



DOCUMENTATION TECHNIQUE

PEUGEOT XP6 50

MANUEL D'ATELIER (EN ANGLAIS)

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GARAGE HANDBOOK



MH FURIA

INTRODUCTION

This garage manual refers to the AM6 engine, equipping the following vehicles:

- Furia 6V Cross
- Furia 6V Supermotard

MOTORHISPANIA RECOMMENDS



2 stroke engine:

- ***MOTUL POWERLUBE SEMI-SYNTHETIC 2T***

Gearbox oil:

- ***TRANSOIL 10W30***

Grease:

- ***GREASE 100***

ADVICE

A good repairer acts with order and methodically

Use the appropriate tools, gaining time and a professional image.

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TECHNICAL FEATURES

ENGINE PART

Name of the manufacturer:Furia6V
 Type:FU01
 Engine marking: only engine type is inscribed, not numbered.

ENGINE: MOTORI MINARELLI type AM6
 2 stroke monocylindrical type, with separate greasing and liquid cooling by means of circulation pump.

Diameter and distance: Ø40.3x39mm
 Cylinder capacity: 49.7 cc
 B compression relation 12:1
 R compression relation 6.86:1

Transmission:
 Exhaust pipe: 177°
 Transfer: 125°
 Admission: plate valve
 Idling pattern: 1800 rpm +/- 200
 Power: 1.82Kw ISO at 5250 rpm
 Max. Par.: 3.23 mdaN ISO at 5250 rpm

IGNITION: Type CDI
 -Electronic type by means of condensator discharge (tyristor)
 -Advance 1.4 mm before PMS (20°)
 -Spark plug Resisting 5 Kohm
 Type: ..NGK BR8ES or EYQUEM R1000 L
 Electrode space: 0.6 mm

CARBURETTOR: DELL 'ORTO SHA 14-12
 -Main jet: 63

GENERATOR: magneto DUCATI
 -Number of poles: 6
 -Power: 85 W
 -Voltage: 12 V

REGULATOR: FACOMSA (with integrated central integrator)
 -Regulation tension: 13.4VAC +/-0.5

STARTING: Starting pedal

SEPARATE GREASING: DELL 'ORTO oil pump
 -Variable flow
 6 cc/h approx. (control between 0 and 10°)
 9 cc/h approx. (control at 15°)
 25 cc/h approx. (control at 45°)
 38 cc/h approx. (control at 71°)

-Gearing down relation: 2.03 (20x24 and 13x22)

PRIMARY TRANSMISSION: helical gears

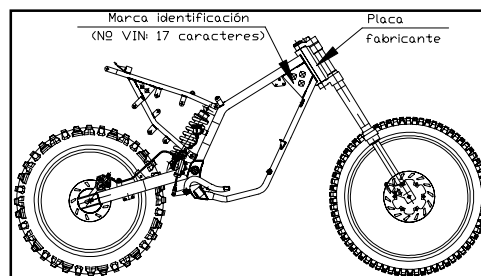
-Gearing down relation: 3.55 (20x71)
 CLUTCH: Multidisc in oil coating with manual control.
 GEARBOX: 6 gears
 -Lubrication by means of chain and pinions
 -Control by means of selector at right foot

GEARING DOWN

1	12X36	3	32,0 %
2	16X33	2,06	46,5 %
3	19X29	1,53	62,9 %
4	22X27	1,23	78,2 %
5	24X25	1,04	92,2 %
6	25X24	0,96	100 %

SECONDARY TRANSMISSION: by means of chain and pinions
 -Gearing down relation: (12x52): 4,33

CYCLE PART



IDENTIFICATION MARK

-VIN nr. 17 characters VTVFU01A.....

CHASSIS:
 Double seat in rectangular steel tube
 Attack angle: 26°
 Advance: 167 mm

STEERING:
 -on ball bearings

FRONT SUSPENSION: SHOWA
 -inverted hydraulic telescopic fork
 -distance: 180 mm
 -bar diameter: 32 mm

REAR SUSPENSION:
 -Cantilever type with oilpneumatic mono shock absorber with helical spring
 -distance: 45 mm

FRONT BRAKE:

- AJP brake pin
- disc O220 mm with manual hydraulic control
- thickness: 4 mm

REAR BRAKE:

- AJP brake pin
- floating disc O180 mm with hydraulic control at the stem
- thickness: 3.5 mm

TYRES: dimensions and pressures when cold

-Cross version:

Front: 2.5x21 1.5 bars
Rear: 110/80x18 1.7 bars

-Supermotard version:

Front: 100/80x17 2.3 bars
Rear: 130/70x17 2.5 bars

DIMENSIONS:

- Total length: 1995 mm
- Total width: 750 mm
- Total height: 1350 mm

WEIGHT:

- Weight when moving: 85 kg
- Max. authorized total weight: 235 kg

CAPACITIES AND TYPES

FUEL: Super, unleaded, 98 or 95 oct.

Capacity of the tank: 6 litres

Reserve: 0.2 litres

SEPARATE GREASING: Semi synthetic oil, or synthetic

MOTUL Powerlube semi-synthetic 2T

Capacity of the oil tank: 1.1 litres.

GEARBOX: Transmission oil

MOTUL Transoil 10W30

Capacity gearbox: 0.75 litres.

COOLING CIRCUIT: Protection until -20°C

Antifreeze fluid type Procor 3000 or equivalent, change every 2 years

Capacity of the circuit: 0.7 litres

BRAKE FLUID: fluid according to the rules DOT 3 or DOT 4

HYDRAULIC FORK: Fork oil type: SAE 20

Contents for each bar:..... 175 cc

PARES APRIETE MOTOR

Cylinder head nut	1,8 mdaN
Crankshaft pinion nut	7,5 mdaN
Camshaft pinion nut	6 mdaN
Magneto nut	5,2 mdaN
Clutch nut	7,5 mdaN
Pressure plate screw	0,5 mdaN
Clutch counter nut	2,7 mdaN
Engine housing case screw	1,1 mdaN
Transmission cover screw	1,1 mdaN
Magneto cover screw	0,4 mdaN
Inlet pipe screw	1,1 mdaN
Starting pedal screw	3 mdaN
Gearbox casting screw	1,8 mdaN

TIGHTENING OF THE CYCLE PART

Front wheel nut	4,5 mdaN
Rear wheel nut	6,5 mdaN
Fork screw	2,5 mdaN
Steering nut	6 mdaN
Fork tube inf. T screw	1,5 mdaN
Fork tube sup. T screw	2,8 mdaN
Handlebar fixing screw	2,3 mdaN
Engine fixing screw	2,8 mdaN
Swing arm nut	6,5 mdaN
Rear chassis fixing screw	2,8 mdaN
Fixing footrest bracket screw	2,8 mdaN
Upper shock absorber screw	4,5 mdaN
Lower shock absorber screw	4,5 mdaN
Front brake pin screw	2,8 mdaN
Rear brake pin screw	2,8 mdaN
Front brake disc screw	1,2 mdaN
Rear brake disc screw	0,5 mdaN

SPECIAL TOOLS

Engine bracket
Adaptation Furia 6V
VAR tool
Opening and closing plaque
Protection cap
Special 10x125 nut
Centrer
Special nut bracket
Gauge 47 set
Wheel extractor
Clutch immobil. tool
Clutch side crankshaft driver
Wheel side crankshaft driver
Selector shaft driver
Water pump driver
Clutchstick driver
Lock pin
Adjustable immobilizer
Outer circlip pin

MAINTENANCE

Depending on the use of the vehicles, we recommend that you should apply:

- The normal maintenance plan
- The reinforced maintenance plan

The normal maintenance plan includes:

- Service after 500 km or 3 month.....Plan A
- Service every 5000 km.....Plan B
- Service every 10000 km.....Plan C

The reinforced maintenance plan includes:

- Service after 500 km.....Plan A
- Service every 2500 km.....Plan B
- Service after 5000 km.....Plan C

NOTE: The replacement of certain parts is directly related to the use of the vehicle and it is also related to “the user’s nature”.

ACTIONS	PLAN A 500 Kms. or 3 months	PLAN B 2.500 Kms or 5.000 Kms *	PLAN C 5.000 Kms or 10.000 Kms *
Verify:			
- Adjustment of the idling	X	X	X
- Gas control	X	X	X
- Clutch control	X	X	X
- Front and rear brake control	X	X	X
- Functioning the electrical equipment	X	X	X
- State and pressure tyres	X	X	X
- Petrol tube	X	X	X
- Oil tube	X	X	X
- Brake fluid tube	X	X	X
- Antifreeze fluid tube	X	X	X
- Brake fluid level	X	X	X
- Antifreeze fluid tube	X	X	X
- Regulation of tension chain and oiling	X	X	X
- Tightening of screws	X	X	X
Replace:			
- Gearbox fluid	X		X
- Spark plug		X	X
- Filtering elements of the filter box		X	X
- Brake pads (if necessary)			X
- Crown, pinion, chain (if necessary)		X	X
- Clutch disc (if necessary)			X
Clean:			
- Pinion head			X
- Combustion chamber			X
- Exhaust pipe exit			X
Clean:			
- Carburettor			X
Vehicle testing:			
- On the road	X	X	X

DISASSEMBLY OF THE ENGINE OF THE VEHICLE

-Disassemble:

the petrol tube to the carburettor
the oil pipe to the pump
the two tubes of the cooling circuit (cylinder head and pump)
gas control
the spark plug cap
the oil pump control
the filter box

-Disconnect:

the electrical installation of the magneto
the electrical installation of the neutral

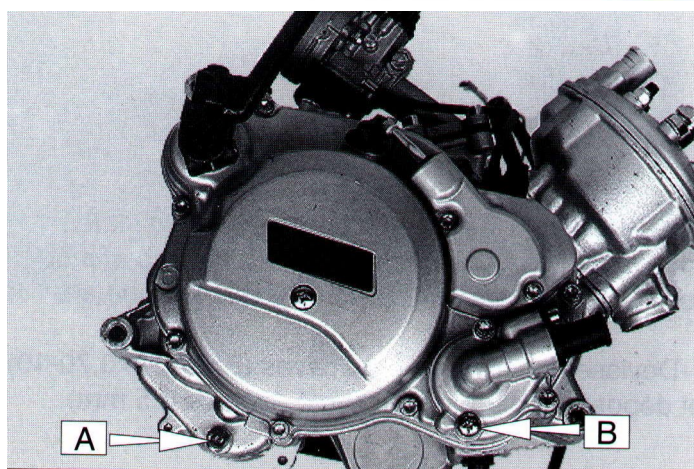
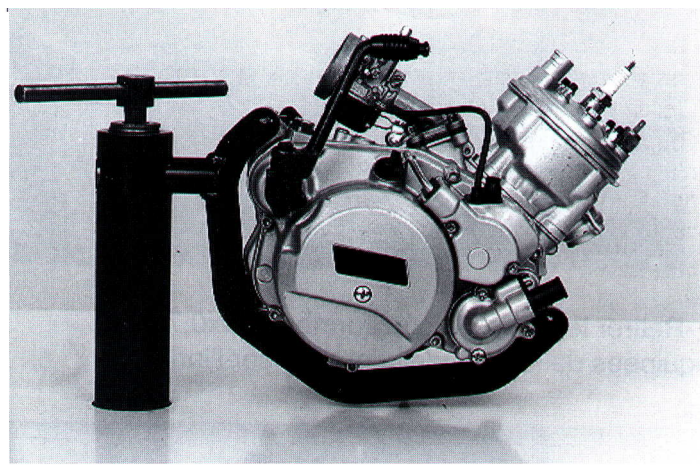
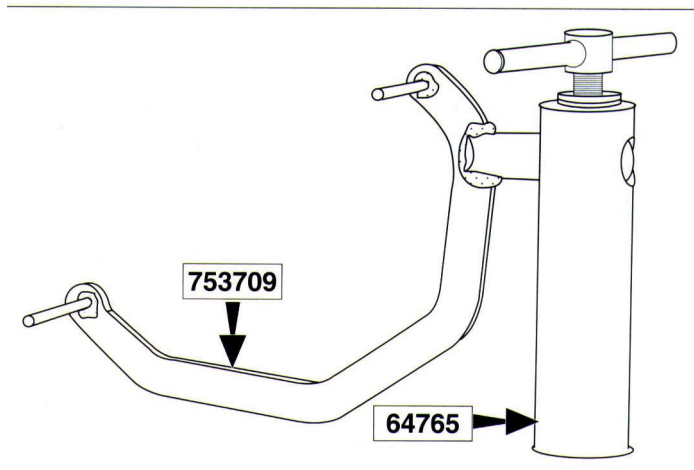
-Disassemble the transmission chain (fast union)

loosen nut of the swing fork
loosen and remove:
screw sup fastening of the engine and make it pivot upwards
the other two screws of the engine

-Remove the engine and put it on the bracket adaptor (this bracket has to be screwed to a bench)

-Take the oil out of the gearbox, screw (a)
-Remove the draining screw from the water pump (B)
to empty it.

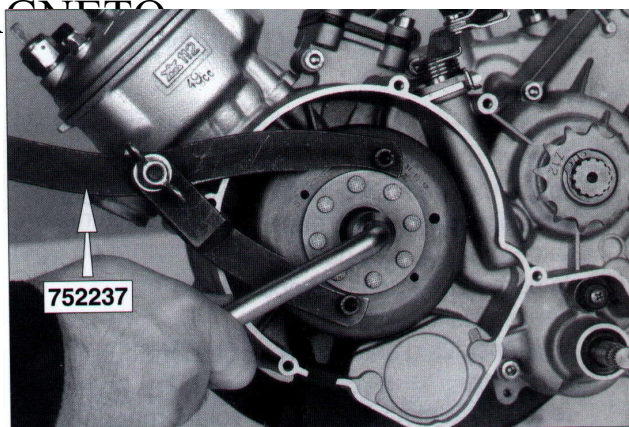
CAUTION: respect the environment, recover the used oil and antifreeze fluid in the appropriate containers.



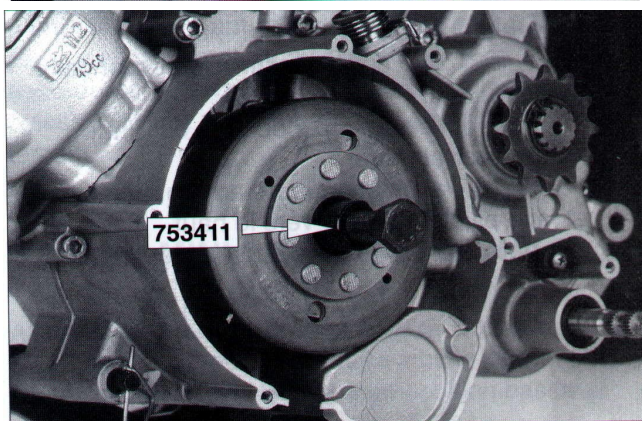
DISASSEMBLY OF THE MAGNETO

Remove the 5 screws (CHC M5x0.80-20) and remove the cover.

