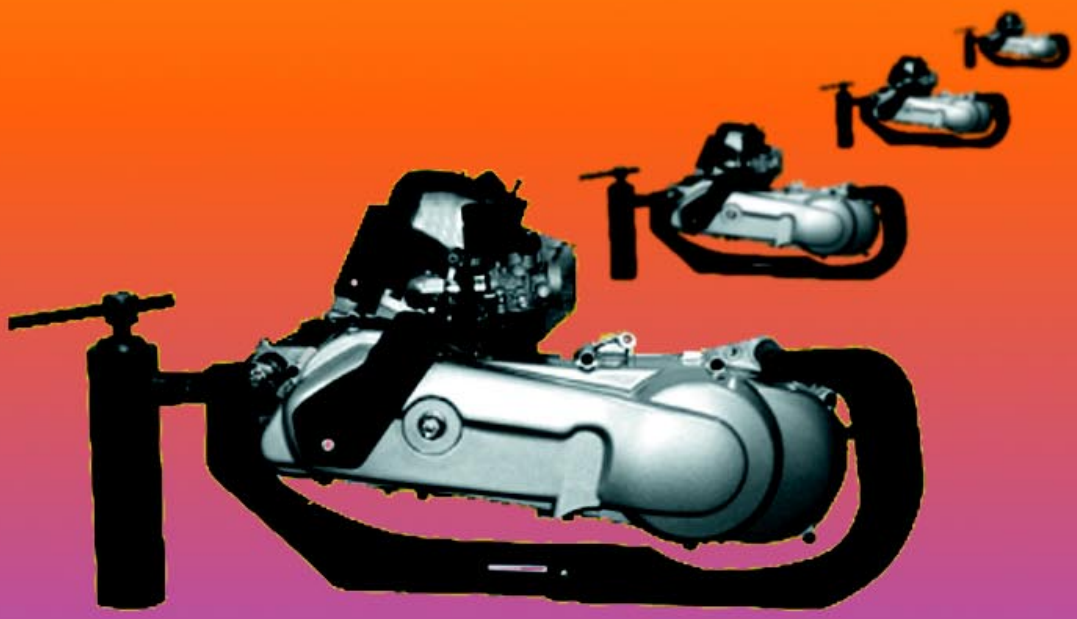
Moteur FB3 - FB6

WORKSHOP MANUAL 100 cm3



PEUGEOT MOTOCYCLES

GB

INTRODUCTION

This workshop manual concerns the FB engine which is fitted on several 100cm³ vehicles

- FB 3……..SV100
- FB 6……..SPEEDFIGHT - TREKKER - ELYSÉO - VIVACITY

2-stroke oil

2T SPECIAL ..... 1....litre .... Ref. 753752

2T SYNTETIC..... 1....litre .... Ref. 753759

Relay box oil

GEAR OIL GX-80W-90 ..... 2....litres .. Ref.753009

High temperature grease

SKF LGHT 3/0.4..... Ref. 752093

- A GOOD MECHANIC WORKS IN AN ORDERLY AND METHODICAL FASHION
- TIME SAVING = MONEY SAVING

CONTENTS

INTRODUCTION

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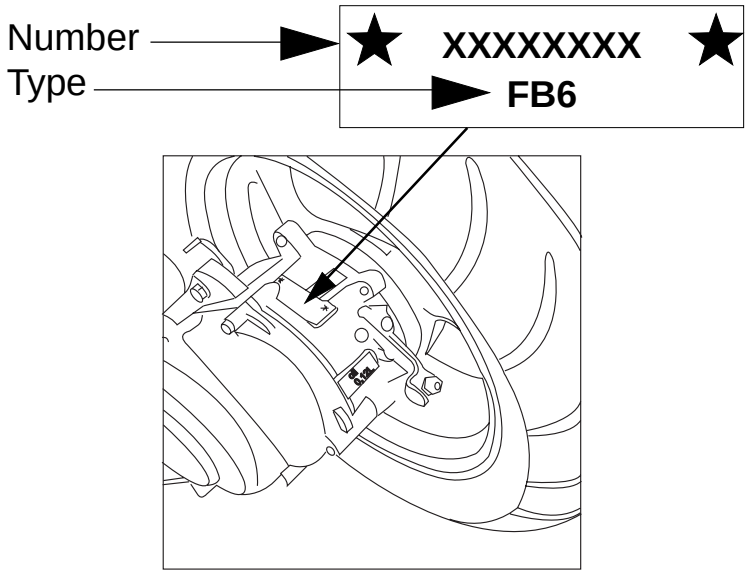
CHARACTERISTICS

VIVACITY

Main characteristics

ENGINE MARKING



- FB6 ENGINE

2 stroke cooled by forced air
Bore x stroke ..... 50.6 X 49.7
Displacement ..... 100 cm³
Gross compression ratio 11

- Maximum power :

..... 6.4 kw at 7000 rpm (95/1/CEE)

- Timing :

Exhaust ..... 184°
Transfer ..... 124°
Intake ..... by valve

- Ignition :

Advance ..... mapping 17° before TDC
Spark plug ..... resistive 5 KΩ
..... NGK BR8ES
..... EYQUEM R1000L
Spark gap ..... 0.6 mm

- Carburettor :

..... DELL'ORTO PHVA 17.5 ES
Idling speed ..... 1 600 rpm +100
Initial position of the air screw ..... loosen : 2 turns
5-notch needle ..... A10 4th notch from the top
Main jet 83
Idling jet 32

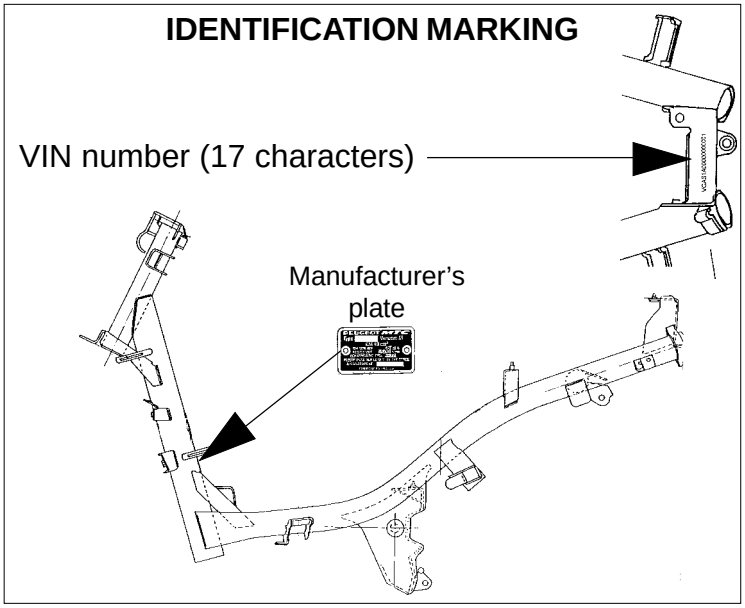
- Flywheel : ..... MITSUBA
- Starter : ..... MITSUBA
- Oil pump : ..... MIKUNI

Transmission

Clutch ..... centrifugal, automatic type
Primary transmission ..... by notched V-belt
Reduction gear ..... with 2 trains of gear-wheels

Chassis

IDENTIFICATION MARKING



Identification : VGAS2AC . . . . . .

Front tyre ..... 120/70 -12
Rear tyre 130/70-12
Pressure when cold : front ..... 1.3 bar
rear ..... 1.6 bar

Capacities (litre)

Fuel tank 6
Oil tank 1.3
Relay box 0.12

Dimensions (mm)

Overall length 1 740
Overall width (not including mirrors) 697
Overall height (not including mirrors) 1 143
Wheelbase 1 249

Weight (kg)

Dry weight 90
Weight with full tanks 98

Markings 100 cm³

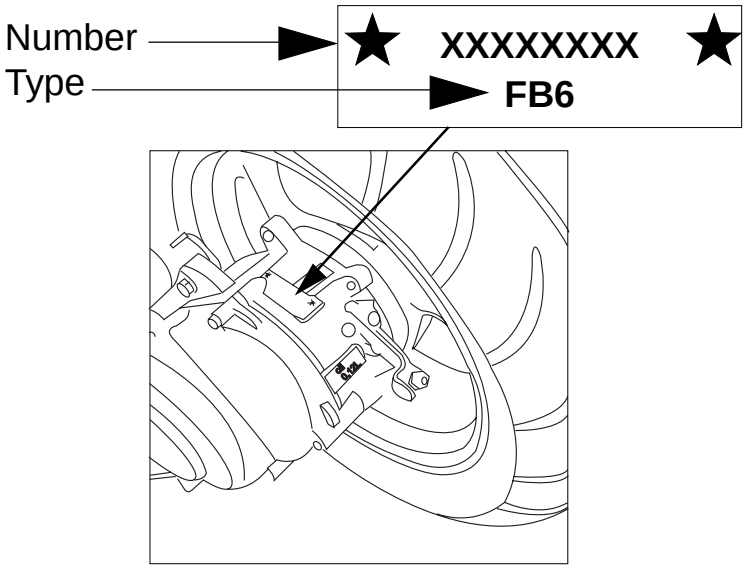
LH housing (under the starter)
Cylinder head (front RH side)
Cylinder (exhaust bracket LH side)
Intake pipe Ø19.5

CHARACTERISTICS

ELYSÉO

Main characteristics

ENGINE MARKING



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..... EYQUEM R1000L
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- Carburettor :

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Idling speed ..... 1 600 rpm +100
Initial position of the air screw ..... loosen : 2 turns
5-notch needle ..... A10 4th notch from the top
Main jet 83
Idling jet 32

- Flywheel : ..... MITSUBA
- Starter : ..... MITSUBA
- Oil pump : ..... MIKUNI

Transmission

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Primary transmission ..... by notched V-belt
Reduction gear ..... with 2 trains of gear-wheels

Chassis

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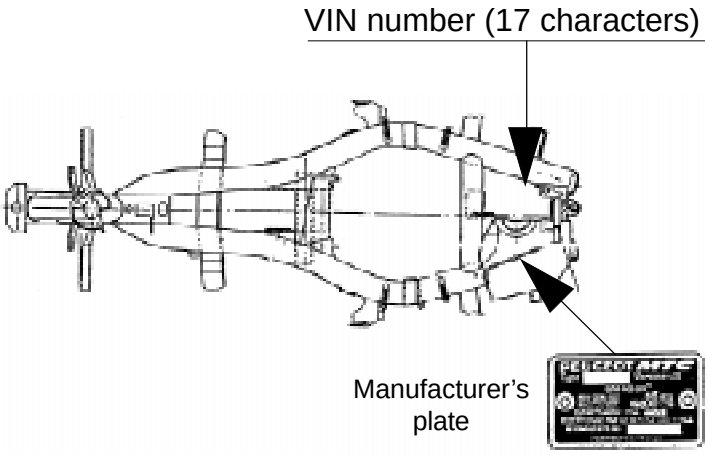


Identification : VGAG2A . . . . . .

