump drum

Inspect the tip of the drum of gearbox with regard to scratches, wear or evidence of insufficient lubrication. Inspect the slots in guide of the drum of gearbox with regard to abnormal wear or damage. Measure the D. E. from the right edge of the drum.

| Service | Limit | 19,90 mm |
|---------|-------|----------|
|---------|-------|----------|







DRUM OF gears



Inspect the stump drum of changing gears in the right half of the casing of the engine, with regard to excessive wear or damage.

Measure the D. I. the stump drum.

| | Service Limit 20.07 mm |
|--|------------------------|
|--|------------------------|



Axle of the forks of the change of gears

Check the axle of the forks of the change of gears with regard to damage and twist.

Measure the D. E. the axle of the forks, according to the illustration.

| Service | Limit | 12,90 mm |
|---------|-------|----------|
|---------|-------|----------|

Tensile distribution chain

Check with regard to damage. Replace, in case of need.



RETURN SPRING



SELECTOR

The Spindle gears

Remove the rings of pressure and the spring of return. Also Inspect the plate selector gears with regard to wear or damage.

Inspect the spring of return and the springs of replenishment with regard to fatigue or damage.

Inspect the spindle of gearbox with regard to twist, excessive wear and other damage.

Bearing of the transmission

Turn the internal track of each bearing the finger. The turning should rotate smooth and noise.

Also check if the track outside of each ball is firmly embedded in the casing of the engine.

Replace the bearings, in case of need.



REPLACEMENT OF THE BEARINGS OF THE TRANSMISSION

Turning of the main axle and countershaft

Remove the checkpoints of oil from the left half of the casing of the engine.

Use the special tools to remove the bearings in each half of the casing of the engine.

Special tool:

Bearing left of the main axle:Head extractor of turning, 15 mm07936-KC10200Axle of extractor07746-005 0100Weight of extractor07741-0010201

Install the new bearing, using the special tools.

Tool:

Bearing of the main axle: right side Driver

Accessory, 42 x 47 mm Pilot, 20 mm

Left Behind Accessory, 42 x 47 mm Pilot, 17 mm

Bearing of countershaft: right side Driver

Accessory, 42 x 47 mm Pilot, 17 mm

Left Behind

Accessory, 52 x 55 mm Pilot, 22 mm 07749-0010000 07746-0010300 07746-0040500

07749-0010000 07746-0010300 07746-0040400

07749-0010000 07746-0010300 07746-0040400

07749-0010000 07746-0010400 07746-0041000





OIL SEALS

DRIVING ACCESSORY



PILOT

TREAD



Inspect the bearing of needles with regard to wear or damage.

Replace, in case of need.

BALL NEEDLES



TREAD



Replace, in case of need.

oil in the countershaft.

Inspect the checkpoint of oil spindle of gearbox with regard to wear or damage.



ASSEMBLY OF THE TRANSMISSION

Clean all the pieces with solvent.

Lubricate all surfaces of slip of the gears, hubs and slots of the forks of the change of gears with oil based on carbon disulphide of molybdenum, to ensure the initial lubrication.

Assemble each piece in its original position.

NOTE

•Check all gears with regard to freedom of movement and the rotation in each axle. •Install washers support and rings of pressure with their edges chamfered oriented toward the side of the burden. No reuse rings worn pressure, which could easily turn into the slot. •Make sure that the rings of pressure to settle firmly in the respective slots. Align their limbs open with the stretch of the axles (pages 11-9).

MAIN AXLE



In case of the crankshaft has been removed, install first, together with the flywheel (page 12-5).

Apply motor oil to the retaining lips oil countershaft.

Install the main axle and the countershaft as a whole, on the left half of the casing of the engine.

Be sure to install the three washers of the extremities of the axles (in both legs of the main axle and only in the left extremity of countershaft).

Each fork of the change of gears possesses an identification mark: R for the fork right, C for the fork central and L for the fork left.

Install each fork of the change of gears in the respective slot in the gear, with the identification mark oriented toward above (or: in the direction to the right half of the casing of the engine).

Apply motor oil in the slots of guide of the drum of gears. Install the drum, aligning the ears of guide to the forks with the slots of guide of the drum of gears.

Apply motor oil to the axle of the forks of the change of gears. Insert through the forks of the change of gears on the left half of the casing of the engine.



OIL SEAL IDENTIFICATION MARKS OF THE FORKS







AXLE OF THE FORKS OF THE CHANGE OF GEARS

DRUM OF gears



RETURN SPRING

Install the rings of pressure, the spring of return and the spring of replenishment in spindle gearbox, according to the illustration.



RING OF PRESSURE BOLT Spike

Lubricate the checkpoint of oil spindle of gears with engine oil.

Install the spindle gearbox aligning the ends of the spring of return with the bolt spike, while holding off the plate selector gears.

ASSEMBLY OF THE CASING OF THE ENGINE

Clean completely the contact surfaces of the halves right and left to the casing of the engine, taking care not to damaging them.

Inspect the contact surfaces with regard to damage.

Install the ears of guide and a gasket new on the left half of the casing of the engine.

Be sure to have installed correctly all parts of the halves right and left to the casing of the engine.

ATENCION

Do not force the halves of the casing of the engine. If you need excessive force to install is because there is a flaw in the assembly. Remove the right half of the housing and please check with respect to spare poorly aligned.

Install half right on the left half of the casing of the engine.



OIL SEAL

RETURN SPRING

GUIDE SPIKE







GASKET





Make sure that the contact surfaces of the casing of the engine are supported in a uniform manner.

Install the bolts on the left half of the casing of the engine.

Tighten in sequence, mixed in several steps.

Install and tighten the bolt from the right half of the casing of the engine.

Install the plate of relief and plaque of fixing the bearing.

Then, tighten the bolt.

Install the limiting plate bearing.

Apply locks chemistry to the thread of bolt of the guide the tensile distribution chain.

Install the guide the tensile distribution chain with the respective bolt, and push firmly.

Install the chain of command of the distribution chain, aligning the slot wide of gear with the striated width of the crankshaft.



PLATE OF RELIEF/PLATE OF FIXING OF THE BEARING/BOLT



BOLT FROM THE RIGHT HALF OF THE HOUSING GUIDE TENSIONER



Limiting PLATE BEARING STRIATED WIDE

BROADBAND SLOT



CHAIN OF COMMAND OF THE DISTRIBUTION CHAIN

CBX250

Install the distribution chain in the chain of command.



DISTRIBUTION CHAIN

BOLT



TUBE OF OIL FROM THE CYLINDER HEAD SEALING WASHER

Install the following components: Engine Flywheel (page 10-6)

Oil pump (page 4-5)

Clutch and gear primary command (9-10)

Selector gears (page 9-11)

Piston and cylinder (page 8-6)

Cylinder head (page 7-19)

Install the tube of oil from the cylinder head together with the respective bolts of the connections inferior and new washers of seal.

Tighten bolts of the lower connections of the tube of oil from the cylinder head.

TORQUE: 12 N.m (1,2 kg.m)

Install the starter motor (page 18-9).

12. CRANKSHAFT/FLYWHEEL

| SERVICE INFORMATION | 12-1 | DISMANTLING OF THE CRANKSHAFT | 12-2 |
|-------------------------|------|--------------------------------|------|
| INVESTIGATION OF FAULTS | 12-1 | INSTALLATION OF THE CRANKSHAFT | 12-5 |

SERVICE INFORMATION

GENERAL INSTRUCTIONS

•In this section describes procedures for service in the crankshaft and in the flywheel. •Separates the two halves of the casing of the engine, to make services of repair in the crankshaft and in the flywheel. Refer to Section 11 to obtain information in respect of the separation and assembly with the casing of the engine. •To make services, be careful not to damage the contact surfaces of the halves of the casing of the engine.

SPECIFICATIONS

Unit: mm

| | ltem | Value | Service Limit |
|---------------------------------------|-------------------------------------|-------------|---------------|
| Con rod | Slack side of the head of the crank | 0,05 – 0,50 | 0,6 |
| Slack radial of the head of the crank | | 0 - 0,008 | 0,05 |
| | del cigüeñal | | 0,02 |

TOOLS

| Whole extractor of bearings, 12 mm | 07936-1660001 |
|--|---------------|
| Weight of extractor | 07741-0010201 |
| Driver | 07749-0010000 |
| Accessory, 37 x 40 mm | 07746-0010200 |
| Accessory, 72 x 75 mm | 07746-0010600 |
| Pilot, 12 mm | 07746-0040200 |
| Pilot, 28 mm | 07746-0041100 |
| Collar of assembly to the casing of the engine | 07965-VM00100 |
| Axle of assembly to the casing of the engine | 07965-VM00200 |
| Threaded Adapter | 07965-VM00300 |
| Universal Extractor of bearings | 07631-0010000 |

INVESTIGATION OF FAULTS

Excessive noise

•Wear of the bearings of the main bearings of the crankshaft

•Wear or damage in the bearings of the crank

- •wear of the foot of the crank
- •wear of the bearings of flywheel
- incorrect installation of flywheel
- •Twist the crank

Abnormal vibration

· Synchronisation of incorrect flywheel



DISMANTLING OF THE CRANKSHAFT

Separates the two halves of the casing of the engine and remove the transmission (Section 11). Use a hydraulic press to remove the crankshaft and flywheel the left half of the cover of the engine. Support for the whole so as not to fall. ATENCION

Be careful not to damage the contact surface of the casing of the engine and the whole of the crankshaft/flywheel.

In the event that the bearing of the crankshaft has been removed from the casing of the engine together with the crankshaft, off using the extractor of bearings and a protector. **Tool:**

Universal Extractor of bearings

07631-0010000

Discard the bearing removed.

ATENCION

Replace provided the bearing left by a new, case has removed along with the crankshaft.

INSPECTION

Eccentricity of the Crankshaft

Support for the crankshaft in a support or in a couple of blocks ${\sf V}$.

Turn the crankshaft two full turns and measuring its eccentricity, using an indicator of quadrant.

| Service | Limit | 0,02 mm |
|---------|-------|---------|

Slack Side of the Head of the Crank

Measure the slack side in the head of the crank using a gauge of thicknesses.

Service Limit 0,6 mm





UNIVERSAL EXTRACTOR OF BEARINGS





Slack Radial in the Head of the Crank

Measure the slack radial in the head of the crank using an indicator of quadrant.

| | Service | Limit | 0,05 mm |
|--|---------|-------|---------|
|--|---------|-------|---------|



GEAR FLYWHEEL

Gear Flywheel

Check the machinery of flywheel with regard to wear or damage.



Bearing of the Crankshaft/Flywheel

Turn the tracks internal each ball with your finger. The bearings must be turning smoothly and without noise. Make sure that external tracks of the bearings are firmly subject in the casing of the engine. Replace the bearings, in case of need.

REPLACEMENT OF THE BEARINGS OF THE CRANKSHAFT/FLYWHEEL

Use the special tools to remove the bearings of the crankshaft halves of the cover of the engine.



BEARING THE CRANKSHAFT





| Special tools: Bearing on the right side Whole extractor of bearings, 12mm Weight of extractor | 07936-1660001 07741-0010201 |
|---|--------------------------------|
| Bearing on the left side | 07036-1660001 |
| Weight of extractor | 07741-0010201 |

Use the special tools to install the new bearings in the casing of the engine.

NOTE

The bearing must be installed perpendicular to the casing of the engine.

| 07749-0010000 |
|---------------|
| 07746-0010600 |
| 07746-0041100 |
| |
| 07749-0010000 |
| 07746-0010200 |
| 07746-0040200 |
| |
| 07749-0010000 |
| 07746-0010200 |
| 07746-0040200 |
| |

After installing the bearing lubricate with motor oil again.



WEIGHT



PILOT ACCESSORY BEARING THE CRANKSHAFT DRIVER



PILOT THE BEARING FLYWHEEL

INSTALLATION OF THE CRANKSHAFT

Clean contact surfaces of the casing of the engine. Inspect with regard to wear or damage, prior to the assembly.

NOTE

In case of the contact surfaces of the casing of the engine submit small irregularities or roughness, rectify with a stone of sharpening with oil.

Attach the flywheel and the crankshaft aligning the reference marks and the holes in the wheels of flywheel, according to the illustration. Place the crankshaft and the flywheel, as a whole, on the left half of the casing of the engine.





ALIGN

ALIGN THREADED Adapter



COLLARÍN DE EJE DE ARMADO ARMADO



Aligr

Install the special tools in the crankshaft.

Install the crankshaft, using the special tools.

NOTE

To install the crankshaft, make sure the crank is not compressed in the edge of the casing of the engine.

Tools:

Collar of assembly to the casing of the engine07965-VM00100Axle of assembly to the casing of motor07965-VM00200Threaded Adapter07965-VM00300

After installing the crankshaft, make sure the reference marks in the balances of the crankshaft and the flywheel, either as the holes in the wheels of flywheel are aligned.

Install the transmission and assembling the halves of the casing of the engine (page 11-8).

| SERVICE INFORMATION | 13-1 | FRONT WHEEL | 13-8 |
|-------------------------|------|------------------|-------|
| INVESTIGATION OF FAULTS | 13-2 | FRONT SUSPENSION | 13-14 |
| HANDLEBARS | 13-3 | STEERING COLUMN | 13-22 |

SERVICE INFORMATION

GENERAL INSTRUCTIONS

ADVERTENCIA

•Driving motorcycle with tires or damaged rays can affect the security. •A disk or brake pads contaminated reduce the performance of braking. Discard the pills contaminated and wipe the disk contaminated with a degreasing agent of brake of high quality.

•To make services of repair and maintenance in the front wheel, suspension or steering column, to support the motorcycle in a proper support. •

\Refer to Section 15 to obtain information to respect the brake system.

