manuel d'atelier

POUR LES VÉHICULES AVEC ET SANS VARIATEUR DE VITESSE

workshop manual

FOR VEHICLES WITH AND WITHOUT VARIABLE SPEED TRANSMISSION UNIT

Werkstatt.Handbuch

FÜR MASCHINEN MIT UND OHNE DREHMOMENTWANDLER

manual de taller

DE LOS VEHICULOS CON Y SIN VARIADOR DE VELOCIDAD

CYCLES PEUGEOT

S. A. CYCLES PEUGEOT 25 BEAULIEU - VALENTIGNEY R. C. 55 B 45 MONTBÉLIARD

1969

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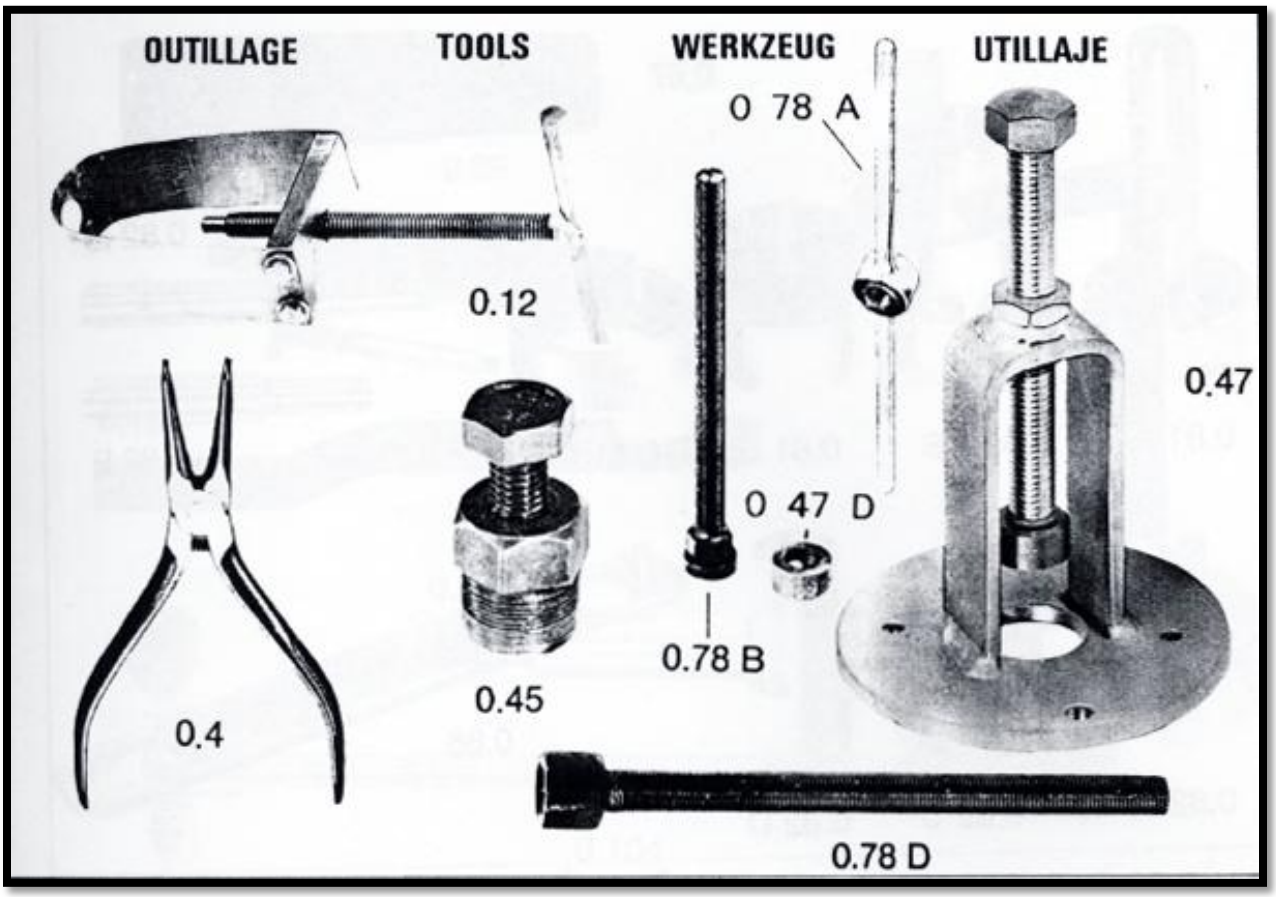
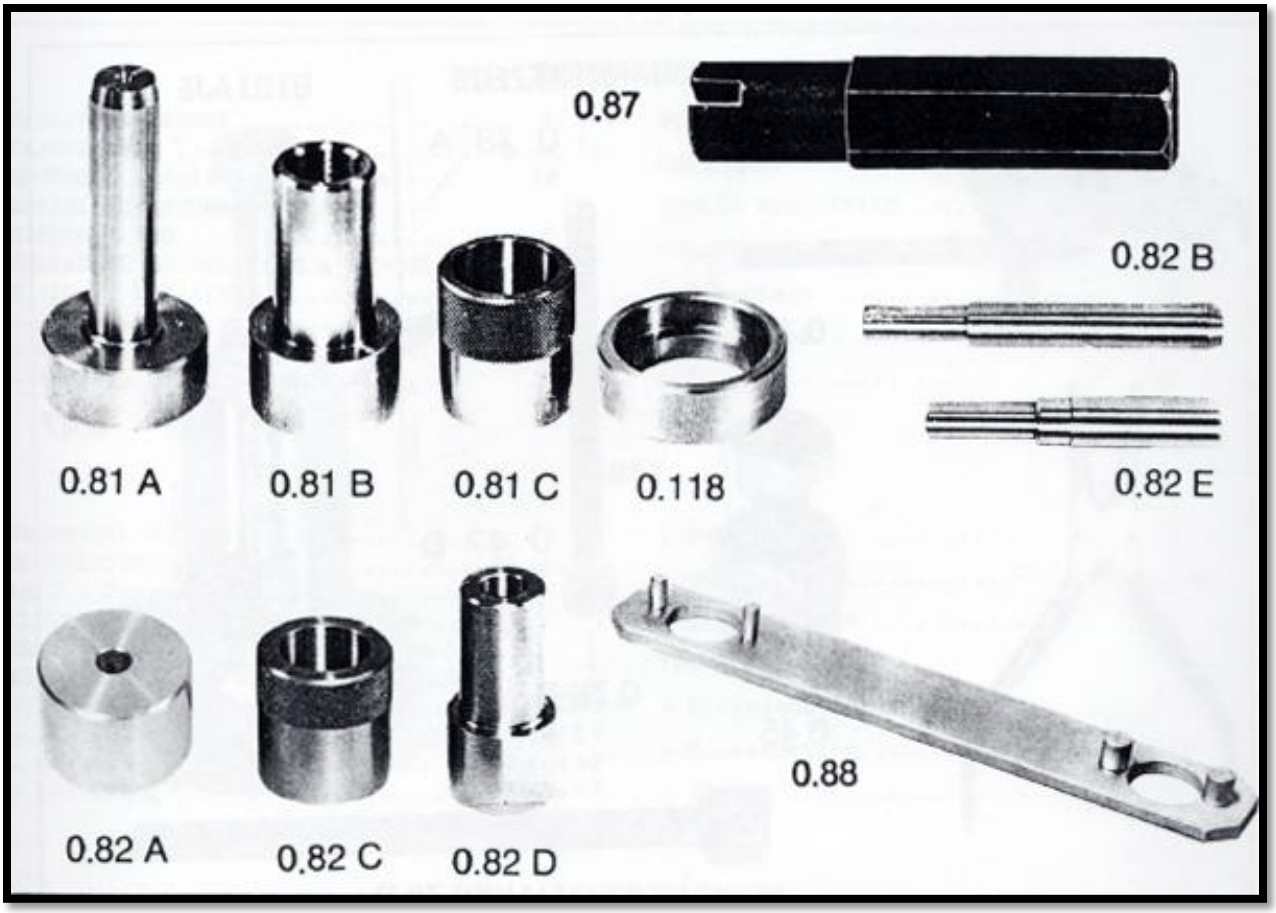
SPECIAL TOOLS



0.4 - Pliers for removing the gudgeon pin retainers (wrist pin clips)
0.12 - Gudgeon pin (wrist pin) assembling and disassembling tool
0.45 - Flywheel magneto extractor
0.47 - Tool with driving attachment (for replacing and removing of crankshaft)
0.47D - Driving attachment
0.78A - Nut with handles
0.78B - Screw for replacing of the crankshaft into the crankcase-halves (diameter 10mm, thread 100)
0.78D - Screw for replacing the crankshaft into the crankcase-halves (diameter 12mm, thread 100)



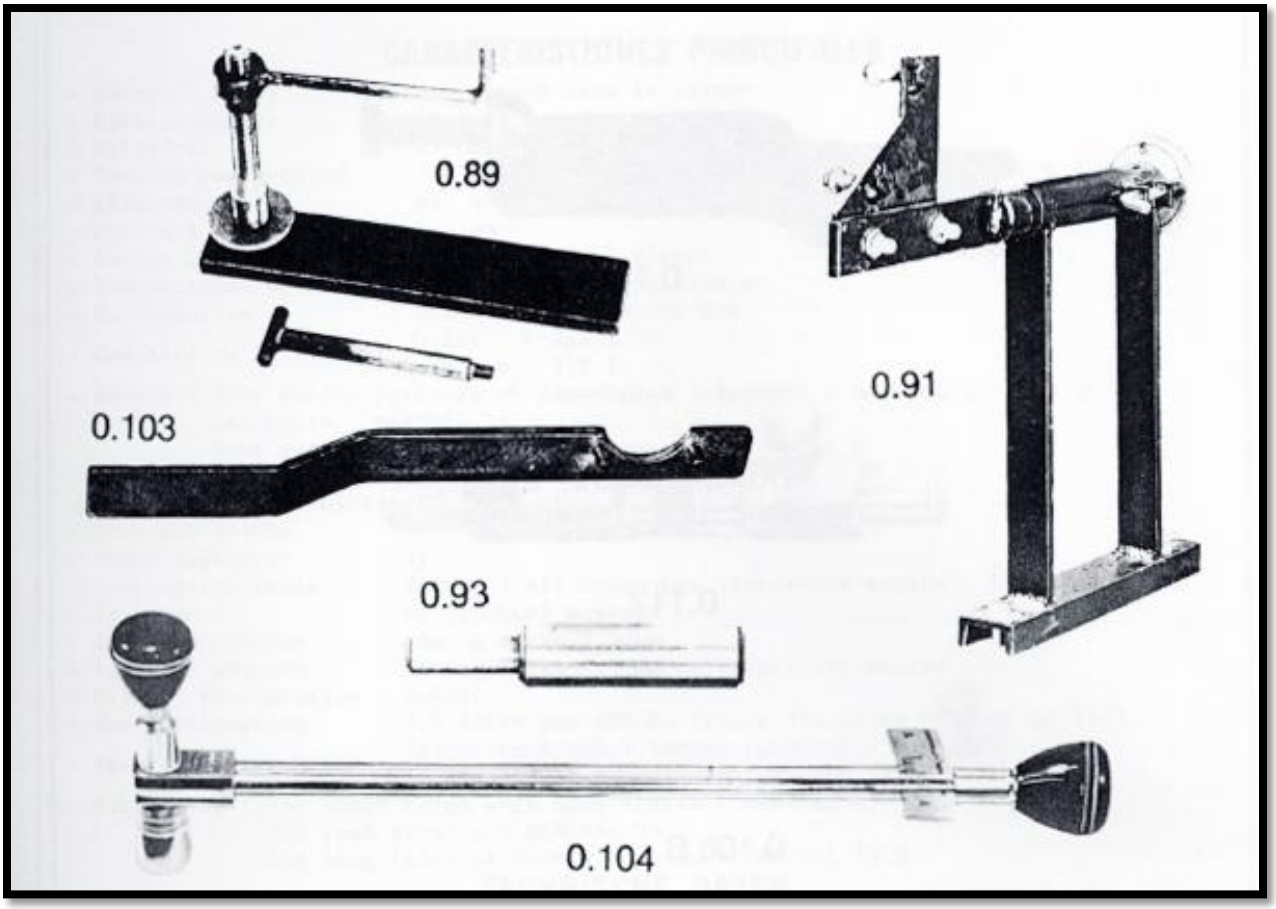
0.81A - Guide piece
0.81B - Driver
0.81C - Oil seal guide piece

→ For replacing the oil seal and ball bearing in the LH crankcase half

0.82A -Socket
0.32B - Guide piece
0.82C - Oil seal guide piece
0.82D - Driver
0.82E - Guide piece