Front tyre ..... 120/70 -12
Rear tyre 130/70-12
Pressure when cold : front ..... 1.3 bar
rear ..... 1.6 bar

Capacities (litre)

Fuel tank 9
Oil tank 1.3
Relay box 0.12

Dimensions (mm)

Overall length 1 895
Overall width (not including mirrors) 710
Overall height (not including mirrors) 1 290
Wheelbase 1 350

Weight (kg)

Dry weight 103
Weight with full tanks 113

Markings 100 cm³

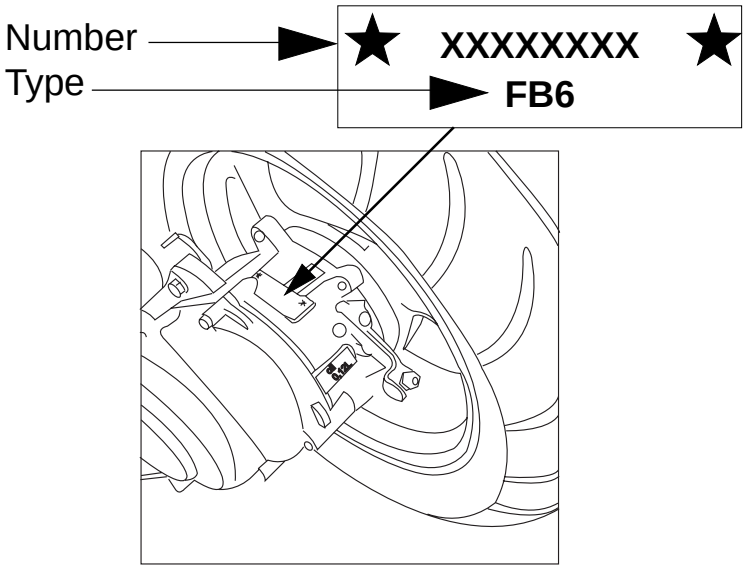
LH housing (under the starter)
Cylinder head (front RH side)
Cylinder (exhaust bracket LH side)
Intake pipe Ø19.5

CHARACTERISTICS

TKR / FIGHT

Main characteristics

ENGINE MARKING



- FB6 ENGINE

2 stroke cooled by forced air
Bore x stroke ..... 50.6 X 49.7
Displacement ..... 100 cm³
Gross compression ratio 11

- Maximum power :

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Transfer ..... 124°
Intake ..... by valve

- Ignition :

Advance ..... mapping 17° before TDC
Spark plug ..... resistive 5 KΩ
..... NGK BR8ES
..... EYQUEM R1000L
Spark gap ..... 0.6 mm

- Carburettor :

..... DELL'ORTO 17.5 ES
Idling speed ..... 1 600 rpm +100
Initial position of the air screw ..... loosen : 2 turns
5-notch needle ..... A11 2nd notch from the top
Main jet 81
Idling jet 32

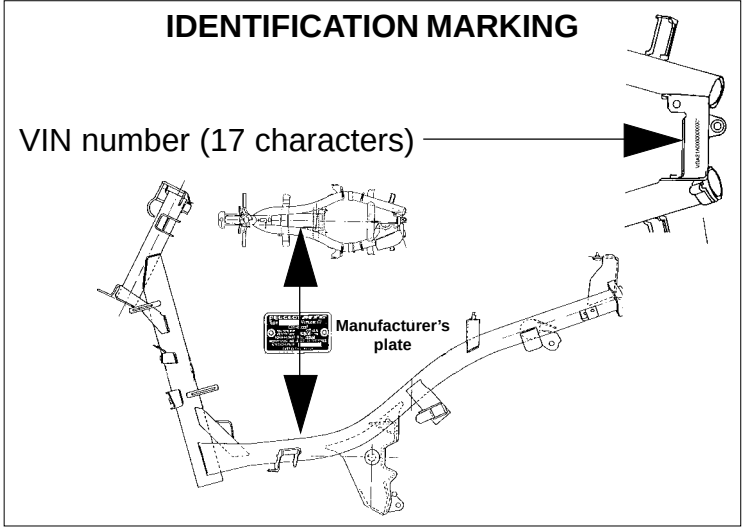
- Flywheel : ..... MITSUBA
- Starter : ..... MITSUBA
- Oil pump : ..... MIKUNI

Transmission

Clutch ..... centrifugal, automatic type
Primary transmission ..... by notched V-belt
Reduction gear ..... with 2 trains of gear-wheels

Chassis

IDENTIFICATION MARKING



Identification : TKR : VGAS2AA . . . . . .
Identification : FIGHT : VGAS2AB . . . . . .

Front tyre 120/70-12
Rear tyre ..... 130 ou 140/70-12
Pressure when cold :
FIGHT : front ..... 1.6 bar
rear ..... 1.8 bar
TKR : front ..... 1.3 bar
rear ..... 1.6 bar

Capacities (litre)

Fuel tank TKR 6
Fuel tank FIGHT 7
Oil tank 1.3
Relay box 0.12

Dimensions (mm)

	TKR	FIGHT
Overall length	1 760	1730
Overall width (not including mirrors)	670	700
Overall height (not including mirrors)	1110	1155
Wheelbase	1250	1225

Weight (kg)

	TKR	FIGHT
Dry weight	89	94
Weight with full tanks	94	101

Markings 100 cm³

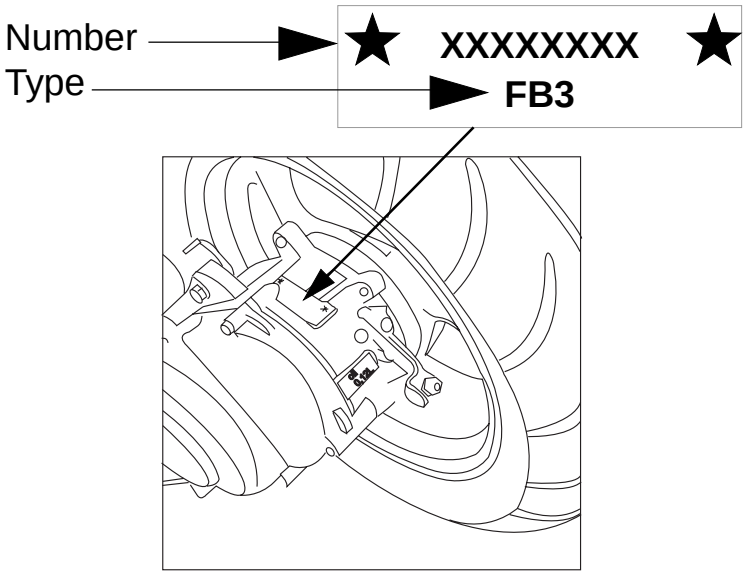
LH housing (under the starter)
Cylinder head (front RH side)
Cylinder (exhaust bracket LH side)
Intake pipe Ø19.5

CHARACTERISTICS

SV100

Main characteristics

ENGINE MARKING



- FB3 ENGINE

2 stroke cooled by forced air
Bore x stroke ..... 50.6 X 49.7
Displacement ..... 100 cm³
Gross compression ratio 11

- Maximum power :

..... 6.4 kw at 7000 rpm (95/1/CEE)

- Timing :

Exhaust ..... 184°
Transfer ..... 124°
Intake ..... by valve

- Ignition :

Advance ..... mapping 17° before TDC
Spark plug ..... resistive 5 KΩ
..... NGK BR8ES
..... EYQUEM R1000L
Spark gap ..... 0.6 mm

- Carburettor :

..... DELL'ORTO PHVA 17.5 ES
Idling speed ..... 1 600 rpm +100
Initial position of the air screw ..... loosen : 2 turns
5-notch needle ..... A11 2nd notch from the top
Main jet 76
Idling jet 34

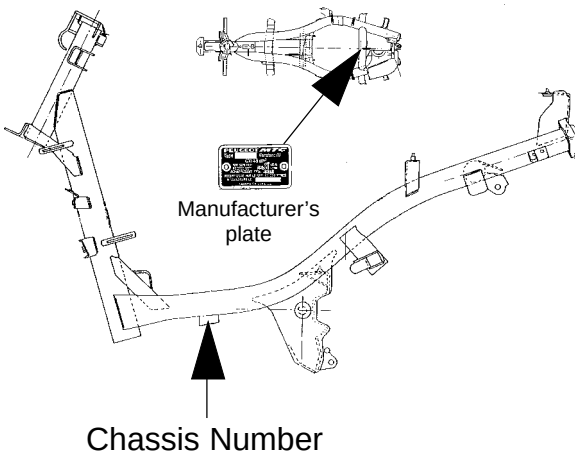
- Starter : ..... MITSUBA
- Oil pump : ..... MIKUNI
- Flywheel : ..... MITSUBA

Transmission

Clutch ..... centrifugal, automatic type
Primary transmission ..... by notched V-belt
Reduction gear ..... with 2 trains of gear-wheels

Chassis

IDENTIFICATION MARKING



Identification : 035 . . . . . .

Front tyre 100/90-10
Rear tyre 100/90-10
Pressure when cold : front ..... 1.8 bar
rear ..... 2.2 bar

Capacities (litre)

Fuel tank 8.8
Oil tank 1.1
Relay box 0.12

Dimensions (mm)

Overall length 1800
Overall width (not including mirrors) 715
Overall height (not including mirrors) 1190
Wheelbase 1260

Weight (kg)

Dry weight 88
Weight with full tanks 99

Markings 100 cm³

LH housing (under the starter)
Cylinder head (front RH side)
Cylinder (exhaust bracket LH side)
Intake pipe Ø19.5

MAINTENANCE PLAN

Depending on the use of the scooter, it is recommended to apply **- the normal maintenance plan or**
- the reinforced maintenance plan

The normal maintenance plan includes :

-Visit after 500 km or 3 months Plan A
-Regular servicing every 5000 km Plan B
- Regular servicing every 10000 km Plan C

The reinforced maintenance plan includes :

- Visit after 500 km Plan A
- Regular servicing every 2500 km Plan B
- Regular servicing every 5000 km Plan C

Reinforced maintenance applies to vehicles used in so-called “severe” conditions: door to door, intensive urban use (courier), short journeys with engine cold, regions with dusty atmospheres, frequent use of vehicles in ambient temperatures over 30°C.

	PLAN A 500 km or 3 mois	PLAN B 2500 km* or 5000 km	PLAN C 5000 km* or 10000 km
CHECK :			
Setting of idling speed	X	X	X
Throttle control	X	X	X
Control of oil pump	X	X	X
Functioning of the electrical equipment	X	X	X
Control of front and rear brake	X	X	X
Fuel pipes	X	X	X
Oil pipes	X	X	X
Front brake fluid pipes	X	X	X
State and pressure of tyres	X		
State, pressure and wear of tyres		X	X
Brake fluid level	X	X	X
Level of battery electrolyte (depending on type of battery)	X	X	X
Tightening of nuts and bolts	X	X	X
CHANGE :			
Relay box oil	X		X
Spark plug		X	X
Filter component of intake silencer		X	X
Front brake pads (if necessary)			X
Rear brake linings or pads (if necessary)		X	X
Drive pulley rollers (if necessary)		X	X
Timing belt			X
CHECK AND DECARBONISE :			
Piston			X
Cylinder head			X
Exhaust port			X
CHECK AND LUBRICATE :			
Driven pulley :			
Movable driven face and needle bearing			X
Drive pulley :			
Movable drive face and rollers			X
Kick : driven gear and spindle pin bush			X
Central and lateral kick stand pivot bolt (if fitted)			X
Rear brake cam			X
CLEAN AND ADJUST :			
Carburettor			X
VEHICLE TEST :			
On road	X	X	X

* Reinforced maintenance

SETTING UP

1. Preparation of the battery

Charging a dry battery:

- Remove the battery
- Remove the six filling caps and the air vent cap
- Fill with electrolyte (35 % sulphuric acid = 1.28 g / cm³) up to the level marked UPPER LEVEL

Reference ..... 1 litre 752740
..... 5 litres 752741

- Leave the battery to settle for half an hour. Top up the level if necessary
- Charge the battery for at least 2 hours, using an intensity of 400 m.A (0.4 A)
- Replace the battery and connect the vapour breather hose to it
- Connect the red wire terminal to ⊕ and the earth pin, green wire to ⊖
- From then on, the battery level should be maintained if necessary using distilled water only

Battery without maintenance :

- After carrying out the initial setting up operations in accordance with the instructions manual enclosed with the vehicle, it should be noted that the cap ramp must not now be removed
- Charging is carried out in normal mode at 0.5A during 5 to 10 hours or at 5A during 30 minutes maximum in rapid charge mode

2. Fuel

- Capacity ..... depending on vehicle
- To ensure the engine is in good working order use only lead free 98 petrol or 95 for vehicles equipped with catalytic converters and conventional 4-star or lead free 98 - 95 for the others

3. Separate lubrication

- Capacity ..... 1.3 litre
- Fill the oil tank with semi-synthetic or synthetic oil for 2-stroke separate lubrication engines in accordance with the standards ..... API ..... type TC
..... JASO ..... type FC

- PEUGEOT MOTOCYCLES recommends :
..... ESSO 2T Special
..... ESSO 2T Synthetic

4. Setting up the fuel and oil circuits

- Put one litre of mixture with 3 % oil in the fuel tank
- Fill up the oil tank
- Start the engine: check and ensure that the oil circuit is perfectly primed
- To do this, disconnect the oil intake hose at the carburettor and check that oil drips out (frequency will depend on the speed of rotation of the engine)
- Top up the fuel tank with high octane petrol

5. Checking the oil level in the relay box

- Vehicle on its stand and on a horizontal plane
- Loosen and remove the filling screw and make sure that the oil level reaches the filling orifice

Capacity ..... 0.12 litre

- Esso Gear Oil GX 80 W 90

Reference 753009

- Tighten the screw to 1.2 m.daN

6. Checks before delivery to customer

- In particular, check tightening of wheel nuts

front ..... 6 m.daN
rear ..... 10 m.daN

- Check tightening of nuts and bolts
- Check brake adjustment and efficiency
- Check inflation pressure of tyres when cold

TYPE	Front	Rear
SV100	1,8	2,2
TKR	1,3	1,6
SPEEDFIGHT	1,6	1,8
Elyséo	1,3	1,6
Vivacity	1,3	1,6

- Check that lights and indicators are working properly (rear light, indicators, brake light, horn unit), and various telltales
- Carry out road test with vehicle.