Immobilize the rotor and loosen the magneto nut with tool.

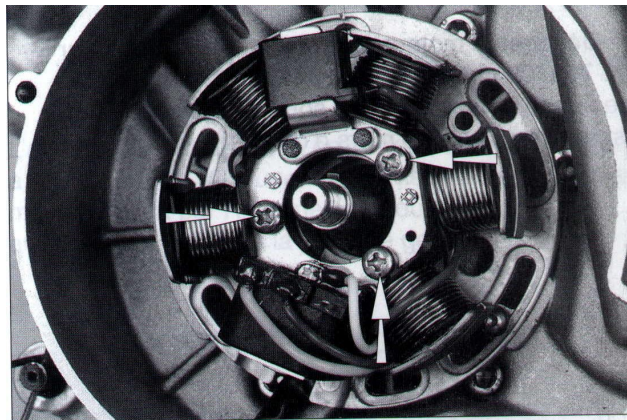


Screw the extractor off the wheel and act on the central part of it to take out the rotor (assembled on conical axle with pin).

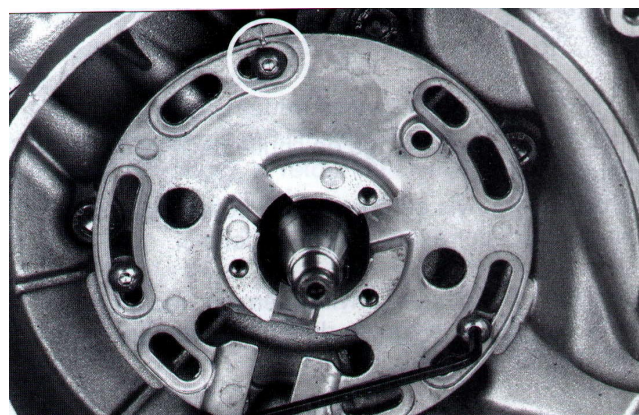


Remove the three screws with star head (M4x0.70-19) and their washers.

IMPORTANT: Before removing the stator base, leave a small mark on the housing case and on the plaque so you can find back the initial position during the assembly.



Loosen the three screws with allen head (BHC M4x0.70-10) and remove the stator plaque (Allen wrench of 2.5 mm).

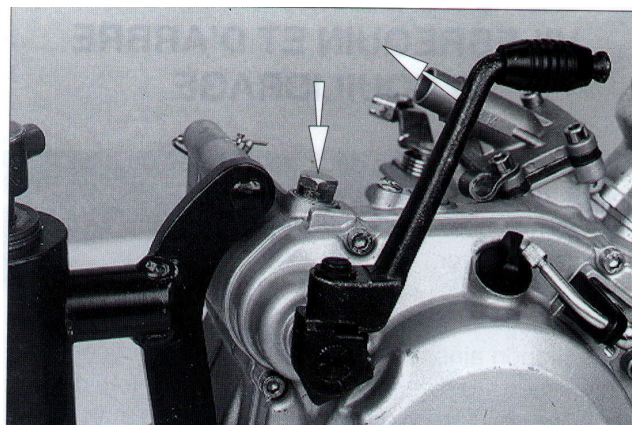


ASSEMBLY OF THE CLUTCH COVER

Activate the starting pedal slightly and keep it in this position.

Remove the fixing screw from the pedal.

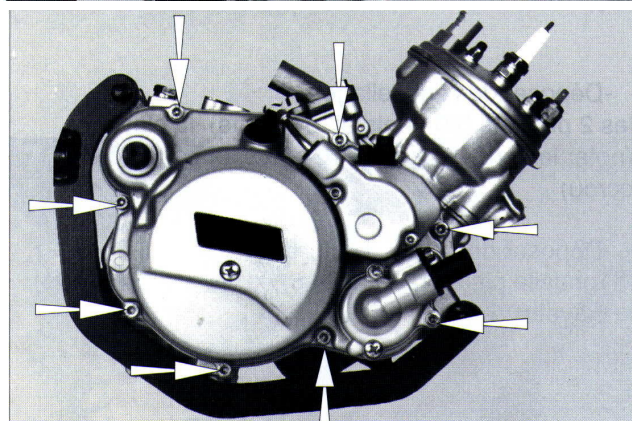
Loosen the pedal launcher screw and remove the spring.



Loosen and remove the 8 fixing screws from the cover (type CHC).

Remove the joint and the two centring bubbles from the cover with the housing case.

IMPORTANT: Write down the position of the starting pedal on the spindle to put it back during the assembly (see page 25).

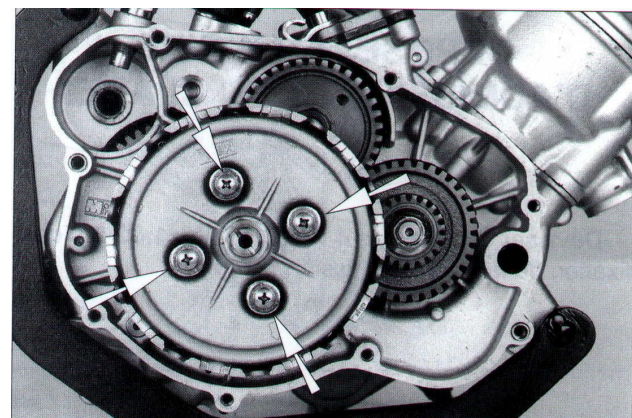


DISASSEMBLY OF THE CLUTCH

Loosen and remove the 4 screws (CB M5x0.80-20), the washers and the springs from the pressure plate.

Disassemble the upholstery discs and the plain ones.

Take out the primary driving shaft, the ball and the driving stick (see page 23 A B C).

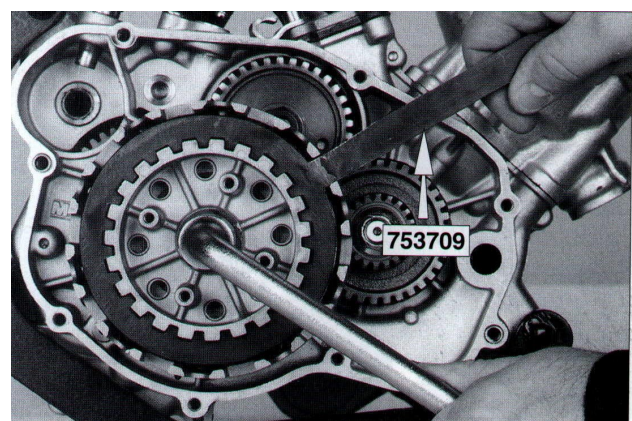


Straighten the nut brake.

Immobilize the rotor clutch with tool.

Loosen and remove the nut (wrench 17) and the nut brake.

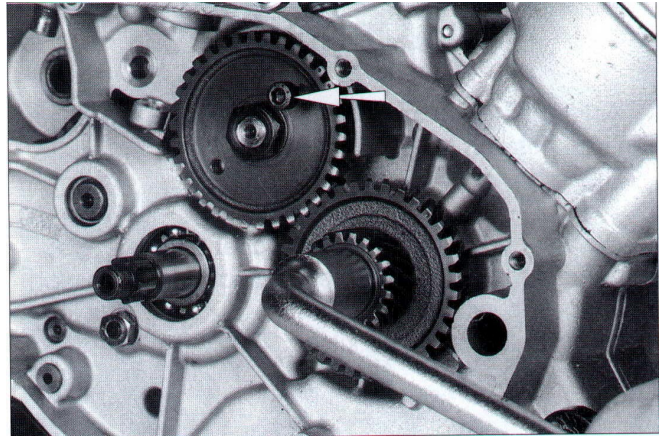
Disassemble the rotor, grooved separator, the plain washer (17.2x30x0.8) and the interior cogged conical washer (write down its position for the assembly).



DISASSEMBLY OF THE CRANKSHAFT PINIONS AND OF THE CAM SHAFT

Put a screw (type CHC M6x1.00-25 for example) into one of the thread holes of the camshaft pinion, resting its end on the ribbing of the housing case.

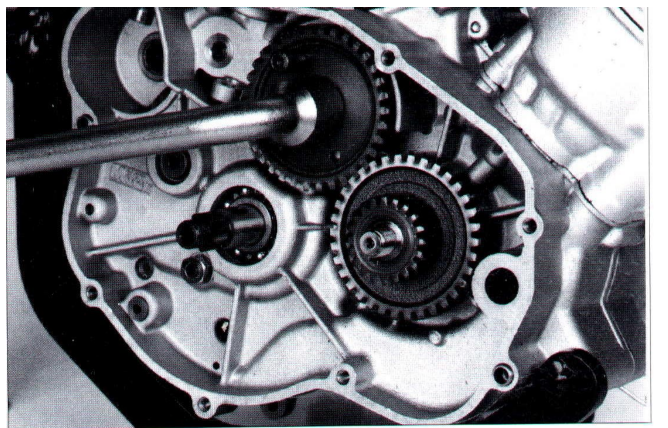
With the immobilized pin in rotation, loosen the crankshaft nut (wrench 17) and the cam shaft nut (wrench 19) and remove them.



Disassembly of the crankshaft:

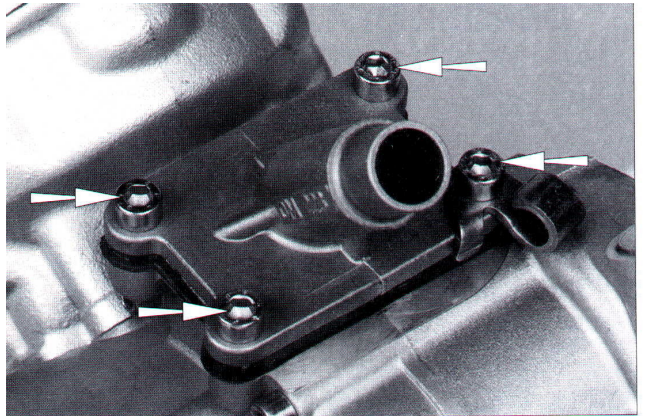
The two pinions (20 cogs and 34 cogs), the in (note the direction of the pinion 20 z, mark towards the nut).

The smooth washer (812.3x22x0.8), the pinion (34 cogs) and the pin.



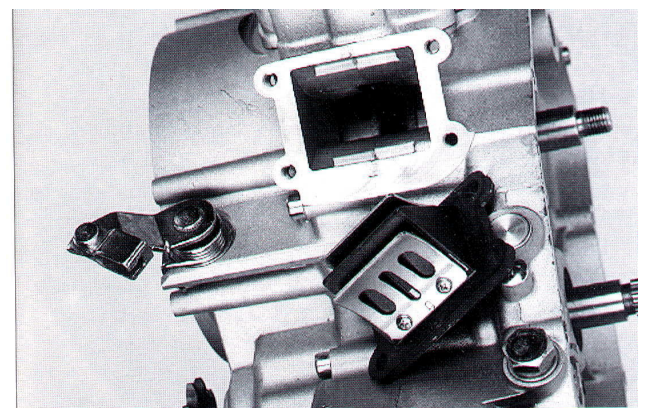
DISASSEMBLY OF THE INLET PIPE AND PLATE VALVE

Loosen and remove the 4 fixing screws (CHC M6x1.00-20) from the inlet pipe.



Disassemble the pipe and the plate sheet (overhaul of valve is in the chapter dedicated to the assembly, page 19).

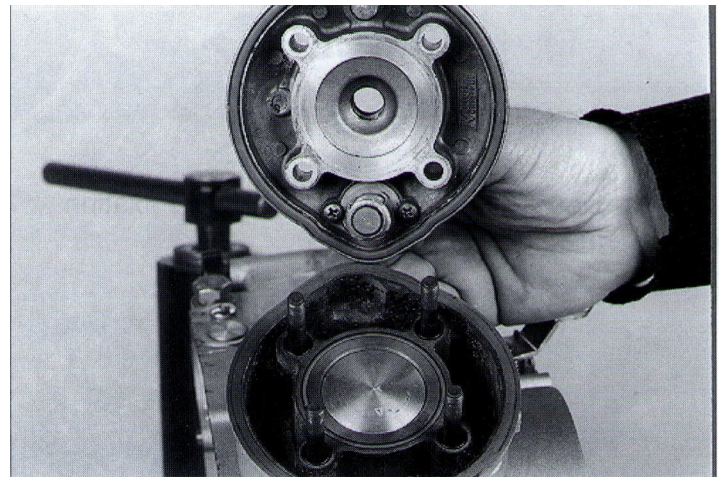
Disassemble the clutch lever with its spring and washer.



DISASSEMBLY OF THE UPPER PART OF THE ENGINE

DISASSEMBLY OF THE CYLINDER HEAD:

Loosen and remove the 4 nuts (wrench 10) and washers.
Disassemble the cylinder head equipped with its torical joint.

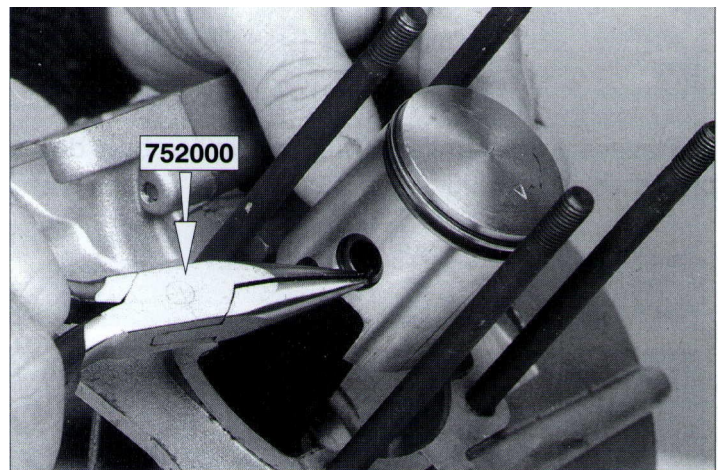


DISASSEMBLY OF THE CYLINDER:

Remove the 4 torical joints from the pullsticks and the central torical joint.
Disassemble the cylinder and its base joint.