SPECIFICATIONS

Unit: mm

| ltem | | Value | Service Limit | |
|---|-------------------------------|---|----------------|--|
| Minimum Depth of tread depth | | | Until the wear | |
| | | | indicator | |
| Tyre pressure (cold) | Solamente pilot | 225 kPa (2,25 kgf/cm ² , 33 psi) | | |
| | Pilot y pasajero | 225 kPa (2,25 kgf/cm ² , 33 psi) | | |
| Twist of the axle | | — | 0,20 | |
| Eccentricity of the rim | Radial | — | 2,0 | |
| of the wheel | Axial | _ | 2,0 | |
| Counterweight to the balance of the wheel | | | 60 g Max. | |
| Slack | Free length of spring | 434,4 | 428,4 | |
| | Twist of the tube of the fork | _ | 0,20 | |
| | Fluid recommended | Fluid for suspension(ATF) | | |
| | Fluid Level | 145 | | |
| | Capacity of fluid | 296 ± 2,5 cm ³ | | |
| Load of the bearing of the head of steering | | 0,98 – 1,47 N (0,10 – 0,15 kgf) | _ | |

TORQUE VALUES

| Bolt top of the fork | 22 N.m (2,2 kg.m) | | | | | | |
|---------------------------------------|----------------------------|---------|---------|-------------|-------|-------|--------|
| Bolt Allen of the fork | 20 N.m (2,0 kg.m) | Apply | locks | chemistry | to | the | thread |
| Bolt the support of the handlebars | 24 N.m (2,4 kg.m) | | | | | | |
| Nut of the steering column | 103 N.m (10,3 kg.m) | | | | | | |
| Adjustment Nut of the steering column | Refer a la page 13-27 Bolt | | | | | | |
| fixing of the higher bridge | 22 N.m (2,2 kg.m) | | | | | | |
| Bolt fixing of the bridge lower | 39 N.m (3,9 kg.m) | | | | | | |
| Nut of the front axle | 59 N.m (5,9 kg.m) | | | | | | |
| Bolt of disk on the front brake | 42 N.m (4,2 kg.m) | Bolt Al | _OC: re | eplace it w | ith a | a nev | v |



SPECIAL TOOLS

Key to nuts Head extractor of bearing, 17 mm Axle extractor Driver Accessory, 52 x 55 mm Accessory, 42 x 47 mm Pilot, 17 mm Driving force behind the checkpoint of oil from the fork Accessory of driver catch of oil from the fork Key socket of the steering column, 30 x 32 mm Extractor of tracks, 34,5 mm Extractor of tracks, 44,5 mm Axle extractor Behind the steering column Axle of driver Accessory, 22 mm

INVESTIGATION OF FAULTS

Steering sticks

•Adjustment Nut of the steering column too tight •Bearing of the steering column damaged or defective •tire pressure insufficient •defective Tire •steering column bent

The motorcycle diverted to one side, or not is kept in a straight line

•Fork twisted •front axle leaf •incorrect installation of the wheel •Bearing of the steering column loose or worn •Chassis twisted •Bearing of the wheel worn •Components of pivot of swing arm worn •Shock Absorber striker with low performance

Front Wheel wobbles

• Rim crooked • Bearing of the front wheel worn or damaged • defective Tire • Wheel and tire unbalanced

07HMA-MR70100 07746-0050500 07746-0050100 07749-0010000 07746-0010400 07746-0010300 07746-0040400 07747-0010100 07747-0010600 07716-0020400 07948-4630100 07946-3710500 07953-KA50000 07946-MB00000 07946-MJ10100 07GMD-KT70200

The front wheel turns with difficulty

•Bearing of the front wheel defective •Gear of the speedometer defective •front axle leaf •front brake rough

Suspension too soft

•Springs of the suspension weakened •insufficient quantity of fluid in the fork •tire pressure insufficient

Suspension too hard

•Viscosity inadequate fluid •fork tubes of the fork banked •Passage of fluid obstructed •excess fluid in the fork

Noises in the front suspension

• Insufficient Quantity of fluid in the fork • Fixers of the forks loose • insufficient quantity of grease in the machinery of the speedometer

HANDLEBARS

DISMANTLING

Remove the clamps band of electrical wiring.

Remove the rearview mirrors.



TORNILLO



COUNTERWEIGHT OF THE HANDLEBARS SUPPORT OF THE BRACKET WIRING SWITCH CLUTCH



SUPPORT FOR THE LEVER CLUTCH SWITCHES ON THE LEFT SIDE OF THE HANDLEBARS



SCREWS

Remove the screws and two balances of the handlebars.

Release the connectors of the wiring breaker clutch.

Remove the screws in the support of the whole of the lever clutch, support, and the whole of the lever clutch.

Remove the screws of the switches on the left side of the handlebars.

CBX250

Release the cable lever choke and remove the switches on the left side of the handlebars.

LEVER OF CHOKE



CHOKE CABL MASTER CYLINDER SWITC LIGHT OF front brake SWITCH OF THE



BRACKET ACCELERATOR/SWITCHES ON THE RIGHT SIDE OF THE HANDLEBARS

BOLTS



SCREWS CABLES OF THE ACCELERATOR



Release the connector breaker of the light of front brake.

Remove the bolts of support, the support and the whole of master cylinder of front brake.

NOTE

Keep the cylinder master of the brake in the vertical position to prevent the penetration of air in the hydraulic system.

Remove the two screws of the fund of the accelerator switches on the right side of the handlebars.

Release cables in the grip of the accelerator. Remove the fund of the accelerator switches on the right side of the handlebars. Remove the bolts, the supports higher of the handlebars and handlebar.

PERNO



HANDLEBAR

SUPPORTS

BOLT





PUNCH MARK

SUPPORTS



TUBE/HANDGRIP ACCELERATOR



INSTALLATION

Position correctly the handlebars. Install temporarily the supports higher of the handlebars with marks of punch oriented toward the front. Tighten temporarily the bolts from the stands above the handlebar. Align the brands of punch in the handlebars with the upper surface of the supports lower handlebar. First Tightening bolts front and then the rear.

TORQUE: 24 N.m (2,4 kg.m)

In case of any of the handles has been removed, clean your inner surface and the outer surface of the handlebars or tube accelerator. Apply Adhesive Honda TO or equivalent to the inner surface of the grip and the outer surface of the handlebars or tube accelerator. Wait 3 to 5 minutes and install the grip. Turn the grip to implement the adhesive evenly.

NOTE

Grease applies to the surface of slip of the tube accelerator. Install the whole of the tube accelerator / grip on the right side of the handlebars. Install the grip on the left side of the handlebars (page 13-7).

Let the adhesive dries during an hour.

ACCELERATOR CABLES

BOLT OF POSITION

Connect the accelerator in the flange of the grip of the accelerator. Install the fund of the accelerator switches on the right side of the handlebars, aligning the bolt of position with the hole in the handlebars.

First tightening the bolt forward and then the bolt back.

Install the cylinder master, aligning its extremity with the mark of punch in the handlebars.

Install the support of the cylinder master with the mark UP oriented upwards.

First tightening the bolt higher and then the bolt lower.

TORQUE: 12 N.m (1,2 kg.m)

Plug the connectors breaker of the light of front brake.

Connect cable in the lever of choke. Install the support of the switches on the left side of the handlebars, aligning the bolt of position with the hole in the handlebars.



SCREWS MASTER CYLINDER WIRING BREAKER OF THE LIGHT OF THE brake



MARK "UP"

LEVER OF CHOKE



CHOKE CABLE

BOLT OF

First tightening the screw front and then the rear screw.



SUPPORT FOR THE LEVER CLUTCH PUNZÓN



MARK "UP"

COUNTERWEIGHT OF THE HANDLEBARS





SCREW

Install the whole of the lever clutch, aligning the tip of the stand with the mark punch in the handlebars. Install the support of the whole of the lever clutch with the mark UP oriented upwards. First tightening the bolt higher and then the bolt lower.

TORQUE: 12 N.m (1,2 kg.m)

Plug the connectors breaker clutch.

Install the counterweights handlebars in the internal checks, aligning its projections with the slots in the internal checks.

Install a screw the counterweight and push while holding the counterweight.

Install the clamps band of electrical wiring.

Install mirrors.



CABLE OF THE SPEEDOMETER



SCREW AXLE BOLT



Bolt Fixing COLLAR SIDE



FRONT WHEEL

DISMANTLING

Support motorcycle firmly in a proper support and to lift the front wheel of the soil. Remove the screw of the cable of the speedometer and disconnect the cable.

Loosen the bolt fixing of the front axle.

Remove the axle and the front wheel.

Remove the collar side of the right side of the body of the wheel.

CBX250

Remove the gear box of the speedometer of the left side of the body of the wheel.

Gear Box OF THE SPEEDOMETER



INSPECTION

Axle

Support for the front axle on two blocks in V. Turn the front axle and measuring its twist, using an indicator of quadrant. Consider the half of the total reading of the indicator of quadrant as the real twist.

| Ball the wheel | | | | |
|----------------|-------|---------|--|--|
| | | | | |
| Service | Limit | 0,20 mm | | |

Turn the internal track of each bearing the finger. The bearings must be turning smoothly and without noise. Make sure that the track outside of each ball is firmly embedded in the body. In case of the track of some bearing no gently turn and without noise, or do not fit firmly within the hub, remove and discard the bearing.

NOTE

Replace the bearings of the wheel to pairs.

Eccentricity of the rim of the wheel

Place the wheel in a revolving support and verify the eccentricity of the rim. Turn the wheel manually and slowly. Read the eccentricity with an indicator of quadrant. Consider the half of the total reading of the indicator of quadrant as eccentricity real.

| Service | Radial | 2,0 mm |
|---------|--------|--------|
| Limit | Axial | 2,0 mm |






VALVE

Balance of the wheel

ATENCION

The balance of the wheel directly affects the stability, driving and, above all, the security of the motorcycle. Always check the balance of the wheel after the assembly of the tire.

NOTE

To reach an optimum balance of the tire, the mark of balance (point painted on the flank of the same) will be near the offspring of the valve. Install again the tire, in case of need.

Check the mark of turning direction of the tire.



BRAND OF BALANCE



Remove the coveralls hub of the wheel.

Arming the wheel, the tire and the whole of the disc brake in a support for inspection.

Turn the wheel, leave stop and check the point of the wheel that has been down (heavier) with chalk.

Repeat this procedure two or three times, to check the area heavier.

In case of wheel is balanced, this does not stop always in the same position.

To balance the wheel, install the balances on the side highest (more mild) of the rim, or is: the opposite side to the marks of chalk.

Add only the counterweight necessary for the wheel no more stops at the same position, to be rotated.

Do not add more than 60 programs to the wheel.

DISMANTLING

Remove the dust and the detaining the spiral of the speedometer.



RETENEDOR GEAR

DUST COVER



Remove the dust on the right side of the body of the wheel.

Remove the bolts and fixing the brake disc.

NOTE

Check the brake disc with regard to twist (refer to page 15-6).

BOLT



HEAD EXTRACTOR OF BEARING

BRAKE DISK AXLE EXTRACTOR OF BEARING

Replacement of the BEARING OF THE WHEEL

Install the head extractor of bearings in the bearing. From the opposite side, install the axle extractor and remove the bearing of the body of the wheel. Remove the sleeve separator and use the special tools to remove the other bearing.

Tools: Head extractor of bearing 17 mm

> 07746-0050500 07746-0050100

Axle extractor of bearing

ASSEMBLY

ATENCION



DRIVER

Grease applies to the cavities of the new bearing. Use the special tools to install the new bearing the left side, with his side sealed oriented toward the outside. Install the sleeve separator. Then, use the special tools to install the new bearing on the right side, with his side sealed oriented toward the outside.

Tools: Driver

Accessory, 42 x 47 mm Pilot, 17 mm 07749-0010000 07746-0010300 07746-0040400

🔔 ADVERTENCIA

Do not allow the grease contaminating the brake disc. Otherwise, in braking force be reduced.

Install the brake discs in the body of the wheel.

Install the new fixing bolts the brake disc. Tighten in sequence mixed, in 2 or 3 steps.

TORQUE: 42 N.m (4,2 kg.m)

Apply grease to lip of the new dust. Install the same in the right side of the body of the wheel.

Apply grease to retaining the spiral of the speedometer. Install the same in the left side of the body of the wheel aligning their tabs with the carvings of the body.



PILOT

ACCESSORY

BOLT



BRAKE DISK DUST COVER



TONGUES

RETAINER



NOTCHES

Apply grease to lip of the new dust. Then, install the same in the left side of the body of the wheel.

Lubricate the gear box of the speedometer with grease. Install the gear box of the speedometer in the body of the wheel, aligning the tabs of retainer with the slots in the gear box of the speedometer.

Install the collar right side.

Install the front wheel between the forks, situating the brake disc between the pads of the clip of the brake. Be careful not to damage the brake pads.

Place the highlight of the gearbox speedometer against the limiter, in the fork left. Apply a thin layer of grease to the surface of the bolt front axle.

Install the bolt front axle from the left side. Hold the bolt and fasten the nut of the front axle to the specified torque.

TORQUE: 59 N.m (5,9 kg.m)

Tighten the bolt fixing of the axle.

Install the cable of the speedometer and mount with the screw.

Gear Box OF THE SPEEDOMETER



DUST COVER



COLLAR SIDE

LIMITER/HIGHLIGHT



Gear Box OF THE SPEEDOMETER FIXING BOLT

CABLE OF THE SPEEDOMETER



SCREW

FRONT SUSPENSION

DISMANTLING

Remove the following components:

Front wheel (page 13-8)

Clamp front brake (page 15-4)

Fenders front page (2-4)

ATENCION

Do not let the clamp to hang in the hose of the brake.

Loosen the bolts superiors of the forks, but not yet the remove. Release fixing bolts the higher bridge. Release the bolts fixing of the bridge lower while holding the fork.

Remove the fork of the steering column.



BOLT TOP OF THE FORK



FIXING BOLTS

O-RING





SPACER OF SPRING



SEAT OF THE SPRING

DISMANTLING

Remove the bolt top of the fork and the o ring of the tube of the fork.

ADVERTENCIA

The spring of the fork is under pressure. Be careful to remove; use a protection for eyes and face.

Remove the spacer fork and the seat of the spring.

Remove the spring of the fork.

Drain the fluid in the fork, pumping the tube of the fork several times.



SLIDE OF THE FORK



BOLT ALLEN/SEALING WASHER DUST COVER



SLIDE OF THE FORK



ATENCION

Not tighten the slide of the fork.

Hold the slide in a vise whose jaws are soft or protected with pieces of wood or cloths. Using an Allen wrench, remove the bolt and washer of sealing of the slide. In the event that the bolt Allen turn together with the piston of the fork, install temporarily the spring, the washer, the seat of the spring and the bolt top of the fork.

Remove the dust of the slide of the fork.

Remove the ring limiter on the slot of the slide of the fork.

ATENCION

Be careful not to cause scratches to the surface of slip of the tube of the fork.

NOTE

Make sure that the tube of the fork to move gently in the slide. Otherwise, inspect the tube with regard to twist or damage. Also check the hubs with regard to wear or damage.

Through from movements fast and successive, bid the tube of the fork out of the slide.

Remove the vedador of oil of the slide of the fork.



TUBE OF THE FORK VEDADOR OIL



SLIDE OF THE FORK

SPRING OF REJECTION



TUBE OF THE FORK TUBE OF THE FORK OIL RING SLIDER SHIM



RING OF Support

Remove the checkpoint of oil, the ring of support and the hub

Remove the piston of the fork and the spring of rejection of

Do not remove the ring at the piston of the fork, unless

NOTE

the tube of the fork.

it is necessary replaced.

slider tube of the fork.

NOTE

Do not remove the hub of tube guide of the fork, unless it is necessary replaced with a new one.

In the event that is necessary, remove the hub of tube guide of the fork forcing the slot with a screwdriver, until the hub it can draw with the hand.

13-16

INSPECTION

Spring of the fork

Place the spring in a flat surface and measure the free length of the spring.

| Service Limit 428,4 mm |
|------------------------|
|------------------------|

Tube / Corredera / Piston fork

Inspect the tube of the fork, the slide, the vedador of oil and the piston of the fork with regard to dashes, marks or abnormal wear/excessive. Check the ring at the piston with regard to wear or damage. Check the spring of rejection with regard to fatigue or damage. Replace any component that is worn or damaged.

Support the tube of the fork on two blocks in V and measuring its twist, using an indicator of quadrant. Consider the half of the total reading of the indicator as the real twist.

Service Limit 0,20 mm Replace the tube of the fork, in case the twist exceeding the limit of service. Replace also in the event that has scratches or furrows that allow leak fluid through retainers of oil from the fork.

Do not use the tube of the fork, in case they did not do can straighten with a minimum of effort.

Hubs of the tube of the fork

Visually inspect the hub slider and the hub of tube guide of the fork.

Replace the hubs to submit scratches or excessive brands. Replace also in the event that the Teflon is worn, so that the surfaces of copper is showing in more than 3/4 of the total surface area. Check the ring of support. Replace, in case of haja distortion in the points of inspection indicated in the illustration.





SLIDE OF THE FORK





ASSEMBLY



Before the assembly, wash all the pieces with solvent nonflammable. Then, drain completely. In the event that has removed the hub of tube guide of the fork, replace it with a new one.

ATENCION

Be careful not to damage the lining of the hub.
Do not open the hub of tube guide of the fork more oj than necessary.

NOTE

Remove the flash of the contact surface of the hubs. Be careful not to damage the coating.

Install the hub slider and ring of support in the tube of the fork.

Apply fluid for suspension for the lip of the new checkpoint of oil from the fork.

Install the new checkpoint of oil in the tube of the fork, with the mark oriented upwards.