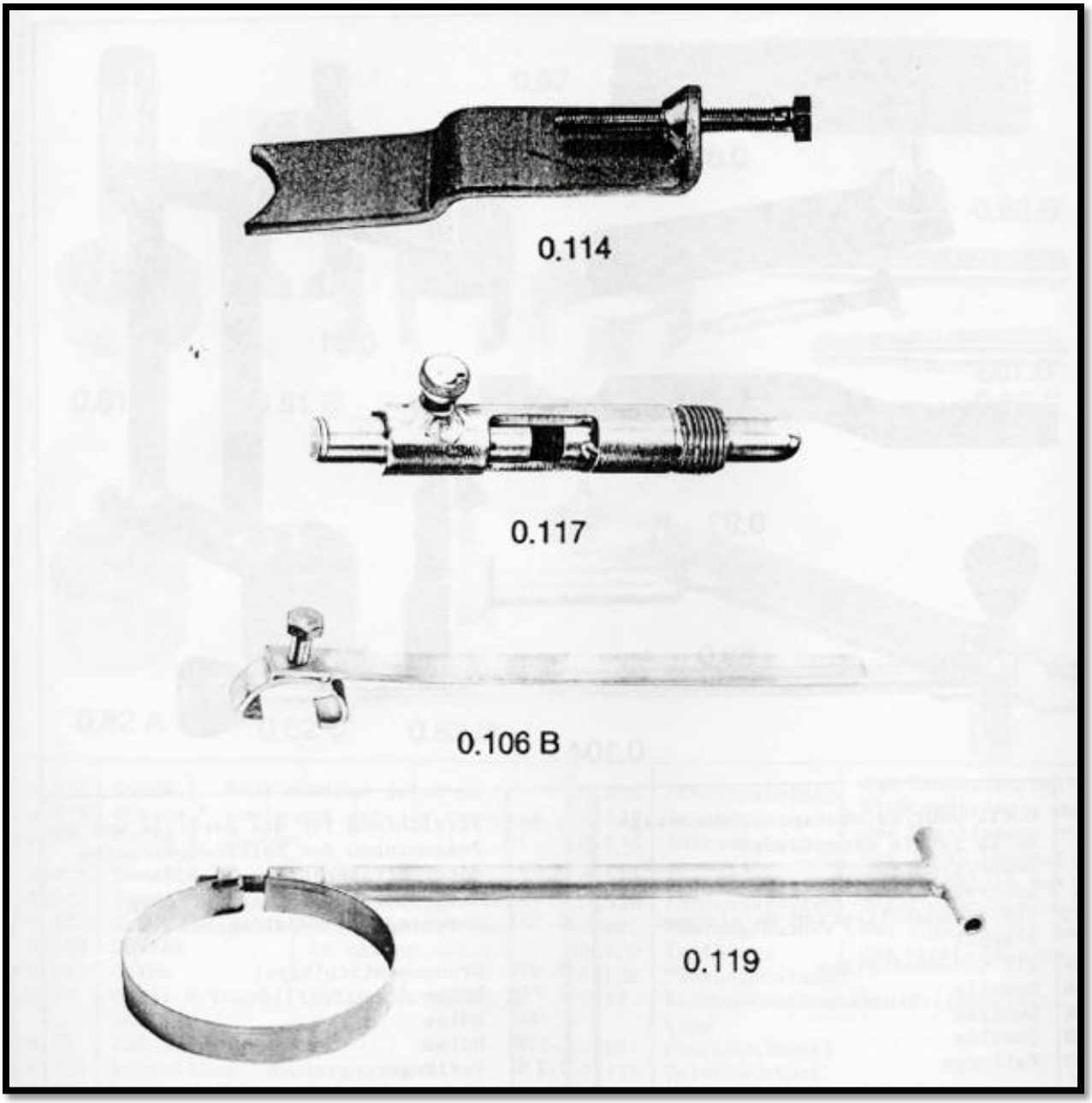
→ For replacing the oil seal and ball bearing in the RH crankcase half

0.87 -Pulley hub fixing tool
0.88 - Stop-pin wrench
0.118 - Distance pin



0.89 - Driven pulley assembling and disassembling tool
0.91 - Engine bearing frame
0.93 - Gudgeon pin (wrist pin) centering tool
0.103 - Drum fixing tool
0.104 - Torque wrench

J.11H - Socket
J.14H - Socket
J.17H - Socket
J.210 - Extension tool



0.106B - Tapered driving nut extractor
0.114 - Belt tension checking tool
0.117 - Ignition advance timing tool
0.119 - Holding strap

MAIN TECHNICAL DATA

- 2-stroke engine with pre-compression in the crankcase
- **Bore and stroke**: 40x39mm
- **Cubic capacity**: 49cc
- **Compression ratio**: 7.4 to 1 all types but reed valve engine: 8.4 to 1
- **Ignition**: flywheel magneto
- **Ignition advance**: timing marks 2.5mm
- **Ignition advance**: timing marks 1.5mm on reed valve engine
- **Primary transmission**: V-belt
- **Fuel consumption**: 1.8 liters per 100 km (about 158 miles per one gallon)
- **Tank capacity**: front tank = 3.7 liters (0.815 gallons), rear tank = 3.2 liters (about 0.69 gallons)
- **Spark plug**: for short trips with many starts = Marchal 35-36 D, for road service, Marchal 35, for long rips or mountain roads, Marchal 34 S.

AUTOMATIC PLATE-CLUTCH, 120MM DIAMTER

Description

The clutch system has the following two main parts:

1) The starting clutch, consisting of 2 cranking shoes (A) which attach to the driving pulley (B). Due to the centrifugal force, these shoes transmit motion to an outside drum (C) which is rigidly locked with the crankshaft.
2) The automatic plate clutch, consisting of a drum (D) which bears 6 balls, a pressure-plate (E) and a lining (F). The outside edge of the lining is notched so it can be rigidly locked with the driving pulley.

Operation

The driver's actuation of the pedals at first transfers the motion to the rear wheel through the crankgear chain, secondly to the large intermediate pulley through the driving chain, then to the starting clutch over the small pulley which is driven by the belt.

As soon as the speed reaches about 8km per hours (5mph), the starting clutch sets to work and it cranks the engine over, thus starting it.

Once the engine runs, the operation of the throttle will cause the rotation speed to increase. Due to centrifugal force, the balls tend to move away from the center. The drum (D) being used as a support, the balls bring out an axial thrust which forces the pressure-plate (E) against the lining (F), the latter being in contact with the drum (C). The lining, thus rigidly locked with both the pressure-plate and the drum, transfers motion to the pulley by means of its notches, and so the engine rotation is transmitted to the rear wheel over the belt and the driving chain.

AUTOMATIC PLATE-CLUTCH AND VARIABLE SPEED TRANSMISSION

Description

The automatic plate-clutch with variable speed transmission unit has the following two main parts:

1) The drive pulley, consisting of the tight flange (B) which bears the cranking shoes, and the moving flange (G), which can travel sideways. A centrifugal weights system is built-in between the moving flange (G) and the nylon deflector plate (H). The centrifugal force enables this system to control the width of the groove between both flanges of the pulley.
2) The driven pulley, consisting of two flanges which are kept pressed together by six springs.

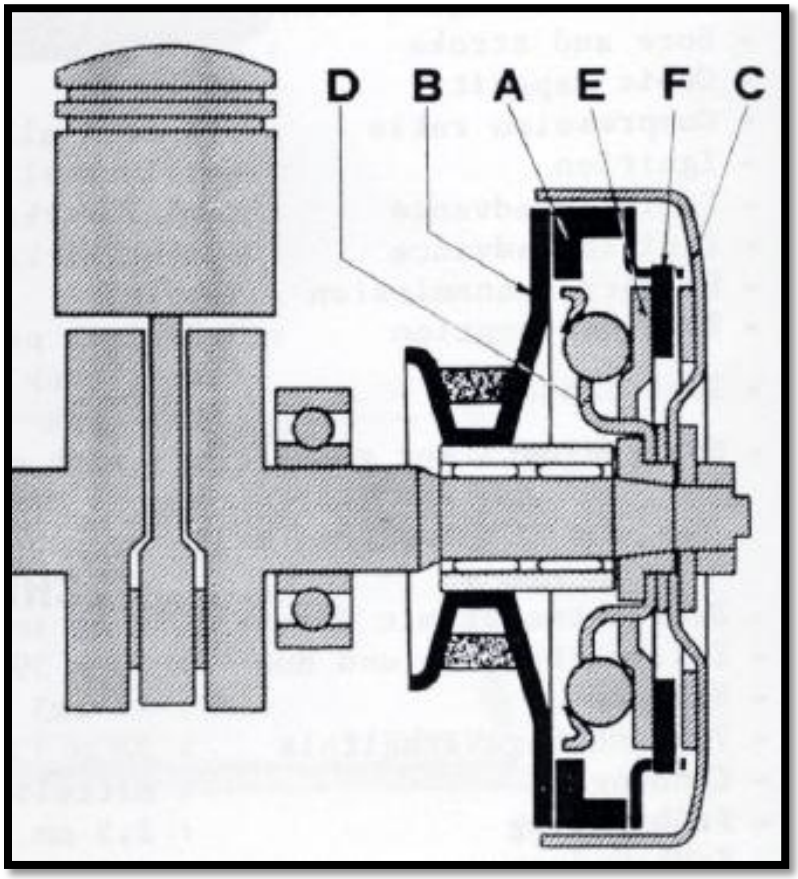
Operation

At starting, and as a general rule while the speed is low, the reduction ratio is high and squares with a normal first gear.

The belt travels around the driving pulley at the bottom of the groove and at the periphery of the driven pulley groove.

Through an increase of the engine RPM, the centrifugal force operates, and the built-in centrifugal weights, using the nylon deflector plate (H) as a support, push the moving flange (G) back towards the tight flange (B). By doing so, they compel the belt to climb up the flanges of the driving pulley groove to its periphery. This variation is a continuous one. It happens without any interference of the driver. Therefore it is better than a gear shift. It is actually an "automatic speed variation."

While the diameter of the driving pulley variates automatically in the way explained above, the diameter of the driven pulley changes in the inverted way, but not by the same amount, as it is actuated by its springs.



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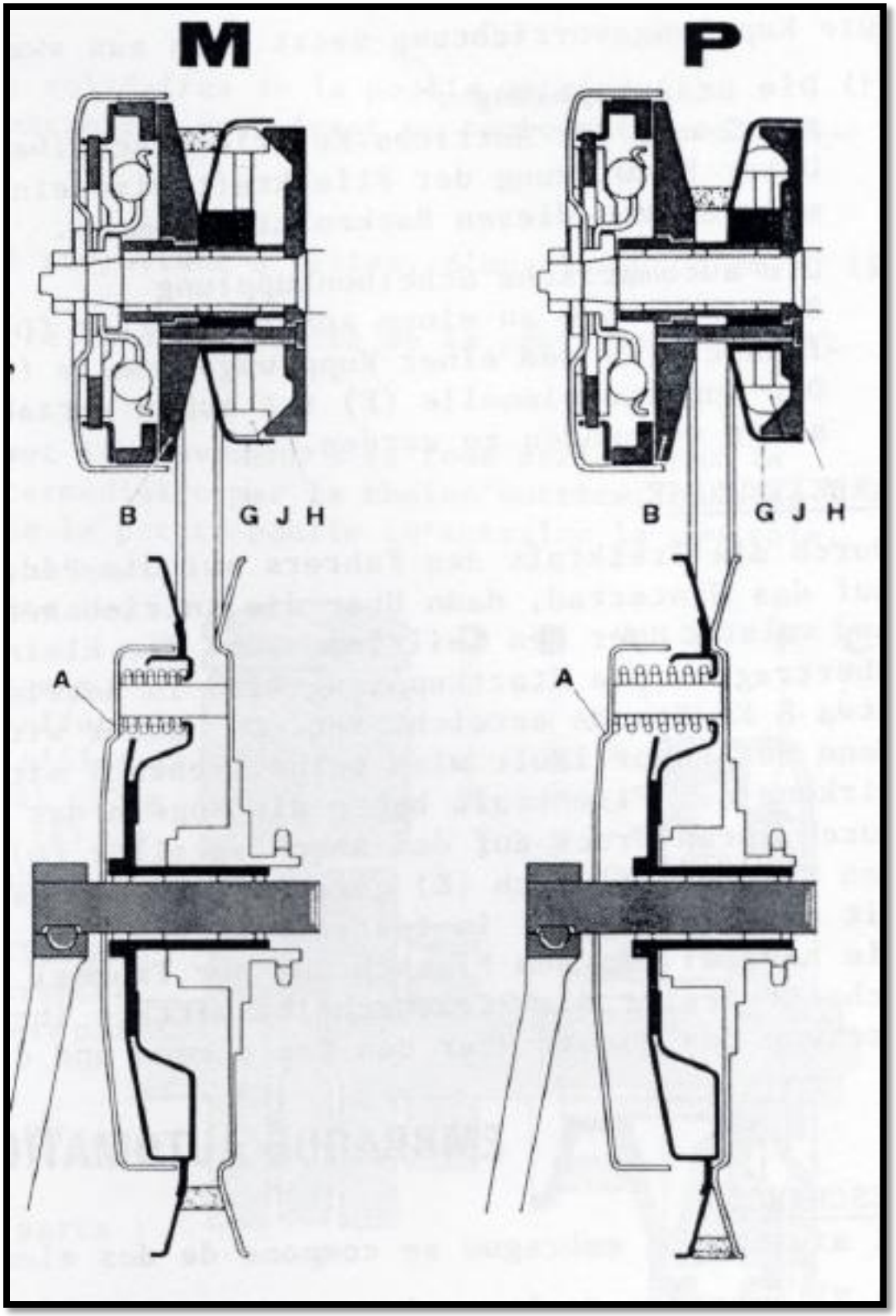
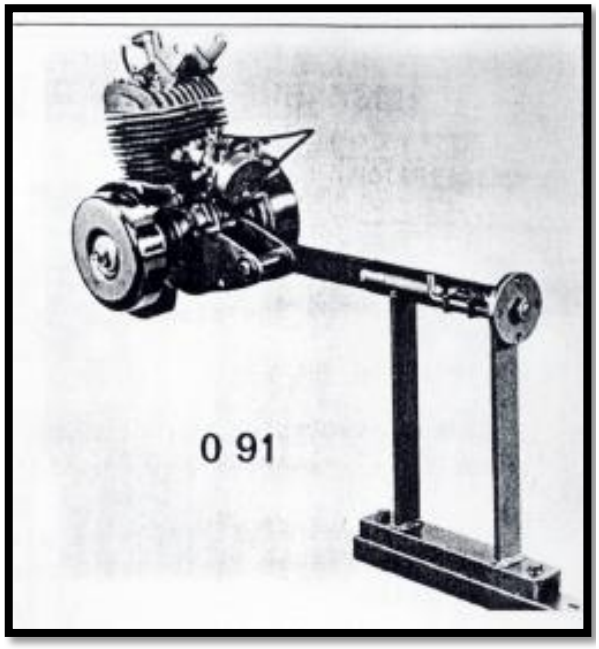
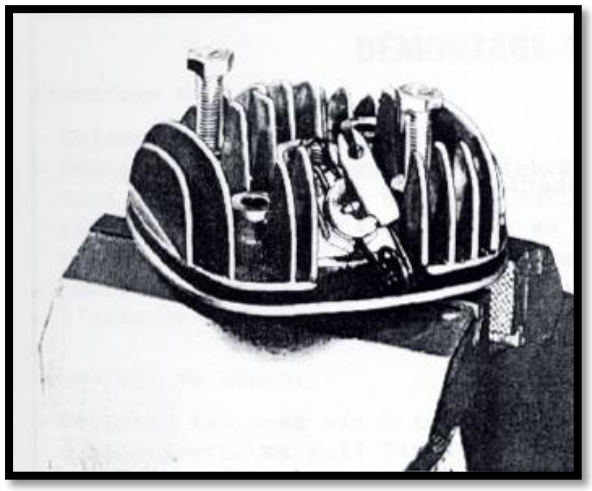

M
P
B
G J H
A
B
G J H
A

DISASSEMBLING THE ENGINE

Engine stand

The opposite figure shows an engine stand which is very handy and can be used for all the engines which are made in our works. The engine is mounted on a rotating shaft which may be locked in four different positions, making all parts easily accessible. This engine bearing frame is supplied by our spare parts distributor under part Nr. 0.91.