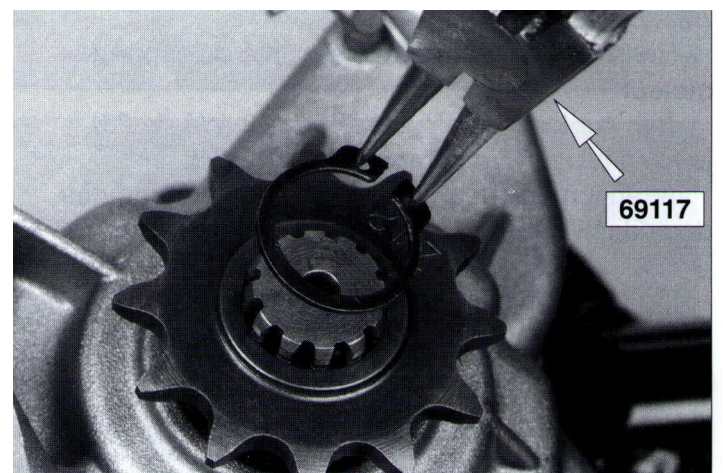
DISASSEMBLY OF THE PISTON:

Incline the engine towards the left or right side
In order to avoid dropping the fixer accidentally into the engine.
Remove the bolt fixer by means of some tongs.
Push the bolt and remove the piston (the bolt is adjusted to the piston with oil).
Remove the needle case from the stem of the connecting rod.



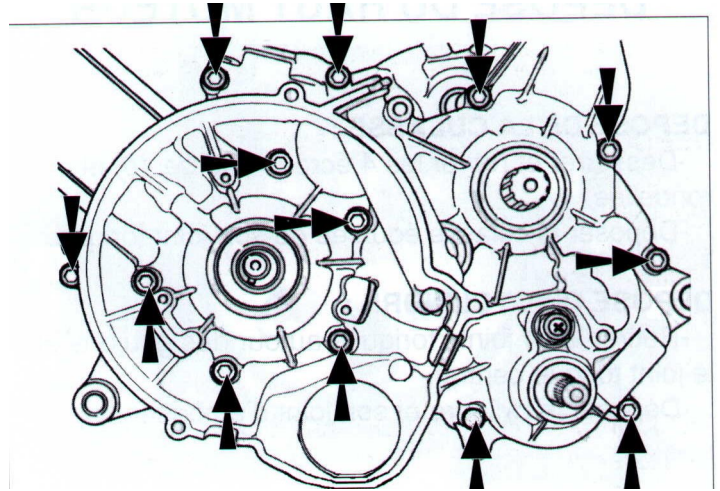
DISASSEMBLY OF THE EXHAUST PINION

Remove the retention circlip by means of some tongs from the exhaust shaft.
Disassemble the exit pinion.
Remove the second retention circlip.



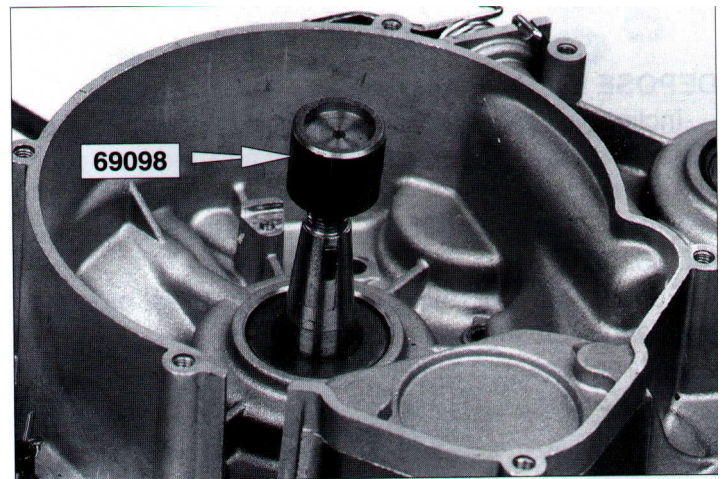
OPENING OF THE ENGINE HOUSING CASES

Remove the 13 fixing screws (CHC M6x1.00-40) from the two cases.



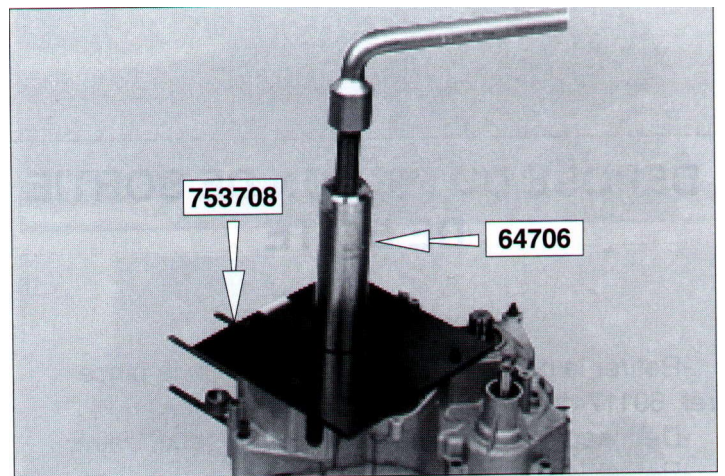
Put the protection cap at the end of the crankshaft.

Place the plaque in the left case equipped with tool. Fix the plaque on the housing case with four screws (M5x0.80-20). Remove the two safety pins from the engine bracket. Act on the screw of tool the housing cases have been opened completely. Be careful with both centring bubbles of both cases.



CAUTION: while opening, make sure that both cases open in parallel. If necessary, use a plastic hammer, hitting both ends of the secondary shaft and gear shaft.

Put the two safety pins back on the engine bracket.

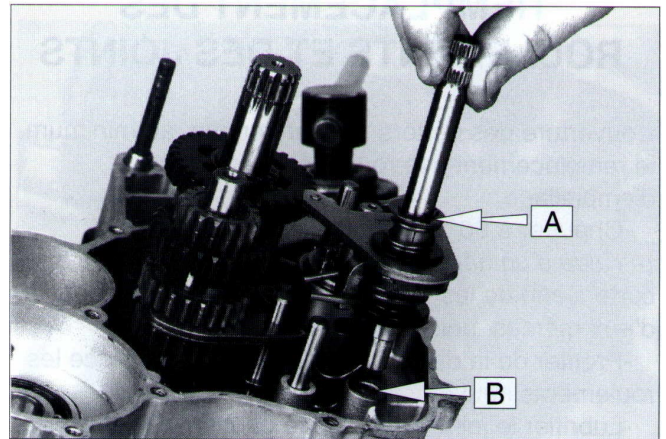


DISASSEMBLY OF THE SELECTOR AND THE GEARBOX

DISASSEMBLY OF THE SELECTOR SHAFT:

Put the selector drum in 4th position (pin of the mechanism looking towards the fork shaft of the secondary shaft).

Remove the selector shaft equipped with its two friction washers (10x16x0.6(A) and 12x17x0.6 (B)).



DISASSEMBLY OF THE GEARBOX:

Remove the friction washer from the secondary shaft(20.4x25x0.6).

Remove the friction washer from the selector drum (10x16x0.6).

Remove and disassemble the fork shaft from the secondary shaft.

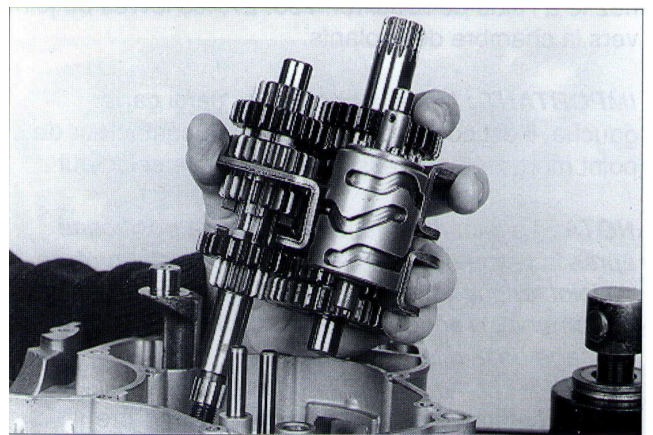
Take out the whole:

Main shaft

Secondary shaft

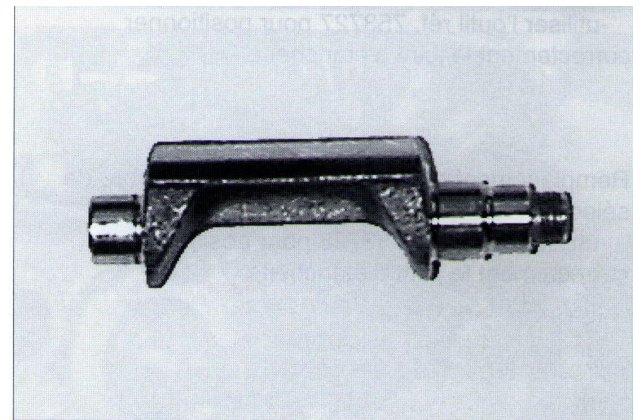
Selector drum

Forks



Remove the anchorage ball and its driver spring.

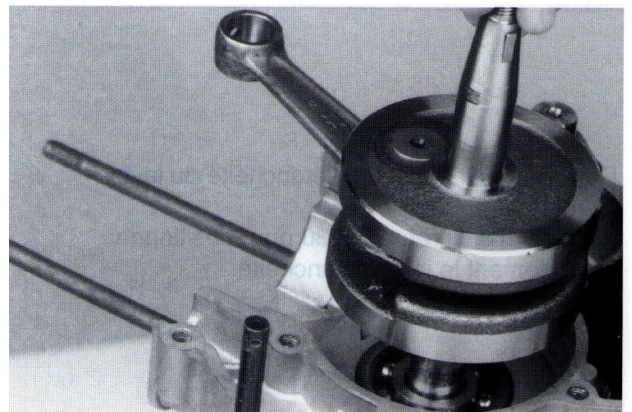
Remove the 2nd friction washer (14.5x27x0.6) from the secondary shaft.



DISASSEMBLY OF THE CAMSHAFT

The camshaft is fixed on its bearing.

Hit its end with a plastic hammer to disassemble it.



DISASSEMBLY OF THE CRANKSHAFT

Disassemble the whole connecting rod / crankshaft, the modified separator and the torical joint (the crankshaft is assembled on its bearing and it is lubricated).

REPLACEMENT OF BEARINGS AND JOINTS

The opening of the housing cases of the engine implies, at least, the replacement of the crankshaft bearings and joints.

Heat the housing cases at approx. 80°C in an even way (with a thermal layer remover, for example) to expand them; the bearings will fall off by themselves. Remove the joints.

Take advantage of the expansion to place the new bearings in their position.

Lubricate the left tight joint and put it in its position with tool, the edges towards the wheel chamber.

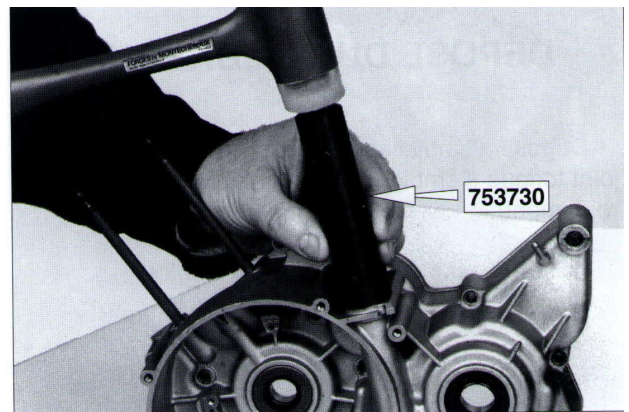
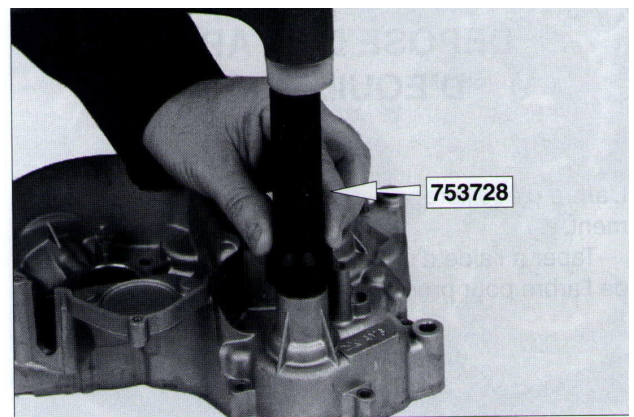
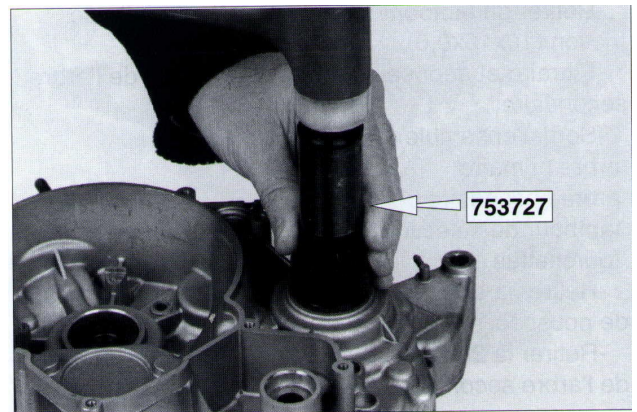
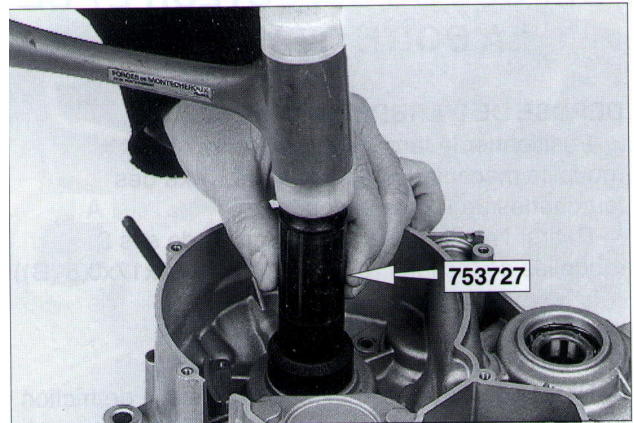
IMPORTANT: Before heating the left case, we recommend that you should remove the neutral socket of the selector shaft.

NOTE: The right tight shaft will be installed after closing the housing cases, placing the torical and the separator, to avoid causing any damage to its edges again when it touches that same separator.