Install the spring of rejection in the piston of the fork.

Install the piston of the fork in the tube of the fork.



PISTON FORK TUBE OF THE FORK

Install the vedador of oil in the tip of the piston of the fork. Bathe the hub of tube guide of the fork with the fluid for suspension recommended. Install the tube of the fork in the slide.

HUB OF TUBE GUIDE OF THE Fork



PISTON FORK WASHER SEALED VEDADOR OIL



BOLT ALLEN OF THE FORK





OIL SEAL LIMITER RING

DRIVER

ACCESSORY



ATENCION

Not tighten the slide of the fork.

Hold the slide in a bench lathe, whose jaws are soft or protected with pieces of cloth.

Replace the washer sealed by a new.

Clean and implement locks chemistry to the thread of bolt Allen of the fork.

Install the bolt Allen in the piston fork, together with the new washer seal.

Tighten the bolt Allen to value specified.

TORQUE: 20 N.m (2,0 kg.m)

NOTE

- •In case of the piston of the fork, turn together with the bolt Allen, install temporarily the spring, the washer, the spacer spring and the bolt top of the fork.
- •Applied the fluid for suspension recommended to the hub slider and the lips of the new retain de aceite.

Use the special tools to install the new checkpoint of oil in the corredera, so that the slot in the ring limiter will be visible.

Tool:

Driving force behind the checkpoint of oil from the fork

07747-0010100

Accessory Driving force behind the checkpoint of oil from the fork 07747-0010600

Install the ring limiter on the slot of the slide.

Apply the fluid for suspension recommended to the lip of the new dust and install in the slide of the fork.



SLIDE

Supplying the tube of the fork with the specified amount of fluid to suspension.

Fluid recommended: Fluid for suspension (ATF)

Capacity of fluid: 296 ± 2,5 cm³

Pump gently the tube of the fork several times, with the aim of eliminating the air prisoner in the bottom section.

Compress the fork to the maximum and measure the level of fluid from the top of the tube.

Level of fluid: 145 mm



ATF

Using a clean cloth, dry completely the fluid that is left in the spring.

Install the spring of the fork with the side of the spires closest downwards.





Install the seat and the spacer of spring.

SPACER OF SPRING



SEAT OF THE SPRING

O-RING

SEAT OF THE SPRING



TOP SIDE



Bathe the new o ring with the fluid for suspension recommended and install it into the slot on the bolt top of the fork. Install the bolt top of the fork in the tube of the fork, but not tighten.

NOTE

Still not tighten the bolt top of the fork.

INSTALLATION

Install the tube of the fork in the bridges lower and upper, aligning the upper extremity of the tube with the upper surface of the higher bridge, according to the illustration.

Tighten the bolt fixing of the bridge below to value specified.

TORQUE: 39 N.m (3,9 kg.m)



FIXING BOLTS

Tighten the fixing bolts the higher bridge to the specified torque.

TORQUE: 22 N.m (2,2 kg.m)



FIXING BOLTS

BOLT TOP OF THE FORK



LID



NUT OF THE STEERING COLUMN/WASHER



In the event that has removed the bolt top of the fork, install and push the pair specified.

TORQUE: 22 N.m (2,2 kg.m)

Install the following components: Fenders front page (2-4) Clamp front brake (page 15-6) Front wheel (page 13-13)

Steering column

DISMANTLING

Remove the following components: Forks front (page 13-4) Handlebars (page 12-5) Casing for the light (page 19-4) Table of instruments (page 19-6) Remove the cover of the nut of the steering column.

Using the special tool, remove the nut of the steering column and the washer.

Tool: Key socket of the steering column, 30 x 32 mm

07716 - 0020400

Remove the steering column, the higher bridge and the support of the casing of the headlight.

HIGHER BRIDGE



SUPPORT FOR THE CASING OF THE HEADLIGHT TAB OF THE WASHER Locks



LOCKNUT



Remove the adjustment nut of the steering column, using the special tool.

Tool: Key to nuts

07HMA-MR70100

Remove the dust higher.



Using the special tool, remove the against and the washer locks of the steering column.

Straighten the tabs of the washer locks.

Tool: Key to nuts

07HMA-MR70100

HIGHER BEARING

Hold the steering column. Then, remove the internal track bearing higher and the bearing higher.

INTERNAL TRACK BEARING HIGHER



Steering column

LOWER BEARING AXLE EXTRACTOR



EXTRACTOR OF Tracks



DRIVER

Remove the steering column of the head of direction.

Check the track internal and the track outside of the bearing bottom of the steering column with regard to wear or damage.

REPLACEMENT OF THE BEARINGS OF THE steering column

NOTE

Replace always bearings and tracks as a whole.

Remove the track outside of the bearing bottom of the steering column, using the special tools.

Tool: Axle extractor Extractor of tracks, 44,5 mm

07953-KA50000 07946-3710500

Remove the external track bearing top of the steering column, using the special tools.

Tool: Axle extractor Accessory, 22 mm

07953-KA50000 07GMD-KT70200

Install the nut on the steering column, to prevent damage to the thread to remove the internal track bearing lower. Remove the internal track bearing lower, using a slitting or an equivalent tool. Be careful not to damage the steering column. Remove the dust and washer.Install the nut on the steering column, to prevent damage to the thread to remove the internal track bearing lower. Remove the internal track bearing lower, using a slitting or an equivalent tool. Be careful not to damage the steering column. Remove the dust and washer.

Install the washer on the steering column. Apply grease to lip of the new dust and install it into the steering column.

Install the new internal track bearing lower, using the

and install it into the steering column. Install the new

special tool and a hydraulic press.Install the washer on

the steering column. Apply grease to lip of the new dust

internal track bearing lower, using the special tool and a

DUST COVER



INTERNAL TRACK BEARING LOWER



DRIVER

Using the special tools, install the new external track bearing higher on the head of the steering column.

Driver

Tool:

Accessory, 42 x 47 mm

hydraulic press.

Behind the steering column

07749-0010000 07746-0010300

07946-MB00000



ACCESSORY ACCESSORY

Using the special tools, install the new external track bearing lower in the head of the steering column.

Tool: Driver

Accessory, 52 x 55 mm

07749-0010000 07746-0010400



DRIVER

INSTALLATION



Steering column

Apply grease to new bearing lower. Install the new bearing lower on the steering column. Insert the steering column in the head.



Apply grease to new bearing higher.

Install the bearing superior, its internal track and the dust higher.

Install the adjustment nut of the steering column and

tighten manually. Then, tighten the pair of initial pinch.

Tool: Key to nuts TORQUE: 25 N.m (2,5 kg.m) 07HMA-MR70100



Turn the steering column to the right and left, from one extreme to another, at least five times, for which the bearings are settled. Make sure that the steering column will move gently, without play nor gridlock. Then, loosen the adjustment nut. Tighten again the adjustment nut of the steering column, the pair specified.

TORQUE: 22 N.m (2,2 kg.m)

Check once more the smooth movement of the steering column, without play my gridlock. Install a new washer locks in the steering column. Align the tabs of the washer locks with the slots in the adjustment nut. Double the two tabs opposite (minors), directing them toward the slots in the adjustment nut.





TAB OF THE WASHER Locks

LOCKNUT

Install and tighten the with your fingers. Hold the adjustment nut of the steering column and tighten the 1/4 lap (90°), to align their slots with the tabs of the washer locks. Double the tabs of the washer locks, directing them toward the slots in the against. Install the support of the casing of the headlight and the higher bridge.

Guide correctly the cables and wiring.

Install the washer and nut of the steering column. Install temporarily the forks. Using the special tool, tighten the nut of the steering column to the specified torque.

TORQUE: 103 N.m (10,3 kg.m)

Tools: Key socket of the steering column, 30 x 32 mm

07716-0020400

Install the lid of the nut of the steering column.

Install the following components: Table of instruments (page 19-6) Casing for the light (page 19-4) Handlebars (page 13-5) Forks front (page 13-21)





BURDEN AFTER THE BALL THE steering column

Support for the motorcycle in a proper support and to lift the front wheel of the soil. Locate the steering column in a position reta, forward. Insert a dynamometer in the tube of the fork, between the bridges lower and upper.

NOTE

Make sure that there is no interference of cables, cabled or hoses.

Position the dynamometer, keeping it in angle with the steering column. The readings of the scale from the point where the steering column begins to move.

Burden after the ball the steering column:

0,98 - 1,47 N (0,10 - 0,15 kgf)

In the event that the reading does not obey the limit of service, to support the front wheel on the ground and adjustment again the adjustment nut of the steering column.

The installation is performed in reverse order dismantling.



NOTES

| |
|------|
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |



| SERVICE INFORMATION | 14-1 | SHOCKS | 14-12 |
|-------------------------|-------|-------------|-------|
| INVESTIGATION OF FAULTS | 14-2 | SWING ARM | 14-14 |
| BACK WHEEL | 14-3 | BRAKE PEDAL | 14-19 |
| BACK BRAKE | 14-10 | | |
| | | | |

SERVICE INFORMATION

GENERAL INSTRUCTIONS

ADVERTENCIA

•A drum or brake shoes contaminated reduce the performance of braking. Discard the brake pads contaminated and clean the drum with a degreasing agent of brake of high quality. •The conduct of the motorcycle with tires or lightning damaged can adversely affect the operation and security.

ATENCION

When you use a lever to extract tires, always use a protector of tires, to avoid damaging them.

•The damper contains nitrogen under high pressure. Keep it away from flames and heat. •Before dismissing the damper, release the nitrogen (page 14-13). •Damper contains nitrogen under high pressure. Do not attempt dismantle. •To make services of repair and maintenance in the rear wheel, swing arm or the absorber, support the motorcycle in easel or adequate support. •Refer to Section 15 to obtain information to respect the brake system. •Use nuts and bolts of replacement original Honda in all the joints and fixing points of the suspension.

SPECIFICATIONS

Unit: mm

| | ltem | Value | Service Limit |
|---------------------|--|---|-----------------------------|
| Minimum Depth of | f tread depth | | Until the wear |
| | | | indicator |
| Air pressure (cold) | Solamente pilot | 225 kPa (2,25 kgf/cm ² , 33 psi) | — |
| | Pilot y pasajero | 250 kPa (2,50 kgf/cm ² , 36 psi) | — |
| Twist of the axle | | — | 0,20 |
| Twist of the axle | Radial | _ | 2,0 |
| rim of the wheel | Axial | _ | 2,0 |
| Counterweight to t | he balance of the wheel | _ | 60 g Max. |
| Chain of | Size/links | 520 VD – 106 | — |
| transmission | Slack | 15 – 25 | — |
| Brake | Free Play of brake pedal | 20 – 30 | — |
| | D. I. the drum rear brake | 130,0 – 130,2 | 131,0 |
| | Thickness of the lining of the zapata rear brake | _ | Until the wear indicator |



TORQUE VALUES

Nut of the rear axle Nut of the crown of transmission Nut superior of the damper Nut lower buffer Nut pivot swing arm Screw on the guide to the drive chain Nut arm trigger for the brake Against the adjuster of the drive chain

SPECIAL TOOLS

| Driver |
|--|
| Accessory, 42 x 47 mm |
| Accessory, 28 x 30 mm |
| Accessory, 24 x 26 mm |
| Pilot, 17 mm |
| Pilot, 22 mm |
| Accessory of extractor of bearing, 22 mm |
| Driving Axle |
| Driving Axle |
| Bolster b extractor, 17 mm |
| |

INVESTIGATION OF FAULTS

Suspension too soft

•Spring absorber weakened •Leakage of oil to the damper •incorrect Adjustment of the suspension •tire pressure insufficient

Suspension too hard

•Incorrect Adjustment of the suspension •Articulation swing arm bent •Bearing of the articulation of swing arm damaged •Unit of the damper bent •tire pressure too high

The motorcycle diverted to one side, or not is kept in a straight line

• Rear Axle leaf • Axle out/incorrect adjustment of the drive chain

Rear Wheel wobbles

88 N.m (8,8 kg.m)

64 N.m (6,4 kg.m)

36 N.m (3,6 kg.m)

36 N.m (3,6 kg.m)

88 N.m (8,8 kg.m)

10 N.m (1,0 kg.m)

07749-0010000 07746-0010300 07946-1870100 07746-0010700 07746-0040400 07746-0041000 07GMD-KT70200 07946-MJ00100 07746-0050100 07746-0050500

4 N.m (0,4 kg.m)

21 N.m (2,1 kg.m)

Nut U

Nut U

Nut U

Nut U

•Rim unentered •Bearing of the rear wheel worn or damaged •defective Tire •tire pressure insufficient •Bearing of the joint swing arm •defective Wheel and tire unbalanced

The rear wheel turns with difficulty

•Bearing of the rear wheel •defective rear axle leaf •rear brake seized •drive chain too tight

Noises in the rear suspension

•Rear Shock defective •fixers Elements of the rear suspension loose •Bearing of the joint swing arm worn

REAR WHEEL

DISMANTLING

Place the engine on an easel or adequate support and lift the rear wheel of the soil.

Remove the bolts and the cover of the drive chain swing arm.

Remove the adjustment nut rear brake, the stem the brake, the spring and the union.

Remove the nut of the rear axle and the plate of the axle. Loosen completely the nuts and bolts of adjustment of the drive chain.

Move the rear wheel totally forward.

Remove the chain of the crown of transmission. From the left side, remove and rear axle and the wheel. Remove the adjusters in the chain transmission.

INSPECTION

Rear Axle

Support the axle on two blocks in V and measure the twist, using an indicator of quadrant.

Consider the half of the total reading of the indicator of quadrant as the real twist.

| Service | Limit | 0,20 mm |
|---------|-------|---------|
| | | |

Wheel

Support for the wheel in a support giratório and verify the eccentricity of the rim.

Turn the wheel slowly and carry out the reading of the eccentricity, using an indicator of quadrant. Consider the half of the total reading of the indicator of quadrant as eccentricity real.

| Service | Radial | 2,0 mm |
|---------|--------|--------|
| Limit | Axial | 2,0 mm |









BOLTS

Ball the wheel

Turn the internal track of each bearing the finger. The bearings must be turning smoothly and without noise. Also check if the track outside of the bearing fits firmly in the body of the wheel. In the event that tracks not rotated soft and silent, or that the bearing loose in the body, remove and descártelos.

NOTE

Replace the bearings of the wheel to pairs.

Crown of transmission

Check the teeth of the crown of transmission with regard to wear or damage. Replace the crown, in the event that is worn or damaged.

NOTE

•If it is necessary to replace the crown of transmission, inspect the chain and the pinion of transmission. •Never install a string of new transmission in a crown or piñon worn and vice versa. Both the chain as the crown and the pinion of transmission should be in good condition. Otherwise, the new parts will wear prematurely.

Balance of the wheel

ATENCION

•The balance of the wheel directly affects the stability, the directability and, above all, the security of the motorcycle. •Always check and carefully balance, after arming the tire.

NOTE

For that reaches optimum balance, the mark of balance of the tire (point painted in the flank of the tire) must be located near the offspring of the valve. In case of need, reassembling the tire.

Check the mark of turning direction of the tire. Remove the coveralls hub of the wheel. Arming the whole of the wheel and tire in a support for inspection. Turn the wheel, leave stop and check the point that has been down (the point heavier) with chalk. Repeat this procedure two or three times, to check the area heavier. If the wheel is well balanced, does not stop always in the same position. To balance the wheel, install the balances on the side highest (more mild) of the rim, or is: the opposite side to the marks of chalk. Add only the counterweight enough for the wheel no more stops at the same position, to be rotated. Do not add more than 60 g to the wheel.