TIGHTENING TORQUE AND SPECIAL TOOLS

Tightening torques

Engine part

Assembly screws for :

- Housing ..... **1 m.daN**
- Covers ..... **1 m.daN**
- Intake pipe ..... **1 m.daN**
- Starter ..... **1 m.daN**
- Stator ..... **1 m.daN**
- Sensor ..... **1 m.daN**
- Ventilator ..... **1 m.daN**
- Carburettor ..... **0.8 m.daN**
- Oil pump ..... **0.8 m.daN**
- Cylinder head ..... **1.2 m.daN**
- Drive pulley ..... **4 m.daN**
- Driven pulley ..... **4.5 m.daN**
- Rotor ..... **4 m.daN**
- Oil cap ..... **1.2 m.daN**
- Spark plug ..... **2 m.daN**

Cycle part

- Front wheel nut ..... **8.5 m.daN**
- Front wheel axle nut ..... **7.5 m.daN**
- Rear wheel nut ..... **10 m.daN**
- Engine on bracket link ..... **6 m.daN**
- Bracket on chassis articulation ..... **6 m.daN**
- Upper shock absorber fastening Fr/Rr . **4 m.daN**
- Lower shock absorber fastening Fr/Rr **2.2 m.daN**
- Exhaust nuts on cylinder ..... **1.6 m.daN**
- Handlebar nut ..... **4 m.daN**
- Steering lock-nut ..... **6.5 m.daN**
- Suspension arm pivot pin ..... **9 m.daN**
- Front brake reaction bracket ..... **5.6 m.daN**
- Front brake calliper ..... **3 m.daN**

- Screw and nut f 5 mm ..... **0.5 m.daN**
- Screw and nut f 6 mm ..... **1 m.daN**
- Screw and nut f 8 mm ..... **2.2 m.daN**
- Screw and nut f 10 mm ..... **3.5 m.daN**
- Screw and nut f 12 mm ..... **5.5 m.daN**

Special tools

- Engine support **64765**
- Adjustable adaptation for engine support **752026**
- Flywheel clamp **68570**
- Piston circlip gripper **752000**
- Protective end piece small model for flywheel puller **68007**
- Tool for removing and opening housing ... **64706**
- Protective end piece large model for opening housing **69098**
- Retaining dowel pin **64710**
- Screw on torque handle **69104**
- Clutch compression tool all types **752127**
- Tubular socket wrench 39 ..... **752361**
- Adjustable notched wrench **752237**
- (Half shells for extraction of bearing f 56)
- Tool for opening housing **750807**
- Support washer **750808**
- Base plate 250 X 160 X 50 ..... **750541**
- Torque wrench + extension + reducer **69802**
- Flywheel puller (delivered with protector 68007) **750806**
- Immobilising tool **752370**
- Circlip **69117**
- Spindle **750069**

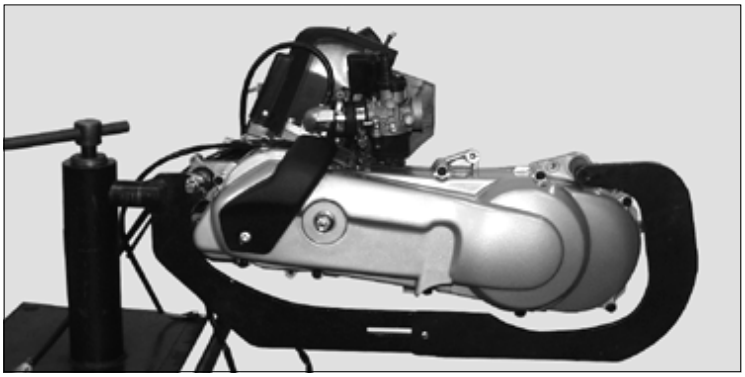
DISMANTLING AND REASSEMBLY PROCEDURE

Removing the engine from the vehicle

- Remove :
. all the lateral fairings.
- Disconnect :
. the fuel intake pipe at carburettor,
. the vacuum hose of the automatic cock assy,
. the oil pump control,
. the throttle control,
. the oil intake pipe at the pump (big hose),
. interference suppressor,
. the rear brake control.
- Disconnect :
. the electrical harness on the right hand tube of the chassis : flywheel outlet (under the footboard), choke, starter.
- Remove :
. the lower shock absorber fastening nut and the front fastening pin of the engine.

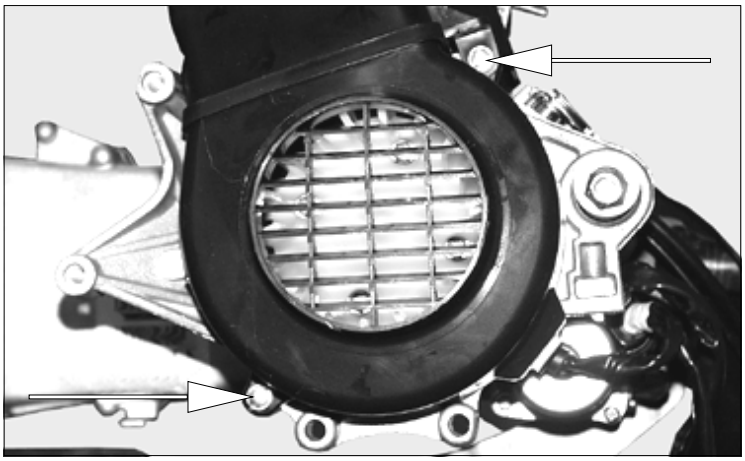
Placing the engine on its support

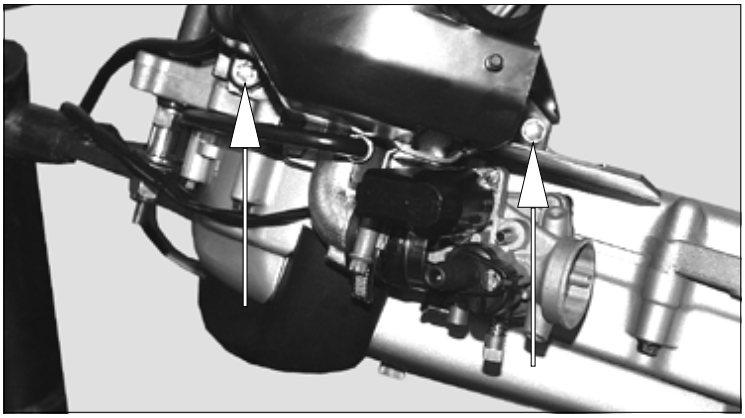
- Position the engine on the adapted part ref. **752026** modified,
- Place the assembly on the support ref. **64765** clamped in a vice.



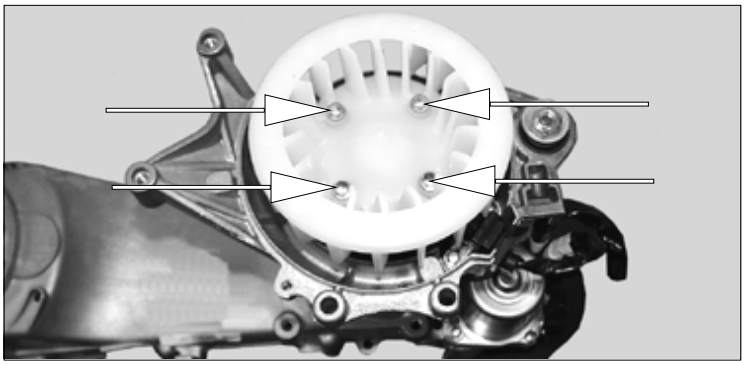
Cooling system

- Remove the two parts of the cooling scroll (4 screws),
- Tightening torque : 1 m.daN,



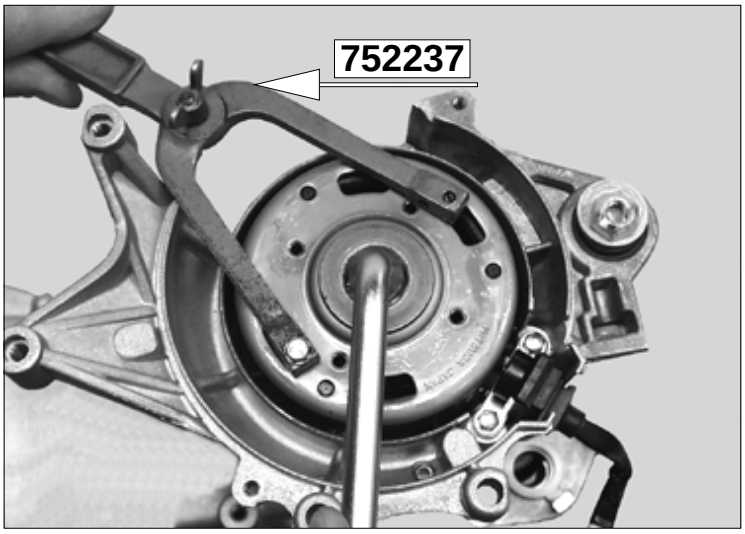


- Remove the 4 fastening screws from the turbine and remove it,
- Tightening torque : 1 m.daN.

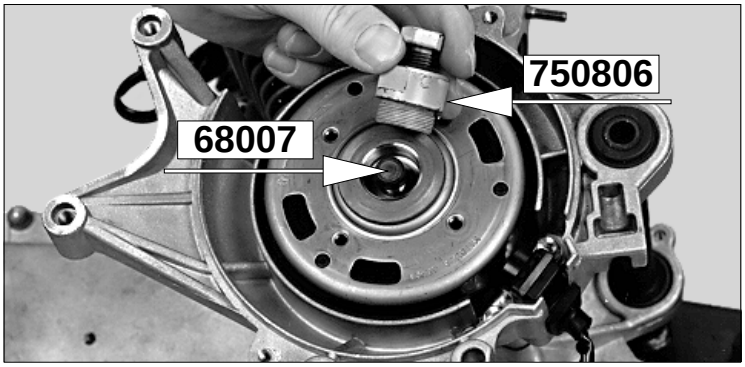


Flywheel

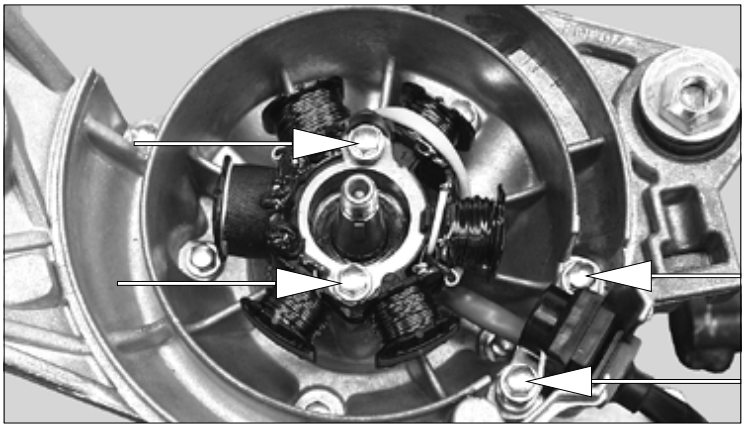
- Immobilise the rotor using the notched clamp ref. **752237**,
- Remove the nut.