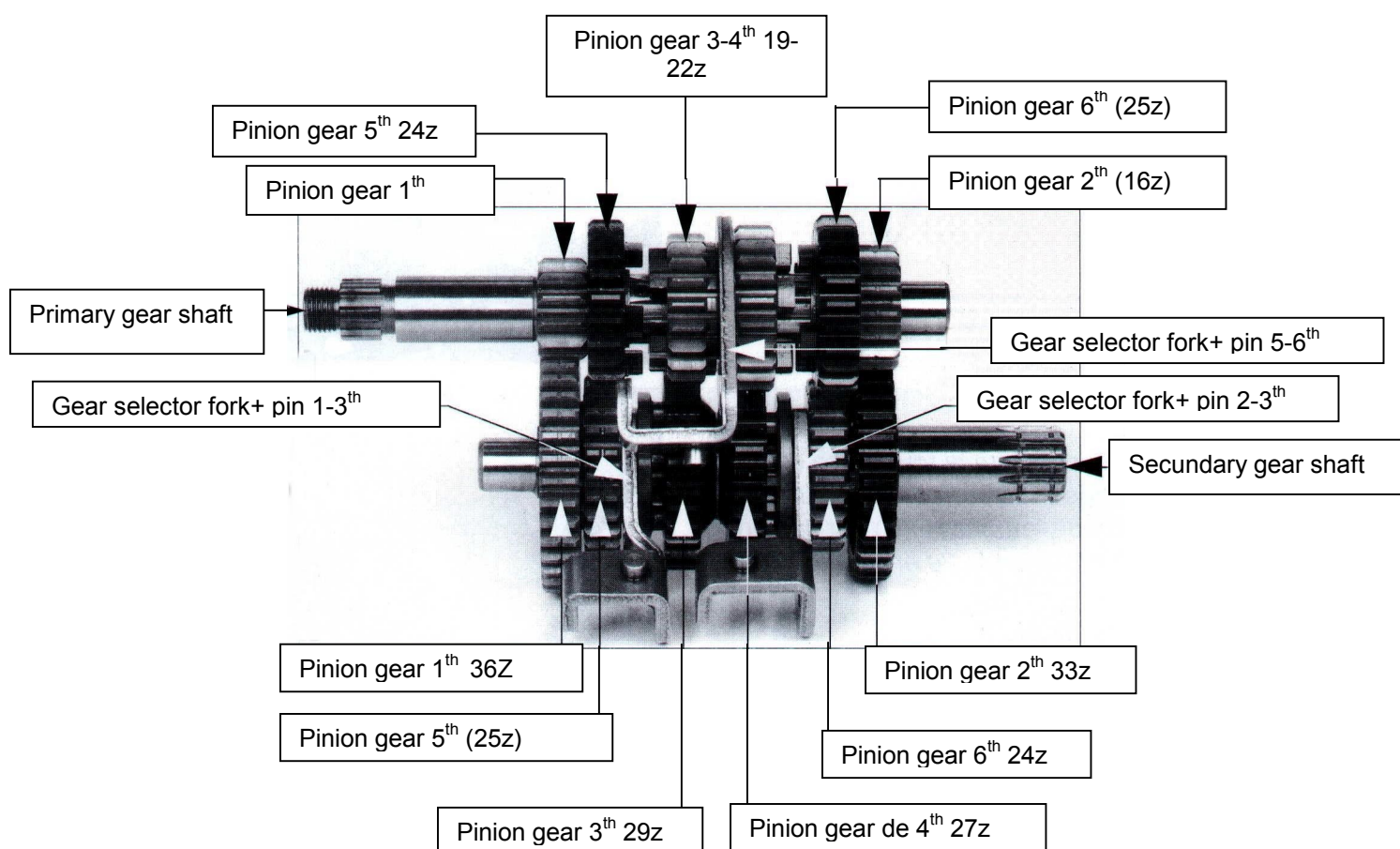
Replacement of the tight joints of the secondary shaft:
Use tool to put this joint in the correct place and position.

Replacement of the tight joints of the selector shaft:
Use tool to put this joint in the correct place and position.

Replacement of the clutch lever joints:
Use tool to put this joint in the correct place and position.



ASSEMBLY OF THE GEARBOX AND OF THE SELECTOR



CHECK BEFORE THE ASSEMBLY:

Verify:

The bearings and needle cages of the housing cases.

The state of the tops (clips) and seats.

Each and every pinion to verify wearing out or deformation.

The state of the selection forks (wearing out or deformation of the fork or wearing out of its end: it must be cylindrical).

The good condition of the drum and its holes.

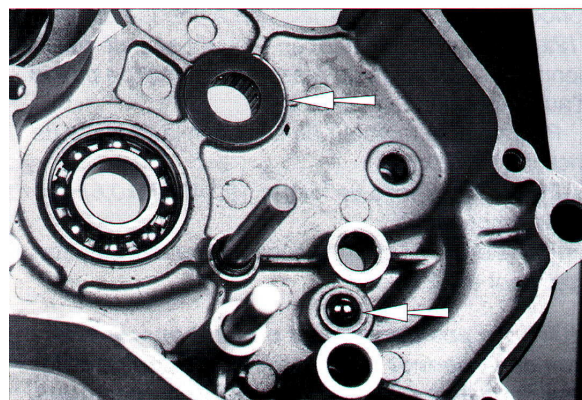
The drum shafts (wearing out-breaking).

NOTE: should replacement of a pinion be necessary, then we recommend replacing the entire train (the pinion of the main shaft and the one that belongs to the secondary shaft).

ASSEMBLY OF THE GEARBOX:

Place the washer (14.5x27x0.6) on the needle case of the secondary shaft of the right case.

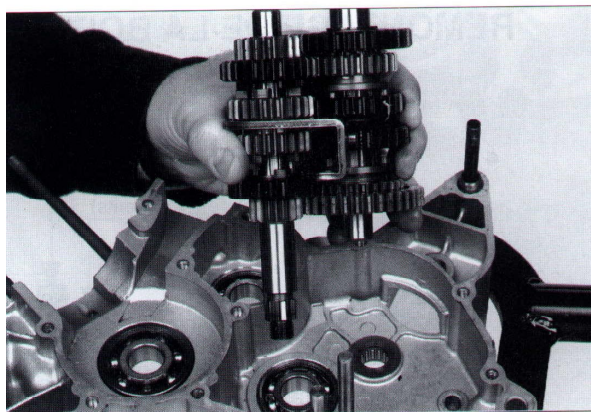
Put the spring and the anchorage ball in their seats and lubricate them with grease.



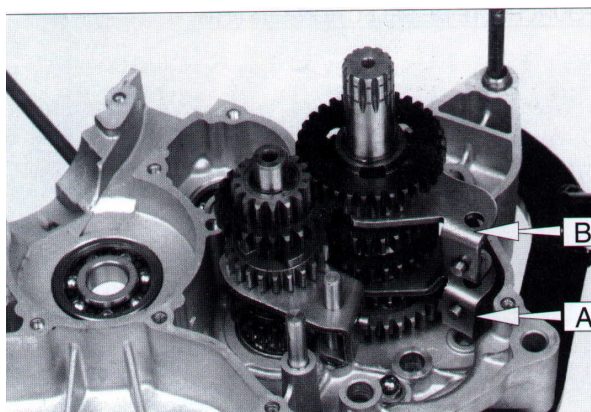
Place the set of the secondary shaft/main shaft equipped with its control fork of the double rocker pinion, in the case.

Place the bent fork (A) on the secondary shaft in the pinion of the fifth (control of the first and third) and the second pin (B) on the rocker pinion of the sixth (control of the second and the fourth). Place the selector drum, after oiling its shaft, and place the hole guides starting with the pin of the fifth-sixth in the intermediate drum hole. After this, place the pin first-third in the inferior hole and, finally, the pin of the second-fourth in the superior hole.

Place the fork shaft of the secondary shaft in its seat.



Verify the good change of the gears activating the selector drum with one hand, turning the main shaft with the other hand.



ASSEMBLY OF THE SELECTOR SHAFT:

Place the selector drum in the fourth position (the bolt of the aligned mechanism virtually with the fork shaft of the secondary shaft).

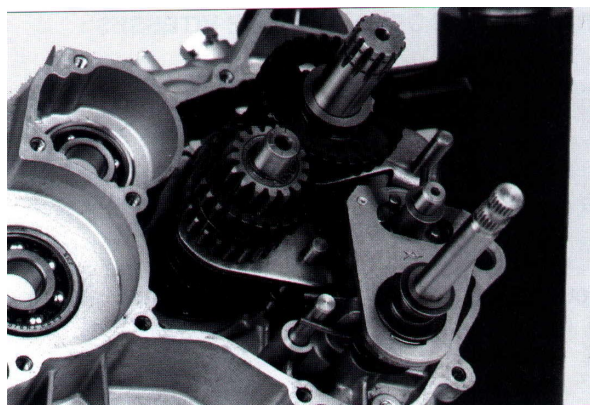
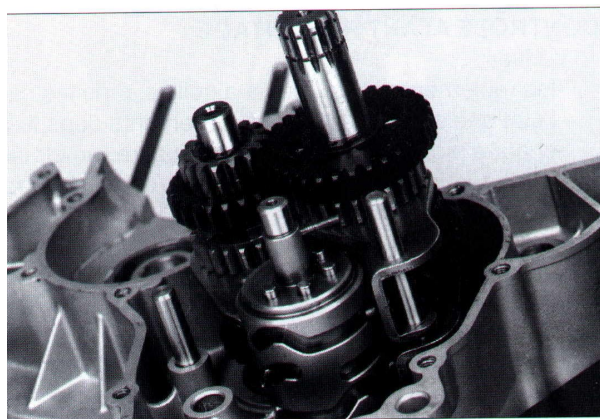
Place the selector shaft equipped with its washers (with a thickness of 0.6 mm in each end (12x17x0.6 and 10x16x0.6) taking care that you place the ends of the spring of both sides of the fixing shaft.

Place the friction washer (10x16x0.6) on the selection drum.

Place the friction washer (20.45x25x0.6) on the secondary shaft.

The side set of the secondary shaft must not be bigger than 0.2 mm.

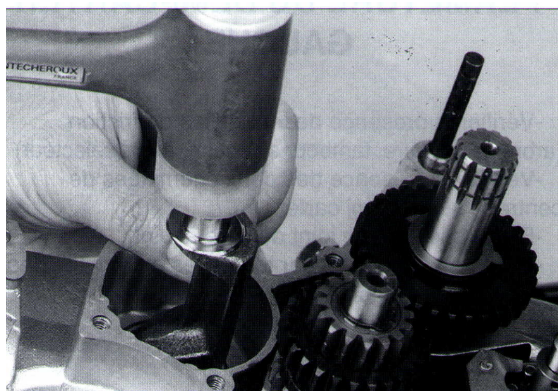
NOTE: the placing of the selector drum in fourth position allows the assembly of the selector shaft without being bothered by the bolt of the mechanism.



ASSEMBLY OF THE CAMSHAFT

This shaft is assembled tightly on the bearing.

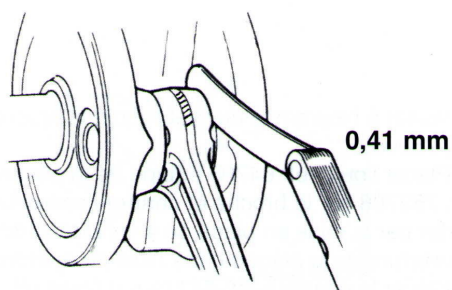
Make sure you place it well with a plastic hammer.



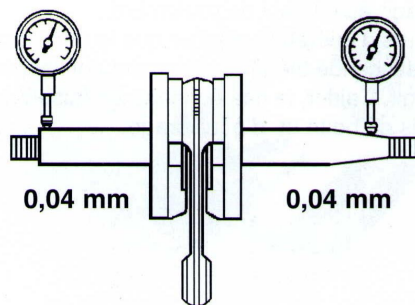
ASSEMBLY OF THE WHOLE JOINT/CRANKSHAFT IN THE RIGHT CASE

CHECKING THE CRANKSHAFT

The side set of the head of the joint must be between 0.14 and 0.41 mm.

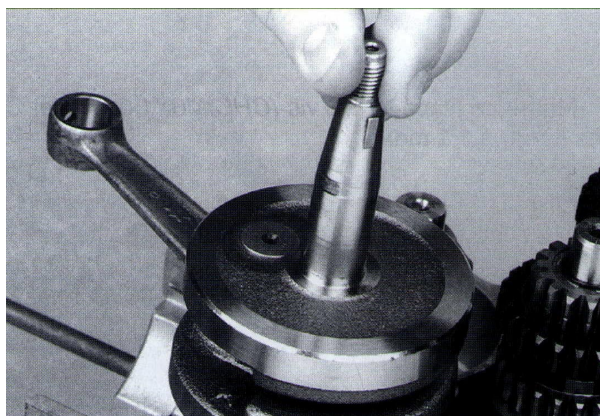


Check the ligning-up of the crankshaft.
The values at the end must never be higher than 0.04 mm.



ASSEMBLY

Place the crankshaft in its correct position in the right semicase. Do this by hand.



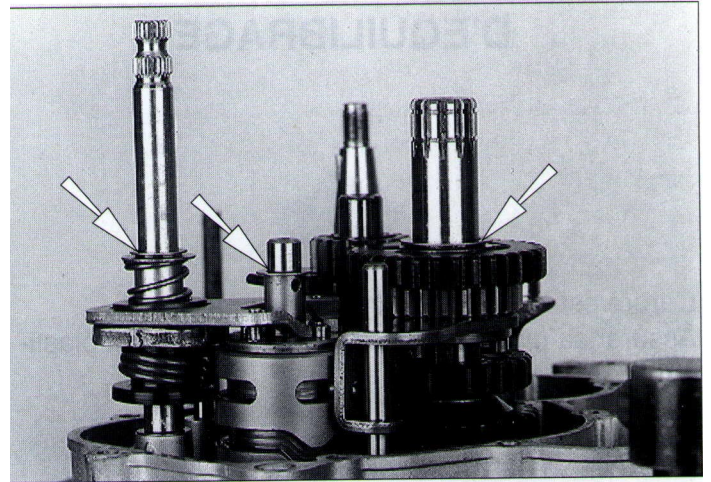
CLOSING OF THE LEFT CASE

Verify the presence of the friction washers (secondary shaft, selector drum, selector shaft).
Verify the presence of both centring bubbles in the semicase.