VALVE MARK OF DIRECTION OF TURNING



BALANCING MARK



ALL OF THE PANEL OF THE brake

DISMANTLING

Remove the whole of the panel of the brake of the body right of the wheel.

COLLAR SIDE

Remove the collar side of the flange of the crown of transmission.



FLANGE OF THE CROWN

Loosen the nuts and bolts of the crown of transmission. Remove the flange of the crown of transmission of the body left of the wheel. Then, remove the nuts and bolts of the crown and the crown of transmission.

NOTE

In the event that has difficulties to remove the flange of the crown of the body, tap at various points, to remove.

Remove the gums and cushioned the o ring.

Replace the gums cushioned, in case of which are damaged or damaged.



FLANGE OF THE CROWN RUBBER BUFFER



O-RING

Dismantling of the bearing of the body of the wheel

Install the head extractor in the bearing.

From the opposite side, install the axle extractor and remove the bearing of the body of the wheel.

Remove the collar side and the other bearing.

Tools: Head extractor of bearing, 17 mm Axle extractor

07746-0050500 07746-0050100

Dismantling of the bearing of the flange of the crown

Remove the dust.

Remove the bearing of the flange of the crown and the collar side.

Head extractor of bearing



HEAD EXTRACTOR OF BEARING

BEARING

SIDE COLLAR



DUST COVER

ASSEMBLY



DRIVER ACCESSORY

Installation of the bearing of the body of the wheel

Apply grease to the cavities of bearing.

ATENCION

Never reuse a ball used. Replace provided by a new one, after remove it.

Using the special tools, install the new bearing on the left side perpendicular to the wheel, with his side sealed oriented toward the outside.

| Tools | |
|-----------------------|---------------|
| Driver | 07749-0010000 |
| Accessory, 42 x 47 mm | 07746-0010300 |
| Pilot, 17 mm | 07746-0040400 |
| | |

Install the collar side in the body of the wheel. Then, using the special tools, install the bearing on the right side with his side sealed oriented toward the outside.

Installation of the bearing of the flange of the crown

Install the collar side of the flange on the new ball the flange of the crown, using the special tools.

| Tools: | |
|-----------------------|---------------|
| Driver | 07749-0010000 |
| Accessory, 24 x 26 mm | 07746-0010700 |
| Pilot, 17 mm | 07746-0040400 |
| | |

Install the bearing and the collar side in the flange of the crown, using the special tools.

| Tools: | |
|-----------------------|---------------|
| Driver | 07749-0010000 |
| Accessory, 42 x 47 mm | 07746-0010300 |
| Pilot, 17 mm | 07746-0040400 |



BEARING

PILOT DRIVER



SIDE COLLAR

PILOT DRIVER ACCESSORY



BEARING/COLLAR SIDE

PILOT



Apply grease to lips of the new dust and install in the flange of the crown.

ADVERTENCIA

Do not apply grease to drum brakes, because it will reduce the performance of braking.

07746-0040400

Apply grease to new o ring.

Install the gums cushioned in the body of the wheel.

Install the new o ring.

RUBBER BUFFER





O-RING

BOLT



ALL OF THE FLANGE OF THE CROWN SIDE COLLAR



ALL OF THE PANEL OF THE brake



CBX250

Install the whole of the flange of the crown in the body left of the wheel.

Install the crown of transmission and tighten the screws.

TORQUE: 64 N.m (6,4 kg.m)

Install the collar left side.

Install the whole of the panel of the brake in the body right of the wheel.

INSTALLATION

Locate the rear wheel between the swing arm, aligning the slot on the panel of brake, with the highlight in the swing arm.

Highlight/SLOT







Align TOP OF THE DRIVE CHAIN





Locate the rear wheel in the chassis.

Insert the rear axle from the left side, through the adjuster left of the drive chain, the collar left side and the adjuster right.

Install the chain in the crown of transmission.

Install the plate and the nut axle, without tightening.

Install the union in the arm trigger for the brake and connect the stem from the brake, together with the spring.

Install the adjustment nut.

Setting the slack in the drive chain (page 3-14).

Setting the rear brake (page 3-19).

Install the cover of the drive chain,

Aligning the hole with the highlight in the swing arm.

Tighten bolts.

Tighten the nut of the rear axle.

TORQUE: 88 N.m (8,8 kg.m)

Setting the play free of brake pedal rear (page 3-19).

REAR BRAKE

DISMANTLING

Remove the rear wheel (page 14-3).

Remove the panel rear brake (page 14-5).

INSPECTION

Measure the D. I. drum rear brake.

|--|

DISMANTLING

NOTE

•Before removing the brake pads, tag for after armálas in its original position. •Always replace the brake shoes to pairs.

Besides the brake pads and remove the panel of the brake.

Remove the bolt fixing arm trigger for the brake, nut and then the arm trigger for the brake.

Remove the plate indicator of wear and tear of the brake.

Remove the hubs of the panel of the brake.

Remove the came from the brake and the

Clean completely each piece.

vedador cmea.





PANEL OF THE brake ARM TRIGGER FOR THE brake



INDICATOR PLATE WEAR SHIMS

NUT

PARAFUSO



CAME FROM THE brake

VEDADOR DEL CAME

ASSEMBLY



Install the new hubs on the panel of the brake.

Install the vedador cmea, aligning the highlight of the panel of brake, with the carvings of vedador cmea.

VEDADOR DEL CAME



CAME DEL FRENO

SHIMS

Grease applies to the areas slip came

from the brake. Install came on the

panel of the brake. ADVERTENCIA

Do not apply grease linings of the brake pads the brake, because it will reduce the performance of braking. Remove any excess grease cmea.



Install the plate indicator of attrition in the cmea, aligning its striated more width with the slot wide came from the brake.

INDICATOR PLATE WEAR



STRIATED WIDE/SLOT WIDE

CAME FROM THE brake

ARM TRIGGER FOR THE brake



Align

BOLT SHOTES



SPRINGS

BOLT/NUT HIGHER



BOLT/NUT LOWER

Install the arm of brake, aligning the marks of punch in the arm and in the came from the brake.

Install the bolt and nut in the arm of brake. Tighten to value specifie

TORQUE: 10 N.m (1,0 kg.m)

Position the brake pads on the panel of the brake and then, install the springs. ATENCION

Do not allow the grease scope the brake pads.

Case reuse pads, be sure to install them on its original position.

INSTALLATION

Install the whole of the panel of the brake in the rear wheel. Then, install the wheel (page 14-8).

Setting the rear brake (page 3-19).

SUSPENSION

DISMANTLING

Remove the saddle (page 2-2). Remove the side cover (page 2-2). Support motorcycle firmly, using a cat of flat or other support equivalent. Remove the nut and bolt fixing lower damper. Remove the nut and bolt higher fixing cushion. Then, remove the damper.

INSPECTION

Inspect the damper with regard to damage.

Check the following components:

Unit of the damper, with regard to deformation or leakage Hub of rubber, with regard to wear or damage

Spring, with regard to damage inspect all the other parts with regard to wear or damage.

Replace the whole of the damper, in case of need.

ATENCION

Damper contains nitrogen under high pressure. Do not attempt dismantle.
Replace the whole of the damper, in case of some component this damage.

INSTALLATION

Install the cushion in the chassis. Install and tighten the bolt and nut superior of the damper to to value specified.

TORQUE: 36 N.m (3,6 kg.m)

Install and tighten the bolt and nut lower buffer to the specified torque.

TORQUE: 36 N.m (3,6 kg.m)

Check the functioning of the damper (page 3-22).

Install the lid side (page 2-2). Install the saddle (page 2-2).

DISCARDING OF THE DAMPER

Make a mark of punch to the damper, to indicate the c of drilling.

Point of drilling: 40 mm, from the c of the hub of fixing.

Place the damper in a plastic bag.

Hold the damper in a vise.

Through the opening of plastic bags, enter a pneumatic drill with a drill well sharp, whose diameter should be 2.3 mm.

ADVERTENCIA

•Do not use a drill without edge of court, because this can generate heat and excessive pressure inside the buffer, causing an explosion and serious personal injury.

•Damper contains nitrogen and oil to high pressure. Not penetrate the damper neither more nor less than the measure indicated. Otherwise, the house of oil can be perforated and the escape of oil to high-pressure can cause serious personal injury.

•Always wear glasses of security to prevent the penetration of particles of metal in their eyes, when released the gas pressure. The sack of plastic serves only to protect it from the emanations of gas.

Turn the plastic bag around the pneumatic drill. Activates the drill quickly, in the interior of the bag, which will inflate with the air from the pneumatic drill. This will prevent the sack left prisoner in the drill, during drilling.



WASHER

BOLT/NUT HIGHER

DAMPER



BOLT/NUT LOWER



BOLT/NUT PIVOT

SWING ARM

DISMANTLING

Remove the following components: Silencer (page 2-5)

Rear wheel (page 14-3)

Bolt and nut lower damper (page 14-12)

Remove the nut pivot swing arm.

From the left side, remove the bolt pivot and swing arm.

DISMANTLED

Inspect the guide to the drive chain with regard to wear or damage.

Remove the adjusters in the drive chain.

Remove the two screws, the spacer of the guide and the guide to the drive chain.

Remove the spacers of pivots swing arm.

Remove the coveralls and the bearing of needles of the articulation of the damper.



SWING ARM

ADJUSTERS IN THE DRIVE CHAIN







BALL NEEDLES

tools.

Tools: Axle Driver

extractor, 22 mm

Accessory for the bearing

Remove the dust pivot swing arm.

PIVOT SWING ARM



DUST GUARD

PIVOT SWING ARM



BALL Fields

RING OF PRESSURE



Check the dust of the joints with regard to damage.

Remove the bearing of needles swing arm, using the special

07946-MJ00100

07GMD-KT70200

Check the spacers joints with regard to damage.

Check the needle roller bearings of the joints with regard to damage.

Check the ball fields of pivot swing arm with regard to damage. Replace the pieces damaged, if necessary.

Check the swing arm with regard to damage. Replace, in the event that is leaf or damaged.



Remove the two ball fields.

Remove the ring of pressure pivot swing arm.
REPLACEMENT OF THE BEARINGS OF THE JOINT

Turn the track of each ball fields of pivot swing arm with his finger.

The bearing must turn gently, without noises or excessive play.

Make sure that the external track bearing is not with excessive play in the pivot swing arm.

Replace the bearing, in case of the track not internal gently turn and without noise, or the track outside this play excessive in the pivot swing arm.

Apply grease to new ball needles.

Using the special tools and a press, install the bearing of needles in the left side of pivot swing arm.

Tools: Driver Accessory, 28 x 30 mm Pilot 22 m

07749-0010000 07946-187100 07746-0041000





Apply grease to new ball needles.

Using the special tools and the press, install carefully the new ball needles in the articulation of the damper.

Tools: Driver

Accessory, 24 x 26 mm Pilot, 17 mm 07749-0010000 07946-0010700 07746-0040400

NOTE

Install the bearing the marks oriented toward the outside.



ASSEMBLY



PIVOT SWING ARM

Apply grease to new ball fields.

Install the new ball fields and ring of pressure firmly in the slot on the pivot swing arm.



BALL Fields

RING OF PRESSURE PIVOT SWING ARM



DUST COVER

Install the new dust firmly in the slot on the pivot swing arm.

Apply grease to lip of the new coveralls and install in the articulation of the damper.



GUIDE TO THE DRIVE CHAIN PROJECTIONS



HOLES



ARTICULATION OF THE DAMPER



SWING ARM

Install the guide to the drive chain in the swing arm, aligning its projections with openings in the swing arm.Install the guide to the drive chain in the swing arm, aligning its projections with openings in the swing arm.

Install the spacer of the guide to the drive chain and tighten the screw to value specified.

TORQUE: 4 N.m (0,4 kg.m)

Install and tighten the screw and washer to the specified torque.

TORQUE: 4 N.m (0,4 kg.m)

Install the three spacers in the pivot swing arm. Install the spacer in the articulation of the damper.

Install adjusters the drive chain.

ADJUSTERS IN THE DRIVE CHAIN



INSTALLATION

Apply a thin layer of grease to the surface of settlement of bolt pivot swing arm. Install the swing arm in the chassis.

From the left side of the motorcycle, install the bolt pivot swing arm.

Install and tighten the nut pivot swing arm to the specified torque.

TORQUE: 88 N.m (8,8 kg.m)

Install the bolt and nut lower damper (page 13-12).

Install the rear wheel (page 14-9).

Install the silencer (page 2-5).

BRAKE PEDAL DISMANTLING

Remove the silencer (page 2-5).

Remove the adjustment nut rear brake, the stem the brake, the spring and the union arm trigger for the brake (page 14-3).

Remove the breather tube in support of the foot pedal.

Disjoint spring breaker of the light of the brake and the offspring of the brake.

Remove the fixing bolts and the support of the foot pedal.

Disjoint the spring of return of offspring of the brake and the support of the foot pedal.

Remove the bolt fixing and the brake pedal.

Remove the bolt cleft, the bolt and the stem from the brake arm intermediate.

BOLT/NUT PIVOT SWING ARM



SWING ARM





INSTALLATION

Install the bolt; mount it into the stem from the brake and arm intermediate, with a new bolt cleft.

Coupling the spring of return in the stem of the brake and in support of the foot pedal.

Install the brake pedal, aligning the mark punch and the groove in the brake pedal and arm, according to the illustration.



Install the breather tube in support of the foot pedal.

Coupling the spring in the switch of the light of rear brake and in the stem of the brake.

Install the support of the foot pedal and tighten the fixing bolts.

Install the adjustment nut of rear brake, the stem the brake, the spring and the union (page 14-9).

Setting the rear brake (page 3-19).

Install the silencer (page 2-5).



| NOTES |
|-------|
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |

15. HYDRAULIC BRAKE

| SERVICE INFORMATION | 15-1 | DISK/brake pads | 15-4 |
|---|------|-----------------|-------|
| INVESTIGATION OF FAULTS | 15-2 | MASTER CYLINDER | 15-6 |
| CHANGE OF FLUID BRAKE / PURGA DEL AIRE | 15-3 | CLAMP brake | 15-10 |

SERVICE INFORMATION

GENERAL INSTRUCTIONS

ADVERTENCIA

Disks or brake pads contaminated reduce the performance of braking. Discard the pills contaminated and wipe the disk with a degreasing agent of brake of high quality.

ATENCION

Avoid shed fluid brake in painted surfaces, surfaces of plastic or in parts of rubber. Place a cloth on these parts, to make services in the brake system.

•In this section describes the maintenance of the hydraulic system of front brake.

•System must be purge after the start of the hydraulic system, or if the brake is elastic.

•To supply, do not allow pollutants (dirt, water, etc.) entering the deposit open.

•Always use fluid brake DOT 4 new, withdrawn from a sealed. Do not mix different types of fluid, because estes may be incompatible.

•Always check the functioning of the brake, before driving the motorcycle.