- Place the protective end piece ref. **68007** on the end of the crankshaft,
- Screw the flywheel puller ref. **750806** onto the rotor and press on the flywheel push screw until the rotor is freed,
- Remove the cotter pin,

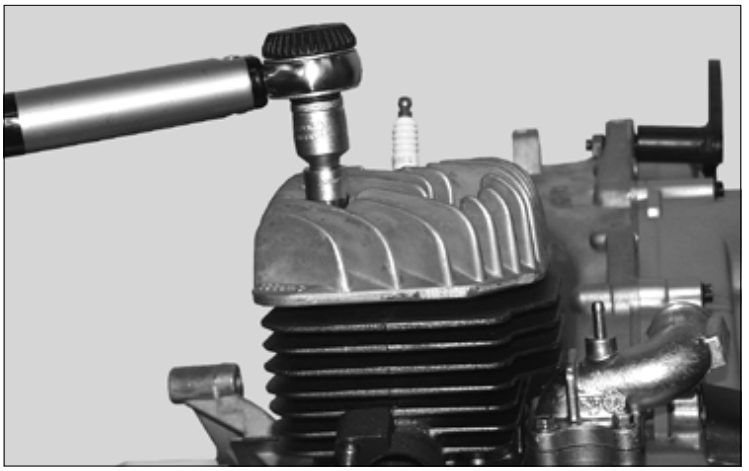


- Remove the 2 fastening screws of the sensor, as well as the 2 fastening screws on the stator plate : . 2 screws L=16
  . 2 screws L=20),
- Tightening torque : 1 m.daN,
- Remove the stator assy and the sensor.



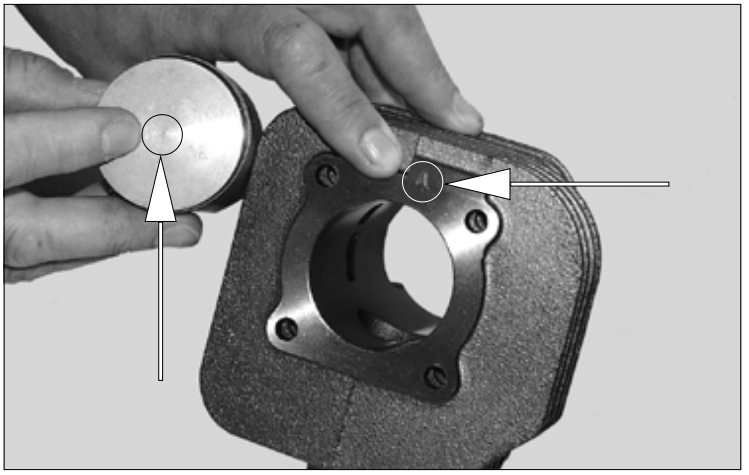
Cylinder head and cylinder – piston assy

- Loosen diagonally the 4 fastening screws of the cylinder head-cylinder assembly,
- Remove the cylinder head and the seal,
- Remove the cylinder and the base seal,
- Lean the engine to the left and remove the RH circlip on the piston,
- Push the piston pin from left to right; this operation does not necessitate the use of a strap,
- Remove the needle bearing cage from the small end of the conrod.

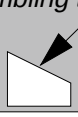


Cylinder and piston

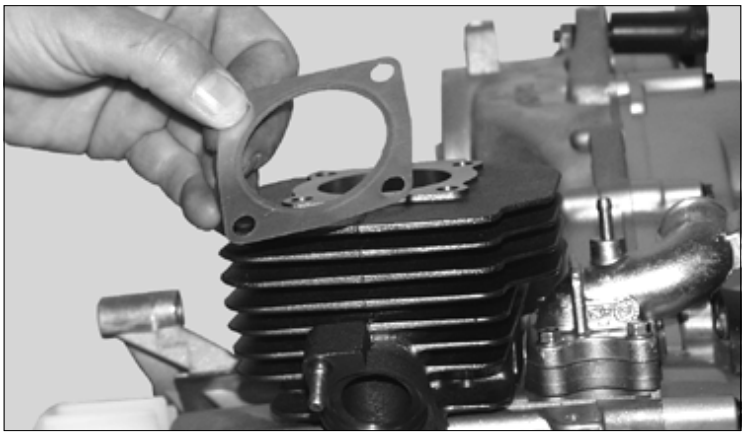
- Check that the cylinder/piston assembly is correctly paired,



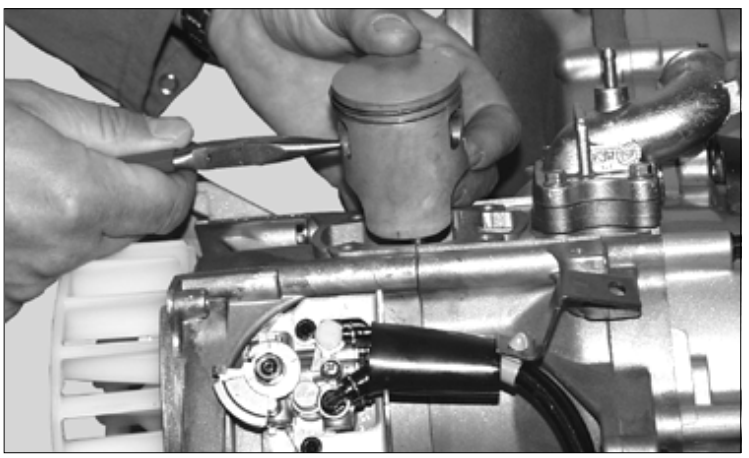
Note :
There is a specific way up for assembling the piston rings: chamfer at the top



- The mating face must be cleaned,
- Place a new and dry base seal on the cylinder,
- Place the needle bearing cage in the small end of the conrod after having lubricated it (2-stroke oil),
- Introduce the piston with the arrow pointing towards the exhaust,
- Push the piston pin,
- Assemble the snap ring(s). They (it) must be new,
- Oil the piston and the cylinder barrel,
- Make sure that the opening of the piston rings is opposite the positioning lugs,
- Insert the cylinder and lower it whilst compressing the piston rings between the middle finger and thumb,
- Ensure that the base seal is correctly positioned on the housing using the 2 stud bolts,
- Place the cylinder head - screw - seal onto the cylinder.



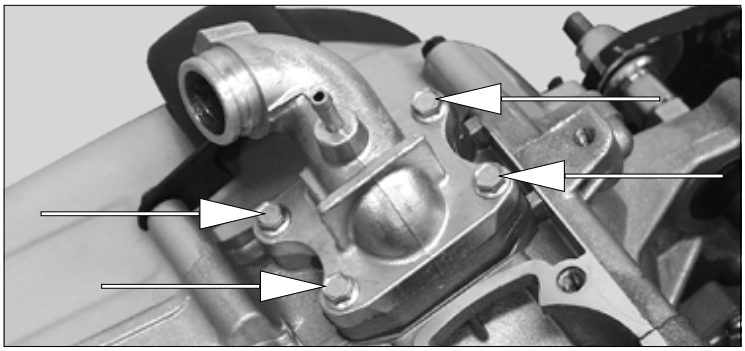
Note :
Bead of the seal against this



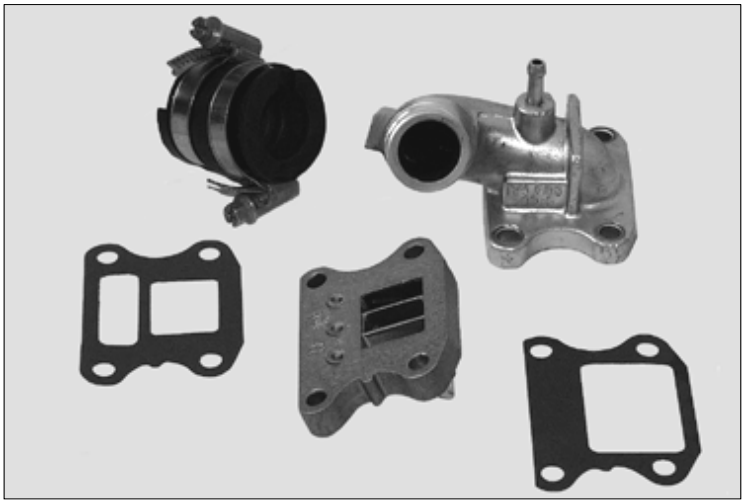
- Progressively tighten the 4 screws diagonally,
- Tightening torque : 1.2 m.daN.

Intake pipe and valve

- Loosen and remove the 4 fastening screws, (L = 28mm),
- Tightening torque : 1 m.daN.



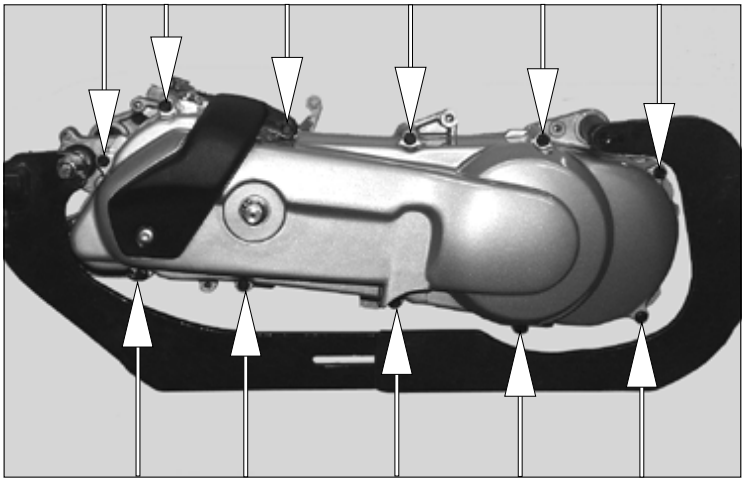
- Remove the pipe, seal, valve assembly, second seal,
-Check the state of the blades and seats.