Removing the cylinder head and cylinder

-Loosen and remove the 4 nuts holding they cylinder head. Operate crosswise to avoid warping. Remove the cylinder head and its gasket.

-In case the cylinder is stuck tight, set the piston at its lowest point (bottom dead center) and strike light blows with a rubber mallet on the exhaust pipe. (Never hammer on the cooling fins, because they are very fragile). Use caution to avoid damage to the gasket while removing the cylinder.

-Remove the base gasket.

Removal of the decompression valve

-Fasten the cylinder head using two bolts in a vice

-Clip off the end of the pin, then compress the spring and remove the pin

-Take off the valve

Removal of the decompression body

-Fasten the cylinder head as explained above

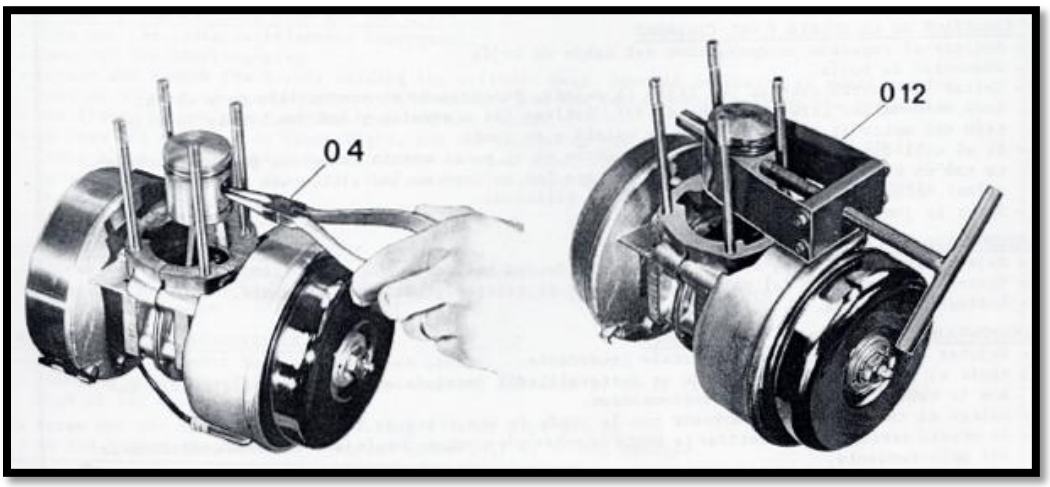
-Insert a screwdriver into the hairpin spring and open it until it can be slipped over the head of the decompressor body.

-Screw out the decompressor body using a 19mm pipe wrench

-Do not remove the compressed copper gasket if it is not damaged.

Removing the piston

1) Remove the two gudgeon pin retainers using the special pliers 0.4.
2) Drive out the gudgeon pin using the tool 0.12. Be cautious with the needle bearing races.



DISASSEMBLING THE MAGNETO FLYWHEEL

Removing the flywheel

-Take off the flywheel cover

-Remove the nut at the end of the crankshaft using a 16mm pipe wrench while immobilizing the rotor with the holding strap 0.119

-Screw back the thrust bolt of the extractor 0.45 without removing it completely. Then put that tool into the position by screwing it onto the rotor until it bottoms.

-Hold the body of the tool using a 21mm wrench, screw in the thrust bolt of the extractor using a 17mm wrench until the rotor disengages.

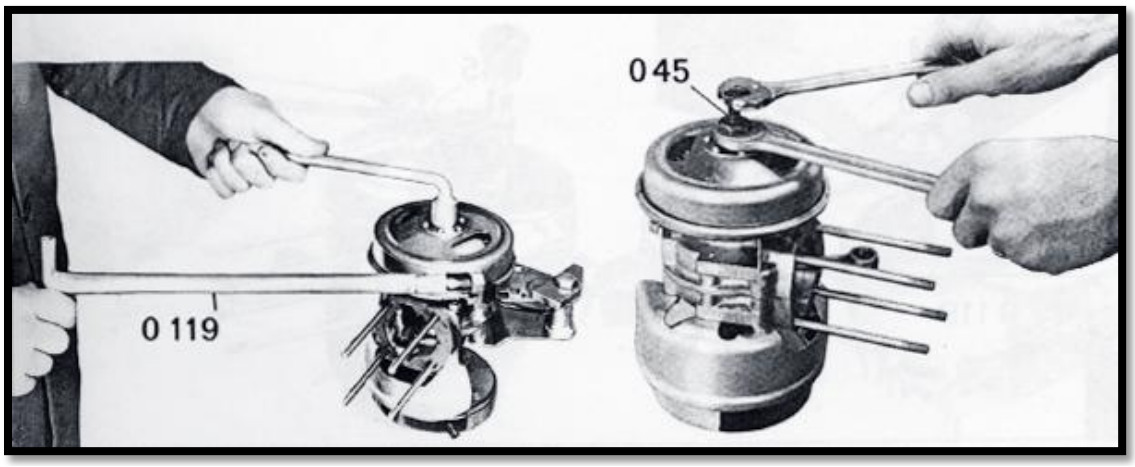
Removing the stator:

-Screw out the two cylindrical head screws, using a screwdriver

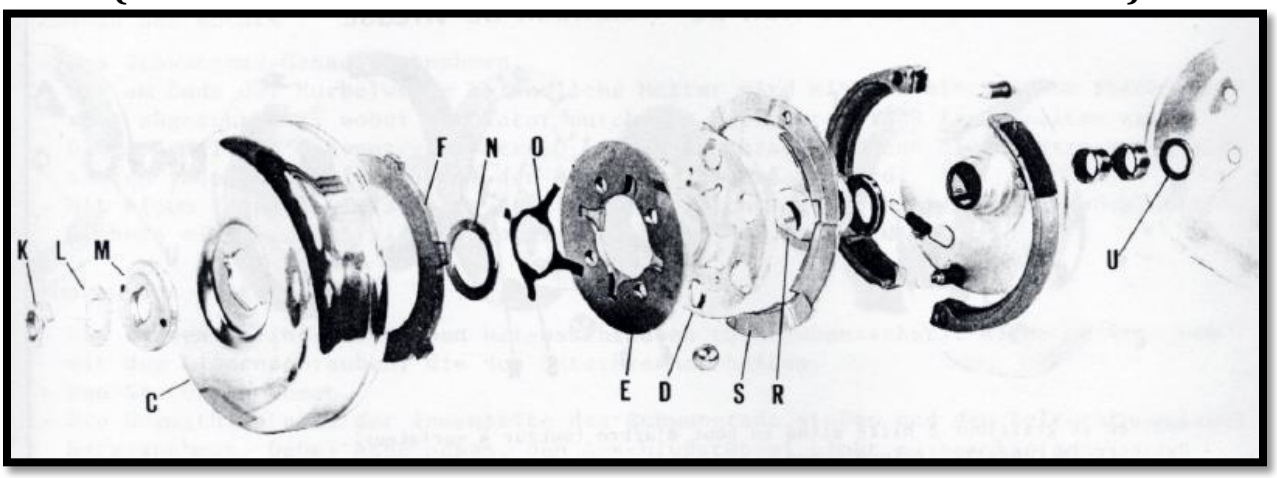
-Caution: Do not erroneously remove the countersunk screws with raised heads holding the breaker.

-Take out the stator

-Push the grommet inside of the flywheel magneto and disconnect the lighting wire. Use caution to avoid damage to the connecting plug.



DISASSEMBLING OF THE PLATE-CLUTCH
(WITH OR WITHOUT THE VARIABLE SPEED TRANSMISSION)



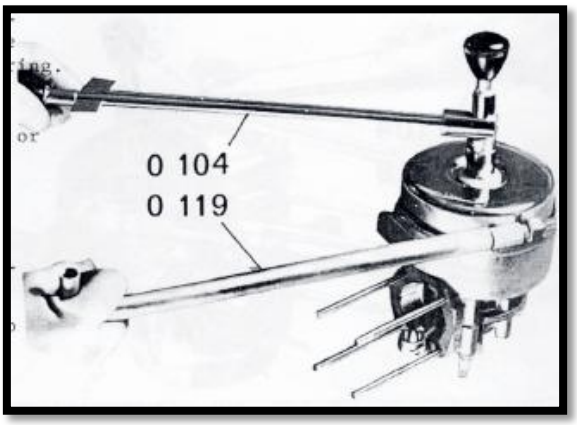
-Remove the ball lubricator located at the shaft end (engine with variable speed transmission)
-Unlock the tab-washer of the nut
-Untighten the nut (right hand thread) using a 17mm pipe wrench or torque wrench while holding the clutch box, using the strap 0.019
-Remove in the following order:

- -the nut (K)
- -the tab-washer (L)
- -the washer (M)
- -the clutch box (C)
- -the adjusting washer (N)
- -the spring (O)
- -the lining (F) (mark the outside surface of the lining in order to put it back the same way it was)

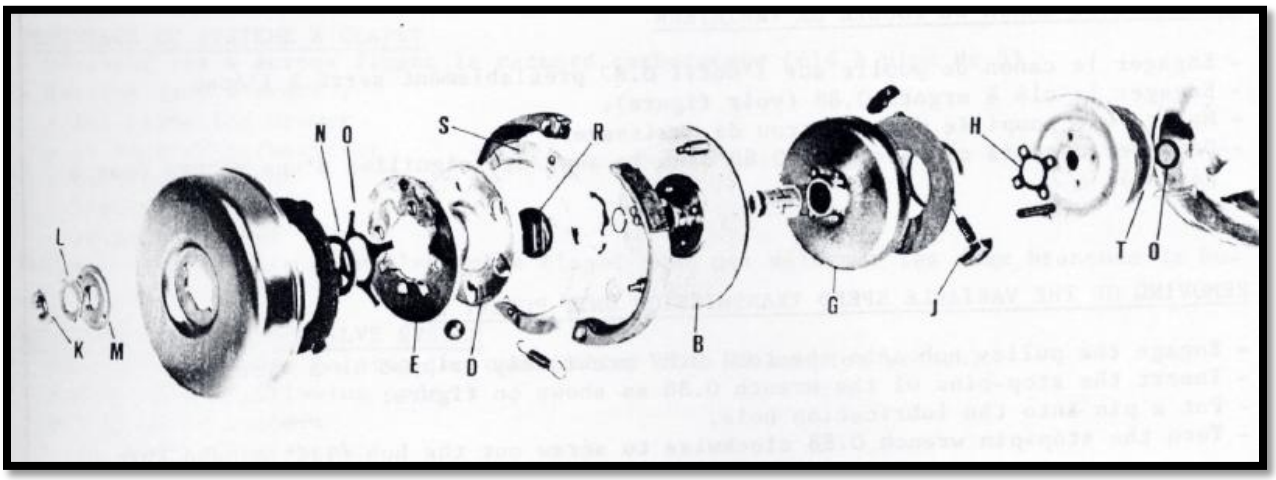
-Remove together the pressure plate (E) and the drum (D) bearing the balls, and the balls. Pull the tapered driving nut (R) off the crankshaft. To do so, use the extractor 0.0106B.

<u>Removing the clutch shoes</u>
The driving pulley assembly is to place onto a bench, with its shaft in a vertical position.
-Untighten and screw out the nuts attaching the locking ring (S), remove the lock-washers, and remove the locking ring.
-Unlock the retracting springs off the studs of the shoes. Do not forget to mark the way they were hooked on (1st or 2nd stud).
-Take the shoes off.

<u>Removing the needle bearing races</u>
(clutch without variable speed transmission)
The needle bearing races are forced into the pulley bore. To drive them out, use the proper driving tool (do not heat).