SPECIFICATIONS

Unit: mm

| Item | Value | Service Limit |
|--|-----------------|----------------|
| Fluid brake specified | DOT 4 | _ |
| Wear indicator of the brake pads | | Until the slot |
| Thickness of brake disc | 3,8 - 4,2 | 3,5 |
| Twist of the brake disk | | 0,10 |
| D.I. master cylinder | 11,000 – 11,043 | 11,055 |
| D.E. of piston of master cylinder | 10,957 – 10,984 | 10,945 |
| D.I. The cylinder of the clip of the brake | 25,400 – 25,450 | 25,460 |
| D.E. The piston calliper brake | 25,318 – 25,368 | 25,31 |

TORQUE VALUES

| Bolt banjo hose brake Bolt the support of the cylinder master striker Screw cap deposit of master cylinder Screw breaker of the light of front brake Nut pivot of the brake striker Bolt pivot of the brake striker Bolt fixing of the clamp front brake | 34 N.m (3,4 kg.m) 12 N.m (1,2 kg.m) 1 N.m (0,1 kg.m) 1 N.m (0,1 kg.m) 6 N.m (0,6 kg.m) 6 N.m (0,6 kg.m) 26 N.m (2,6 kg.m) | Bolt ALOC: replace it with a new one |
|--|---|---|
| Bolt of bolt of the clamp front (main) | 22 N.m (2,2 kg.m) | |
| Bolt of bolt of the clamp front brake (secondary) | 18 N.m (1,8 kg.m) | |
| Clip of the brake pads | 18 N.m (1,8 kg.m) | |
| Cap bolt of the pads | 2 N.m (0,2 kg.m) | |
| Valve purge of the clip of the brake | 5 N.m (0,5 kg.m) | |



SPECIAL TOOL

Pliers for rings of pressure

07914-3230001

INVESTIGATION OF FAULTS

Lever brake too soft or elastic

Presence of air in the hydraulic system •Leakage of fluid in the hydraulic system •Pads/disc brake contaminated
•Stamps piston calliper worn •Checkpoints of piston master cylinder worn •Pills/disc brake •worn Clamp •contaminated The clamp not slips correctly •low level of fluid brake Ducts
•passenger the fluid obstructed •brake disc deformed/leaf
•Piston calliper brake stuck/worn •Piston master cylinder stuck/worn •master cylinder contaminated •Lever brake bent

Lever of brake too hard-

Hydraulic System obstructed/restricted •Piston calliper brake stuck/worn •clamp not slips correctly •Channels of passage of the fluid obstructed •Stamps piston calliper worn •Piston master cylinder stuck/worn •Lever brake bent

Brake seizing or motorcycle diverting to one side

•Pills/brake disc contaminated •Wheel poorly aligned •Connecting the hose brake obstructed/restricted •brake disc leaf/deformed •clamp not correctly slides

Brake seizing.

Disk/brake pads contaminated •Wheel poorly aligned •Disk/ brake pads worn •brake disc leaf/deformed •clamp not correctly slides **CBX250**

CHANGING THE FLUID BRAKE/PURGE OF THE AIR

DRAINAGE BRAKE FLUID

ATENCION

•To supply, do not allow pollutants (dirt, water, etc.) entering the deposit open. •Avoid shed fluid brake on painted surfaces, surfaces of plastic or in parts of rubber. Place a cloth on these parts, to make services in the brake system.

Before removing the lid of deposit, turn the handlebars toward the left, until the deposit left leveled. Remove the screws, the cover of the deposit, the plate of fixing and the diaphragm. Connect a hose of plastic in the valve to purge of the clamp. Loosen the valve of purging and activates the brake until there is no more flow of fluid through the valve. Closing the valve to purge.

ADDITION OF FLUID brake

Supplying the deposit with fluid brake DOT 4, retired from a sealed.

ATENCION

Do not mix different types of fluid, as these may not be incompatible.

Install a system of purge, commercially available, in the valve to purge. Pump system of purging and loosen the valve to purge. When lower the level in the deposit, add fluid brake.

NOTE

 Inspect the level of fluid while purge the brake system, in order to avoid the penetration of air in the system.
 When using a system of purge, follow the manufacturer's instructions.

Repeat procedures described above, until there is no more air bubbles in the hose of plastic.

NOTE

- •In case that has penetration of air in the system of purge through the thread of the valve to purge, seal the thread with tape of Teflon.
- In case of the system of purge is not available, add fluid brake to the cylinder master and operate the brake for supplying the system (page 15-4).

Closing the valve to purge. Then, perform the procedure to purge OF AIR (page 15-4).



LEVER OF brake PURGE VALVE





PURGE OF AIR

Connect a hose of plastic in the valve to purge of the clamp. Pump the brake until there is no more air bubbles in the fluid from the cylinder master, and that the lever offered resistance.

1. Activates the brake and open the valve purge 1/2 lap. Then, closing the valve.

NOTE

Do not release the brake until the valve purge has been closed.

2. Release slowly the brake and wait for a few seconds, until it reaches the end of its course. Repeat steps 1 and 2 until there is no more air bubbles in the hose to purge. Tighten the valve to purge the pair specified.

TORQUE: 5 N.m (0,5 kg.m)

Supplying the deposit toward the mark of the higher level.

Install the diaphragm, the plate of fixing and the cover of the deposit. Tighten the screws.

TORQUE: 1 N.m (0,1 kg.m)





SCREWS



FIXING BOLTS THE CLIP OF THE brake



CAPS OF THE PINS OF THE SOMETHING OF

DISK/brake pads

REPLACEMENT OF THE brake pads

NOTE

Always replace the brake pads to pairs, so that the pressure on the disk is uniform.

Remove the caps of the pins of the pills and release the pins.

Remove the fixing bolts the clip of the brake.

Then, remove the clip of the brake.



Clean the clip of the brake, especially the area around the pistons.

Remove the smugglers of pads.

Then, remove the pads.



BRAKE PADS

SPRINGS OF THE PADS



PASADORES DE PADS

BRAKE PADS



Make sure that the spring of the pads is located in accordance with the illustration.

Install the new brake pads.

Push the pads against the spring.

Then, install the smugglers of pads.

Press completely the pistons of the clamp, in order to permit the installation of new pads.

NOTE

Check the level of fluid in the brake to the shell of the cylinder master, because the procedure described above can do with that fluid level rises.

Install the clip of the brake in the fork left, so that the disc brake is located between the pads.

NOTE

Be careful not to damage the pads.

Install and tighten the new fixing bolts the clip of the brake.

TORQUE VALUE: 26 N.m (2,6 kg.m)

Tighten the smugglers of pads.

TORQUE VALUE: 18 N.m (1,8 kg.m)

Install and tighten the caps of the smugglers of pads.

TORQUE VALUE: 2 N.m (0,2 kg.m)

Activates the brake for the pistons of the clamp to settle in the pads.

INSPECTION OF BRAKE DISC

Visually inspect the disk with regard to damage or cracks. Measure the thickness of the disc brake on various points, using a micrometer.

|--|

Replace the disc brake in case of the lower measurement is below the limit of service. Measure twist of the disc brake, using an indicator of quadrant.

| Service Limit | 0,1 mm |
|---------------|--------|
| | |

In the event that twist exceed the limit of service, inspect the bearings of the wheel with regard to slack excessive.

In the event that the bearings are normal, replace the disc brake

MASTER CYLINDER

DISMANTLING

Remove the support of the cylinder master (page 13-3). Drain the fluid in the system of hydraulic brake (page 15-3). Disconnect the hose the brake, removing the bolt banjo, the washers in sealing and the connection of the hose.

ATENCION

- Avoid shed fluid brake on painted surfaces, surfaces of plastic or in parts of rubber. Place a cloth on these parts, to make services in the brake system.
- •To remove the bolt banjo, tape the tip of the hose, to avoid the pollution.

Remove the bolts of support from the cylinder master. Then, remove the whole of the cylinder master (page 12-4).

FIXING BOLTS THE CLIP OF THE brake



PASADORES DE LAS PASTILLAS

TAPONES DE LOS PASADORES **DE LAS PASTILLAS**





SEALING WASHERS



Connecting the Hose

HYDRAULIC BRAKE

Remove the screw and switch on the light of front brake.



PIVOT OF HANDLE



HANDLE



PLIERS FOR RINGS OF PRESSURE RUBBER PROTECTOR RINGS OF PRESSURE



Remove the nut, bolt pivot the brake and the lever of front brake.

Remove the protective rubber of piston master cylinder.

DISMANTLING

Remove the protective rubber of piston master cylinder.

Remove the ring of pressure from the body of master cylinder, using the special tool, according to the illustration.

Tool: Pliers for rings of pressure

07914-3230001

SPRING

Remove the piston master cylinder and spring.

Clean the cylinder master and deposit with fluid brake again.



PISTON MASTER CYLINDER

INSPECTION

Inspect the protector of rubber and the checkpoints primary and secondary with regard to wear, deterioration, fatigue or damage.

Inspect the spring with regard to damage. Inspect the cylinder master and the piston with regard to scratches or abnormal wear.

Measure the D. I. of master cylinder.

| Service Limit 11,055 mm | |
|-------------------------|--|
|-------------------------|--|

Measure the D. E. piston in master cylinder.





HYDRAULIC BRAKE

ATENCION

The piston master cylinder, the checkpoints, the spring, the ring of pressure and the protective rubber should be replaced as a whole. Do not replace components individually.

Before the assembly, bathe all the pieces with fluid brake again.

Apply fluid brake to the piston. Install the spring in the piston master cylinder. Install the whole piston in the cylinder master.

ATENCION

Do not let the lips of the checkpoints are oriented toward the outside.

Install the ring of pressure in the slot on the master cylinder, using the special tool.

Special Tool: Pliers for rings of pressure

07914-3230001

ATENCION

Make sure the ring of pressure is firmly established in the slot.

Install the protective rubber in the piston and in the cylinder master.







RUBBER PROTECTOR PIVOT BOLT

Apply grease based on silicone to the surface of slippage bolt pivot the brake.

Install the lever of front brake and the bolt pivot.

Install and tighten the nut pivot to the specified torque.

TORQUE VALUE: Bolt pivot Nut pivot

6 N.m (0,6 kg.m) 6 N.m (0,6 kg.m)



BRAKE HANDLE

Install the switch of the light of front brake cylinder master, aligning the highlight the switch and the hole in the master cylinder.

Install and tighten the screw breaker of the light of front brake.

TORQUE VALUE: 1 N.m (0,1 kg.m)

Place the whole of master cylinder on the handlebars (page 13-5).

Install the connection of the hose of brake cylinder master, with the bolt banjo and the new washers of seal. Press the hose of the brake against the limiter on the master cylinder. Then, tighten the bolt banjo to value specified.

TORQUE VALUE: 34 N.m (3,4 kg.m)

Plug the connectors breaker of the light of front brake (page 13-5).

Install the rearview mirror (page 13-8).

Supplying the deposit toward the mark of a higher level and carry out the purge of air of the hydraulic system of front brake (page 15-3).



Align



SEALING WASHERS

BOLT BANJO



LIMITER HOSE BOLT BANJO



SEALING WASHERS

BRAKE CLAMP

ATENCION

Avoid shed fluid brake in painted surfaces, surfaces of plastic or in parts of rubber. Place a cloth on these parts, to make services in the brake system.

DISMANTLING

Drain the fluid in the hydraulic system of front brake (page 15-3).

Disconnect the hose of the brake of the clamp front brake, removing the bolt of connection, the washers in sealing and the connection of the hose.

Remove the fixing bolts the pliers and the pads of the brake (page 15-4).

DISMANTLING

Remove the spring of pads.

Remove the support of the clip of the brake.

Remove, the support of the clamp, the protective rubber of bolt clamp.

Remove from the body of the clamp, the protective rubber of bolt of support.

Place a cloth on the pistons.

Position the body of the clamp to the pistons oriented downwards and apply jets short of compressed air at the entrance of fluid, in order to make the pistons.

ADVERTENCIA

Do not use compressed air at high pressure and does not place the mouthpiece of air very near the entrance to the fluid.

To remove the coveralls and stamps of the pistons press and levántelos.

ATENCION

Be careful not to damage the surface of slipping from the piston.

Clean the slots in the stamps of piston with fluid of brake again.



SPRING OF PADS BODY OF PROTECTIVE RUBBER CLAMP THE BOLT CLAMP



PROTECTIVE RUBBER

SUPPORT FOR THE CLA OF BOLT



STAMPS OF THE PISTONS



DUST COVERS

INSPECTION

Inspect the cylinders of the clip with regard to excoriations, scratches or damage.

Measure the D. I. cylinder of the clamp.

| Service | Limit | 25,460 mm |
|---------|-------|-----------|



Inspect the pistons of the clip with regard to excoriations, scratches or damage.

Measure the D. E. of piston of the clamp.

| Service | Limit | 25,31 mm |
|---------|-------|----------|
|---------|-------|----------|





DUST COVERS

Lubricate the new stamps of the pistons with fluid brake again.

Lubricate the new coveralls with grease based on silicone. Install the stamps of the pistons and the dust in the slots of the body of the clamp.

Bathe the pistons of the clip with fluid brake new and install in the cylinders of the clip, with the extremities open oriented toward the pad.

In the event that the protectors of rubber of clip of the clip or the bolt of support are too hard or damaged, replace. Install the protective rubber of bolt of support in the body of

the clamp.

Install the protective rubber of bolt clamp on the support of the clamp.

Apply grease based on silicone to the pins of the pliers and the support of the clamp.

Then, install the support of the clip in the body of the clamp.

Install the spring of the pads in the body of the clamp.

NOTE

Put special attention to the direction of the installation of the spring of pads.

INSTALLATION

Install the pads of the brake and the clip in the fork right. Tighten the fixing bolts the clamp to the pair specified:

TORQUE VALUE: 26 N.m (2,6 kg.m)

Install the connection of the hose of the brake in the body of the clip, with the two new washers in sealing and the bolt banjo.

Press the connection of the hose of the brake against the limiter on the body of the clamp. Then, tighten the bolt banjo to value specified.

TORQUE VALUE: 34 N.m (3,4 kg.m)

Supplying and carry out the purge of air of the hydraulic system of front brake (page 15-3).



PISTON SEALS BODY OF

THE BRAKE

PROTECTOR OF BOLT CLAMP



PROTECTOR OF BOLT OF Support SUPPORT OF THE BRAKE



BOLT BANJO

BRAKE PAD SPRINGS FIXING BOLTS



SEALING WASHERS

16. BATTERY/CHARGING SYSTEM

| DIAGRAM OF CHARGING SYSTEM | 16-0 | BATTERY | 16-4 |
|----------------------------|------|-------------------------------|------------|
| SERVICE INFORMATION | 16-1 | INSPECTION OF THE CHARGING SY | /STEM 16-6 |
| INVESTIGATION OF FAULTS | 16-3 | REGULATOR/RECTIFIER | 16-7 |

SERVICE INFORMATION

GENERAL INSTRUCTIONS

ADVERTENCIA

•The battery produces explosive gases. Keep away from sparks and lit cigarettes. Provide adequate ventilation to the reload or use the battery in a local closed.

•Battery contains sulphuric acid (electrolyte). If comes into contact with the skin or eyes may cause serious burns. Use protective clothing and protective mask.

 In case of the electrolyte comes into contact with the skin, wash with water and search medical relief immediately.
 In case of the electrolyte between contact com eyes, wash with plenty of water for at least 15 minutes and search medical relief.

•Electrolyte is poisonous. •In case of ingestion drink a large amount of water or milk. Then drink milk of magnesia or vegetable oil and search medical relief. Keep out of the reach of children.

• Always switch off the power switch before disconnecting any electrical component.

ATENCION

Some electrical components can be damaged in the event of the terminals or connectors to connect or disconnect while the power switch is powered and has circulation of electric current.

•In case the motorcycle will remain stored during an extended period, remove the battery, load totally and keep in a local dry and ventilated. To increase its useful life, charge the battery stored every two weeks.

• In case of the battery will remain connected to the motorcycle stored, release the cable of negative terminal.

•The battery can damage in the event that receive insufficient charge or in excess, or if it remains unloaded for a long period of time. Those conditions also decreased its useful life. Even in normal conditions of use, the performance of the battery decrease after 2 or 3 years.

•Voltage of the battery can recover after the burden. But in the event that consumption is very large, the voltage fall rapidly and eventually end. For that reason, the loading system is often considered as the cause of the problem. An overload in the battery, which can pretend be a symptom of overload, is normally of problems in the own battery. In the event that one of the cells is in short circuit and the battery voltage does not increase, the regulator / rectifier provide voltage in excess for the battery. Under such conditions, the level of electrolyte fall rapidly.