Primary transmission assembly

Removal of the cover does not require the kick starter pedal to be dismantled,

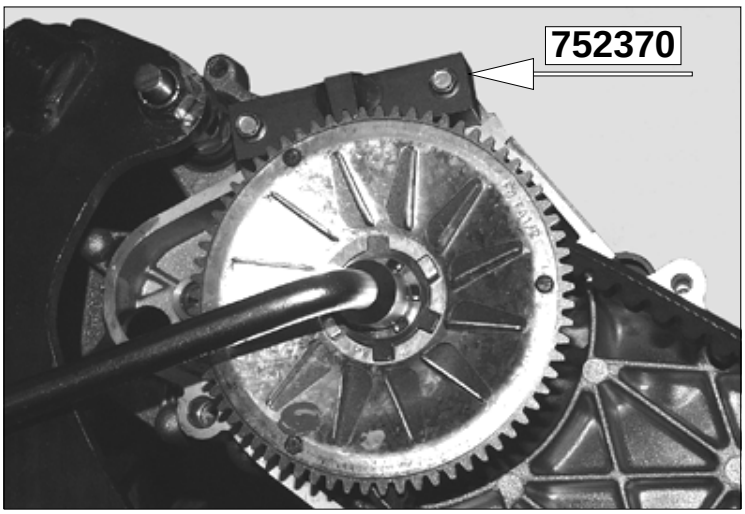
- Loosen and remove the 11 fastening screws from the cover,
- Tightening torque : 1 m.daN,
- Remove the cover with the 2 centring holes,
- Remove the starter drive assy assembly,



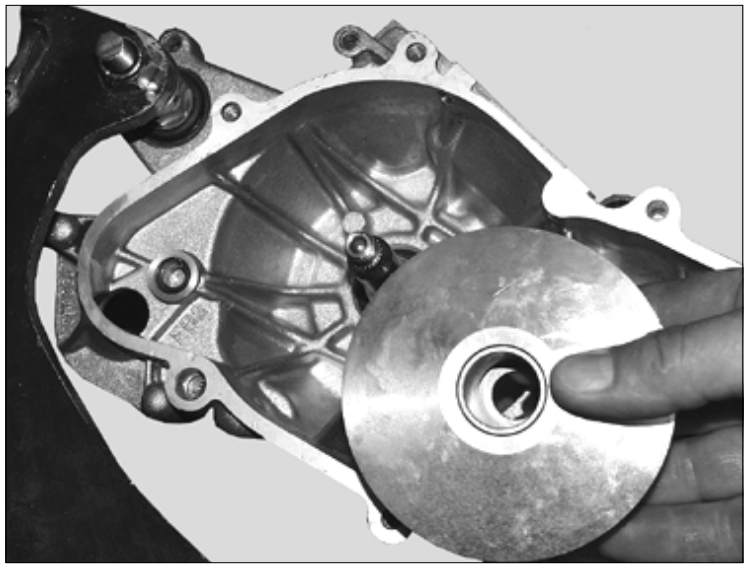
- Block the fixed drive face-kick driven gear with the tool ref. **752370**,

Take careful note of the flush fitting of this tool with the fixed drive face- kick driven gear so as to make sure that the fixed drive face is correctly engaged in the grooves of the crankshaft when re-assembling,

- Loosen the fastening nut from the fixed drive face of the drive pulley,
- Tightening torque : 4 m.daN,
- Remove the nut and the fixed drive face,

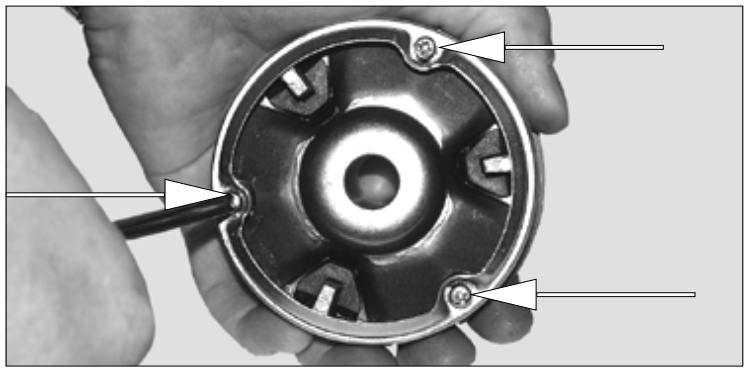


- Remove the belt,
- Take out the drive pulley assembly (variator),



Warning :
Do not discard any stacking component , or reduce any of the dimensions as this could cause tightening of the nut on the grooves of the crankshaft as opposed to the fixed drive face, which could lead to possible destruction of the crankshaft.

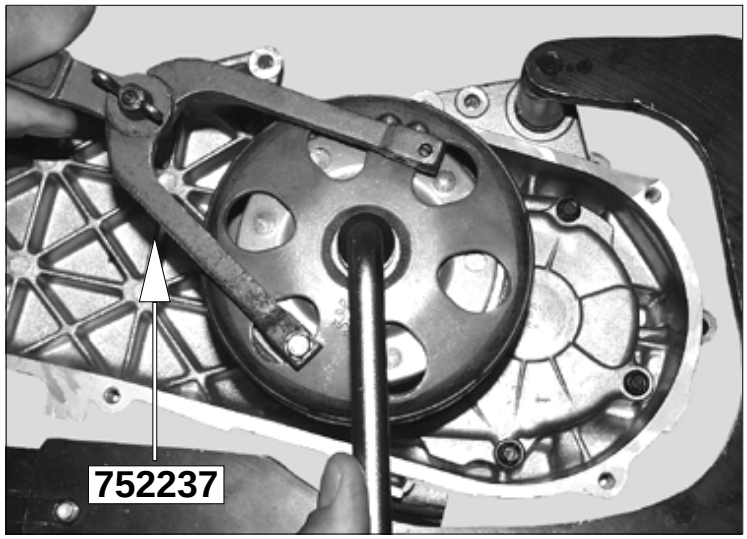
- Remove the drive face boss and the 3 screws holding down the cover and the stop plate,
- Remove the cover using a screwdriver,
- Remove the stop plate , the ramp, the 3 plastic guides, the 6 rollers and the " O " ring,
- After cleaning, pay particular attention to the rollers; they must not contain any significant wear traces.



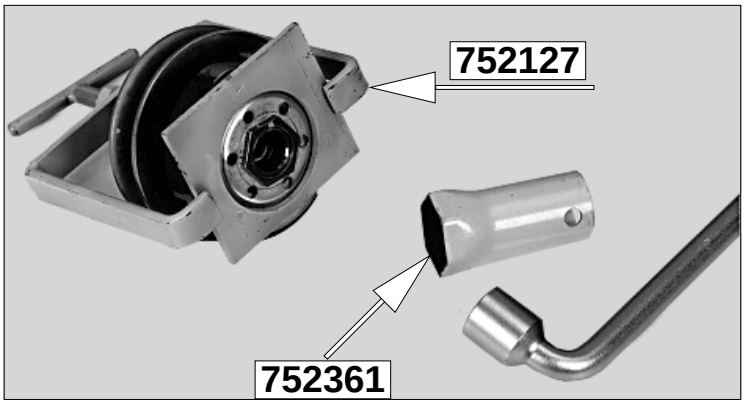
Re-assembly

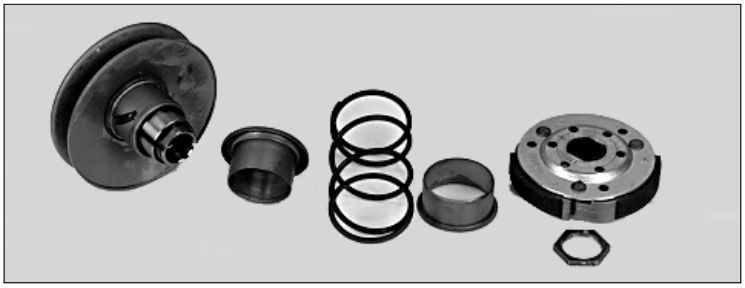
- Same operations as for dismantling in reverse order after having lubricated the 6 rollers, the ramp and the bore of the movable drive face using high temperature grease ref. **752093**,

- Block the clutch plate with the flywheel clamp ref. **68570**, or the notched wrench ref. **752237**,
- Loosen the nut, remove the drum and the clutch driven pulley assembly,
- Tightening torque : 4 m.daN,



- Block the whole unit using the tool ref. **752127** clamped in a vice and loosen the special nut with the wrench ref. **752361** (number 39) or using a number 34 wrench depending on the type of clutch,
- Remove in order :
  . the starting clutch shoe,
  . the spring,
  . the centring sleeve of the spring,
  . remove the 3 pins from the variator ramps,
  . separate the fixed and movable drive faces,
- Tightening torque : 5m.daN.

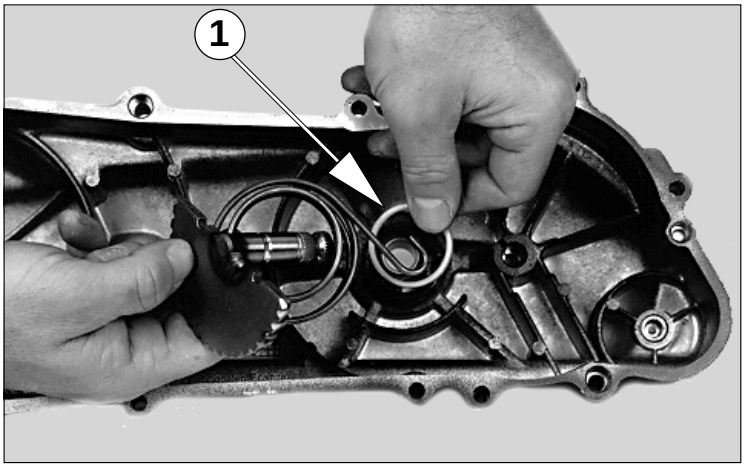




Note :
The rollers need to be checked every 5000 kms.
The belt needs to be changed every 10000 kms.

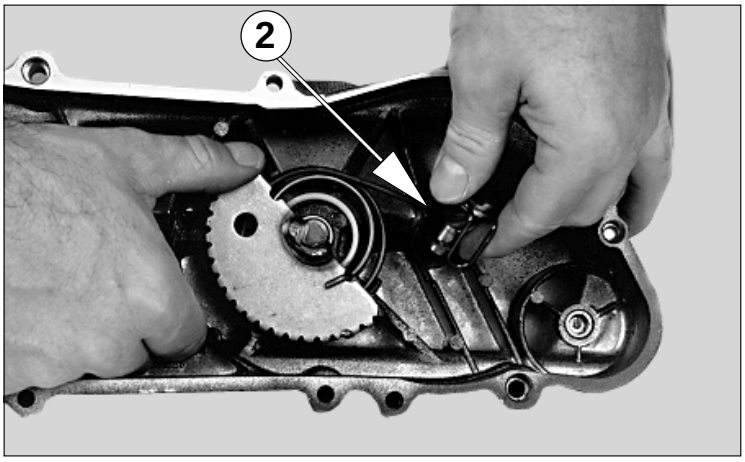
Kick starter system

- Action the kick starter spindle using the thumb and remove the driving dog and washer,
- Using a circlip clamp ref : **69117**, remove the circlip and the washer and remove the kick starter spindle, the return spring and the bearing ring.



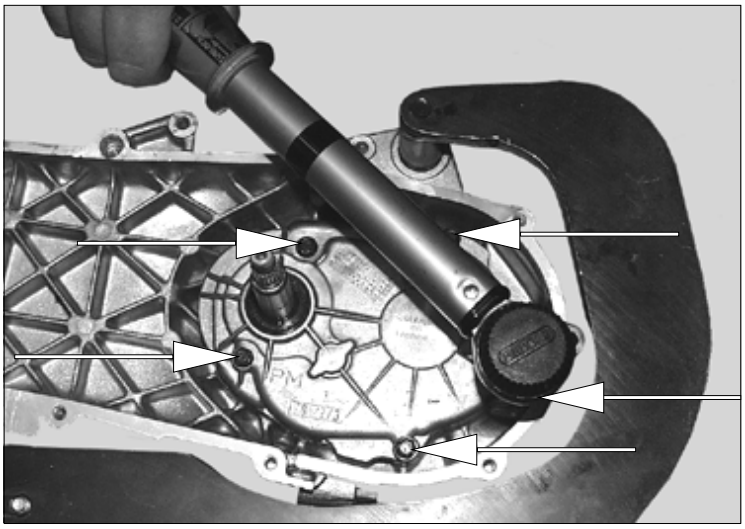
Fitting

- Position the bearing ring and the nylon spacer **(Mark 1)**,
- Put the return spring in place, hook the longest coil onto the notch on the cover,
- Insert the kick starter spindle into the ring after lubrication,
- Hook the second coil of the spring onto the spindle,
- Twist the spring slightly so as to position the kick starter spindle on the central rib of the cover,
- Put the washer and circlip in position on the spindle pin,
- Put the driving dog in place :
  . place the washer on the boss of the driving dog pin housing,
  . twist the spindle about 1/8 of a turn in order to put the driving dog in position (after lubricating the pin),
  . place the driving dog brake in its housing **(Mark 2)**.