Apply the joint paste.

Lubricate all the ends of the shafts and their seats.

Place the left semicase.



Screw tool to the end of the crankshaft.

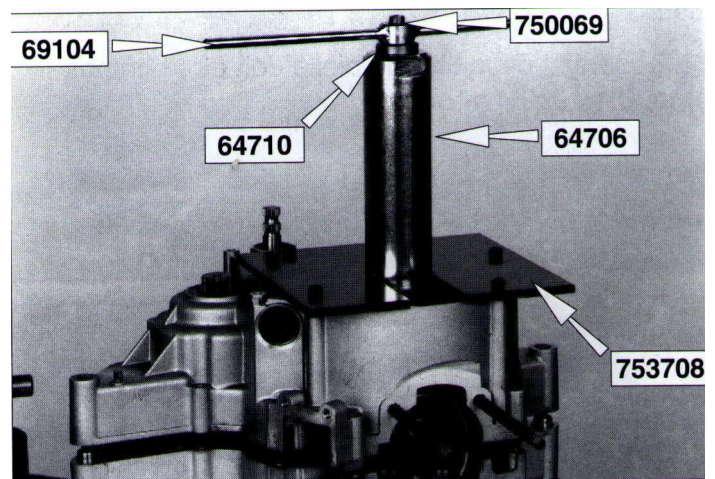
Place tool equipped with plaque and settle the whole on the case by means of 4 screws (M5x0.80-15, the opening of the place on the cylinder shaft).

Place the centrer on tool.

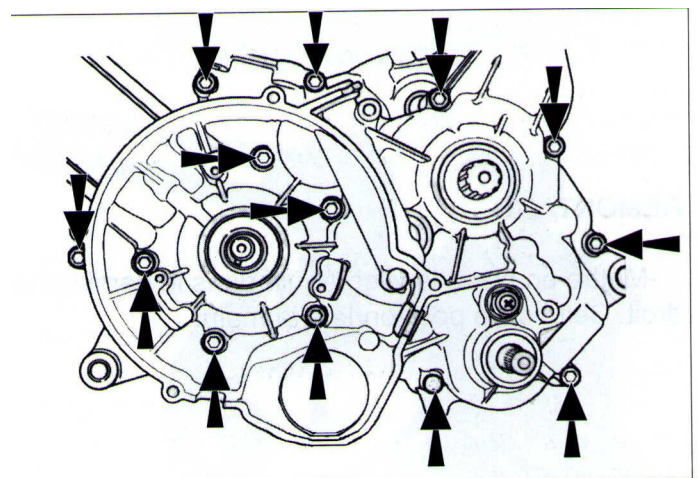
Screw tool on the one that has, holding the connecting rod.

Continue screwing the tool on it until the crankshaft reaches the bearing.

During this operation, make sure that the left semicase descends in parallel on the right one. Help reaching this position, if necessary, making the shafts of the gearbox and cam turn.



Place the 13 screws (CHC M6x1.00-40) and tighten them with a pair of mdaN 1.1.



ASSEMBLY OF THE SUPERIOR PART OF THE ENGINE

CHECKING THE PISTON:

It must not be scratched or show traces of breaking down.

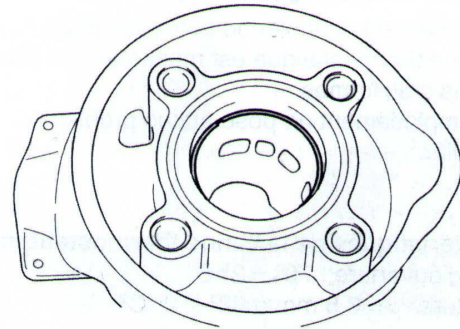
The segments must be free in their seats.

CHECKING THE SEGMENTS: compression segments and tight ones.

Cutting set new segment: 0.15 to 0.33 mm.

Limit of use: max. 1 mm.

Set in the hole: 0.03 to 0.06 mm.

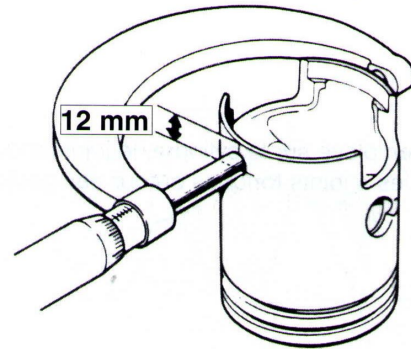


CHECKING THE CYLINDER:

The cylinder must not have any scratches, show traces of breaking down or show traces of having worn out considerably.

Verify this with a comparer in two directions, the first one perpendicular to the piston shaft, the second one in parallel with its shaft (measured between the head of the piston and the exhaust hole). The allowed ovalization is 0.03 mm.

After this, measure the diameter of the piston and compare it with the cylinder. The max. set that is allowed is 0.07 mm.



ASSEMBLY OF THE PISTON:

Verify the parity of the whole cylinder/piston (letter indicated on the piston and cylinder).

Oil and place the needle case at the stem of the connecting rod.

Present the piston with the arrow directed towards the exhaust pipe.

Push the bolt into its seat.

Incline the engine to one side to prevent the clip from falling on the engine.

Assemble a new fixing clip (THIS IS COMPULSARY!) with Pin.

REMEMBER: the opening of the clip must look up or down, never to a side.



NOTE: as in all engines, we recommend verifying the lining-up of the connecting rod in the assembly.

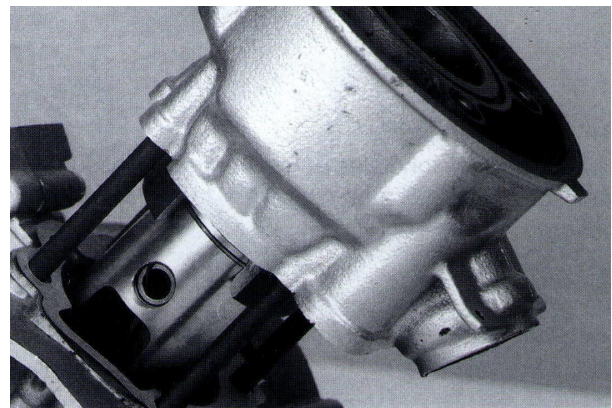
ASSEMBLY OF THE CYLINDER:

Place de new base joint after oiling it.

Also oil the piston and the cylinder.

Make sure that the opening of the segments is in position.

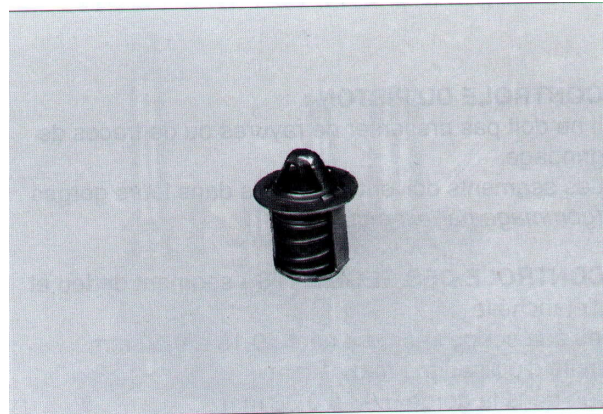
Introduce the cylinder compressing both segments with your fingers.



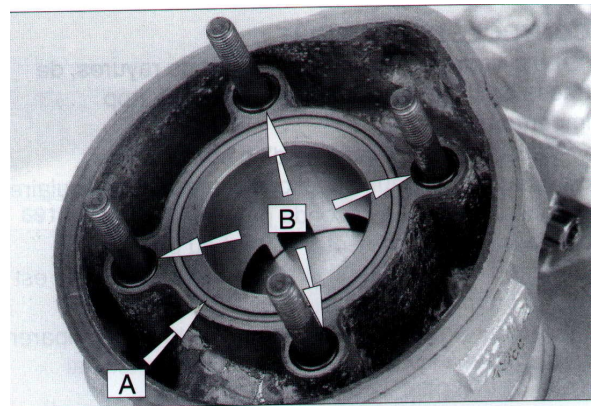
ASSEMBLY OF THE CYLINDER HEAD:

Replace the thermostatic valve:
The thermostatic valve is fixed by two star head screws.
Its replacement does not give any specific problems.

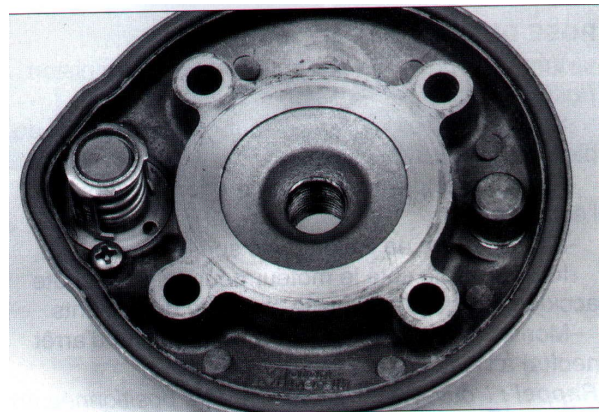
Features of the thermostatic valve:
Beginning of the opening: $70^{\circ} \pm 2^{\circ}\text{C}$
Opening $\geq 3.5 \text{ mm}$ at $82^{\circ} \pm 2^{\circ}\text{C}$



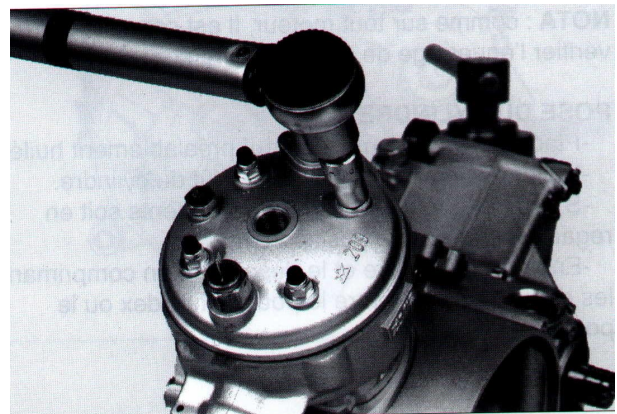
Place the central torical joint in the cylinder and also the 4 torical joints of the push sticks.



Place the torical joint in the cylinder head and place it in the cylinder.



Place the 4 washers and the 4 nuts and make sure they are tightened well with a pair of 1.8 mdaN (tighten in the shape of a cross, wrench 10).

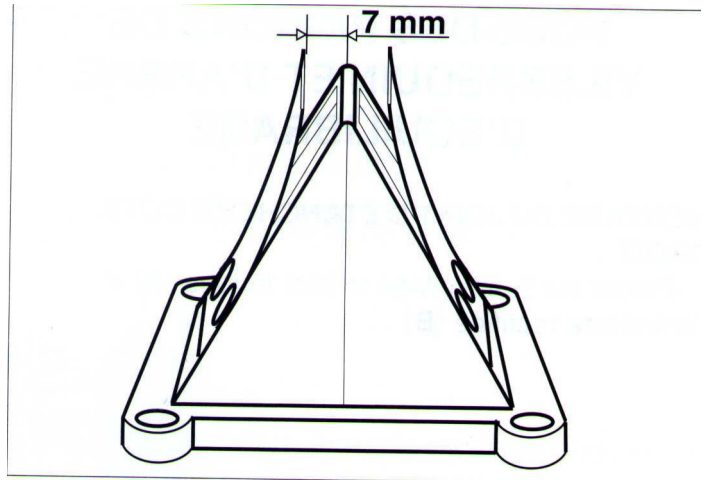


ASSEMBLY OF THE PLATE VALVE AND OF THE INLET PIPE

CHECKING THE PLATE VALVE:

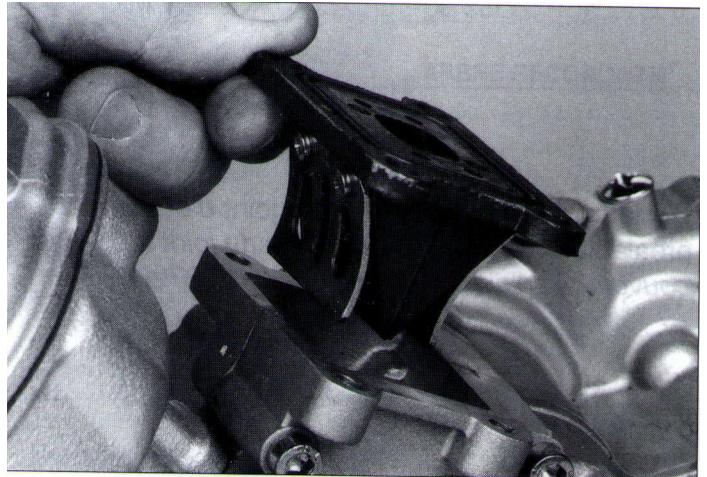
Make sure the plates and their seats are in good conditions.

The limit of the plate openings must be 7 mm.



ASSEMBLY:

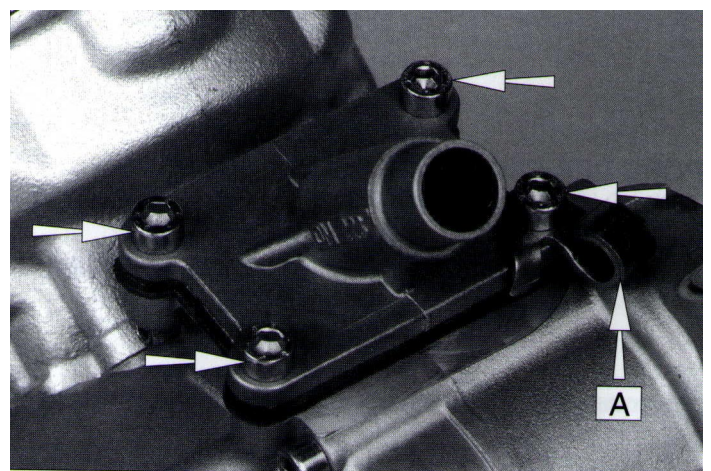
Place the plate valve in the housing case.



Put the inlet pipe on its place.

Make sure that the whole is tightened correctly with 4 screws (CHC M6x1.00-20), which will be tightened with a pair of 1.1 mdaN.