•Before conducting the investigation of breakdowns of the system of loading, check to see if the maintenance of the battery has been done correctly and if the battery has been used properly. Check if the battery is constantly to excessive consumption, as prolonged use of the headlight and the rear with motorcycle parked.

•The battery download, in case of motorcycle is not in use. For that reason, charge the battery every two weeks to avoid sulphation.

•The supply of a new battery with electrolyte produce a voltage. However, for which the battery reaches its maximum performance, it must be sempre cargala. In addition, the life of the battery increases when applied to him an initial charge.

•To verify the system of charging the battery, always follow the steps described in the diagram of investigation of breakdowns (page 16-3).

•Services in the alternator can make with the engine installed in the chassis.

•Refer to Section 10 to obtain information to respect the maintenance of alternator.

DIAGRAM OF CHARGING SYSTEM



Y: Yelllow G: Green R: Red

W: White

ATENCION

The covers of the battery should not be removed. If you are removed the covers of sealing of the cells, the battery can be damaged.

Charging the battery

This model comes equipped with a battery maintenance free (FM). Remember the following about the batteries

MF: Use only the electrolyte that comes with the battery;

Use all of the electrolyte;

Sealing properly the battery;

Never open again the stamps.

Testing the battery

Refer to the Operation Manual tester of battery to obtain information and details of proof. The tester of battery recommended applies a burden to the battery, so that it can measure the real status of the battery, under load.

ATENCION

The charge the battery, does not exceed the current nor the time specified in the same. Otherwise, the battery can be damaged.

SPECIFICATIONS

| ltem | | Specifications | |
|------------|--|----------------|-------------------------|
| Battery | Capacity | | 12 V – 6 Ah |
| | Leakage | | 0,1 mA maximum |
| | Voltage (20°C) | Fully charged | Superior a 12,8 V |
| | | Needs charging | Inferior a 12,3 V |
| | Current burden | Normal | 0,6 A x 5 – 10 h |
| | | Rapid | 3,0 A x 1,0 h maximum |
| Alternator | r Capacity Resistance of the coil load (20°C) | | 0,204 kW/5.000 rpm |
| | | | 0,1 – 1,0 Ω |
| | Voltage regulated the regulator/rectifier | | 13,0 – 15,5 V/5.000 rpm |

INVESTIGATION OF FAULTS

Battery damaged or with insufficient charge



BATTERY

DISMANTLING

NOTE

·Always disconnect the power switch, before removing or install the battery. •Release first cable negative () and then, the cable positive (+) battery.

Remove the cover right side (page 2-2).

Remove the bolt and disconnect the negative terminal () of the battery.

Remove the protector of positive (+) terminal of the battery. Remove the bolt and disconnect the positive (+) terminal of the battery.

Remove the bolt and the band of fixing the battery. Remove the battery of your accommodation.





BATTERY

BOLT/FIXING BAND



INSTALLATION

Install the battery in your accommodation.

Cover the terminals of the battery with grease clean.

Locate the battery in the box and connect first the cable positive (+). Install the protector of positive terminal (+) and then, the cable negative ().

NOTE

Bid the protector on the positive terminal.

Install the band of fixing the battery and tighten the bolt.

Install the lid side right (page 2-2).



BATTERY

BOLT/FIXING BAND



INSPECTION OF THE VOLTAGE

Measure the voltage of the battery, using a digital multitester commercially available.

Voltage (a 20° C): Charged In need of charging

More than 12,8 V Less than 12,3 V

Tool: Digital Multitester commercially available

CHARGING OF THE BATTERY

•The battery produces explosive gases. Keep away from sparks and lit cigarettes. Provide adequate ventilation to the reload or use the battery in a local closed. Battery contains sulphuric acid (electrolyte). If you come in contact com the skin or eyes may cause serious burns. Use protective clothing and protective mask. In case of the electrolyte comes into contact with the skin, wash with water and search help doctor immediately. In case of the electrolyte between contact com eyes, wash with plenty of water for at least 15 minutes and search medical relief. •Electrolyte is poisonous. •In case of ingestion drink a large amount of water or milk. Then drink milk of magnesia or vegetable oil and search medical relief. Keep out of the reach of children. • Connect and disconnect the power in the charger and not in the terminals of the battery.

Remove the battery (page 16-4).

Connect cable positive (+) shipper to the positive (+) terminal of the battery.

Connect cable negative () of the shipper to the negative terminal () of the battery.

Current/charging Time: Normal Rapid

0,6 A x 5 – 10 h 3,0 A x 1,0 h máximo

ATENCION

- •Fast charging should apply only in case of emergency. Recommend the implementation of burden slow whenever possible.
- •To load the battery, does not exceed the current nor the time specified in the same. Otherwise, the battery can be damaged.





INSPECTING THE CHARGING SYSTEM

NOTE

- •To inspect the system of loading, check the components and lines of the system step by step, according to the investigation of breakdowns submitted on page 16-3.
- In case of the capacity of the circuit far exceeds the capacity of measurement of multitester, this should be damaged. Before the start of the test initially set the multitester at its maximum capacity. Only then gradually diminished capacity, to ensure a strip of correct measurement and prevent damage to the multitester.
- •To measure circuits of small capacity, to keep the power switch off. In the event that the switch activates suddenly during the test, the fuse in the multitester may burn.

PROOF OF LEAKAGE

Remove the side cover (page 2-2).

Place the power switch off and disconnect the cable negative () of the battery.

Connect the probe (+) ammeter in the cable negative () and the probe () of ammeter in the negative terminal () of the battery. With the power switch off, check to see if there are leakage.

NOTE

- In measuring the current with the ammeter, initially set to its maximum capacity. Only then set it to a lower level. In the event that the current flow is higher than the adjusted value, the fuse in the ammeter burn.
- In measuring the flow, not tap the power switch. A sudden oscillation of flow may burn the fuse in the multitester.

Leakage specified: 0,1 mA máximo

If the current leakage exceeds the value specified, this probably indicates the occurrence of a short circuit. To locate the short circuit, disconnect each connection step by step and measure the leakage.

INSPECTING THE CHARGING VOLTAGE

\rm ADVERTENCIA

In the event that is necessary to make services with the engine running, make sure that the local work is well ventilated. Never put the engine running in closed areas. The exhaust containing carbon monoxide poison, which can cause loss of consciousness and even death. Activates the engine in a local open, or in a local closed equipped with a ventilation system and extraction of gas.



Activate the engine and heat, until it reaches its normal operating temperature. Stop the engine and connect the multitester between the terminals positive (+) and negative () of the battery.

NOTE

Make sure that the battery is in good condition, before this test.

ATENCION

•To avoid short-circuit, correctly identifies the cables or terminals positive and negative. •Never disconnect the battery, or any cable system of cargo, but before off the power switch. Otherwise, the multitester or electrical components suffer damage.

With the headlight in the position High, operate again the engine. Measure the voltage with the multitester, when the engine reaches 5,000 rpm.

Value:

Battery Voltage measure (p 16-5) < Voltage of the burden of the battery (see above) < 15,5 V

In the event that the multitester indicating the voltage regulated specified, the battery will be normal.

NOTE

If the battery download this often indicates that it is deteriorating, even introduce normal during the inspection of the voltage regulated.

REGULATOR/RECTIFIER

INSPECTION OF THE SYSTEM

Remove the side cover (page 2-2).

Release the connector 5P regulator / rectifier. Check the connector with regard to contact inadequate or corroidos terminals.

Circuit of the battery

Check to see if there is voltage of the battery between the terminals red/white (+) and Green (). If there is no voltage, measure the terminals of connector, as follows:

| ltem | Terminals | Specification |
|---------------------------------|----------------------------|-------------------------------------|
| Charging circuit of the battery | Red/White (+) Earth (–) | Should indicate the battery voltage |
| Earth | Green is earth | There must be continuity |



BATTERY

CONNECTOR 5P OF THE REGULATOR/RECTIFIER





CONNECTOR 5P

NOTE

Do not need to remove the coil of stator, for which this test.

Measure the resistance between the terminals connector 5P.

Connection: Yellow to Yellow Value: $0,1 - 1,0 \Omega$ (a 20°C)

In case of the resistance of the coil is out of the specifications, replace the stator (page 10-2).

Check the continuity between each terminal connector 5P and the earth. There should be no continuity. In case of continuity between some terminal of connector 5P and the earth, replace the stator alternator (page 10-2).

DISMANTLING/Installation

Remove the side cover (page 2-2).

Release the connector 5P regulator / rectifier.

Remove the fixing bolts and the connector of the regulator / rectifier.

The installation is performed in reverse order dismantling.

NOTE

Install wiring correctly (page 1-21).



CONNECTOR 5P



CONNECTOR 5P CONNECTOR 5P

BOLTS



REGULATOR/RECTIFIER

| NOTES | | | |
|-------|--|--|--|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

17. IGNITION SYSTEM

| SERVICE INFORMATION 17-1 PUNTO DE ENCENDIDO | 17-7 |
|---|--------|
| INVESTIGATION OF FAULTS 17-3 | |
| INSPECTION OF THE IGNITION SYSTEM 17-4 |) 17-8 |

SERVICE INFORMATION

GENERAL INSTRUCTIONS

ADVERTENCIA

In the event that is necessary to make services with the engine running, make sure that the local work is well ventilated. Never put the engine running in closed areas. The exhaust containing carbon monoxide poison, which can cause loss of consciousness and even death. Activates the engine in a local open, or in a local closed equipped with a ventilation system and extraction of gas.

ATENCION

•Do not remove the sensor on the accelerator carburetor. This can cause the displacement of the sensor, which would result in a point of faulty ignition. In the event that is necessary to replace the sensor, recommend the replacement of the carburetor as a whole. •Connect or disconnect the terminals or connectors with the power switch in the position ON, and having flow, can cause damage to some electrical components.

- •To make services in the ignition system, always follow the procedures described in Investigation of Breakdowns (page 17-3), in the sequence that occur.
- •The ignition system transistorised uses an electronic control system of the point of ignition. In addition, is previously-set in the factory. Therefore, do not need any type of adjustment at the point of ignition.
- •The control module of ignition (ICM) alters the point of turning on agreement with the rotations of the engine. The sensor on the accelerator sends a signal to the ICM to compensate for the point of turning on agreement with the opening of the accelerator.
- •The control module of ignition (ICM) can be damaged if he was dropped. If you turn off the connector as long as current flow, the excess flow also may damage the ICM. Therefore, before services of repair and maintenance, always switch off the power switch.
- •Defects in the ignition system often are associated with inadequate connections. Inspect the connections, before starting the services.
- •Make sure that the battery is fully charged. If it activates the starter motor with the battery, the engine may not turn with fast enough. Consequently, there will be no sparks in the electrodes spark plug.
- •Use a spark plug with the degree suitable heat. The use of a spark plug with incorrect specifications may cause damage to the engine.
- •Refer to Section 3 to obtain information in respect of the inspection in the spark plugof ignition.
- •Refer to Section 19 to obtain information to respect of the following elements: Switch of bracket power switch Switch emergency Switch deadlock Switch clutch
- Refer to Section 10 to obtain information to respect the dismantling / installation from the pulse generator power.

DIAGRAM OF THE SYSTEM





- Y: Yellow Green
- R: Red
- W: White
- Bu: Blue
- Lg: Light green

SPECIFICATIONS

| ltem | | Specifications |
|--------------------------------------|-------|-------------------------|
| Spark plug | | NGK |
| | Value | CR8EH-9 |
| Spark plug gap | | 0,8 – 0,9 mm |
| Voltage of peak of the ignition coil | | 100 V Minimum |
| Voltage peak pulse generator power | | 0,7 V Minimum |
| Mark F of the point of ignition | | 8° APMS em marcha lenta |

TORQUE VALUES

Tool

Tester Imrie (model 625) o

Adapter from the voltage of pico 07HGJ-0020100 with multitester equivalent commercially available (minimum impedance: 10 M © Vcc)

INVESTIGATION OF FAULTS

• Before carrying out the diagnosis of breakdowns of the system, inspect the following: defect in the spark plug Connection inadequate noise dampening layer or spark plug Penetration of water in the layer suppressive noise (leakage of winder secondary ignition coil) • In case that there are no sparks in the cylinder, replace the ignition coil temporarily on the other which is in good condition. The test of spark. If there are spark, the ignition coil original is with fault. The initial voltage of winder primary of the ignition coil is the voltage of the battery, with the power switch in the position ON, and the switch of emergency in the position RUN. (The engine of the motorcycle not be operated with the starter motor).

The spark plug produces no sparks.

| Abnormal condition | | Causes Probables (Siga el orden numérico al verificar) |
|--|--|---|
| Voltage of winder primary of the ignition coil | The voltage of pico is less than the value roll. | Incorrect Connections adapter voltage of peak. 2. Impedance of multitester too low: less than 10 M /@Vcc. 3. Speed motor drive too low (low battery). 4. The time to sample the tester and pulse measured are not synchronized (the system will be normal in case of at least one of the voltages measures are higher than the specifications). 5. Connection loose or inappropriate in the ter- minal or circuit interrupted in the ignition system. 6. Defect in the switch of side stand in the switch deadlock. 7. Circuit inter- rupted or connection inappropriate in the cables connected to the item no. 6. • Circuit breaker of side stand: cable Green / White • circuit breaker deadlock: cable Light green / Red 8. Control Module of ignition (ICM) with fault (when the items no. 1 to 7 are normal). |
| | The initial voltage is normal, but not the case peak voltage during the motor drive. | Incorrect Connections adapter voltage of peak. 2. Impedance of multitester too low: less than 10 M /@/cc 3. Defect in the power switch or in the switch of emergency. 4. Connection loose or inappropriate in the terminal or circuit interrupted in the con- nector of the ICM. 5. There are no voltage in the black / White of the ICM. 6. Connection inadequate or circuit interrupted in the cable Green (earth) of the ICM. 7. Defect in the switch of side stand in the switch deadlock. 8. Circuit interrupted or connection inappropriate in the cables connected to the item no. 7. • Circuit breaker of side stand: cable Green / White • circuit breaker deadlock: cable Light green / Red 9. Defect in the adapter of voltage in pico. 10. Fault on the pulse generator power (Measure voltage of pico). 11. Control Module of ignition (ICM) with fault (when the items no. 1 to 10 are normal). |
| | The initial voltage and voltage of peak are normal, but the spark plug does not produce sparks. | 1. Spark plug ignition defect or leakage in the winder secondary ignition coil. 2. Ignition Coil with fault. |
| Pulse gen- erator power | The voltage of pico é less than the value roll. | 1. Impedance of multitester too low: less than 10 M /@cc. 2. Speed motor drive too low (low battery). 3. The time to sample the tester and pulse measured are not synchronized (the system will be normal in case of at least one of the voltages measures are higher than the specifications). 4. Pulse generator power with fault (when the items no. 1 to 3 are normal). |
| | There are no voltage of pe | 1. Adapter from the voltage of peak with fault. 2. Pulse generator power satisfies the second peak with fault. |

INSPECTION OF THE IGNI-TION SYSTEM

NOTE

•If there is no sparks in the spark plug, check all connections with regard to contacts loose or inadequate, before measuring the voltage of peak. •Use a digital multitester recommended, commercially available, with a minimum impedance of 10 $M\Omega/Vcc.$ •The values presented differ, according to the memory of multitester. •If using a tester diagnostic Imrie (model 625), follow the manufacturer's instructions.

Connect the adapter from the voltage of peak in the multitester or use the tester diagnostic Imrie.

Tools:

Tester Imrie (model 625) o ADAPTER FROM THE VOLTAGE OF PEAK 07HGJ-0020100 With a digital multitester commercially available (impedance minimal 10 $M\Omega/Vcc$).