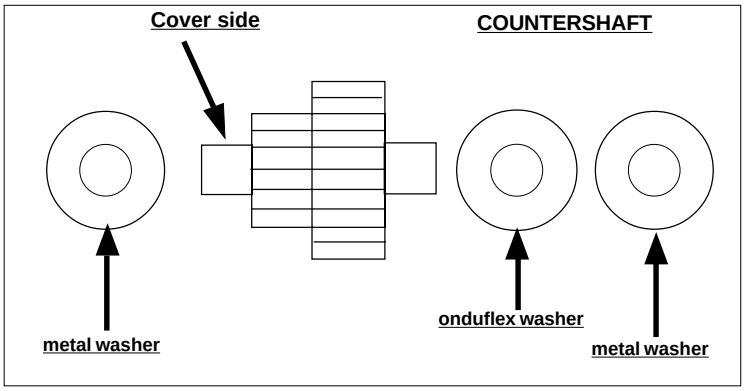


Relays

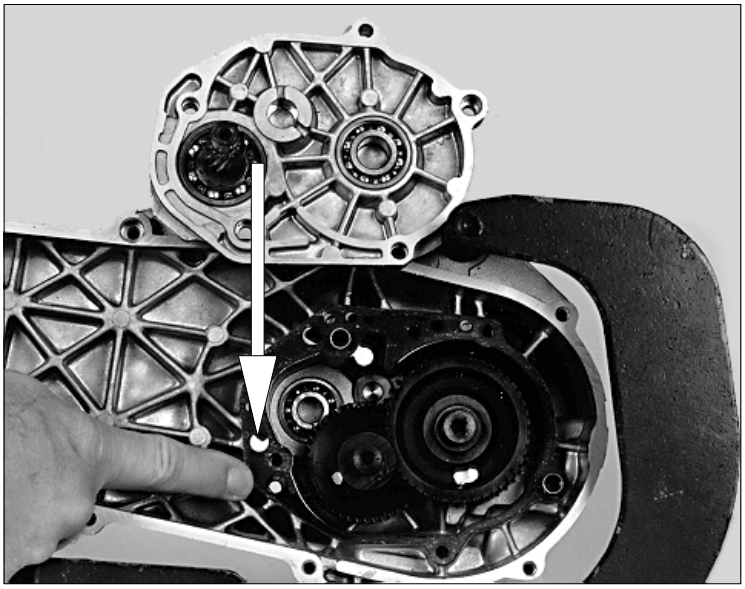
Having drained the relay box :
- Remove the 5 fastening screws from the cover,
- Tightening torque : 1m.daN,
- Remove the cover with the primary shaft (or input shaft), the seal, and the two centring holes,
- The primary (or input) shaft of the cover is pushed out using a mallet,
- Remove the friction washer from the countershaft (18.5 X 27 X 0.5),
- Drain the relay box completely before removing the secondary shaft (or output shaft) so as to avoid dirtying the brake linings,
- Remove the secondary shaft whilst paying attention not to damage the tightness seal,
- If this seal does become damaged, oil will run out via the evacuation slot located in the housing of the return spring of the brake wrench (Photo opposite),



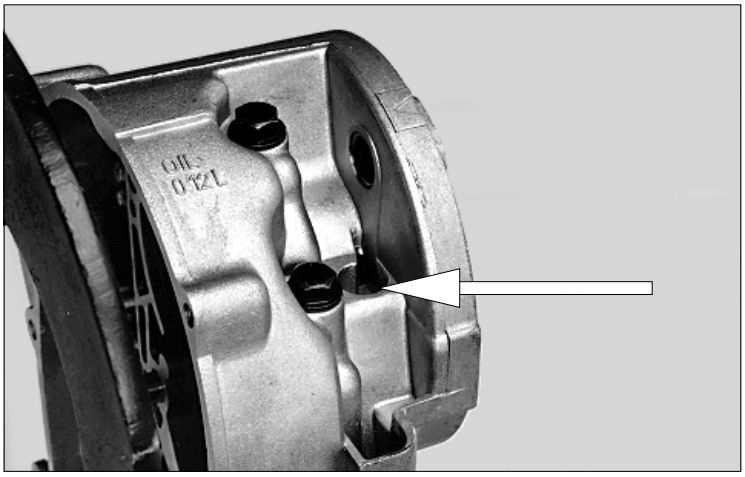
- Remove the countershaft as well as the friction washers (18.5 X 27 X 0.5) and onduflex (18 X 29 X 2),
- Replace the tightness seals and bearings if necessary, using the appropriate heat and remove method.



Important note :
Put graphite grease onto the ends of the countershaft in order to ensure better lubrication when setting up the vehicle,
Check that the shafts rotate freely,
Check that the evacuation pipes have a proper opening.

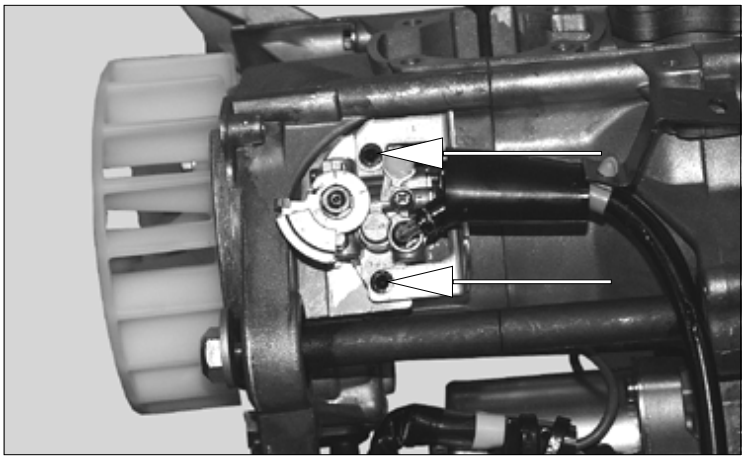


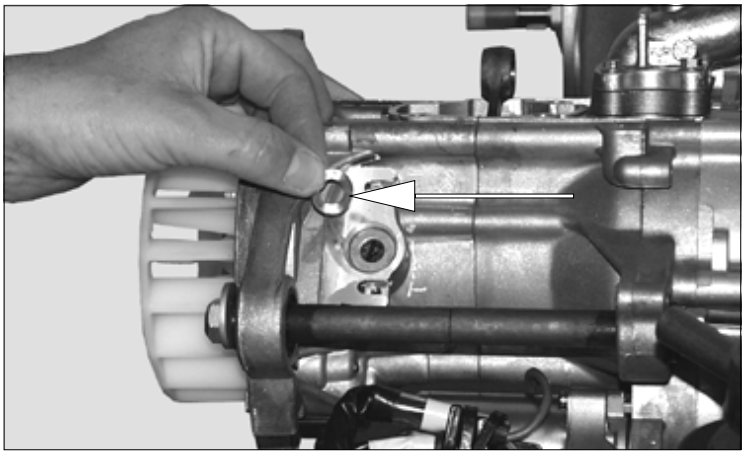
Note :
Fill the box with 0.12 litres of ESSO GX 80 W 90 oil ref. ***753009****,*
Tightening torque of the level screw : 1.2 m.daN.



Oil pump

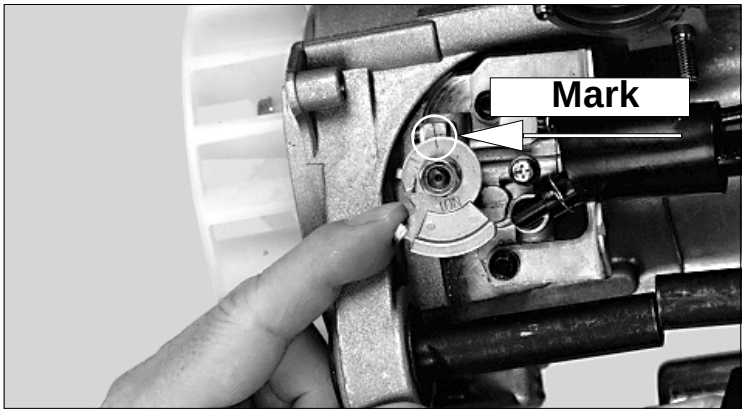
- Unclip the oil intake pipes at the carburettor,
- Loosen the hexagon screws,
- Tightening torque : 0.8 m.daN,
- Remove the oil pump and bracket from the control,
- Remove the 2 Q fastening nuts (square) from their housings,
- Remove the onduflex washer inserted between the pump and the bearing from the oil pump shaft.





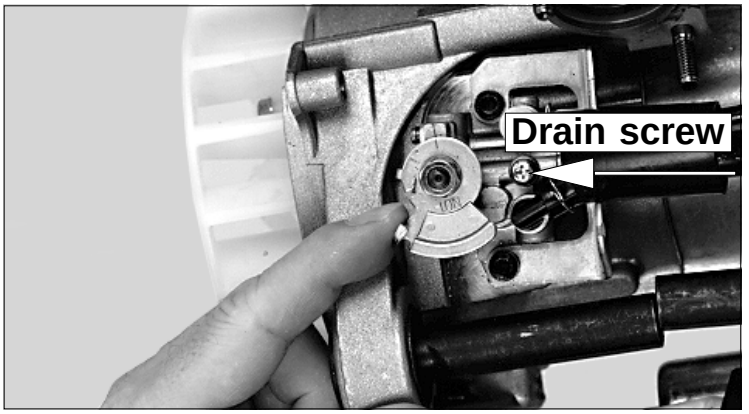
Adjustment of the oil pump

1) Check the clearance on the throttle grip (2 to 5 mm), adjust if necessary using the adjusting screw,
2) Open the throttle fully,
- Check that the mark on the control part of the pump is opposite the mark on the pump housing,
- Adjust, if necessary, by acting on the adjusting screw of the pump control.



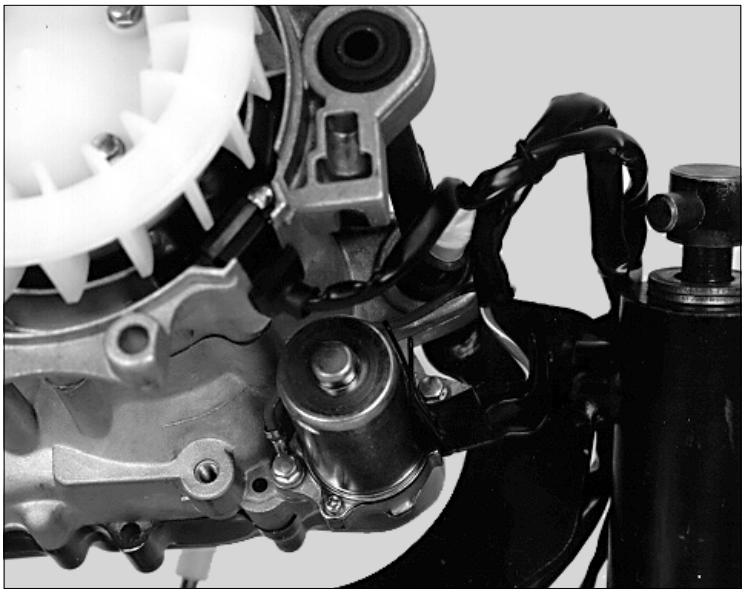
Checking the lubrication circuit

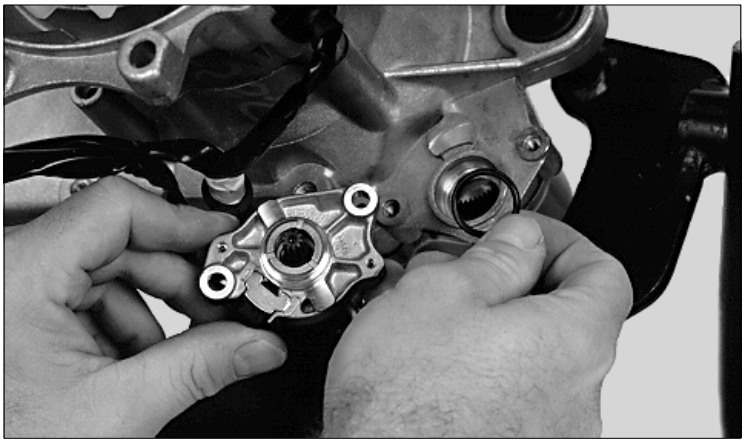
- Supply the carburettor using an additional tank containing 2 stroke mixture,
- Disconnect the oil intake hose at the pump and check the oil runs out correctly, if not, check :
  . that there is oil in the tank,
  . that the hose is not pinched,
  . that the oil filter is not blocked,
  . that the tank cap hole is not blocked (atmospheric pressure hole),
- Reconnect the hose onto the pump housing,
- Open the drain screw of the pump and close it when no air bubbles any longer escape,
- Start the engine,
- Disconnect the oil intake pipe at the carburettor,
- Check that the oil runs out drop by drop. The frequency of flow depends on the speed of rotation of the engine.