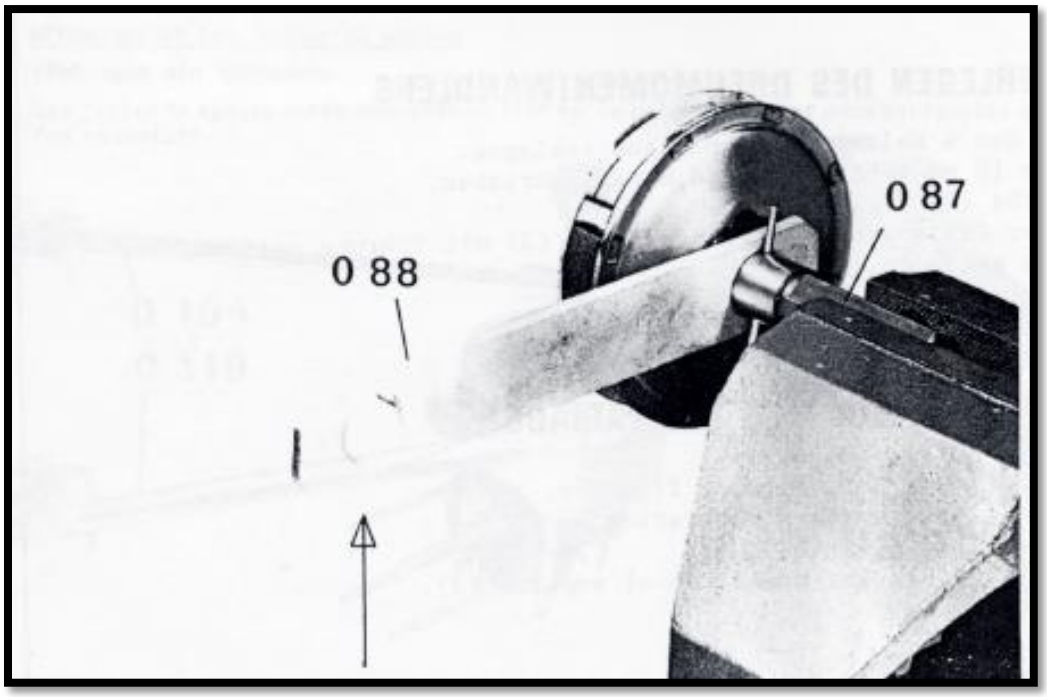


DISASSEMBLING THE VARIATOR



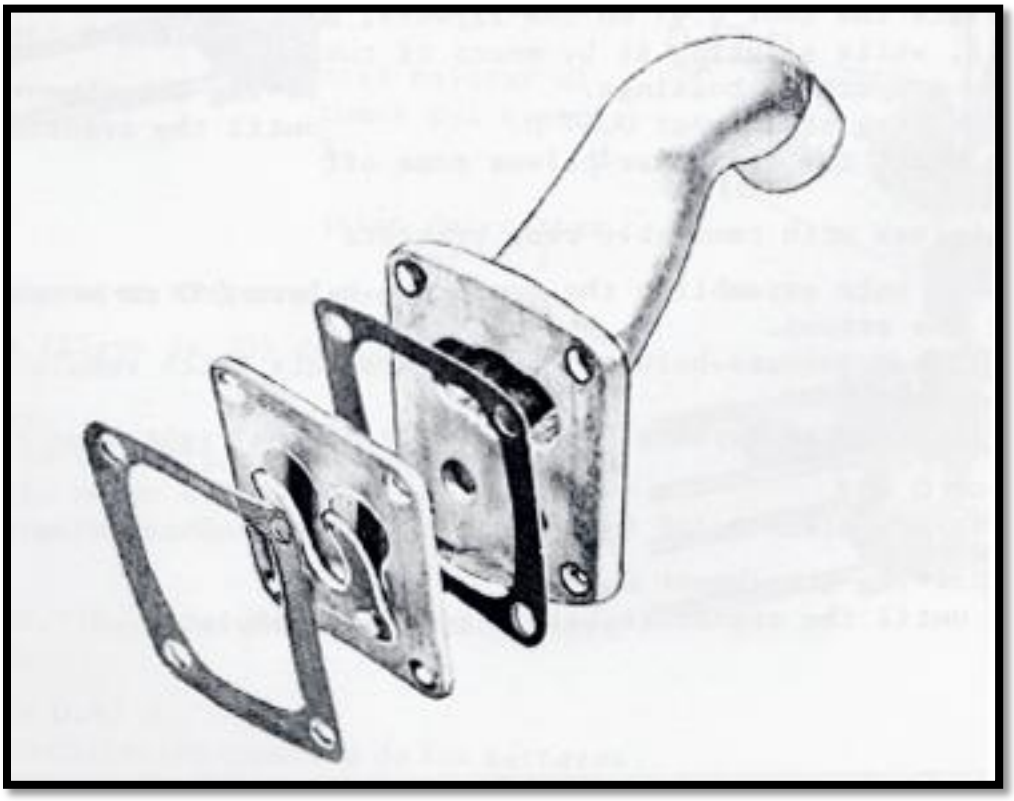
-Unlock the tab-washers of the 4 holding bolts
-Untighten the 4 bolts and take them out (8mm wrench)
-Remove the stiffening plate (T)
-Remove the nylon deflector plate (H) and the centrifugal weights with holder (J)
-Take out the 4 distance pieces
-Remove the moving flange (G)
-Remove the needle bearing race

<u>Removing the variable speed transmission pulley hub</u>
-Engage the pulley hub onto the tool 0.87 previously gripped in a vice.
-Insert the stop pins of the wrench 0.88 as shown on figure.
-Put a pin into the lubrication hole.
-Turn the stop-pin wrench 0.88 clockwise to screw out the hub (left hand thread)

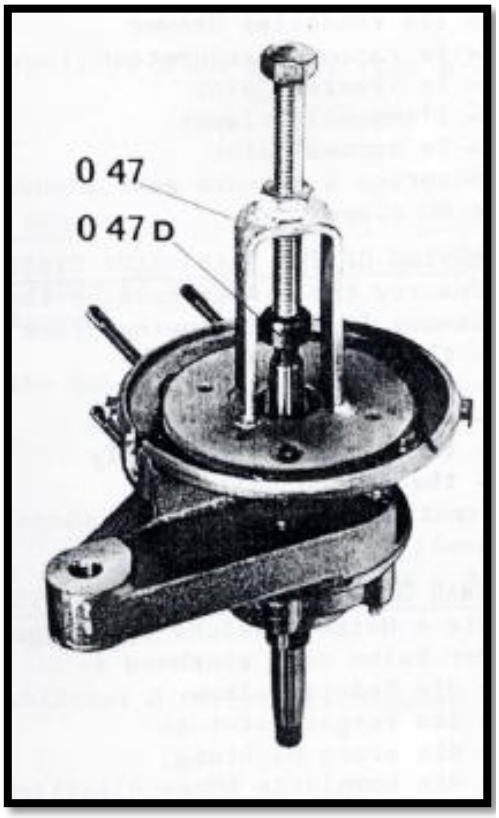


REMOVING THE REED VALVE SYSTEM

-Unscrew the 4 nuts holding on the intake manifold
-Remove in the following order:
    -the spring washers
    -the intake manifold
    -the first gasket
    -the reed valve assembly
    -the second seal
Be careful to not alter the shape of the reed valve stops while removing the reed valve assembly.

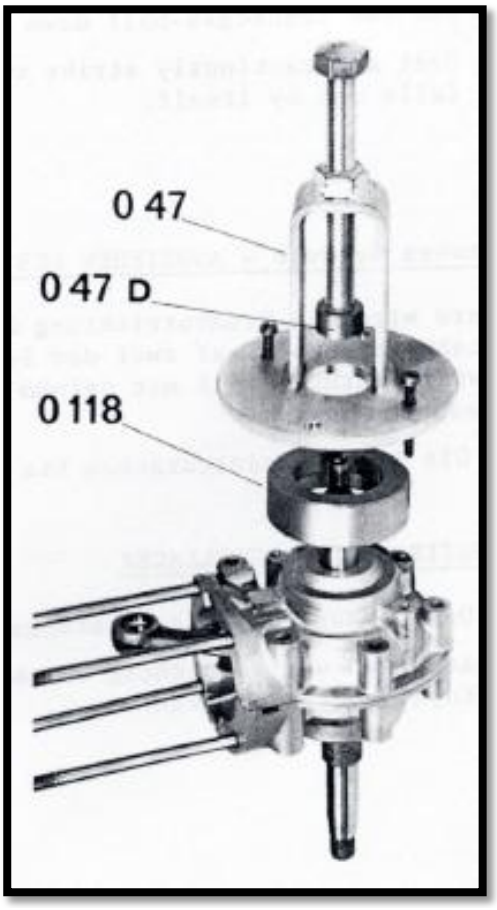


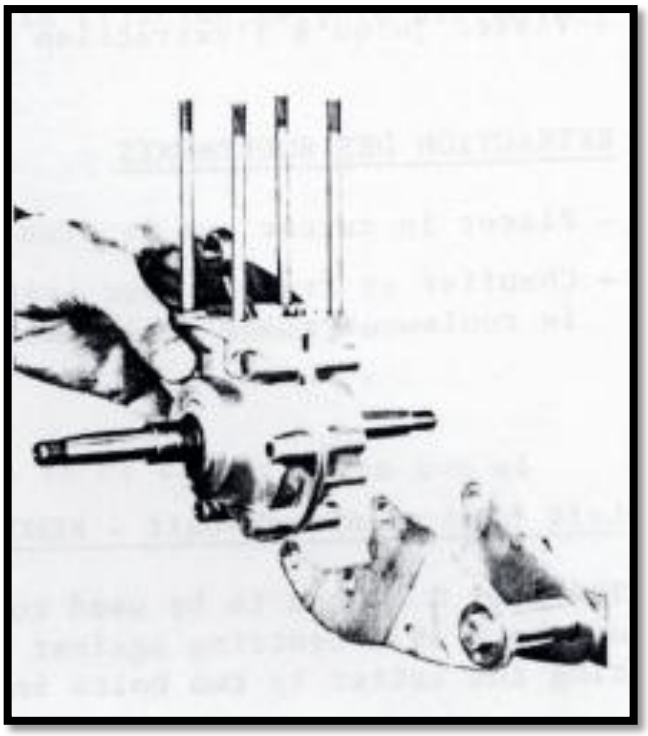
DISASSEMBLING THE CRANKCASE HALVES



(A) Crankcase halves with unremovable rear bracket (right)
-Unscrew the nuts assembling the crankcase halves
-Put in place the tool 0.47 on the flywheel magneto side of the right hand crankcase half, while securing it by means of the two screws part Nr H5-15 onto the pair.
-Use the driving attachment 0.47D
-Screw up until he crankcase halves come off completely

(B) Crankcase halves with removable rear brackets (below)
-Unscrew the nuts assembling the crankcase halves
-Take out the screws
-Pull out the crankcase halves from the brackets which remain fixed to the engine bearing frame 0,91
-Put in place on the flywheel magneto side of the right hand crankcase-half the tool 0.47 and the distance piece 0.118 taking place on the 48 (diameter) centring.
-Use the driving attachment 0.47D
-Screw up until the crankcase halves come off completely.





Left hand crankcase half – removing the crankshaft assembly

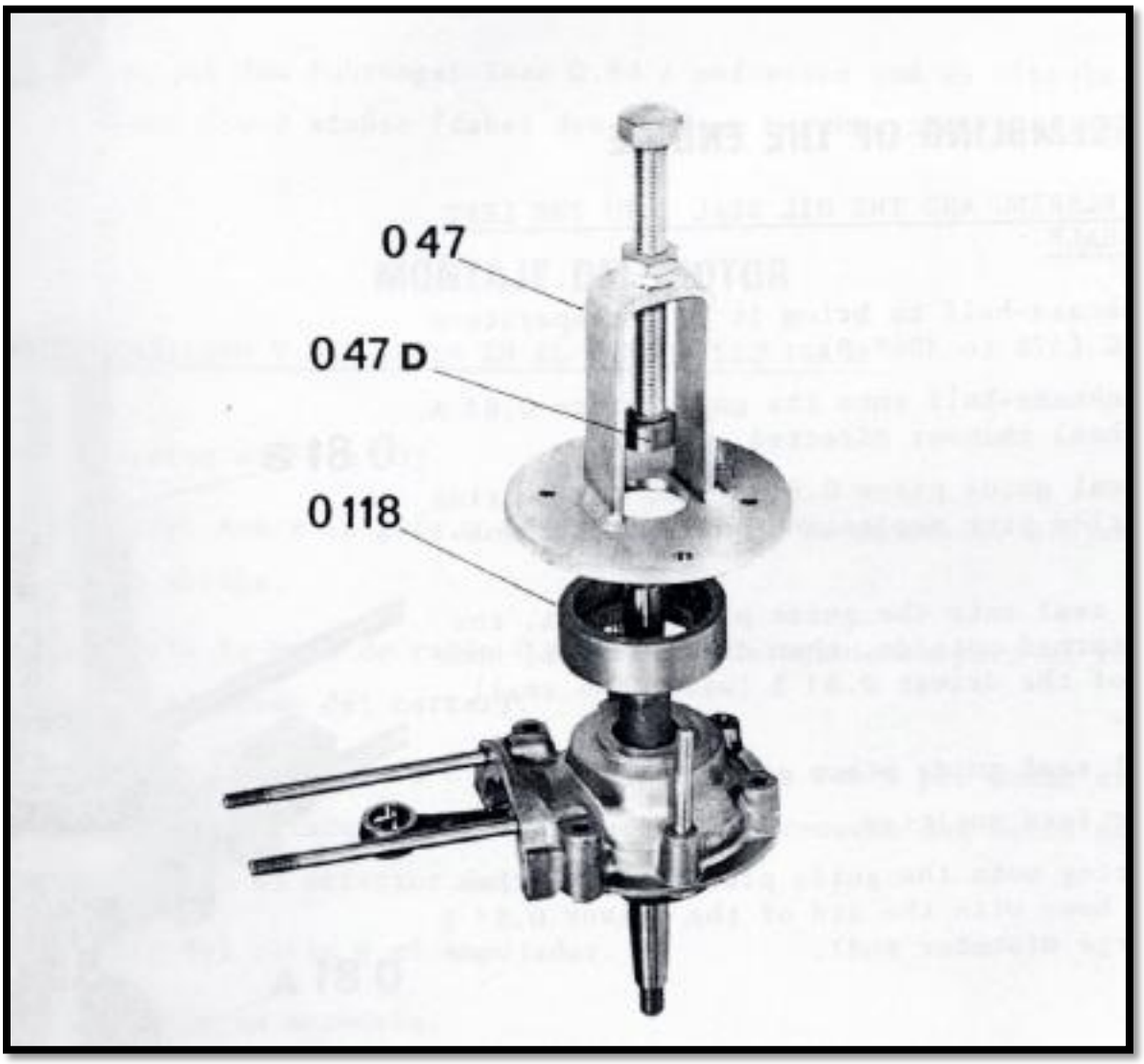
The tool 0.47 has to be used together with the distance piece 0.118 previously placed on the 39.2 diameter centering used against the crankcase half between the tool 0.47, before securing the latter by two bolts inserted into the crankcase assembly holes.