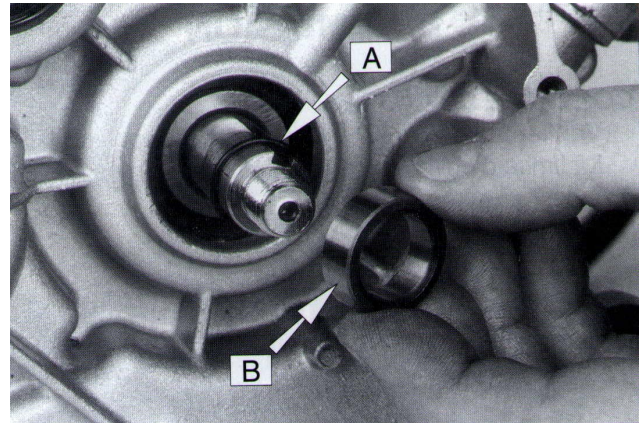
The right rear screw has the clutch thread bracket assembled on it.



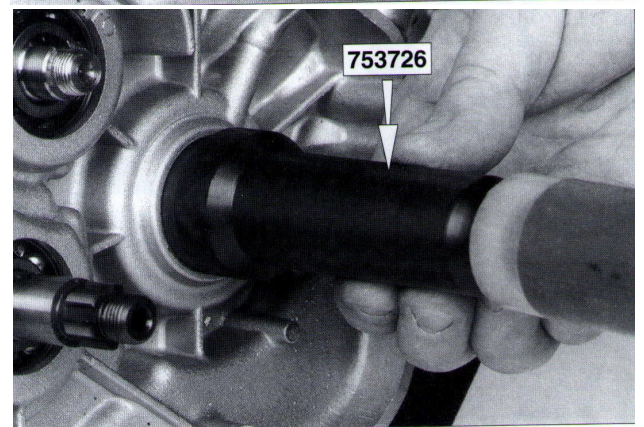
ASSEMBLY OF THE CRANKSHAFT PINIONS AND OF THE CAMSHAFT PINIONS

ASSEMBLY OF THE TIGHT JOINT (RETAIN) OF THE RIGHT SIDE.

Place the torical joint (A) and the modified separator (B) on the crankshaft.



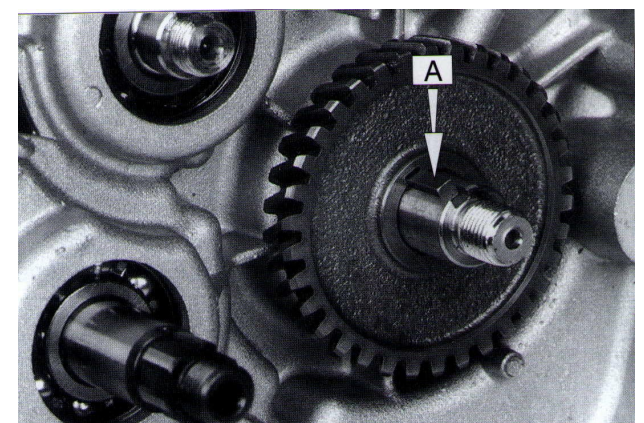
Assemble the tight joint in its seat (the edges of the joint towards the cover side), after lubricating it, with the push rod.



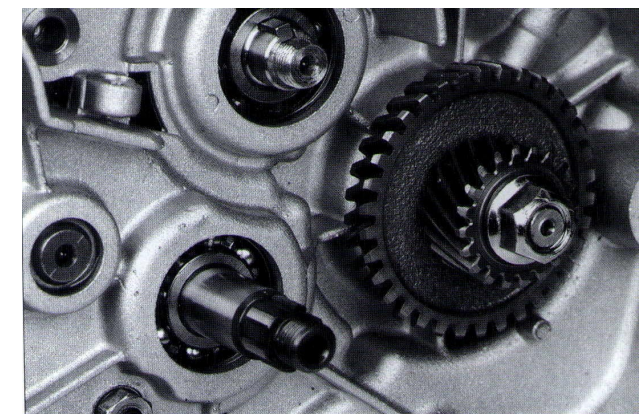
ASSEMBLY OF THE PINIONS

Place the parallepiped pin (A) on the crankshaft axle seat.

Place the pinion that has 34 cogs (cogs visibly marked).



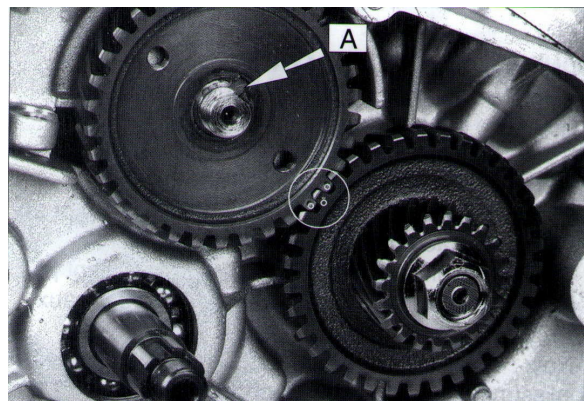
Place the main transmission pinion that has 20 cogs (visible mark) and place the nut afterwards.



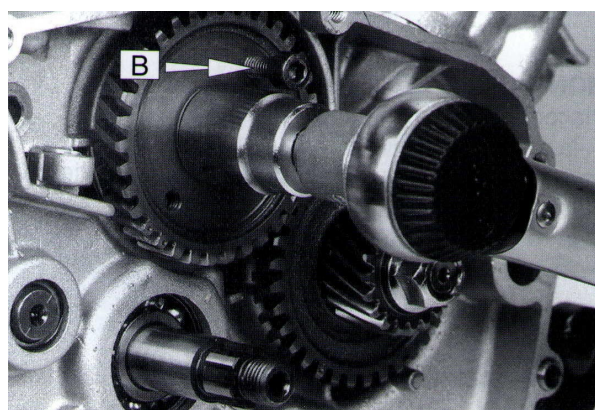
Place the pin (A) in its seat of the cam shaft.

Assemble the pinion that has 34 cogs between the marked cogs of the camshaft pinion, in the same position as the marked pinion cog of the crankshaft.

Place the washer (12.3x22x0.8) and the nut.

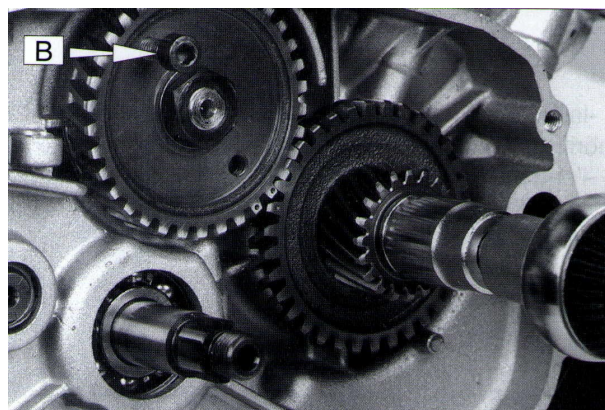


Put a screw (M6x1.00-20) (B) into one of the thread holes of the cam shaft pinion so that it leans on the ribbing of the housing case. With the pinion immobilized like this, make sure that the camshaft pinion is tightened properly with a pair of 6 mdaN (wrench 19).



After this, tighten the crankshaft pinions with a pair of 7.5 mdaN (wrench 17).

IMPORTANT: Do not forget to remove the screw (B).



ASSEMBLY OF THE CLUTCH

CHECKING THE CLUTCH

4 upholstery discs: thickness new 3 mm (thickness of maximum use 2.4 mm).

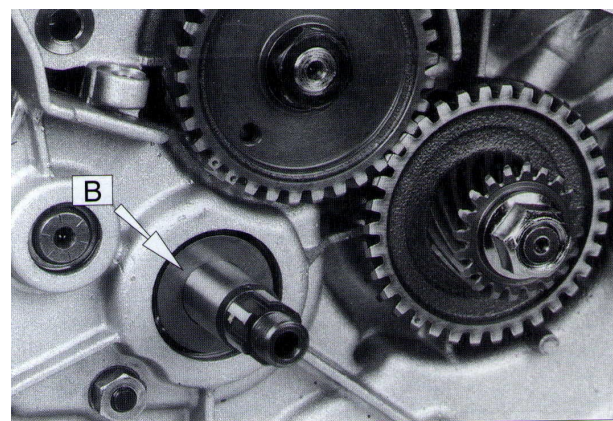
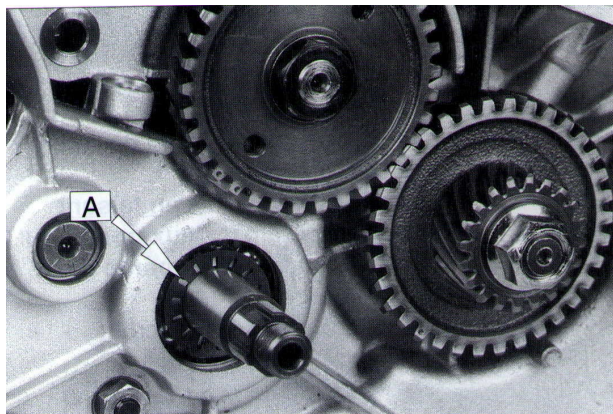
3 plain discs: thickness new 1.35 mm; deformation (warp): 0.06 mm max.

4 springs: min. length 29.5 mm at rest.

Replace the 4 springs if this were necessary.

Hood: make sure that the upholstery discs have not left notches that are too deep in the grooves, change the hood if this were necessary.

Clutch rotor: verify the state of the grooves on which the discs hit the grooves, change it if necessary.

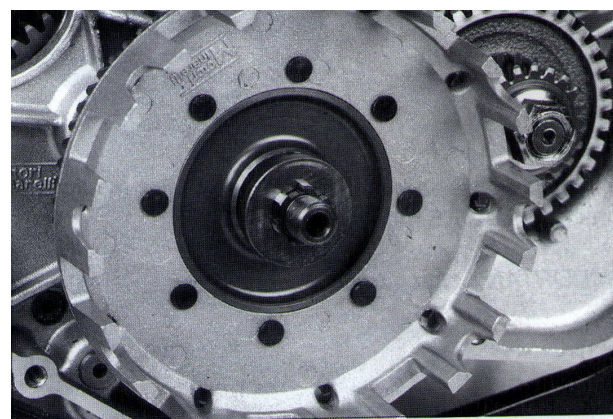


ASSEMBLY OF THE CLUTCH

Place on the main shaft:

The conical washer with interior cogging (A), with the end of its cogs leaning on the interior bearing track.

The smooth washer (17.2x30x0.8)(B).

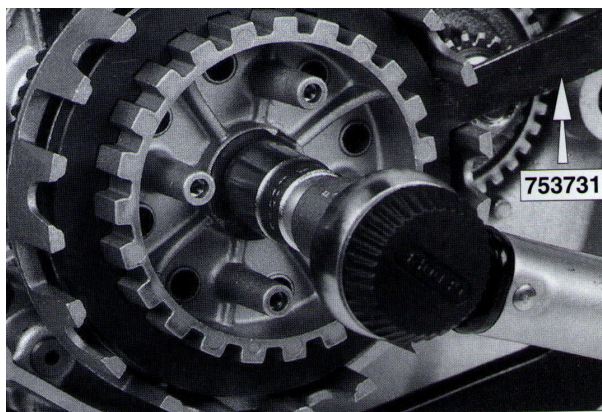


The clutch hood after having lubricated its brass fitting.

The 4 mm grooved separator.

The clutch rotor.

The nut brake and the brake.



Immobilize the whole with tool.

Tighten the nut with a pair of 7.5 mdaN (wrench 17).

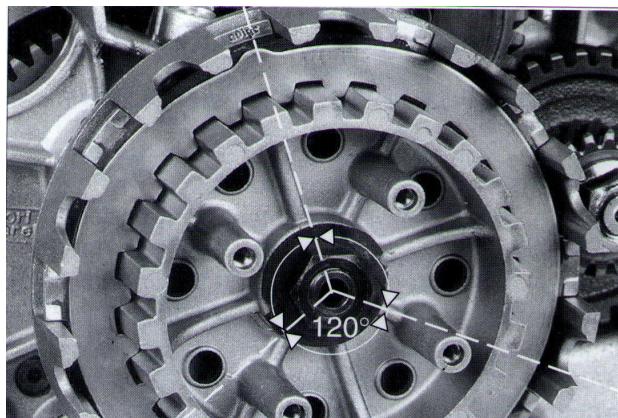
Turn the nut brake.

Place the clutch discs (4 upholstery discs, 3 plain discs), starting with an upholstery disc and alternate upholstery discs and plain discs.

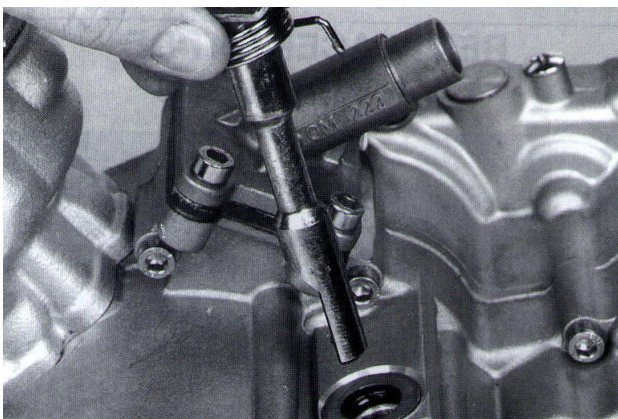
CAUTION: The plain discs have an assembly mark:

During the assembly you must make sure that the marks are 120° one from another.

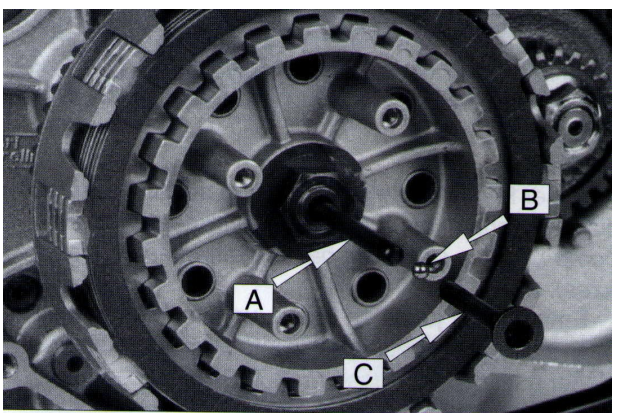
NOTE: The new upholstery discs must be (before the assembly) wet with the gearbox oil (SAE 10W30 type SE).



Place the control lever of the clutch in its seat equipped with its spring and washer after lubricating it.