VOLTAGE PEAK WINDER PRIMARY OF THE IGNI-**TION COIL**

NOTE

•Check all connections of the system, before the inspection. Inadequate Connections can result in incorrect readings. •Verify the compression of the cylinder. Check if the spark plug is properly installed.

Remove the plate pit side right (page 2-3).

Place the transmission in neutral and disconnect the noise dampening layer of the spark plug.

Connect a spark plugof turning in good condition at the noise dampening layer and make the connection to the earth of the spark plugin the cylinder head, as in the proof of spark.





With the winder primary of the ignition coil connected, connect the adapter from the voltage of peak or the test of testator Imrie to earth and in the terminal of winder primary of the ignition coil.

NOTE

No disconnect cables from winder primary of the ignition coil.

Tools: Tester Imrie (model 625) o Adapter of the peak of voltage 07HGJ-0020100 with a commercially available multi-tester (impedance minimal de 10 $M\Omega$ /Vcc).

Connection:

Terminal of the cable Black / Yellow (+) Earth chassis ()

Tap the power switch and place the switch of emergency in the position RUN. Check the initial voltage under that condition. The voltage of the battery must indicate. In the event that the initial voltage cannot be measured, refer to the Investigation of Breakdowns (page 17-3). Down the side bracket. Activates the engine of the motorcycle through the starter motor and measure the voltage of peak in the winder primary of the ignition coil.

Peak voltage: 100 V minimum

ADVERTENCIA

Do not touch the spark plugof ignition or the test of multitester, to avoid an electric shock.

In the event that the voltage of peak is less than the value Value, follow the procedures described in the table of Investigation of Breakdowns (page 17-3).


INSPECTION OF THE VOLTAGE OF PEAK FROM THE pulse generator power

NOTE

Check the compression in the cylinder and make sure that the spark plug is properly installed.

Release the connector 8P of Control Module Ignition (ICM). Connect the adapter from the voltage of peak or the tips of evidence that the tester Imrie in terminals.

Tools:

Tester Imrie (model 625) and high voltage adapter 07HGJ-0020100 for use with commercially available multitester (impedance minimal de 10 $M\Omega/Vcc$)

Connection: Terminal Blue/Yellow (+) Earth chassis ()

Down the side bracket.

Tap the power switch and place the switch of emergency in the position RUN. Place the transmission in neutral. Activates the engine through the mechanism of start and measure the voltage of peak.

Peak voltage: 0,7 V minimum

In the event that the voltage of pico measure in the connectors of the ICM is abnormal, measure the voltage of peak in the connector 3P from the pulse generator power. Release the connector 3P from the pulse generator power. Connect the adapter from the voltage of peak or the tips of evidence that the tester Imrie to the terminals of connector, on the side of pulse generator of ignition. Measure the voltage of peak with the same procedure used to measure the voltage in the connector 8P ICM. Compare the reading with the obtained in the connector 8P ICM. In case of the voltage of pico measure in the connector of the ICM is out of the specifications and ten sion of peak measured in the pulse generator power is normal, this indicates that there is a circuit interrupted, or wiring is not in the electrical wiring. In case of both measurements are below the value specified, inspect each item in accordance with the procedures described in the table of Investigation of Breakdowns (page 17-3).





IGNITION COIL

DISMANTLING/Installation

Remove the fuel tank (page 2-4).

Release the noise dampening layer of the spark plug. Disconnect cables in the ignition coil.

Remove the two bolts, washers and the ignition coil. Install the parts in reverse order dismantling.

NOTE

Install correctly the cable spark plug.



SPARK PLUGS

In case of that is necessary to make services with the engine running, make sure that the local work is well ventilated. Never put the engine running in closed areas. The exhaust containing carbon monoxide poison, which can cause loss of consciousness and even death. •Activates the engine in a local open, or in a local closed equipped with a ventilation system and extraction of gas.

NOTE

Read the instructions of the functioning of the strobe lamp.

Activate the engine and heat until the normal operating temperature. Stop the engine. Remove the cover of the hole of timing and the o ring. Connect the strobe lamp in the cable spark plug. Activates the engine, leave operate in idle and verify the point of ignition.

Idle speed 1.400 ± 100 rpm



STROBE LAMP



The point of power is correct if the mark F in the rotor from the pulse generator power is aligned with the notch reference in the lid from the engine, in accordance with the illustration.



Bathe a new o ring with motor oil and install in the cover of the hole of synchronisation.

After the verification, install and tighten the cover of the hole of sync value specified.

TORQUE VALUE: 10 N.m (1,0 kg.m)



IGNITION CONTROL MODULE (ICM)

DISMANTLING/Installation

Remove the saddle (page 2-2).

Release the connector 8P of control module ignition (ICM).

Remove the control module of ignition (ICM) of the chassis, together with the rubber band of fixing.

The installation is performed in reverse order dismantling.



NOTES

| DIAGRAM OF THE SYSTEM | 18-0 | STARTER MOTOR | 18-4 |
|-------------------------|------|--------------------------------|-------|
| SERVICE INFORMATION | 18-1 | MAGNETIC SWITCH OF THE STARTER | 18-10 |
| INVESTIGATION OF FAULTS | 18-2 | CLUTCH DIODE | 18-11 |

SERVICE INFORMATION

GENERAL INSTRUCTIONS

ATENCION

Before services in the starter motor, turn the power switch. Otherwise, the engine can operate suddenly, causing serious injuries.

The •starter motor can be removed with the motorcycle engine installed in the chassis.

•To inspect the start system, always follow the procedures described in the table of Investigation of Breakdowns (page 18-2).

•A battery with low voltage can be unable to operate the starter motor with fast enough, or to provide the quantity of needed power to the ignition system. •If the flow of the current is maintained through the starter motor, while the motorcycle engine is stopped, the starter motor may suffer damage.

•Refer to Section 10 to obtain information in respect of services in the clutch boot.

•Refer to Section 19 to obtain information in respect of the following components: power switch Switch to start Switch to a standstill Switch of side bracket Switch clutch

SPECIFICATIONS

Unit: mm

| Item | Value | Service Limit |
|---------------------------------|-------|---------------|
| Over the motor brushes of start | 12,5 | 8,5 |

DIAGRAM OF THE SYSTEM



INTERRUPTOR MAGNÉTICO DE ARRANQUE INTERRUPTOR FUSIBLE AUXILIAR, LUZ TRASERA, CUADRO DE INSTRUMENTOS, 15 A DE ENCENDIDO 6 С BI $\mathbf{\bullet}$ \bigcirc BATERÍA 12V – 6Ah PARA EL FUSIBLE REGULADOR/ RECTIFICADOR R/W 钭 PRINCIPAL 10 A RECOGIDO INDICADOR DEL SOPORTE LATERAL BAJADO 20 A c – Y/BI INTERRUPTOR DE ARRANQUE INTERRUPTOR DEL SOPORTE LATERAL MOTOR DE ARRANQUE INTERRUPTOR DE EMERGENCIA M G/R Y/R 7 BI/W -07 5 BI/R G Ŧ Y/R . BI/W G/W DIODO ▶ G/W MODULO DE CONTROL DEL ENCENDIDO (ICM) G/R G/W Lg/R INTERRUPTOR DEL EMBRAGUE BI: Negro INTERRUPTOR DE Q PUNTO MUERTO Y: Amarillo ~~ G/R INDICADOR DEL PUNTO MUERTO G: Verde + R: Red ⊚ Lg/R W: White Lg: Verde Light Br: Marrón G/R

INVESTIGATION OF FAULTS

The starter motor not turn.

• Check if the main fuse (20) or the auxillary fuse (15) is burned. • Make sure that the battery is fully charged and in good condition.



| From page | 18-2 | | |
|---|------------------------|----------|--|
| | ¥ | · · · | |
| Measure the voltage b | oreaker magnetic start | Abnormal | → •Power switch defective. |
| | Normal |] | Fuse. Switch emergency defective. Switch defective start. Connector or loose contact inadequate. Circuit interrupted in the cabling. |
| Check the functioning start (page 18-10). | of magnetic switch | Abnormal | → • Magnetic Switch start defective. |
| | | | |

The starter motor rotates very slowly

•Low Battery or with low voltage.

- •Contact inadequate cables of the battery.
- •Inappropriate Contact motor cable to start.
- •Starter Motor defective.

The starter motor turns, but the motorcycle engine does not.

•Clutch start defective (Section 10). •Starter Motor spinning in the wrong direction. •Casing for the starter motor assembly incorrectly. •Terminals connected in the wrong way.

The magnetic start emits a characteristic sound (click), but the motorcycle engine not turn.

•Crankshaft not turn because of problems in the engine. •Spiral of reduction in the start defective (Section 10).

•Intermediate Gear boot defective (Section 10).

STARTER MOTOR

DISMANTLING

ADVERTENCIA

Before services in the starter motor, turn the power switch. Otherwise, the engine can operate suddenly, causing serious injuries.

Disconnect the breather tube from the casing of the engine.

Remove the protective rubber of the terminal. Remove the drainage tube of the carburetor.

Remove the nut of the terminal and the cable from starter motor. Remove the two fixing bolts the starter motor and the ground wire. Remove the starter motor.

Push the starter motor backwards.

BREATHER TUBE



DRAINAGE TUBE



PROTECTIVE RUBBER NUT TERMINAL/CABLE



NUT TERMINAL/CABLE



STARTER MOTOR

CBX250

O-RING

DISMANTLED

locks and the o ring.

Remove the o ring of starter motor.

Remove the bolts of the casing for the starter motor, the plates of fixing and rings o.



BOLTS/PLATES OF FIXING/ RINGS O



Remove the front flap, the washers for support, the washer

Remove the cover rear, the shims and the o ring.

Remove the led to the casing of starter motor.

NOTE

Write down the number of shims and their respective positions.

Inspect the bearing and the checkpoint of oil in the front door, with regard to wear or damage.

FRONT FLAP

OIL SEAL

BAR OF THE Collector

CBX250

INSPECTION

Inspect the bars of the collector of induced with regard to discolourment. Pairs of bars discoloured indicated reels in short-circuit with the earth. In this case should be replaced the starter motor.

NOTE

Do not use sandpaper or emery in the collector.

Check to see if there is a continuity between the bars of the collector, individually. There must be continuity.

Check to see if there is a continuity between each bar of the collector and the axle of the armature. There should be no continuity.

Check to see if there is a continuity between each brush isolation and the terminal of the cable of starter motor. There must be continuity.









Remove the following components: Nut Washer Shims o ring Whole carries brushes

ELECTRIC STARTING SYSTEM





Remove the brushes off of carries brushes.

| Service Limit | 8,5 mm |
|---------------|--------|

Measure the length of each brush.





CBX250

BRUSH CARRIER

Install the brushes on the carries brushes. Install the whole carries brushes in the lid rear, aligning its tongue with the slot in the lid back.

NOTE

Install correctly the shims, in accordance with what you have observed during the dismantling.

Install the following components: New o ring Shims Washer Nut

Keep the brushes pressured inside the carries brushes. Then, install the induced in the casing for the starter motor, through the carries brushes.

To install the induced in the casing for the starter motor, then refasten firmly, in order to avoid the imam of the casing or atraega.

ATENCION

•Coil damage may occur in the event that the imam atraega induced the meeting to the housing. •Surfaces of slip of the brushes are destroy, in case they are installed incorrectly.

Install the same number of s rear in the same positions that have been observed and recorded during the disassembly. Install a new o ring in the casing for the starter motor. Install the lid rear, aligning its slot with the tab of the whole carries brushes. Install the same number of s front in the same positions that have been observed and recorded during the disassembly. Install the washer of support and one new o ring in the casing for the starter motor. Apply grease to lip catch of oil and the ball needles the front flap. Install the washer locks in the front flap. Install the front flap.

ATENCION

To install the front flap, be careful to the axle of induced does not harm the lip of checkpoint of oil.



BRUSH NUT WASHER

BRUSH CARRIER



O-RING ARMATURE CASING OF STARTER MOTOR



O-RING

BACK FLAP FRONT FLAP



O-RING

CBX250

ELECTRIC STARTING SYSTEM

O RING/PLATE OF FIXING/BOLT

Align the reference marks of the casing for the starter motor and the tapas front and rear.

Install the plates of fixing and the new rings o in the bolts of the casing of the engine.

Install the bolts of the casing for the starter motor, but not yet the tighten.



Align





Install the new o ring.

Tighten bolts of the casing for the starter motor.

INSTALLATION

Install the starter motor in the casing of the engine.

NOTE

Guided correctly the motor cable start and the ground wire.



STARTER MOTOR NUT TERMINAL/CABLE

BOLTS/EARTH CABLE

Connect cable earth and tighten fixing bolts the starter motor.

Install the motor cable start and tighten the screw terminal.

Install firmly the protective rubber on the terminal starter motor.

Install the drainage tube of the carburetor.

DRAINAGE TUBE



RUBBER PROTECTORS BREATHER TUBE





MAGNETIC START SWITCH



Install the breather tube from the casing of the engine.

MAGNETIC START SWITCH

INSPECTION

NOTE

Prior to inspect the switch magnetic to start, check the status of the battery.

Remove the cover right side (page 2-2). Place the transmission in neutral. Place the power switch in the position ON, and the switch of emergency in the position RUN. Press the button breaker to start. The coil will be normal if the switch breaker magnetic start cast a characteristic sound (click). In the event that do not listen to the sound, inspect the switch magnetic start in accordance with the following procedures.

Earth circuit Release the connector 4P breaker magnetic start.

Check to see if there is a continuity between the terminal of the cable Green/ Red (circuit of earth) and the earth.

If there is a continuity when the transmission is at a standstill or when the clutch is decoupled and switch the bracket is collected, this indicates that the circuit of earth is normal (at a standstill there is a small resistance, due to the diode).

CBX250

Voltage breaker magnetic start

Plug the connector 4P breaker magnetic start.

Place the transmission in neutral.

Measure the voltage between the terminal of the cable yellow/red (+), in the connector 4P breaker magnetic to start, and the earth ().

The voltage of the battery must indicate only when the switch is pressed to start, with the power switch activated (ON position).

DISMANTLING/Installation

Remove the cover right side (page 2-2).

Release the connector 4P breaker magnetic start.

Apart from the protectors of rubber; then, of accommodation remove the nuts and cables.

Remove the magnetic switch start of the box of the battery. Install components in reverse order dismantling.

CONNECTOR 4P



CONNECTOR 4P





NUTS/CABLES



DISMANTLING

Remove the saddle (page 2-2).

Open the door of the fuse box and remove the diode clutch.





INSPECTION

Check the continuity between the terminals of the diode. In case of continuity, recorded a small value of resistance. Normal Address: there must be continuity. Reverse Direction: There should be no continuity. In case of continuity only in one direction, this indicates that the diode is normal.

INSTALLATION

Install the diode in reverse order dismantling.



| NOTES |
|-------|
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |

| DIAGRAM OF THE SYSTEM | 19- 0 | LIGHT SWITCH | | 19- 9 |
|-------------------------------------|-------|---------------|----------------|--------|
| SERVICE INFORMATION | 19- 1 | SWITCHES OF T | HE HANDLEBARS | 19- 10 |
| INVESTIGATION OF FAULTS | 19- 2 | SWITCH OF THE | LIGHT OF brake | 19- 11 |
| HEADLIGHT | 19- 4 | CLUTCH SWITC | н | 19- 12 |
| INDICADOR INTERMITENTE DE DIRECCIÓN | 19- 5 | SWITCH DEADL | ОСК | 19- 12 |
| BACK LIGHT / BRAKE LIGHT | 19- 5 | SIDESTAND SW | ІТСН | 19- 12 |
| INSTRUMENT PANEL | 19- 6 | RELAY OF | INDICATORS | 19- 13 |
| SPEEDOMETER | 19- 8 | HOOTER | | 19- 14 |
| FUEL LEVEL METER | 19- 8 | | | |
| | | | | |

SERVICE INFORMATION

GENERAL INSTRUCTIONS

\rm ADVERTENCIA

The lamp h of the light is heated too while the headlight is switched on and stays hot for some time, after which turns the headlight. Make sure that the lamp has cooled, before making services.