-Screw up until the crankshaft comes out completely.

Removing the bearings

-Put the crankcase half down to rest on its mounting surface

-Heat and cautiously strike very light blows on the crankcase half until the bearing falls out by itself.



REASSEMBLING THE ENGINE

Fitting the bearing and oil seal into the left hand crankcase half

-Heat the crankcase half to bring it to a temperature of 80-90 degrees C (176-194 F).

-Place the crankcase half onto the guide piece 0.81A with the flywheel chamber directed upwards

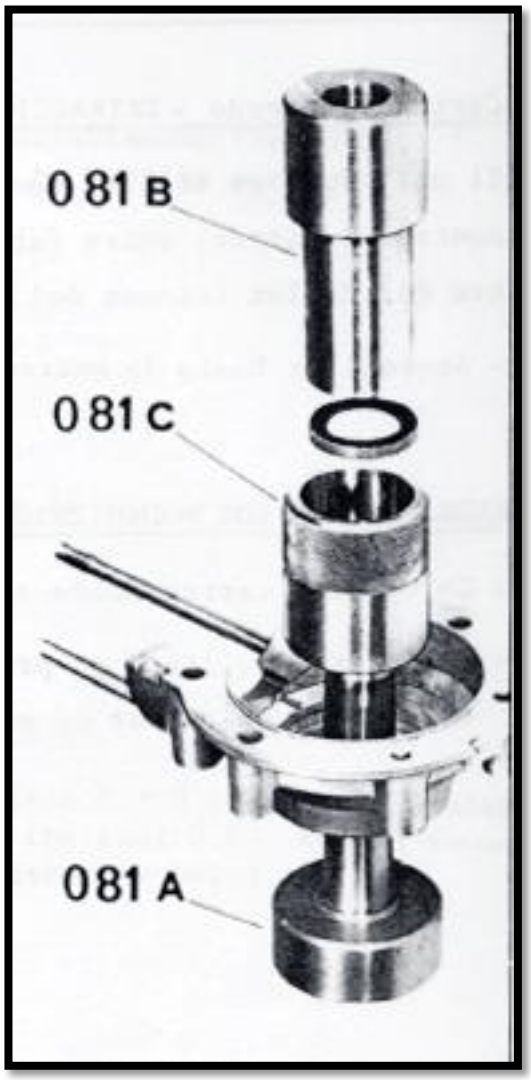
-Fit the oil seal guide piece 0.81C into the bearing bore (the knurled part projecting out of the crankcase half).

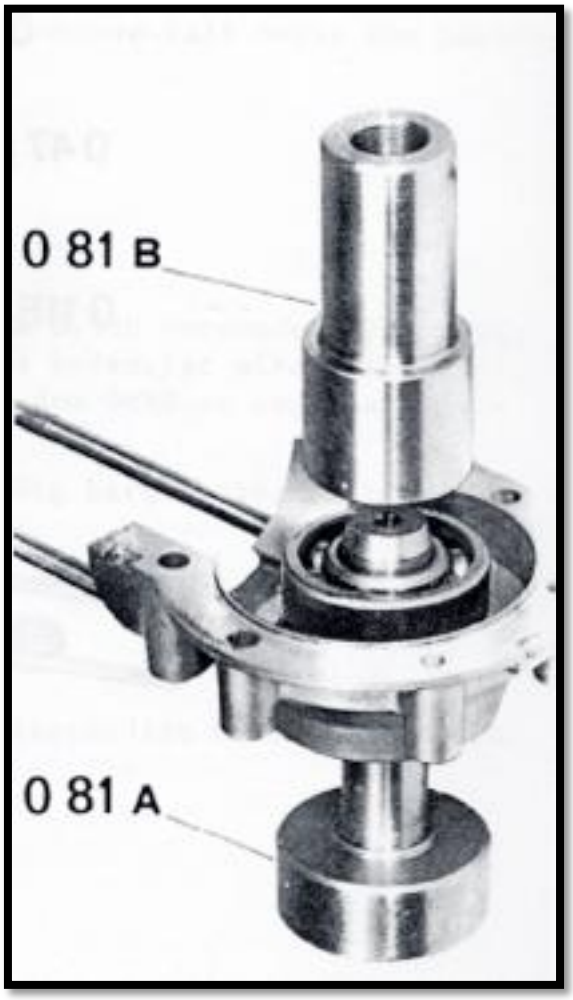
-Start the oil seal onto the guide piece 0.81A, the spring being turned outside, then drive it in with the aid of the driver 0.81B (using the smaller diameter end)

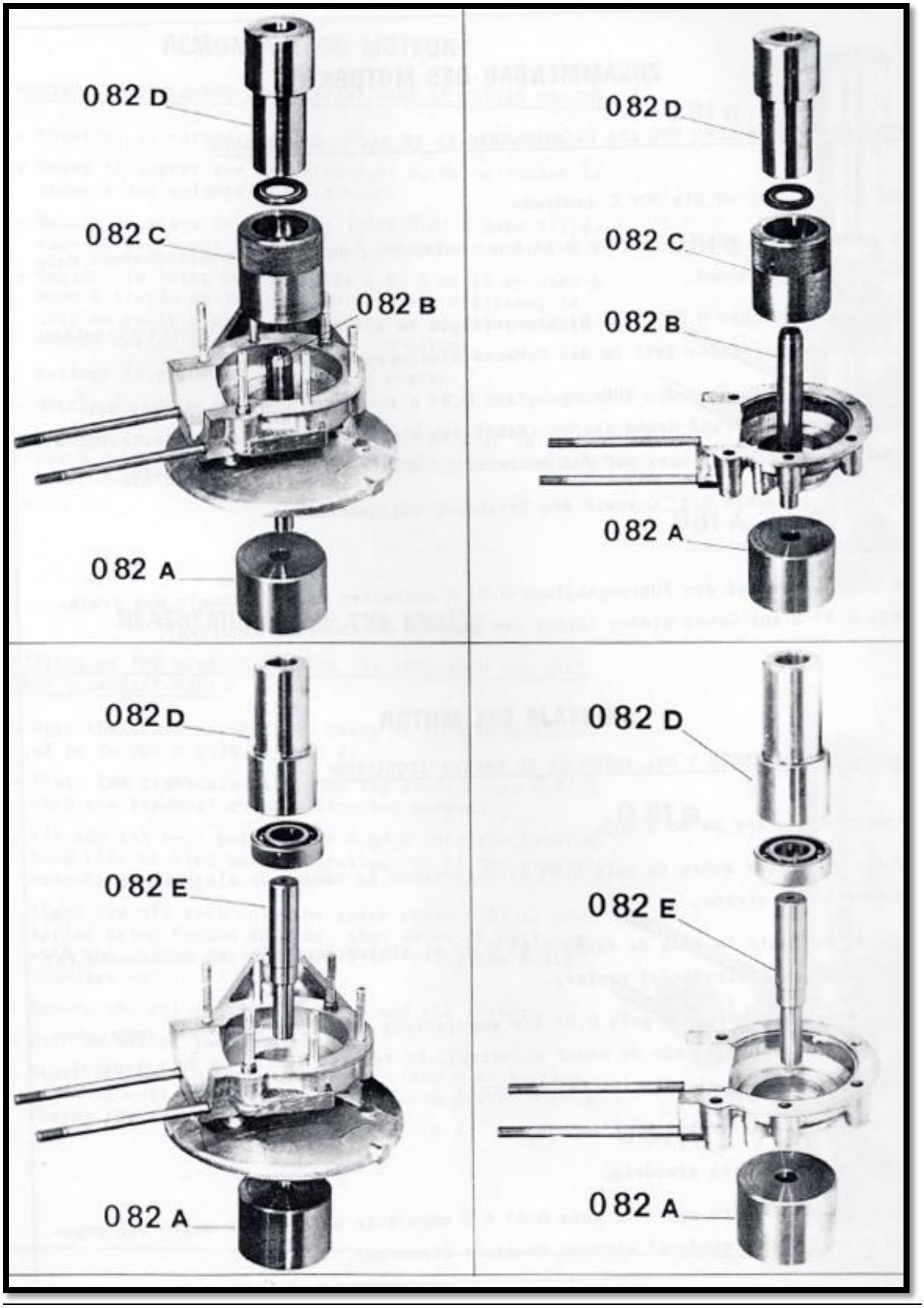
-Remove the oil seal guide piece and the driver.

-Put the washer into position.

-Start the bearing onto the guide piece 0.81A, then drive it in with the aid of the driver 0.18B (using the large diameter end)





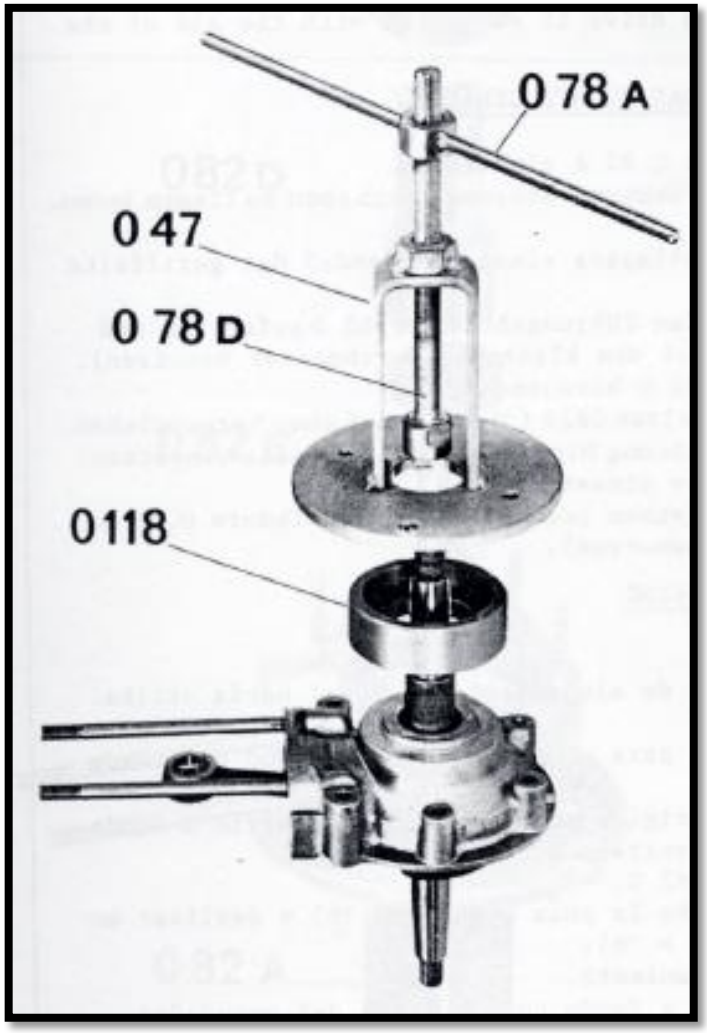

0 82 D
0 82 C
0 82 B
0 82 A
0 82 D
0 82 C
0 82 B
0 82 A
082 D
0 82 E
0 82 A
0 82 D
0 82 E
0 82 A

Fitting the bearing and oil seal into the right hand crankcase half

-Heat the crankcase half to bring it to a temperature of 80-90 degrees C (176-194 F)
-Place the guide piece 0.82B (16mm diameter) into the socket 0.82A
-Put the crankcase half onto the tool with the flywheel chamber turned upwards
-Position the felt seal onto the crankcase half
-Fit the oil seal guide piece 0.82G into the bearing bore (the knurled part projecting out of the crankcase half)
-Start the oil seal onto the guide piece 0.82B (the spring being turned upwards). Drive it in with the aid of the driver 0.82D, using the small diameter end).
-Remove the driver 0.82D and the oil seal guide piece 0.82C
-Without taking the crankcase half off the socket, remove the guide piece 0.82B (16mm diameter upwards) and replace it by the guide piece 0.82E (17mm diameter by 16mm), sliding the latter through the oil seal.
-Put the bearing thrust washer into position in the crankcase half.
-Start the bearing onto the guide piece 0.82E and drive it in with the aid of the driver 0.82 D, using the large diameter end.

Fitting the crankshaft into the left hand crankcase half

-Slide the thrust washer into position on the crankshaft (only in case of crankshaft assembly with shrunk-on shafts)
-Put the distance piece 0.118 on the 39.2 diameter centering against the crankcase half.
-Place the tool 0.47 onto the distance piece 0.118 used as a support.
-Screw the tool attachment 0.78D onto the crankshaft end, and screw down the nut 0.78A until the crankshaft bottoms in the crankcase half.