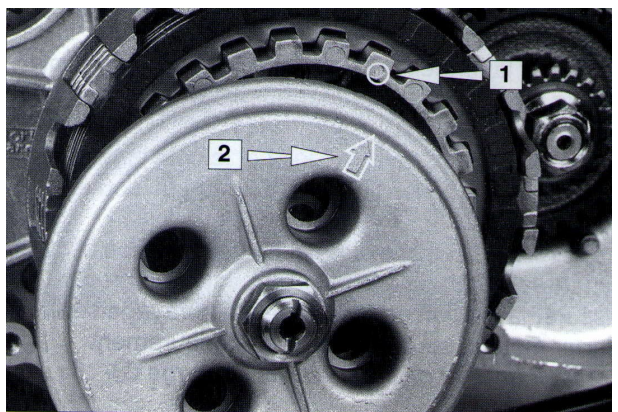


Introduce in the main shaft:
The push stick O5 length 116.6 mm (A).
The ball O4.8 (B).
The push rod of the clutch (C).



Assemble the pressure plate making the mark (arrow) (2) meet with the mark of the clutch rotor (round mark) (1).

Place the 4 springs, the 4 washers and make sure you tighten the 4 screws properly with a pair of 0.5 mdaN.



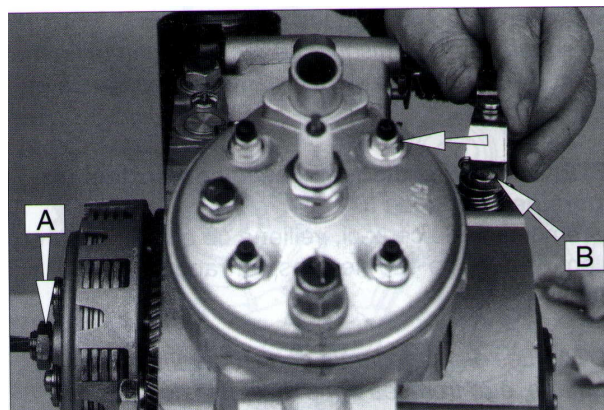
ADJUSTMENT OF THE ENGINE CLUTCH LEVER

Loosen (on the pressure plate) the counter nut (A) (wrench 19).

Place the stick(B) leaning the stick on the control.

Act on the central screw of the pressure plate with a screwdriver in order to take the clutch lever to its correct position, that is, parallelly to the magneto gasket plan.

Make sure the counter nut (wrench 19) is tightened properly with a pair of 2.7 mdaN, trying not to modify the adjustment after this operation.



REPLACEMENT OF THE WATER PUMP

DISASSEMBLY:

Disassemble the cover of the water pump and its gasket, loosening both fixing screws (Allen wrench of 5 and star head screwdriver for the draining screw).

The top circlip (A).

The washer (B).

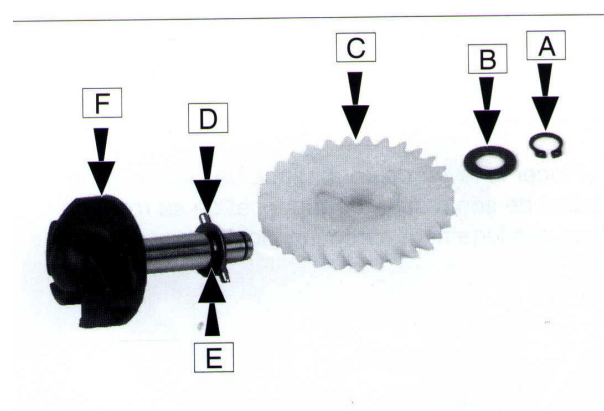
The nylon pinion with 30 cogs (C).

The bolt (D).

The second washer (E).

Take out the turbine.

Disassemble the tight joint (retain) (with a screwdriver, for example).



ASSEMBLY:

Place the clutch cover on a plain surface (be careful with the oil pump pinions if the axles have not been removed already).

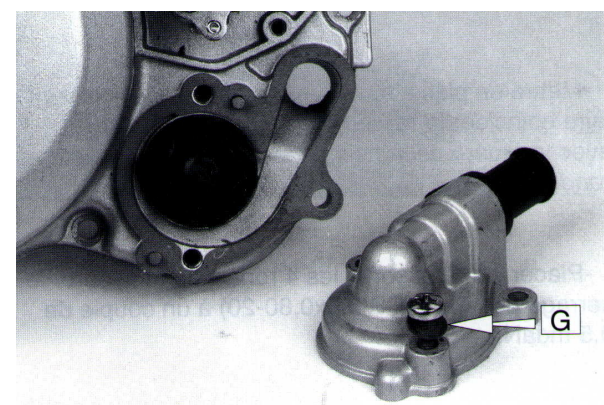
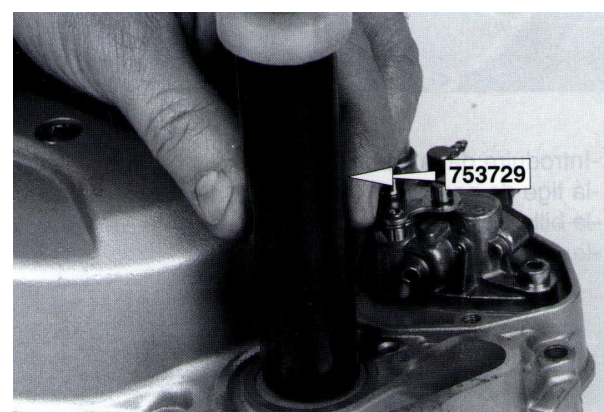
Place a previously lubricated tight joint, previously lubricated to enable placing it, with a push rod and a plastic hammer.

Lubricate the turbine axle and then assemble it.

Place the washer (E), the bolt (D), the nylon pinion (C), the washer (B) and also the circlips (A).

Place a new gasket and the pump cover next to the centring bubbles of the clutch cover.

Make sure the pump cover is tightened properly with two screws, the third screw is also suitable for fixing the clutch cover to the housing case and will be placed afterwards (foresee a new gasket for the draining screw G).



REPLACEMENT OF THE OIL PUMP

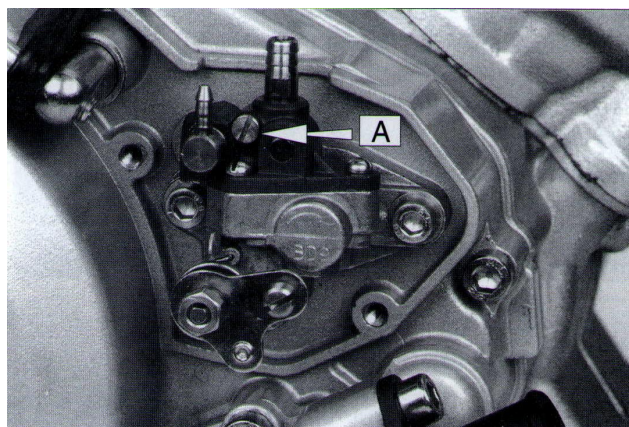
Disassemble both fixing screws (CHC M5x0.80-16) and remove the defective pump. Place a new pump equipped with a new torical gasket putting the transmission blade at the same level as the axle groove foreseen for this situation.

Make sure the pump is tightened properly with two screws.

Assemble the oil inlet tube as well as the exhaust tube for the carburettor.

Loosen the draining screw and let some oil pour out until it does not contain any air bubbles any more.

After this, tighten the draining screw (A) again.



ADJUSTMENT OF THE PUMP

The adjustment of the oil pump is done with the engine idling and without accelerating.

The control thread must not be pulled taut and its tolerance in the pump must be between 1 and 2 mm. When you accelerate, the control lever must not be activated before the engine system has risen.

ASSEMBLY OF THE STARTING SHAFT AND THE CLUTCH COVER

Loosen and remove the anchorage screw of the starting shaft of the upper part of the housing case (A) (photograph below).

Introduce the starting shaft set in the transmission cover equipped with the friction washer (16x25x0.6) making sure you place the extreme of the spring in its seat (B).

Place the spring and the ratchet launcher facing the ramp (C) at the end of the spring.

Assemble the starting pinion.

Verify the presence of the housing case centring bubbles.

Assemble the previously lubricated cover gasket.

Put the cover (the transmission pinions of the water pump and the oil have to engage with the main transmission pinion).

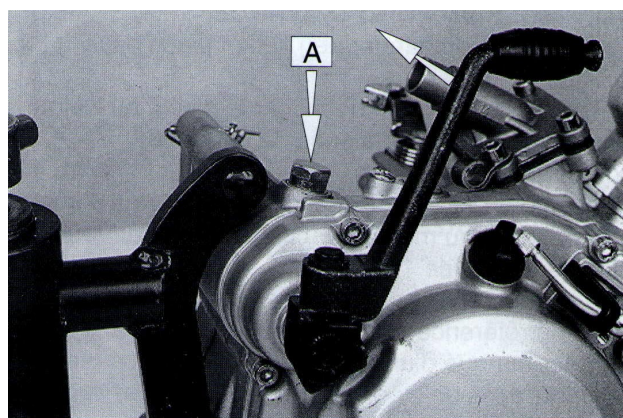
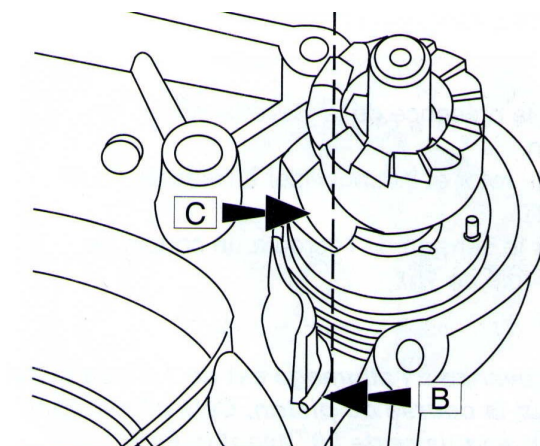
Place the 8 fixing screws (CHC) and tighten them with a pair of mdaN.

Assemble the starting pedal and activate it to act on the spring.

When the ramp (C) passes to the bottom of the thread drill hole of the anchorage screw, screw this one to the housing case with a pair of 3 mdaN (wrench 16).

The return system of the pedal is operational.

Fix the starting pedal.



ASSEMBLY OF THE MAGNETO

Place the stator base according to the corresponding mark that was made during the disassembly and tighten the 3 fixing screws (BHC M4x0.70-10) with a pair of 0.30 mdaN.

Slide the rubber thread passer of the electrical installation in its seat.

Place the electrical installation in the seat of the stator plaque.

Put the induced in its position and make sure that it is fixed properly with the 3 screws (CB M4x0.70-19) equipped with their 3 washers with a pair of 0.30 mdaN.

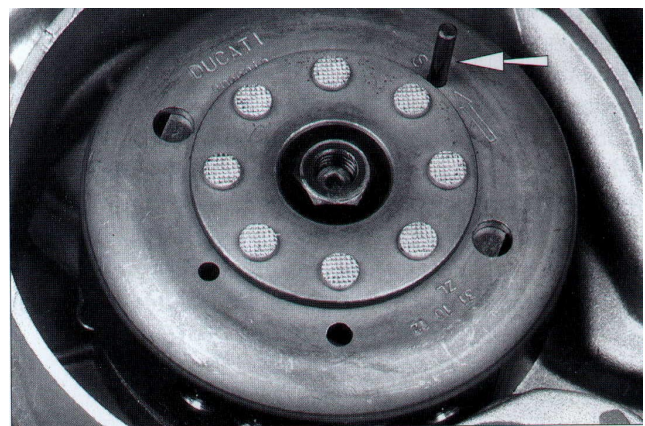
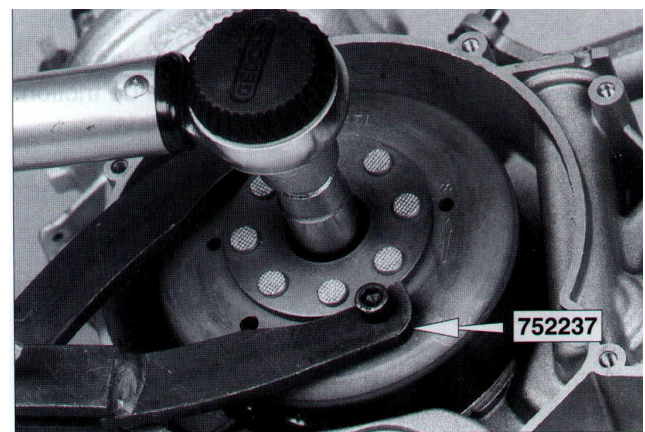
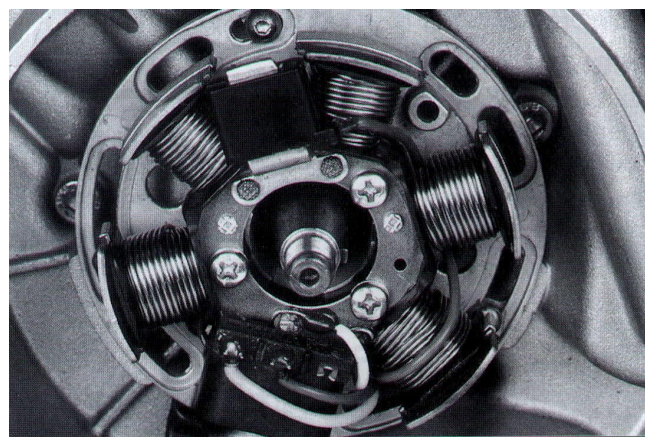
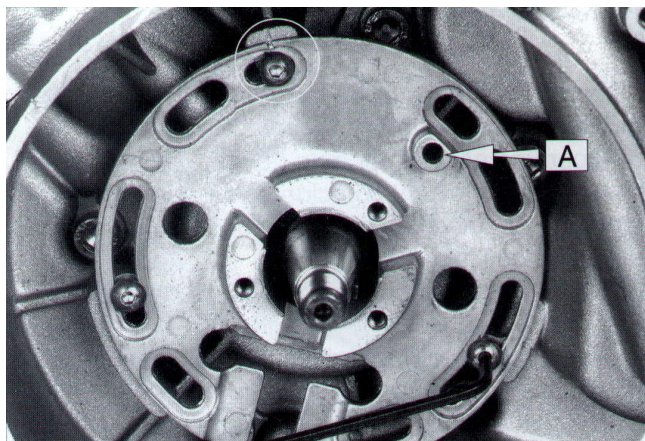
Verify the presence of the pin in the crankshaft. Assemble the rotor and immobilize it with tool. Make sure that the nut is tightened properly. Do this with a pair of 5.2 mdaN (wrench 15).