• To replace the lamp halogen of the light, observe the following: Use gloves clean during the replacement. Do not leave fingerprints in the lamp, because these may form hot spots, thus causing the burning of the lamp. In the event that touch the lamp with his hands without protection, wipe with a cloth dampened with alcohol, to avoid fails premature. Be sure to install the layer of rubber after replacing the lamp. •Check on the state of the battery before making any type of inspection you need correct voltage battery. •Proof of continuity can be done with the switches installed in the motorcycle. •In this section are used the following colour codes:

Bu = Blue

| | G = Green | Lg = Light green | R = Red |
|------------|-----------------|------------------|------------|
| BI = Black | Gr = Grey | O = Orange | W = White |
| Br = Brown | Lb = Light blue | P = Pink | Y = Yellow |

LOCATION OF THE SYSTEMS



SPECIFICATIONS

| ltem | | Specifications | | |
|-------------|---------------------------------|----------------|--------------------|--|
| Light bulbs | Headlight | High | 12 V – 35 W | |
| | | Low | 12 V – 35 W | |
| | Rear/light of brake | | 12 V – 5/21 W | |
| | Indicator front direction | | 12 V – 15 W x 2 | |
| | Indicators rear | | 12 V – 15 W x 2 | |
| | Light of the instruments | | LED | |
| | Indicator of indicator | | LED | |
| | Indicator of the headlight high | | LED | |
| | Neutral Indicator | | LED | |
| | Sidestand indicator | | LED | |
| Fuses | Main fuse | | 20 A | |
| | Auxillary fuse | | 10 A x 3, 15 A x 1 | |

TORQUE VALUES

| Bolt pivot of side stand | 10 N.m (1,0 kg.m) |
|----------------------------------|-------------------|
| Against the pivot bracket | 39 N.m (3,9 kg.m) |
| Bolt breaker of bracket | 10 N.m (1,0 kg.m) |
| Nut terminal breaker of deadlock | 2 N.m (0,2 kg.m) |
| Body breaker deadlock | 12 N.m (1,2 kg.m) |

INVESTIGATION OF FAULTS

Table of instruments

•Prior to inspect the picture of instruments, make sure that the battery, the fuse main (20), the auxillary fuse (15), the fuse in the clock / kilometer (10) and the connector 16 of the speedometer are in good condition and firmly connected.

•Turn the power switch toward the position ON and inspect the following: Verify if indicators of the speedometer and tachometer returning to the point of origin. Check to see if the desk digital lights.

When the power switch is turned OFF position), the indicator of speed or tachometer not aligns with the 0 of the bar indicator.

Turn the power switch for the position on. The indicator of speed or tachometer should go back and align with the 0 of the bar indicator.

Abnormal

Disconnect the cable positive (+) battery. Wait a few seconds plug back and check the functioning of the table of instruments.

Abnormal

➤ • Table of instruments defective.

The picture of instruments does not work



HEADLIGHT

LAMP REPLACEMENT

ADVERTENCIA

- •Halogen lamp of the light is heated too while the headlight is switched on and stays hot for some time, after which turns the headlight.
- •Make sure that the lamp has cooled, before making services.

Remove the two screws, the collars and the connector of the headlight.

Release the connector 3P of socket headlamp. Remove the layer of rubber.

Release retainer and remove the whole socket / lamp in

the headlight.

ATENCION

Avoid touching the halogen lamp. The finger prints that remain in the lamp may form hot spots and cause their burning.

In the event that touch the lamp with his hands without protection, wipe with a cloth dampened with alcohol, to avoid fails premature.

Remove the lamp in the socket.

Install the new lamp in the socket.

Install the whole socket / lamp, aligning their tabs with the slots in the connector of the headlight.

Lock the retainer the lamp. Install the layer of rubber firmly in the headlight.





Install the connector 3P in the socket of the light. Install the connector of the light in their casing. Install the two screws and the collars. Adjust the focus of the light (page 3- 20). Then, tighten the screws.



DIRECTION INDICATORS

REPLACEMENT OF THE bulbs

Remove the screw and the lens of indicator.



Turn the socket bulb counter-clockwise and off. Replace the bulb for a new. Install the parts in reverse order dismantling. NOTE

•Make sure that the gasket of the lens is in good condition and properly installed. In case of need, replace it with a new. •To install the lens, align the tongue with the slot in the casing of indicator.



REAR/LIGHT OF brake

REPLACEMENT OF THE bulbs

Remove the screws and the lens of the rear / light of brake.



Press the light bulb, turn it into effect against opening hours and remove from the rear / light of brake. Replace it with a new. Install the new light bulb, pressuring and turning clockwise. Install the parts in reverse order dismantling.

NOTE

Make sure that the gasket of the lens is in good condition and properly installed. In case of need, replace it with a new.



INSTRUMENT PANEL

DISMANTLING/Installation

Remove the two bolts and the collars. Release the connector 3P headlamp. Remove the two screws, nuts and the casing of the headlight. Remove the clamp.

Disconnect the cable of the speedometer.

Disconnect the connector 16 of the table of instruments.

Remove the bolts and the picture of instruments of the

Remove the four screws and the bottom layer of the table

Remove the three nuts, gums and the support of the table

The installation is performed in reverse order dismantling.





BOTTOM LAYER



SCREWS

BRACKET

NUTS/BOLTS

HEADLIGHT UNIT



CASING OF THE HEADLIGHT SCREWS

HIGHER BRIDGE



higher bridge. The installation is performed in reverse order dismantling.

DISMANTLED

of instruments.

of instruments.

INSPECTION

Remove the casing of the light (page 19-4). Remove the connector 16 of the table of instruments and measure the voltage between the terminal of the cable Black / Brown and the terminal of the cable Green, from the side of the wiring. The voltage of the battery must submit to the power switch activated (ON position). If there is no voltage, check the following: Circuit interrupted in the black / Brown Auxillary fuse (15) burned



Remove the connector 16 of the table of instruments and measure the voltage between the terminal of the cable Red / Green and the terminal of the cable Green, from the side of the wiring. The voltage of the battery must submit to the power switch activated (ON position). If there is no voltage, inspect with regard to circuit interrupted in the red / Green.

Remove the connector 16 of the table of instruments and check to see if there is a continuity between the connector cable Green, from the side of the wiring, and the earth.

Disconnect the cable positive (+) battery and initialise again the picture of instruments. Wait a few seconds, connect cable positive (+) battery and verify the functioning of the table of instruments. In case of the picture of instruments do not work, replace it with a new one.



R/G G

CABLE positive (+)



SPEED SENSOR

INSPECTION

Remove the casing of the light (page 19-4). For a test of the sensor of speed, the system should be turned on, or is: the

ignition operated (ON) and the connector 16 connected to the dashboard. Levante and support the motorcycle in a proper support. Measure the voltage between the terminals of the cable Blue / White (+) and Green (), from the side of the wiring. Turn slowly front wheel with your hands.

ATENÇÃO

It should never be the cable White / Blue (+) to cable Black (+), even that momentarily, as this may damage the speed sensor.

NOTE

Recommend using a multitester analogue and not the digital, because it can check the impulses of the sensor through the oscillation pointer. The multitester digital submitted only a shuffling of digits, which is not conclusive for a test run.

It should indicate impulses of voltage from 0 to 12 V. In the event that has impulses, inspect the picture of instruments (page 19-7). In the event that has not impulses, inspect with regard to circuit interrupted or short circuit in the cable Blue / White. Also check whether the connector 3P of speed sensor is connected in the wrong way. In case of the cable Blue / White and the connection connector 3P are normal, replace the speed sensor.

SENSOR OF FUEL LEVEL

DISMANTLING

Remove the fuel tank (page 2-4).

Remove the fuel tank nuts and the connector of level sensor / fuel reserve.

ATENCION

Be careful not to damage the arm of the float.

INSPECTION OF THE SENSOR OF FUEL LEVEL

Connect the lead to the terminals of the cables Yellow / White and Green connector 2P sensor fuel level.

Measure to resistance with the float in the top and bottom positions.

| | Full Tank | Empty tank |
|---------------------|-----------|------------|
| Resistance (20° C) | 4 – 10 Ω | 90 – 100 Ω |









INSPECTION OF THE INDICATOR OF FUEL LEVEL

Plug the connector 2P (Black) of the sensor of fuel level to the cabling and move the float from the position of tank empty until the position of tank full . This will verify the functioning of the indicator of fuel level. In case of the indicator does not work properly, check the cabling with regard to circuit interrupted or short. In case of the wiring is normal, replace the connector of the indicator of fuel level.



INSTALLATION

Check if the o ring is in good condition. Replace, if necessary.

Install the sensor fuel level in the tank.

ATENCION

Be careful not to damage the arm of the float.

Install the nuts and tighten firmly.

Install the fuel tank (page 2-4).







INSPECTION

Remove the connector of the light (page 19- 4).

Release the connectors of the ignition switch.



Check to see if there is a continuity between the terminals of the connectors of the ignition switch, in all the positions. The continuity must obey the c code that occurs in the table below:

IGNITION SWITCH

| | R | BI |
|-------------|----|----|
| Activated | 0- | -0 |
| Deactivated | | |
| Lock | | |

DISMANTLING/Installation

Remove the higher bridge (page 13 -22).

Release the connectors of the ignition switch.

Remove the two fixing bolts and the power switch.

Install the power switch and tighten the fixing bolts.

Install the parts removed. SWITCHES OF THE HANDLEBARS

NOTE

Refer to page 13-3 to obtain information to respect the dismantling / installation of the switches of the handlebars.

Remove the connector of the light (page 19-4). Check if there is a continuity between the terminals connector, in all the positions of switch, according to the c code that

occurs in the tables below:

SWITCHES ON THE RIGHT SIDE OF THE HANDLEBARS

Release the connector 9P of the switches on the right side of the handlebars.

EMERGENCY SWITCH

| | BI/R | BI/W |
|-----------------|------|------|
| Deactivated | | |
| Run (Activated) | 0 | 0 |

STARTER SWITCH

| | BI/W | Y/R |
|---------|------|-----|
| Free | | |
| Pressed | 0 | -0 |





BOLTS





19-10

SWITCH OF LIGHTING

| | BI/R | Br | Br/Bu | Br/W |
|----------|------|----|-------|------|
| • | | | | |
| H (High) | 0— | -0 | 0— | -0 |

SWITCHES ON THE LEFT SIDE OF THE HANDLEBARS

Release the connector 9P of the switches on the left side of the handlebars.

SWITCH OF THE HEADLIGHT

| | Bu | Br | W |
|----------|----|----|----|
| H (High) | 0— | -0 | |
| (N) | 0— | -0 | -0 |
| L (Low) | | 0 | -0 |

SWITCH OF INDICATORS

| | 0 | Gr | Lb |
|-------|----|----|----|
| Left | 0— | -0 | |
| (N) | | | |
| Right | | 0 | -0 |

SWITCH ON THE Horn

| | Bl/Br | Lg |
|---------|-------|----|
| Free | | |
| Pressed | 0— | -0 |

SWITCH OF THE LIGHT OF brake

FRONT

Disconnect the connectors breaker of the light of front brake. Check to see if there is a continuity between the terminals of the switch. There must be continuity when operated the brake and there must be continuity when released the brake.

BACK

Remove the cover left side (page 2-2). Release the connector 2P breaker of the light of rear brake. Check if there is a continuity between the terminals connector. There must be continuity when you press the brake pedal rear and must not be continuity when released the brake pedal.







SWITCH OF THE LIGHT OF front brake CONNECTOR 2P



BRAKE PEDAL

CLUTCH SWITCH

Release the connector 2P breaker clutch and verify if there is a continuity between the terminals of the switch. There must be continuity when operated lever clutch and there must be continuity when released the lever clutch.

CLUTCH SWITCH





SWITCH DEADLOCK

Remove the cover of sprocket of transmission (page 6-3). Release the terminal type ring breaker of deadlock. Place the transmission in neutral and check to see if there is a continuity between the terminal of the cable Light green / Red and the earth. There must be continuity when the transmission is at an impasse and must not be continuity when the transmission is positioned in any way.

SIDESTAND SWITCH

INSPECTION

Release the connector 3P breaker of side stand.



Check if there is a continuity between the terminals connector. There must be continuity between the terminals, according to the c code presented at the table below:

| | G/W | G | Y/BI |
|-------------------|-----|----|------|
| Lower Support | | 0- | -0 |
| Support collected | 0 | -0 | |



DISMANTLING/Installation

Release the connector 3P breaker of side stand.









Remove the bolt and the switch of side stand. Install the switch of bracket, aligning the following: the bolt breaker with the hole in the support the slot on the switch with the bolt fixing of the spring of return of side stand. Install and tighten the bolt breaker of bracket. Connect the connector 3P breaker of side stand.

RELAY OF INDICATORS

DISMANTLING/Installation

Remove the plate deflector right (page 2-3). Fuse (15A) Remove the connector 3P and relay the indicators.

INSPECTION

Check the following items: State of the battery Bulbs of the indicator burned or outside of the specification fuse (15A) Operation of the switches of ignition and the indicator Connectors loose or connected incorrectly In case of the components related top are normal, made the following procedures: Release the connector 3P relay of indicators. Connect the terminals of the cables Gray and Black / Brown connector relay of indicator, using a jumper. Tap the power switch (ON position) and inspect the lights of the indicators. In case of the light does not turn: • Inspect with regard to circuit interrupted in the electrical wiring. In case of light is turn: Verify if there is a continuity between the terminal of Gray cable connector relay and the earth of the chassis. • If there is a continuity, inspect with regard to: Connections inadequate Relay of indicator defective. • But there is a continuity, verify if the circuit of Gray cable is interrupted. In case of the wiring and the terminals of connector are in good condition, replace the relay of indicator.



HORN

Remove the plate pit (page 2- 3). Release the connectors of the horn. Connect a battery of 12 V, in good condition, directly to the terminals of the horn. The horn will be normal, in case of that works with the battery of 12 V connected to their terminals.



20. ELECTRICAL DIAGRAM



| Bu: Blue | Lg: Light green |
|----------------|-----------------|
| BI: Black | O: Orange |
| Br: Brown | P: Pink |
| G: Green | R: Red |
| Gr: Grey | W: White |
| Lb: Light blue | Y: Yellow |

COMBINACIÓN DE COLORES: TIERRA/MARCACIÓN

0030Z-KPFA-9000

| NOTES |
|-------|
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |

21. FAULT FINDING

THE ENGINE DOES NOT START/START DIFFICULT


THE ENGINE HAS NO POWER



Probable Causes



UNDER PERFORMANCE AT LOW ROTATIONS AND IDLING



Probable Causes

UNDER PERFORMANCE AT HIGH ROTATIONS



STEERING DEFICIENT

| | Probable Gauses |
|---|--|
| 1. The steering is heavy. | •Nut of the steering column too tight. •Bearing of the steering column damaged. •Steering column bent. |
| 2. Swings in the wheels | Slack excessive of the bearings of the wheels. Eccentricity of the rim. Incorrect Installation of the body of the wheel bearings pivot swing arm damaged. |
| 3. The motorcycle diverted to one side. | •Buffer with fault. •Wheels front and rear misaligned. •Fork deformed. •Swing arm twisting. •Front Axle leaf •twisted chassis. •Clamp brake rough toward the side |