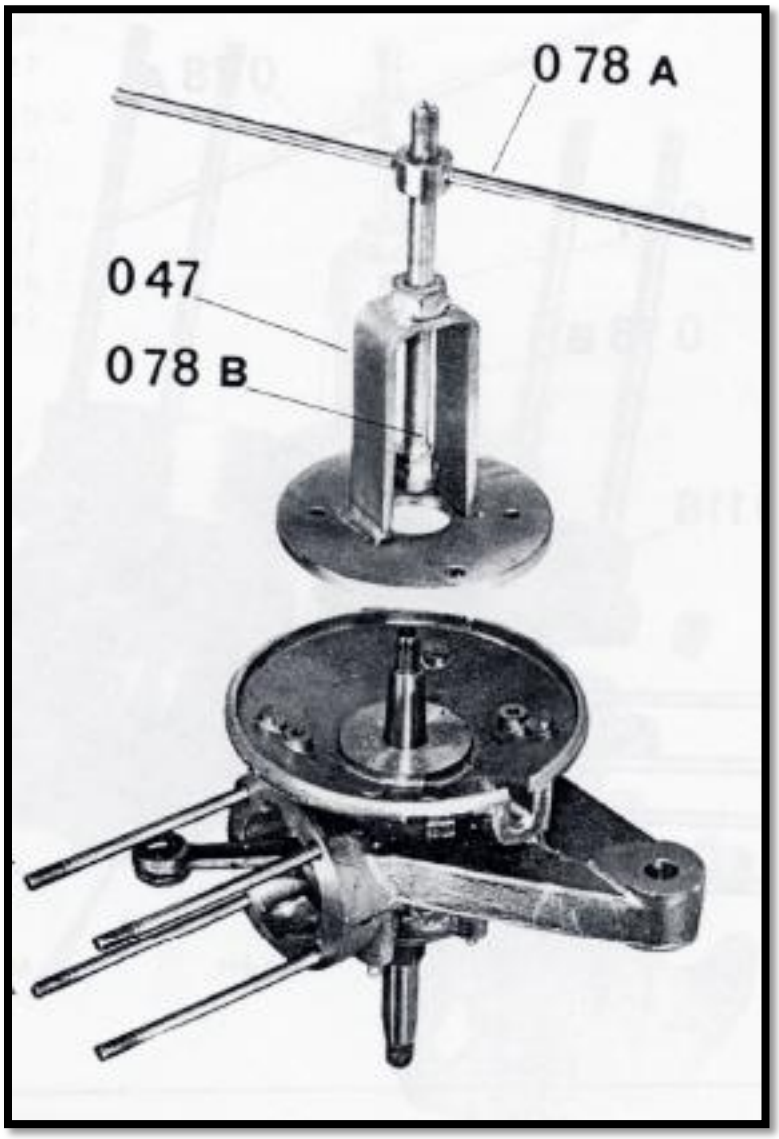
Fitting the left hand crankcase half with the crankshaft in the right hand crankcase half

A) Crankcase halves with unremovable rear bracket

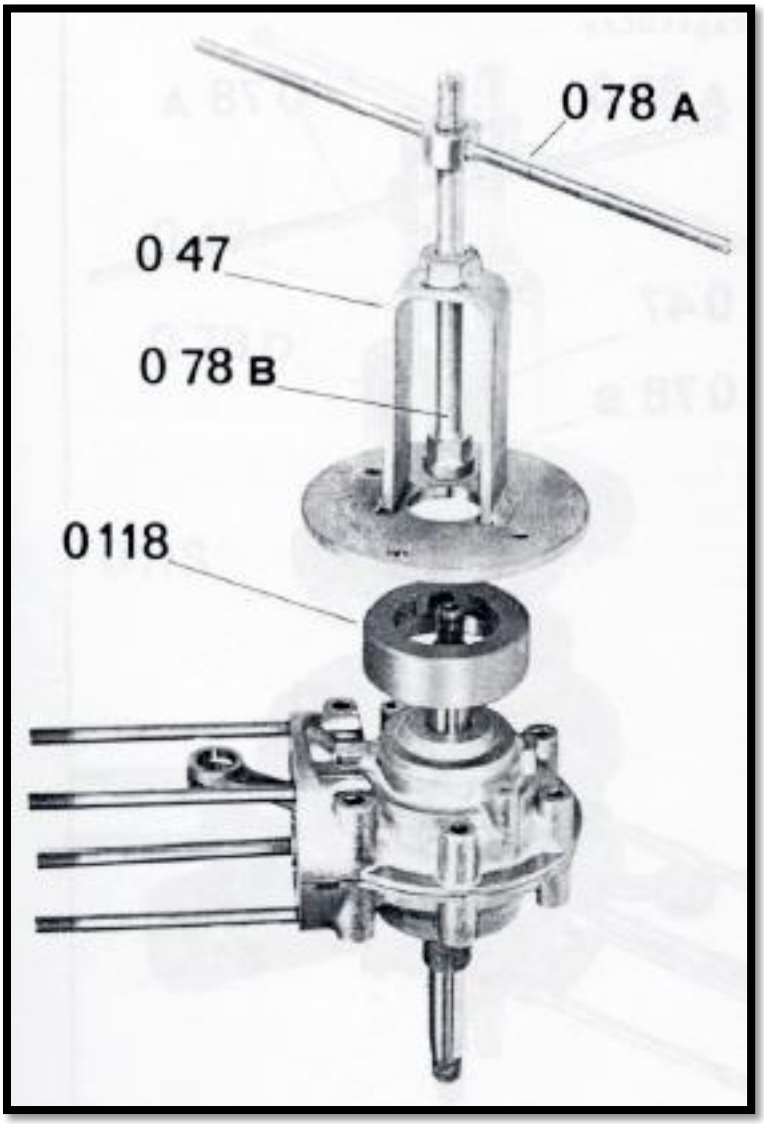
-Slide the thrust washer into position on the crankshaft (only in case of crankshaft assembly with shrunk on shafts)

--Place the tool 0.47 onto the pair of stator supporting bossings.

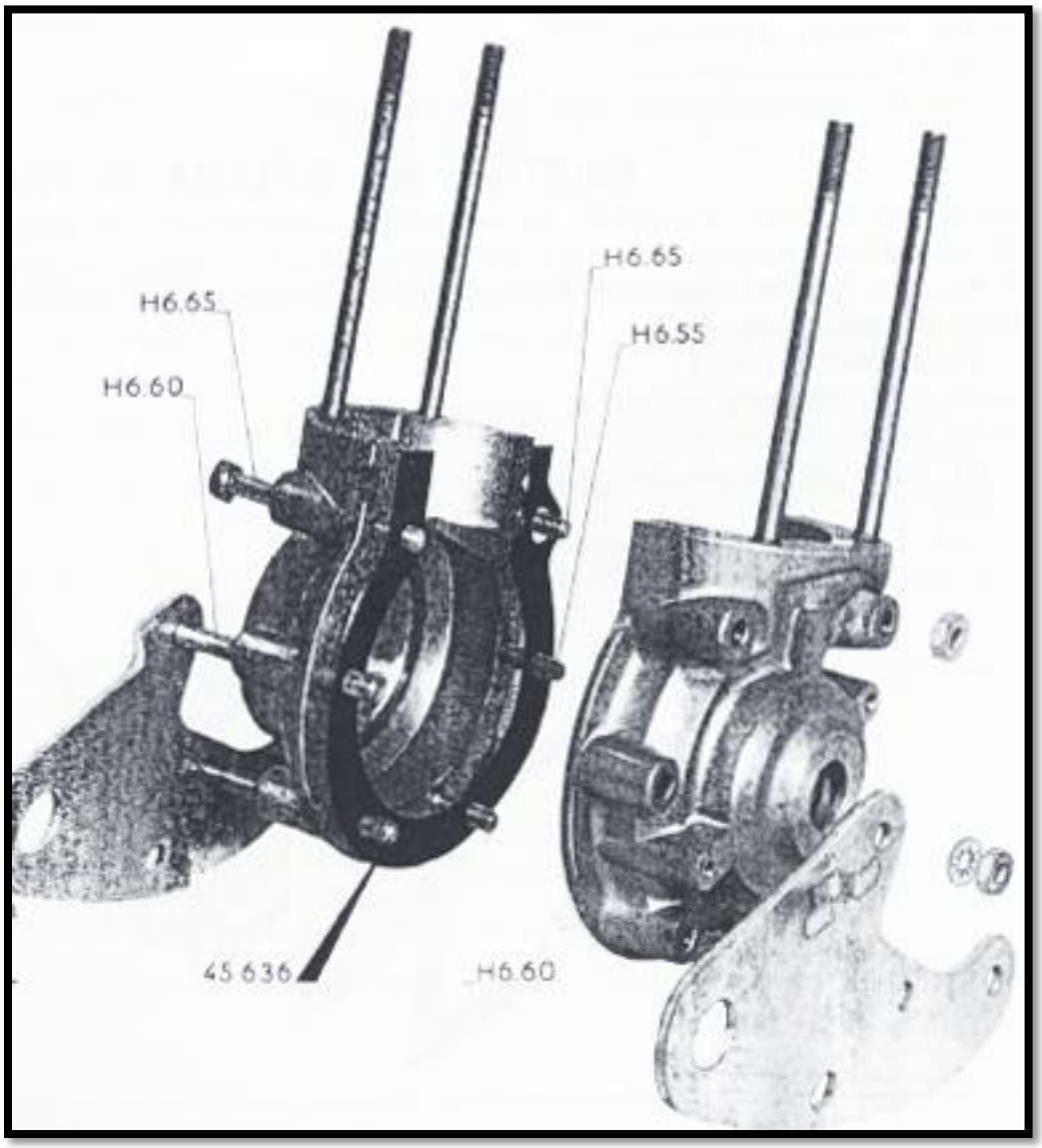
-Screw the tool attachment 0.78B onto the crankshaft end, and screw down the nut 0.78A until the crankshaft bottoms in the crankcase half.



(B) Crankcase halves with removable rear brackets
-Slide the thrust washer into position on the crankshaft (only in case of crankshaft assembly with shrunk on shafts)
-Put the distance piece 0.118 on the centering 48 diameter of the crankcase half.
-Place the tool 0.47 onto the distance piece 0.118 used as a support.
-Screw the tool attachment 0.78B onto the crankshaft end, and screw down the nut 0.78A until the crankshaft bottoms in the crankcase half.



Important:
-Take care that the crankcase halves are properly positioned.
-For that purpose, centring screw Nr. 45636 has been adjusted to a 5.8mm diameter; put it into the right place.
-Do not forget to turn the crankshaft to be sure it rotates freely. If necessary, put it in position by lightly striking light blows of a hammer on one of the shaft ends.

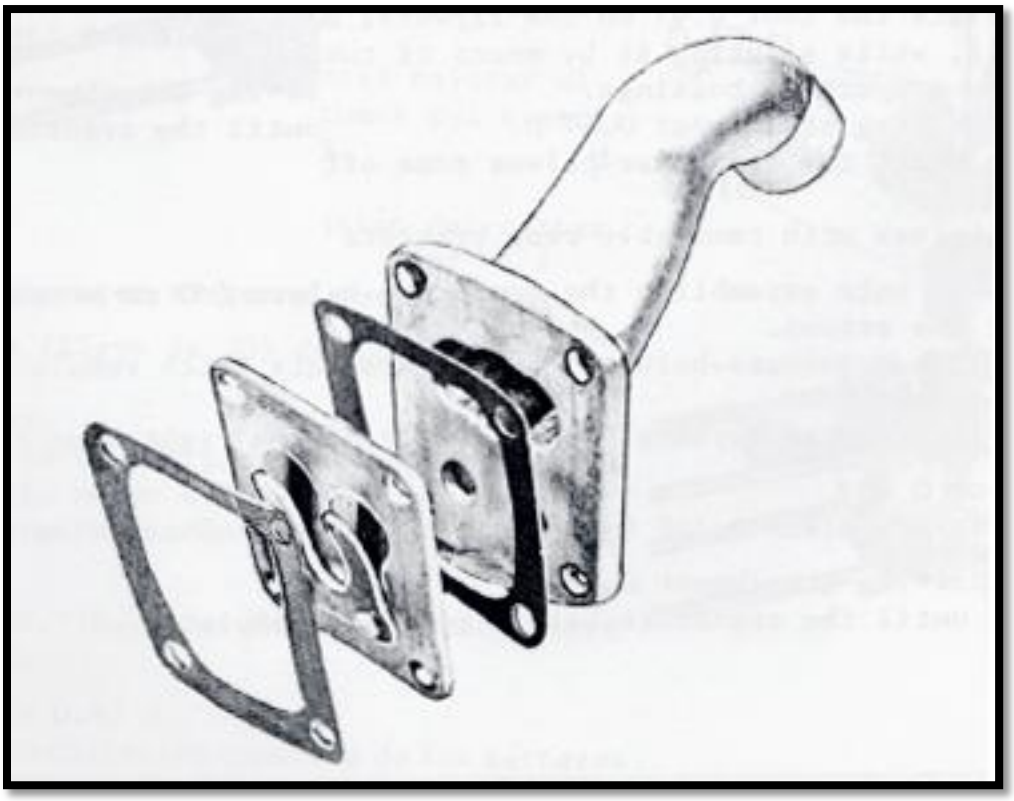


Reassembling the reed valve system

-Before reassembling the reed valve, make sure the two stops have not been warped. If necessary, readjust their width to 5mm, which should never be changed.