Starter

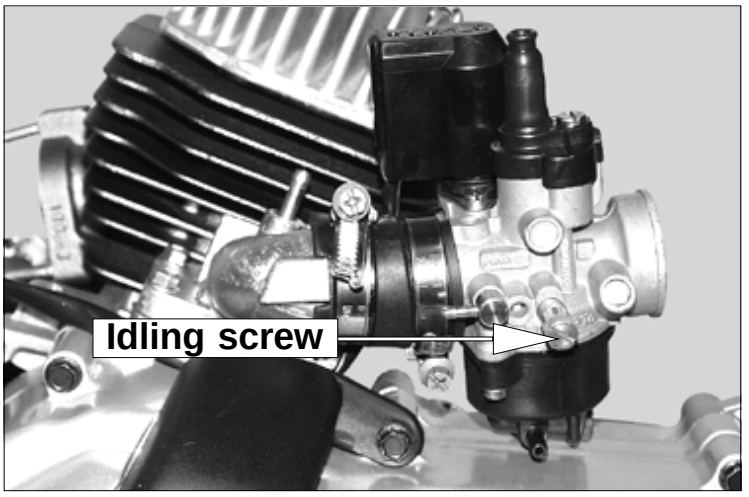
- Unclip the electric harness from the support clamp,
- Remove the 2 fastening screws and washers from the starter and take out the latter not forgetting the “ O ” ring,
- The lower screw also ensures earthing of the battery to the engine (green wire),
- The upper screw also ensures fastening of the electric harness support bracket,
- Tightening torque : 1 m.da.N.

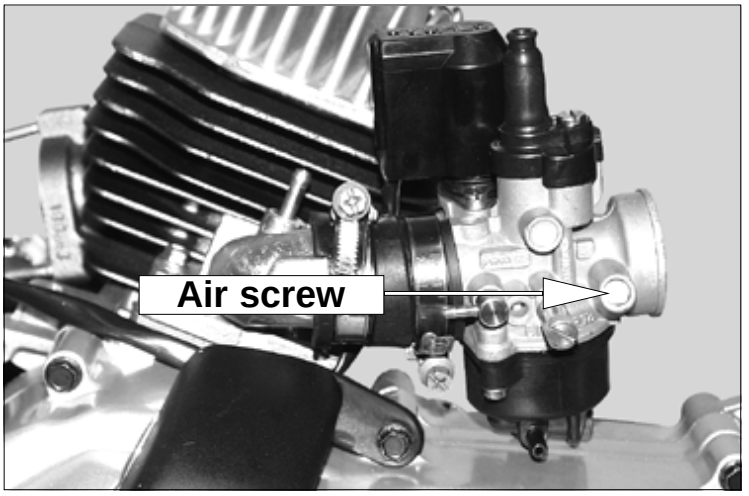




Carburettor - choke assembly

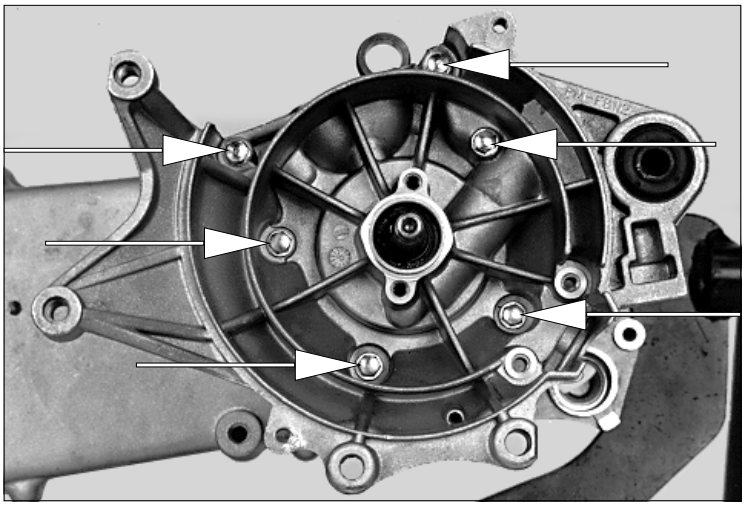
- Loosen the flexible clamping,
- Take the carburettor out of the flexible connecting part,
- Check that the connecting part is in perfect condition before putting it back,
- Tightening torque : 0.8 m.daN,
- Adjustment of air screw and idling screw, see general characteristics,



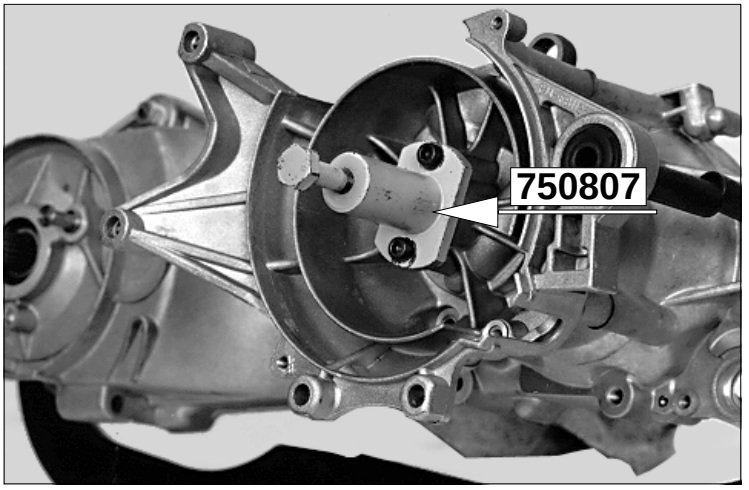


Opening of engine housings

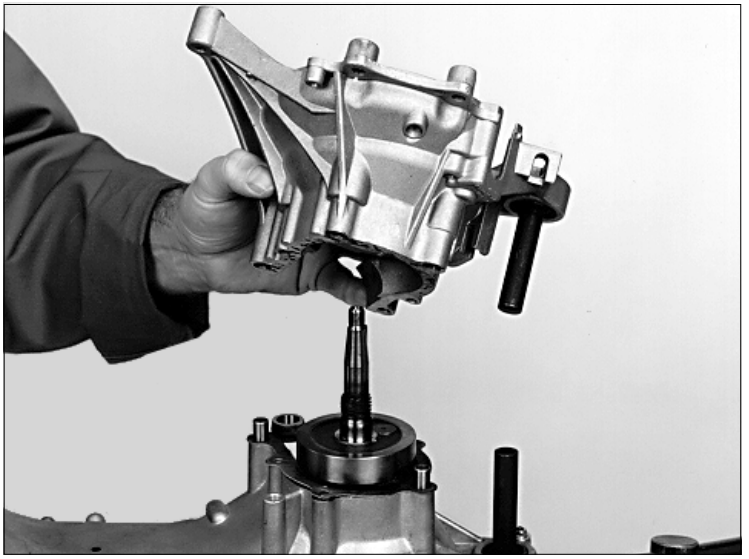
- Remove the 6 fastening screws from the RH half housing,
- Place the protective end piece ref. **68007** on the end of the crankshaft,



- Fix the extraction tool ref. **750807** onto the half housing,
- Turn the central screw until the housings are fully open. Hold the conrod in place so as to avoid it knocking into the housings,



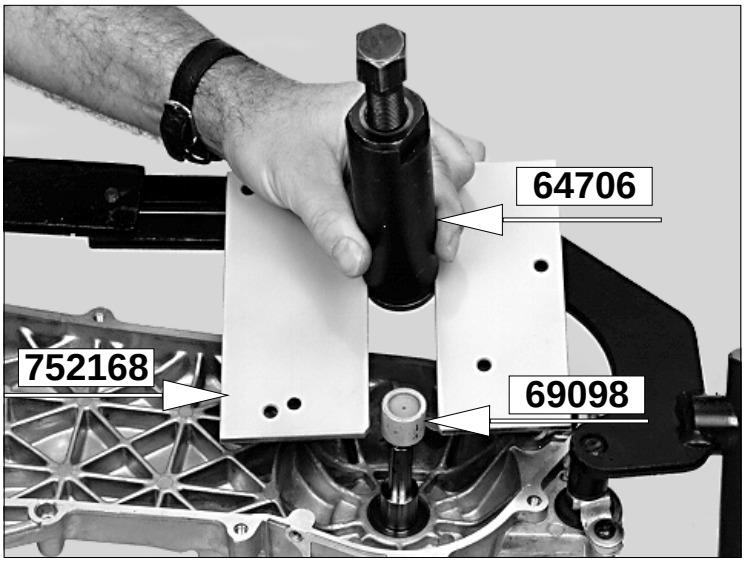
- Remove the RH half housing,

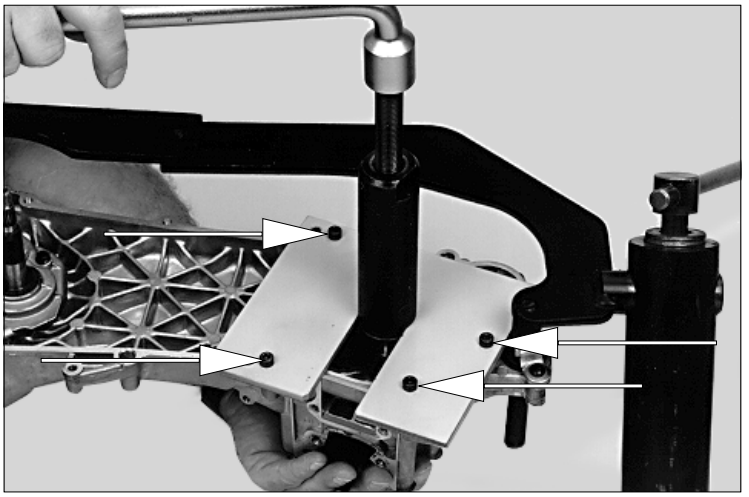


- Remove the seal and the two centring holes,
- Remove the drive shaft from the oil pump and its positioning bearing.