NOTE: the circuit advance is of 1.4 mm before the PMS of the piston distance.
It has an angular value of 20° before the PMS.

CHECKING THE ADVANCE POINT

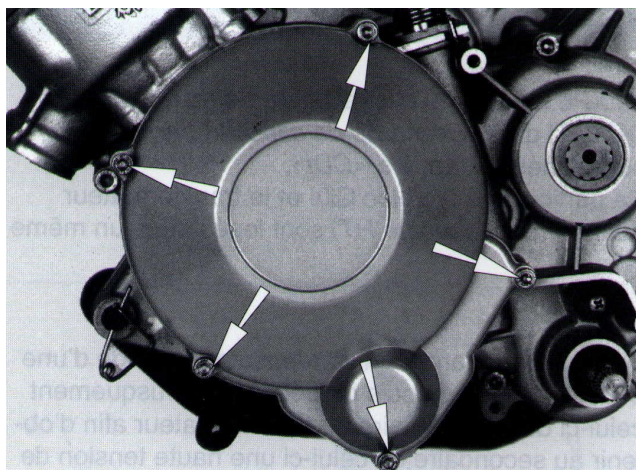
Place a comparer in the spark plug position. Make the rotor turn in order to take the piston to the PMS and put the comparador at zero value. Make the rotor turn clockwise until the moment when the comparador indicates the 1.4 mm level.

It is then when you must check the lining-up of the two stator-rotor reference holes putting a push stick of O4 mm that must penetrate in a seat foreseen for this situation in the stator plaque (mark A of the picture above).



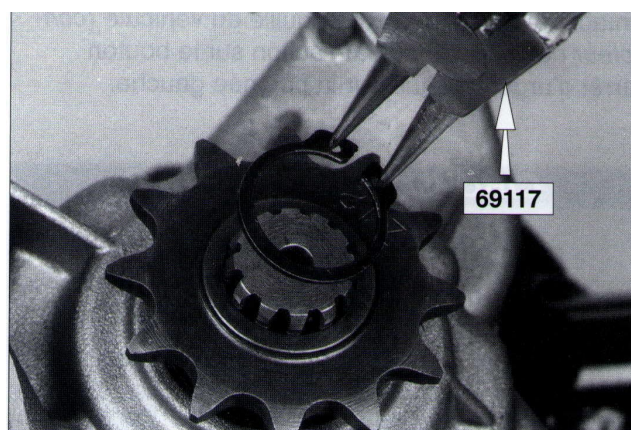
ASSEMBLY OF THE MAGNETO COVER

Place the cover on the housing case.
Place the 5 fixing screws (CHC M5x0.80-20)
and make sure that they are tightened properly with
a pair of 0.4 mdaN.



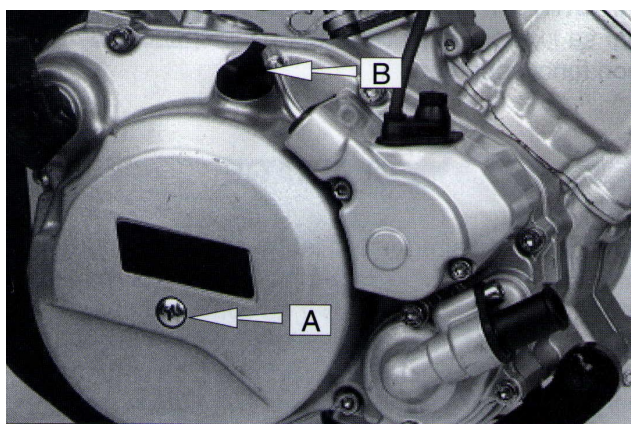
ASSEMBLY OF THE EXHAUST PINION

Place the corresponding clip with pin ref.69117
in the hole that is near to the housing case.
Place the exhaust pinion of the engine on the
secondary shaft.
Place the second circlip in the second hole.



FILLING OF THE GEARBOX

Loosen the nivel screw (A).
Remove the filling cap (B).
Fill the engine case with 0.75 litres of oil SAE
10W30 type SE.
With the vehicle on a horizontal surface and placed
vertically, the oil must start to pour out through the
opening of the level screw.
Tighten the nivel screw (A).
Place and tighten the filling cap (B).



IGNITION AND ELECTRICALS CIRCUITS

IGNITION

The Furia 6V is equipped with an electronical ignition type CDI, that is, condensator discharge electronic lighting by means of tyristor.

Its distinguishing feature: the CDI opening and the high voltage transformer (high voltage coil) are set on the same bracket.

PRINCIPLE

It consists of the load of a condensator by means of an ignition coil and afterwards it is suddenly discharged in the main induction circuit of a transformer in order to obtain a voltage of about 20 KV from the latter in the secondary induction circuit. The condensator discharge is activated by a tyristor that is ruled by impulses of various volts supplied by the receiver in the magneto. The ignition stop is activated by the earth setting of the ignition block by means of the ignition key or by the security ignition of the side bracket.

ELECTRICAL CIRCUITS

PRINCIPLE AND REGULATOR.

The different electrical circuits of the Furia 6V are all fueled by alternating current. This current is produced by five mass- assembled coils in the magneto (exit conductor in yellow).

The tension regulator situated under the petrol tank (that adds the indicator stationl) stabilizes the alternating current of the work to 13.5V +/- 0.5V.

IMPORTANT: the good earth setting of the regulator by means of its fixing to the chassis and its earth terminal are indispensable for its good functioning.

LIGHTS

In the lighting position, the yellow conductor that supplies the alternating current of the magneto already regulated by the regulator reaches the switch through the light position switchr in the ignition key. Activating the switches you can change from road headlights to dipped headlights and with the lights off it allows you to produce flashes.

NEUTRAL GAUGE

Fueled by regulated alternating current (yellow conductor), the closing of the circuit (earth setting of the neutral ignitionl by the boltr of the gearing mechanism) allows the lighting of the small lamp.

COOLING TEMPERATURE GAUGE

Fueled by regulated alternating current (yellow thread) the closing of the earth setting circuit is secured by the temperature probe set on the cylinder head (115°+/-3°C) and allows the lighting of the small lamp.

MINIMUM OIL LEVEL GAUGE (2S)

Fueled by regulated alternating current (yellow thread) the probe ballcock acts as a switch, closing the circuit in the inferior position and itallows the lighting of the small lamp.

HORN

The horn is fueled by regulated alternating current (yellow thread). The closing of the earth setting circuit is activated by means of a horn button situated on the switch of the left handle.

SOCKET

The vehicle is equipped with two stop switches, one at the front brake and the other one at the rear brake, both fueled by regulated alternating current (yellow thread). Activating one, the other oneor both at the same time, the circuit that fuels the stop filament of the rear lamp is closed (red thread), and the return is through the black thread.

INDICATORS

The indicator station and the voltage regulator are assembled in the same case and situated under the petrol tank. The indicators are fueled by regulated alternating current.

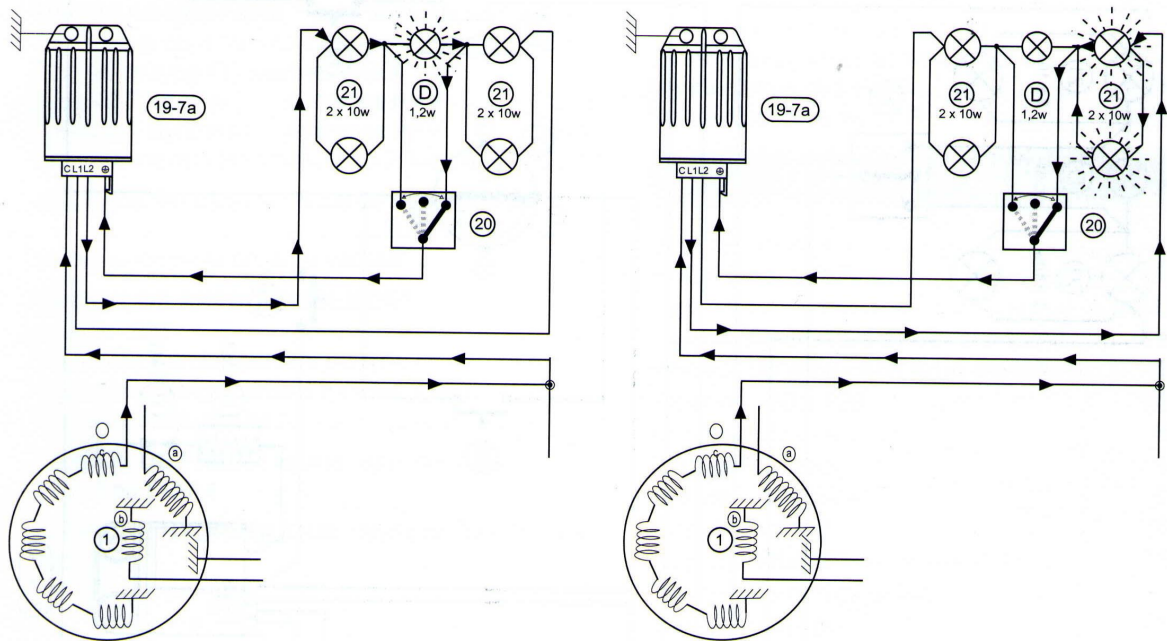
PRINCIPLE

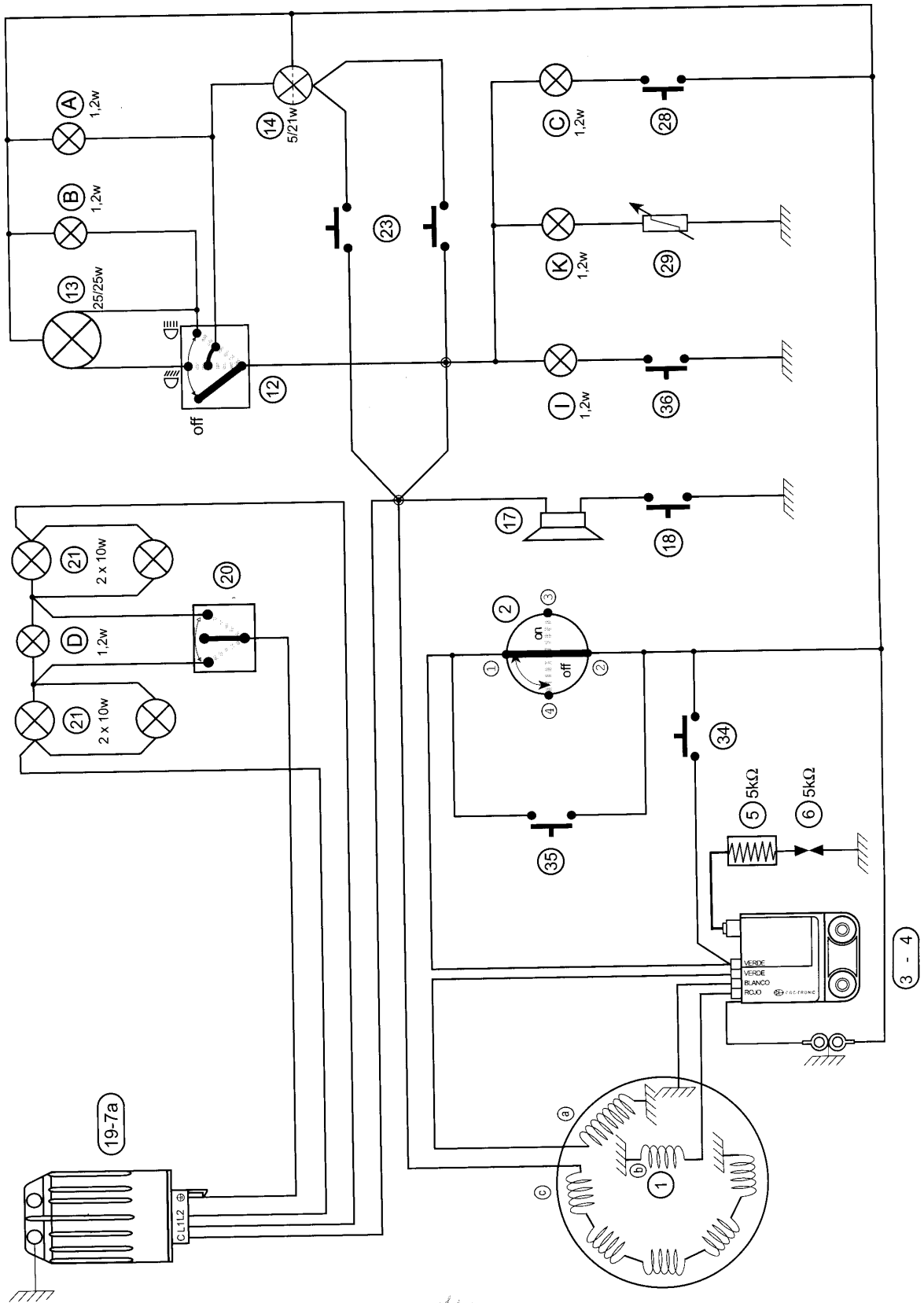
The central indicator fueling is activated by a yellow conductor (mark C). Out of this conductor two conductors emerge, a brown one, mark L1, which fuels the lamps of the right side directly, and another one which is violet, mark L2, and which fuels the lamps on the left side.

The returns to the right side lamps (blue thread/white of the main installation) and of the left side lamps (red thread/white of the main installation) go to the indicator switch. Its manipulation connects the blue/white thread well or the red/white thread, to the orange conductor of the indicator station with the earth mark.

The good earth setting of the indicator station by means of its fixing to the chassis and its connection of the orange conductor is indispensable for its good functioning.

The indicator gauge on the dashboard functions alternatively with the lamps during service. This is fueled by the station on the other side of the lamps functioning by means of lamp filaments of the side that is not used.





A Dashboard lighting
B Headlamp gauge
C Minimum oil level gauge
D Indicator gauge
I Neutral gauge
K Temperature gauge

1 Magneto
 A lights
 B receiver
 C alternating current
2 Key switch
3 CDI Ignition
4 High voltage coil
5 Antiparasital 5Kohm
7^a Regulator (AC)
12 Lamp control
13 Headlamp
14 Rear light and stop lamp
17 Horn
18 Horn button
19 Indicator station
20 Indicator control
21 Indicator lâmparas
22 Sockets
28 Minimum oil level control
29 Temperature probe
34 Rear bracket socket
35 Stop
36 Neutral ignition

PRINCIPLE SCHEME