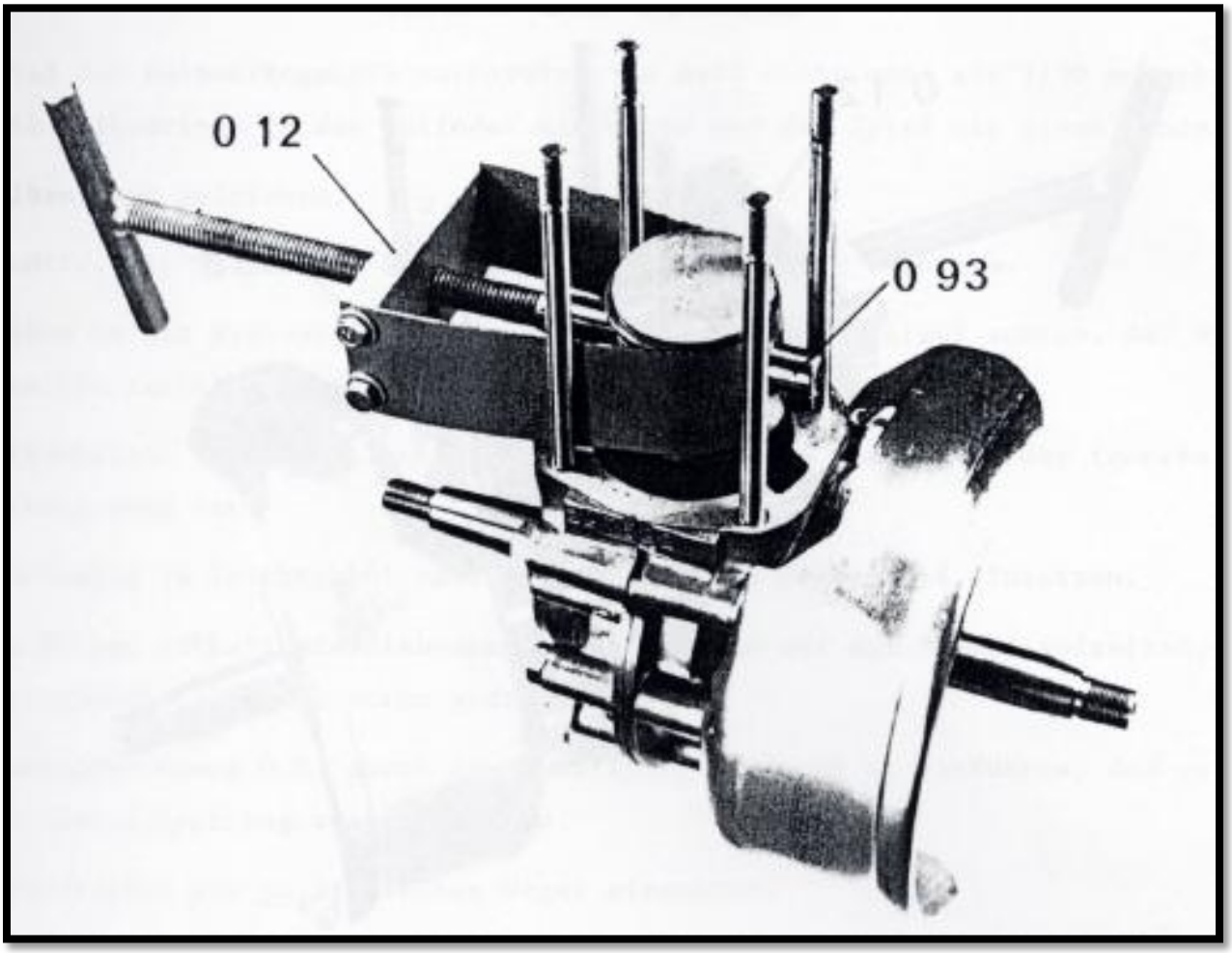
-Assemble in the following order:

- -the first gasket
- -the reed valve assembly
- -the second gasket
- -the intake manifold
- -the four washers and nuts



Reassembling the piston

-Check the piston ring gap. It should not exceed a maximum of .3mm. Position the piston rings in the cylinder bore and check the gap with a feeler gauge.
-Place the rings on the piston.
-If necessary, clean out the wrist pin retainer grooves.
-Place the piston into the assembling tool 0.12 so as to have the piston rings correctly positioned by the stops.
-Start the gudgeon pin into its bore until it is flush with the inner bossing.
-Dip the needle bearing race in light oil. Then, fit it into the connecting rod bore.
-Position the tool 0.12 with the piston inside on the connecting rod, the reference letter being directed frontwards.
-Insert the centering tool 0.93 through the needle bearing race into the gudgeon pin hole for positioning.
-Push the pin as far as ¾ of its way in.
-Then, remove the centering tool 0.93 and fit on one of the gudgeon pin retainer rings (pliers 0.4).
-Drive the wrist pin further in until it is bottomed on the first fitted wrist pin clip.
-Remove tool 0.12 and fit on the second wrist pin clip.
-Make sure the retainer rings are well seated in their grooves.



Refitting the cylinder

In order to simplify this operation, we recommend a wooden tool as shown in the image.

-Clean the mounting surface (the crank cases and the bottom of the cylinder)

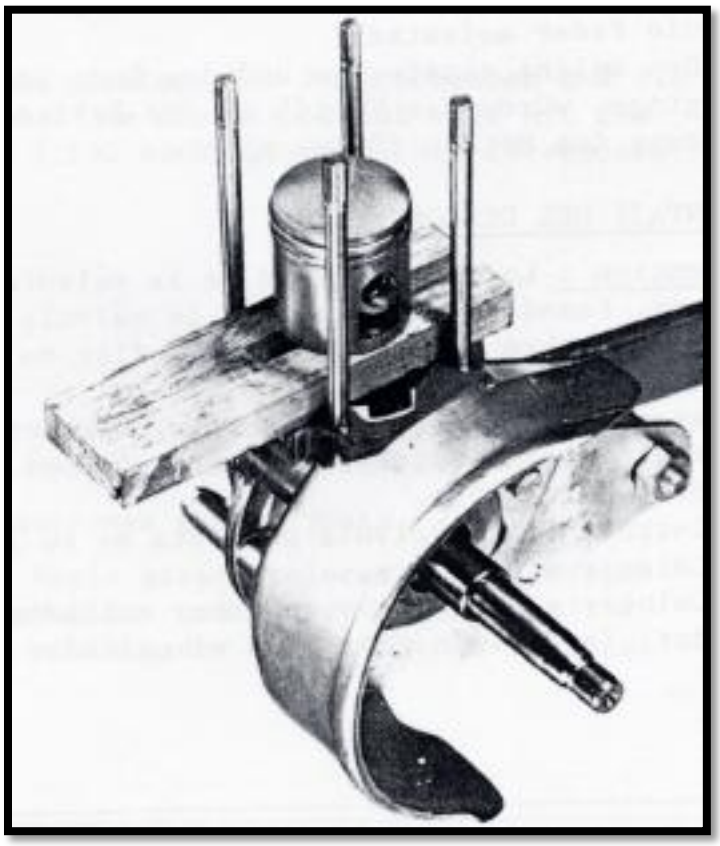
-Place the gasket on the cases

-Put the piston down to rest on the wooden U-board mentioned above

Important: Make sure the piston ring gaps are accurately facing the stops which are located in the grooves.

-Start in the cylinder well in line, without any striking, the chamfer which is well machined at the base of the cylinder bore is there to help close in the piston ings.

-Remove the wooden U-board and push the cylinder down until it is flush with the crankcases.



Reassembling the decompression valve

Caution: The tightness of the valve has a vital effect on the performance of the engine. Thoroughly check the valve seat and the valve before refitting it. If the valve face shows any kinds of defects, replace the valve or the entire assembly.

-Make sure that the copper gasket is fitted.
-Tighten the decompressor body vigorously on the cylinder head (19mm wrench)
-Insert the valve stem into the decompressor body.
-Fit the valve spring.
-Put in the pin, and secure it by riveting its end. In case the pin comes loose, the valve falls into the cylinder.

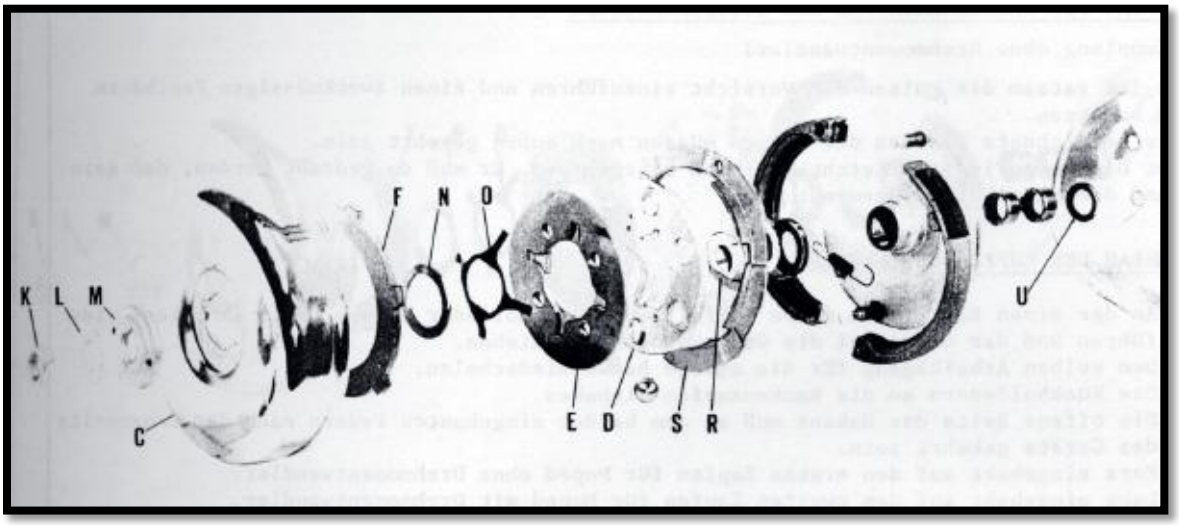
Fitting the cylinder head

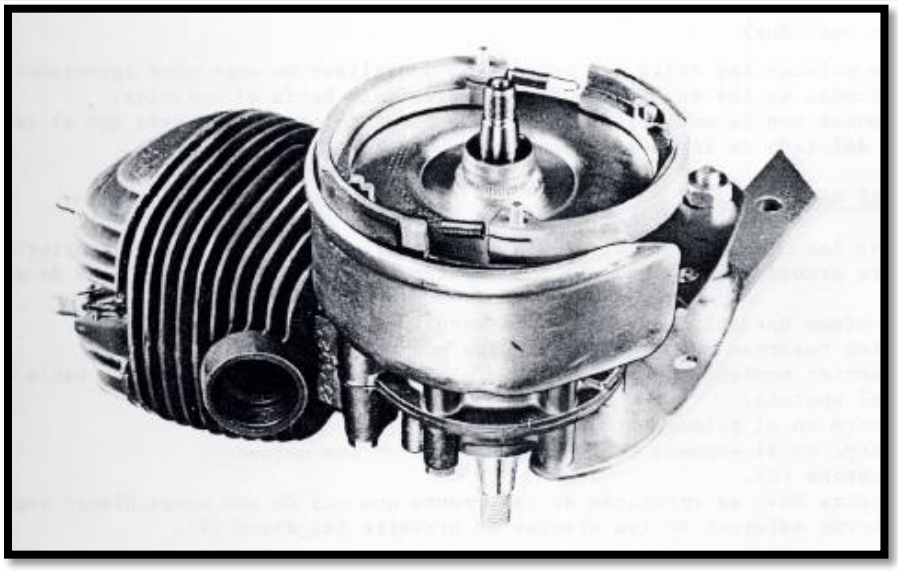
-Place the gasket. Make sure it is oriented in the right direction. The hole provided in the top of the cylinder to let air escape (decompression valve) must match the hole in the gasket.
-Install the cylinder head, positioning it the same way as the gasket.
-Install the brackets attaching the engine. They have to be directed rearwards. Place the spring-washers and the nuts onto the studs. The nuts must be screwed in and securely tightened crosswise, using an 11mm wrench or a torque wrench (torque to 1.1m Kg).

REASSEMBLING THE CLUTCH

Fitting the needle bearing races and the oil seal (clutch without variable speed transmission)
It is recommended to engage the races with caution, and to use the proper driving tool. The sides of the races bearing the marks must be turned outside. The oil seal is easy to fit by hand. It must be placed in such a way as to turn the open side towards the needle bearing race.

Fitting the clutch shoes
-Place onto a shoe the large hook of the retracting spring inside the articulation milling, then position this assembling onto the anchor pin.
-Do this again fitting the other shoe.
-Hook the retracting sprigs onto the shoe studs. When the springs are in the right position, the open side of their hooks must be turned towards the inside of the device. On mopeds without variable speed transmissions, the springs are to be hooked on “short”, that is onto the first stud. On mopeds with variable speed transmissions, the springs are to be hooked on “long”, that is onto the second stud.
-Fit the locking ring (S). The two nuts, part Nr HU-5, have to be tightened in such a manner as to bring one of their flanks to be parallel to the outer edge of the lining locking stops (F).



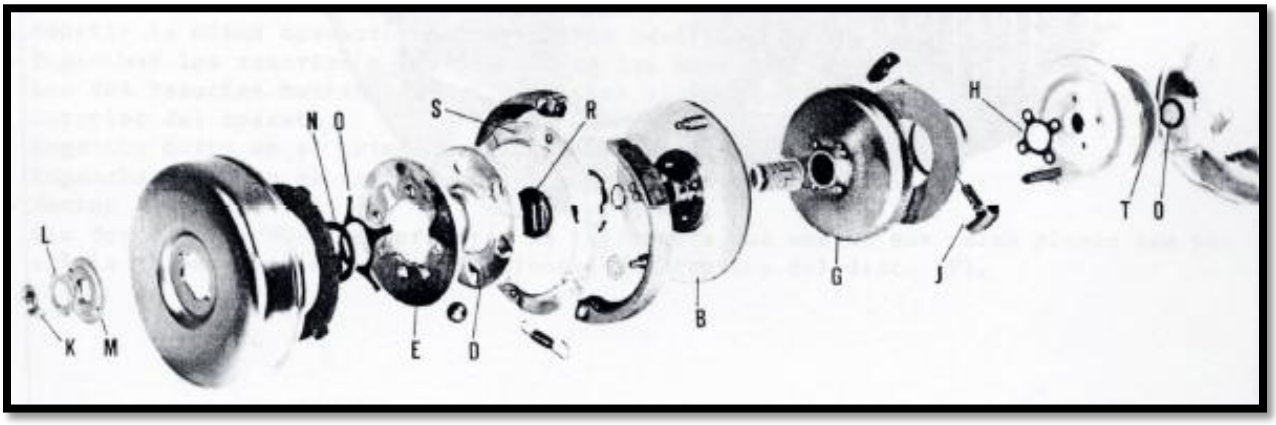


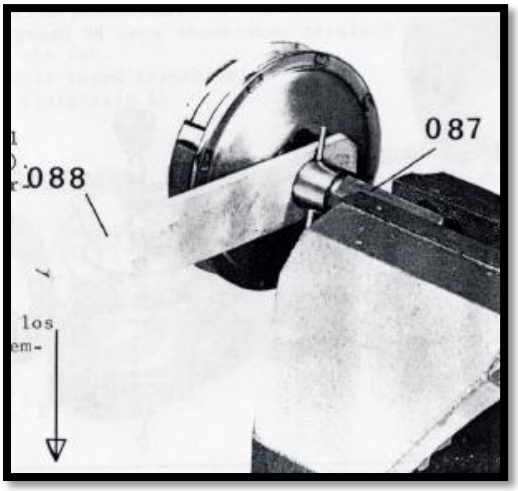
REASSEMBLING THE VARIABLE SPEED TRANSMISSION

-Screw the tight flange (B) bearing the starting clutch onto the pulley hub (left hand thread). Use the tool 0.87 together with the stop-in wrench 0.88 to tighten it.
-Lubricate the needle bearing races with grease and fit them into their housing, following the order given below:

-the nylon seal
-the needle bearing races after having assembled them

Then fit:
-the moving flange (G)
-the nylon disc
-the centrifugal weights smeared with grease with their holder (J). Caution: the rounded flank must be turned towards the moving flange.
-the distance piece
-the reinforcing washer
-the nylon deflector plate (H)
-the stiffening plate (T)
-start in the bolts, tightening them, bend the tab washers (in case they are worn out, replace the stiffening plate).