Crankshaft

- Place the protective end piece ref. **69098**, onto the end of the crankshaft,
- Place the tool ref. **64706** equipped with the plate ref. **752168**, onto the housing,

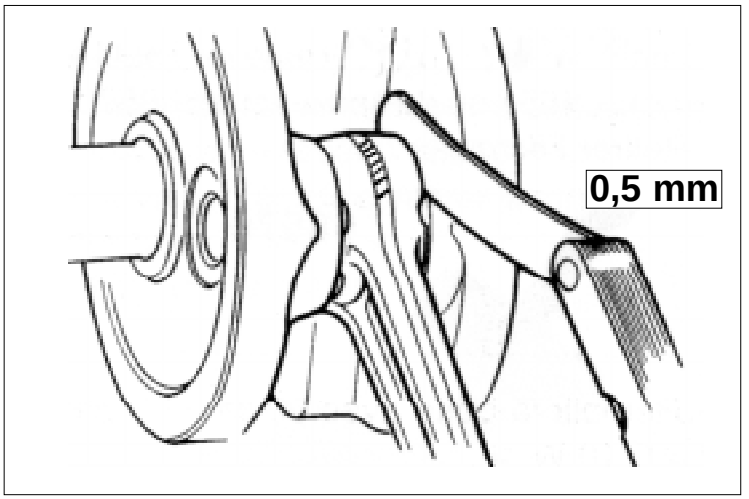




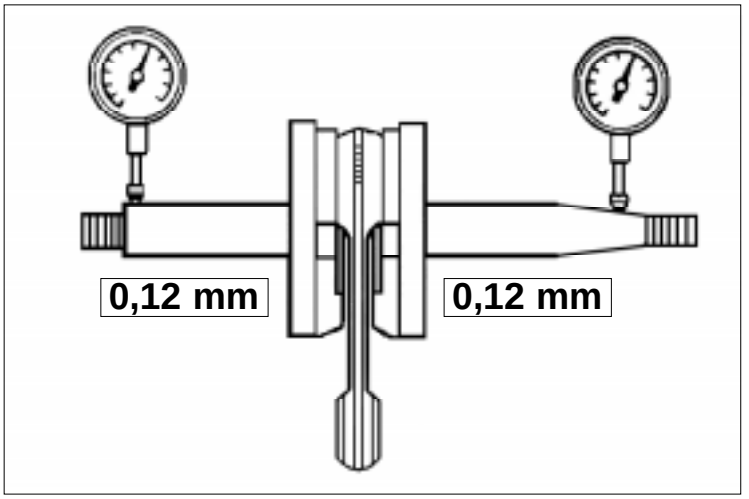
- Fix the plate onto the housing with 4 screws,
- Extract the crankshaft by tightening the central screw of the tool.

Checking the crankshaft

- The maximum lateral play of the conrod big end must not be greater than : 0.5 mm,



- Check the alignment of the crankshaft,
- The values measured at the ends must not be greater than 0.12 mm.



Replacement of bearings and seals

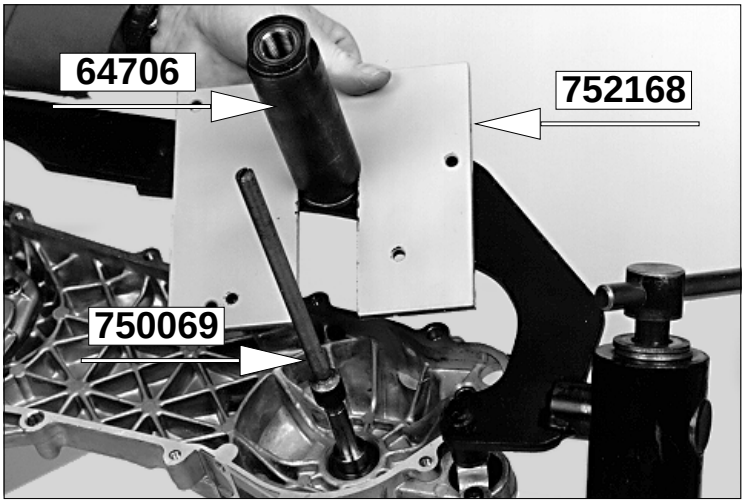
- Heat the housings evenly to 90° in order to dilate them. The bearings will fall off of their own accord, remove the seals,
- Use the dilation to put new bearings in place,
- Position the tightness seals :

.the seal on the drive pulley side directly on the housing, the lips on the chamber side of the wheel,
the seal on the flywheel side must be inserted by approximately 9 mm.

Comment :
*If the bearings on the crankshaft remain in place on the latter, use the extraction tool ref. **64706** fitted with half shells (diam = 56) in order to carry out the extraction.*
*Do not forget to place the protective end piece ref. **69098** onto the end(s) of the crankshaft.*

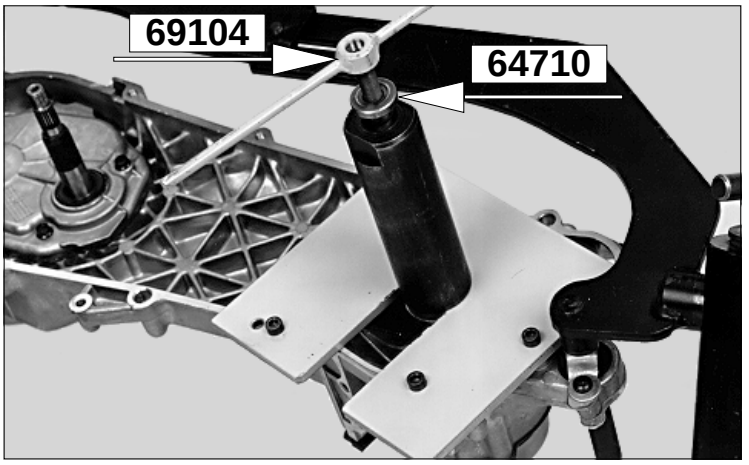
Refitting the engine and Closing of the housings

Assembly of the crankshaft in the LH housing :
- Insert the crankshaft into the bearing,
- Screw the spindle ref. **750069** onto the end of the crankshaft,
- Introduce the tool ref. **64706** fitted with the plate ref. **752168** onto the spindle and centre the assembly onto the housing using 4 screws,

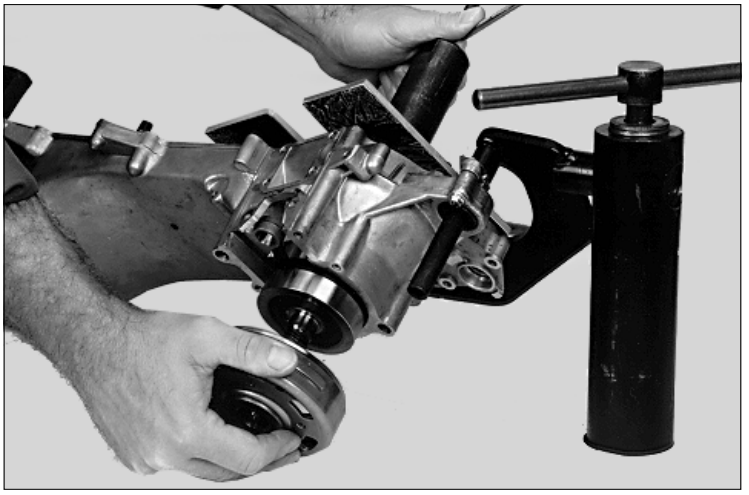


- Put the centring device in place ref. **64710**,
- Screw the screw on torque handle ref. **69104** onto the spindle ref. **750069** whilst holding the crankshaft in place.
- Continue to screw the screw on torque handle in order to bring the crankshaft into contact with the bearing.

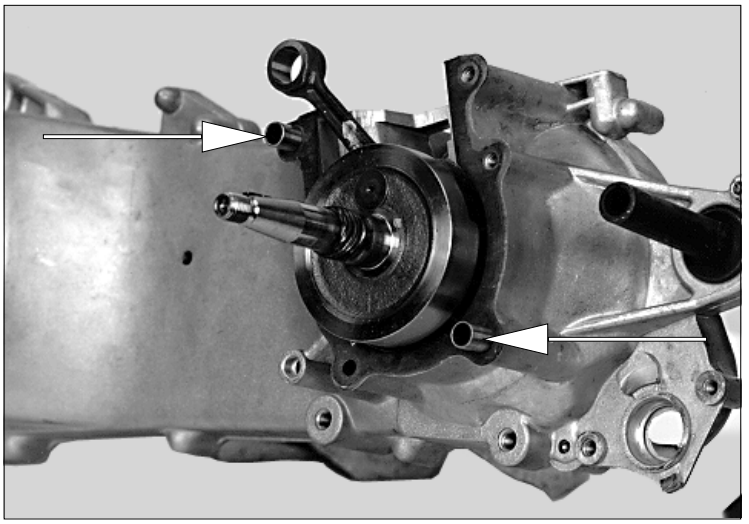
Warning :
Do not jam the conrod against the housing.



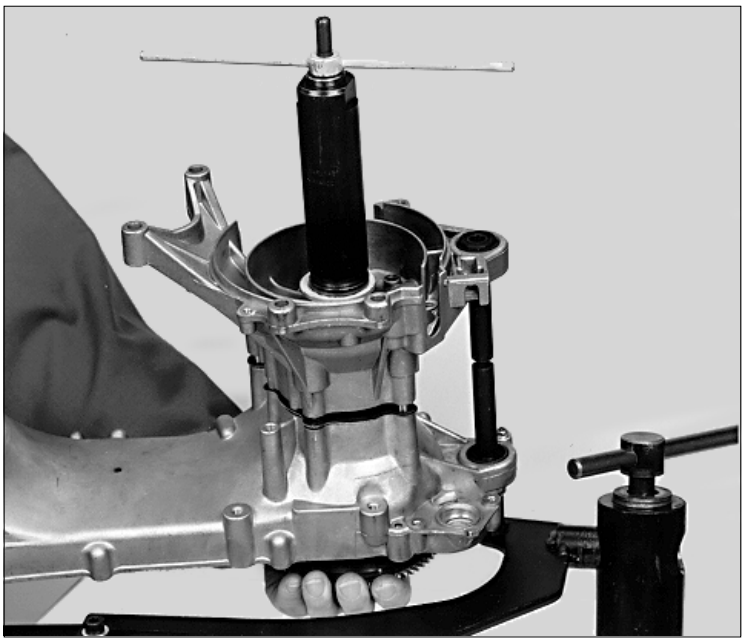
- In order to facilitate holding the crankshaft in place, use the rotor fitted into the cotter pin on the right hand side,



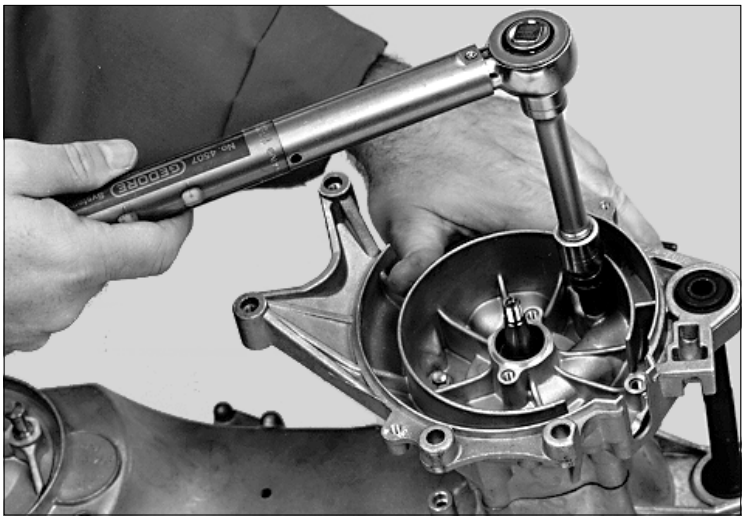
- Check that the crankshaft is correctly positioned in relation to the mating face of the engine housing (the middle of the conrod must correspond with the level of the mating face),
- Put the 2 centring holes in place on the LH housing,



- Position the housing seal (no oil, no grease),
- Present the RH housing and insert it paying attention not to damage the tightness seal when passing in front of the cotter pin,
- Screw the spindle ref. **750069**, onto the end of the crankshaft,
- Place the washer ref. **750808** (50X29X3 mm),
- Place the tool ref. **64706**,
- Put the centring device ref. **64710**, in place,
- Tighten the screw on torque handle ref. **69104** until the housings are fully closed,
- Keep the crankshaft assy in place on the left hand side with the starter drive assy,
- Lubricate the oil pump shaft and place the shaft - bearing assembly in the housing,
- Check that the crankshaft assy turns freely and drives the oil pump shaft correctly,



- Position the 6 fastening screws . 3 = L 45 mm
  . 3 = L 70 mm),
- Tightening torque : 1 m.daN,
- Shave the housing seal,
- Lubricate the crankshaft assy and bearings using 2-stroke oil.



NOTES

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SYSTÈME QUALITÉ
CERTIFIÉ ISO 9001

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