Fitting the assembly onto the crankshaft

-Make sure that the adjusting washer (U) is in position (for the model with variator, thickness =2mm, for the model without variator, thickness = 1mm)

-Coat the rear support surface of the pulley hub with grease (use ball bearing grease).

-Fit the driving pulley assembly (or the variable speed transmission and tight flange assembly) onto the crankshaft, the needle bearing races and the oil seal being in position

-Carefully remove all grease from the male taper on the crankshaft using pure petrol and fit in the following order:

-the nylon washer (V)

-the tapered driving nut (R), its inner surface being lubricated but the inner taper being perfectly clean and free from grease

-Onto the tapered driving nut, place an outer thrust plate, part Nr. 42018 (fitted part on the clutch with diameter 100mm, drawing Nr. 19, page 10 of the catalog C-CT-VCT-LT-VLT 1967 edition)

-Start the nut (K) onto the thread of the crankshaft.

-Hold the plate Nr. 42018 by means of the tool 0.103 and tighten the nut using a torque wrench (torque to 3mKg).

-Make sure the axial clearance of the pulley is about 0.4-0.6mm.

-Untighten the nut (K) and remove it as well as the outer thrust plate Nr. 42018.

-Then, assemble onto the tapered driving nut:

-the drum (D)

-the 6 balls (12mm diameter), very slightly coated with a mineral lithium-graphite type grease (do not use any other type of grease)

-the pressure plate (E)

-the linings (F)

-the spring (O)

-the adjusting washer (N)

-the clutch box (C)

While holding the clutch box, fit:

-the washer (M)

-the tab washer (L)

-the nut (K)

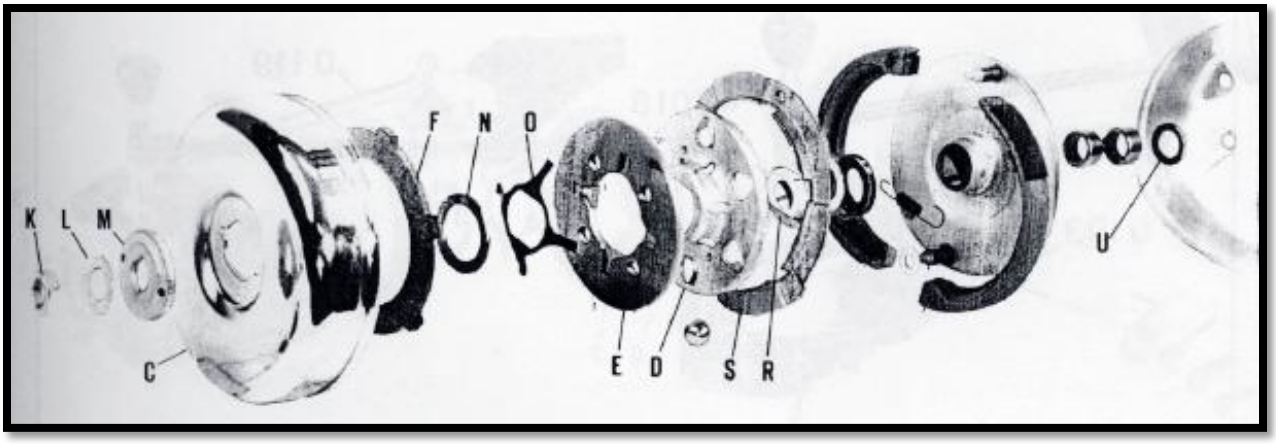
-Screw in the nut and tighten it using a torque wrench (3m Kg) while firmly holding the clutch box by means of the strap 0.119.

-check the lateral functioning clearance of the assembly on the crankshaft. If must remain within the limits of 0.4 to 0.6mm.

-Lock the tab washer by bending it against the nut.

-Fit the ball lubricator (engine with variator)

-Lubricate moderately with BP Multipurpose Energrease L2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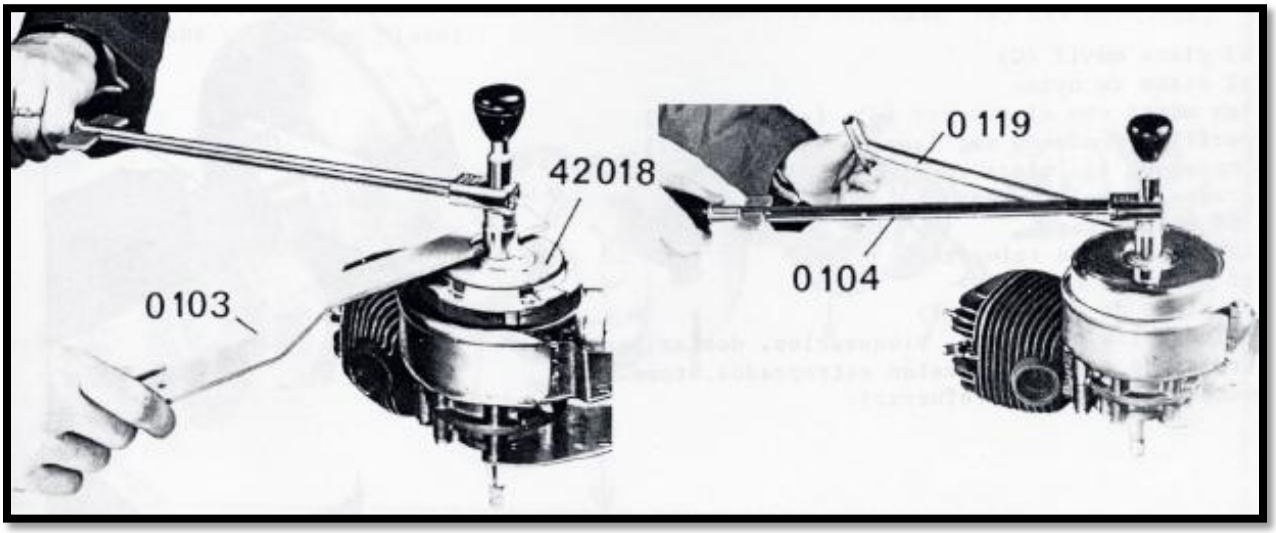
42018
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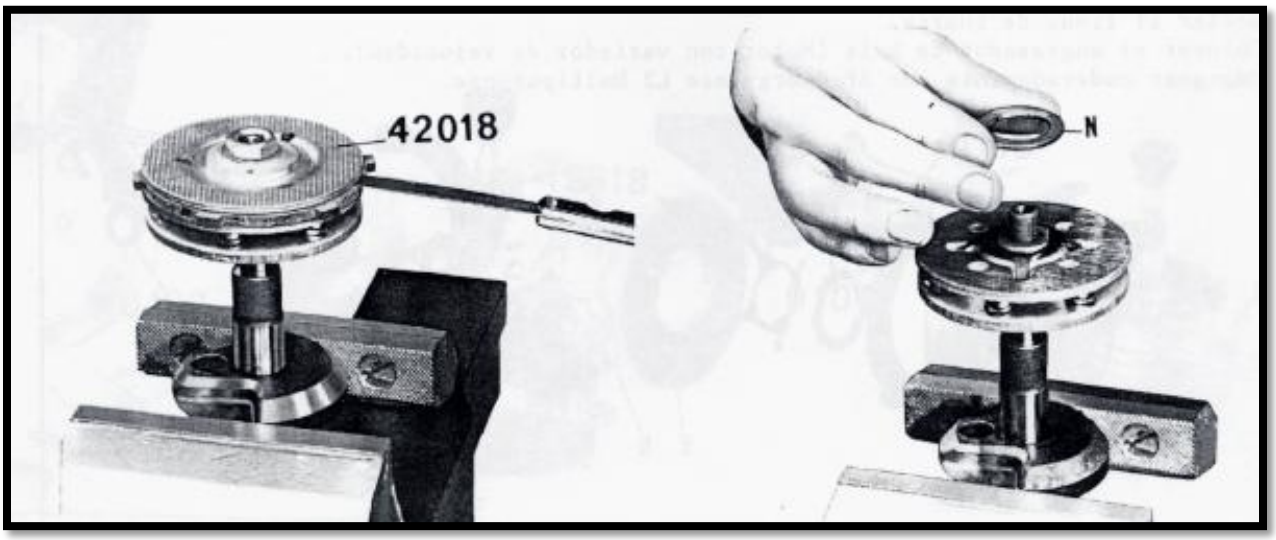
ADJUSTING THE AUTOMATIC PLATE-CLUTCH

In the case of the clutch working badly and after making sure that the pulley slides freely on the crankshaft (axial clearance about 0.4-0.6mm), the functioning clearance which should be found between the lining (F) and the pressure plate (E) must be checked as well.

This check should be made as follows:
-On a shaft gripped vertically in the jaws of a vice (use the clutch-side crankshaft half) assemble in the following order:

- -the tapered driving nut (R)
- -the drum (D)
- -the six balls
- -the pressure plate (E)
- -the lining (F)
- -the spring (O)
- -the adjusting washer (N)
- -an outer thrust-plate Nr. 42018
- -the washer (M)
- -the tab-washer (L)
- -the nut (K)

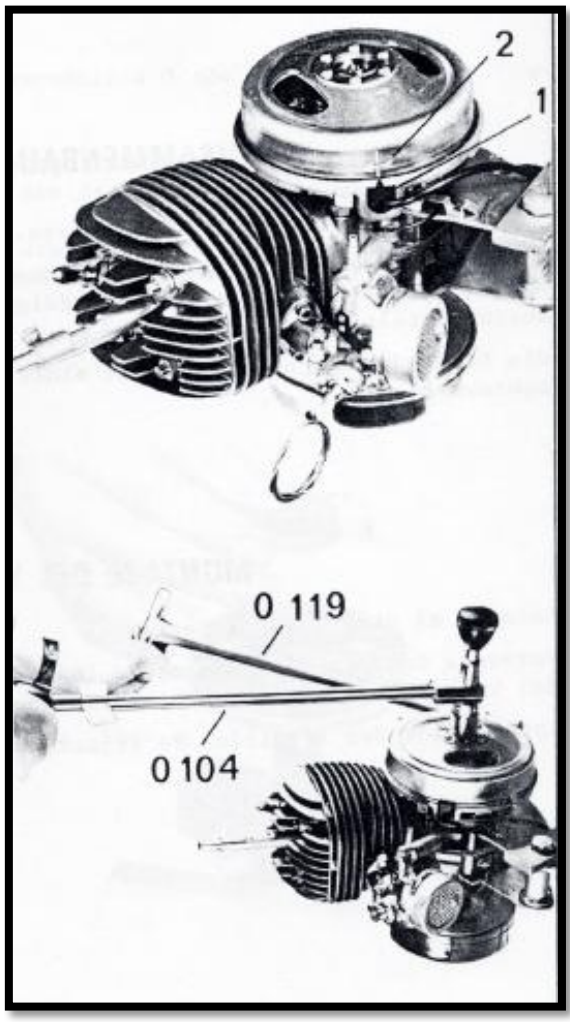
Firmly tighten the assembly using a torque wrench (torque to 3m Kg).
Use a feeler gauge to check the functioning clearance between the lining (F) and the pressure plate (E). That clearance should remain within the limits of 0.5-0.7mm. In case the clearance is found to be out of the above limits, replace the adjusting washer (N) by another one the thickness of which, when properly chosen, will give the recommended clearance. That adjusting washer can be supplied with the following thickness measures: 1.2, 1.4, 1.6, and 1.8 mm.



REASSEMBLING THE FLYWHEEL MAGNETO

-Put the stator in position on the crankcase half
-Carefully fit the rubber grommets which are to keep the flywheel watertight into the right crankcase half. In case they are in bad condition, replace them.
-Drive in the two attaching screws with a lock-washer under the screw head.

<u>Setting the ignition timing</u>
-Screw the tool 0.117 into the spark plug hole.
-Screw in the locking screw of the upper gliding rod, but do not tighten it.
-Find top dead center (TDC) by rotating the clutch box.
-Tighten the screw firmly to lock the upper gliding rod.
-Rotate the clutch box in the opposite direction of normal engine operation in order to let the lower gliding rod go down.
-Insert a feeler gauge between the ends of the two gliding rods: 1.5mm on the reed valve engines, and 2.5mm on all other engines. Continue to rotate the clutch box in the same direction until the feeler gauge gets stuck tight.
-Without moving the piston, turn the rotor until its timing mark 2 matches the timing mark 1 of the stator.
-Tighten securely the rotor in that position using the holding strap 0.119 and the torque wrench (torque to 2.5 mKg).



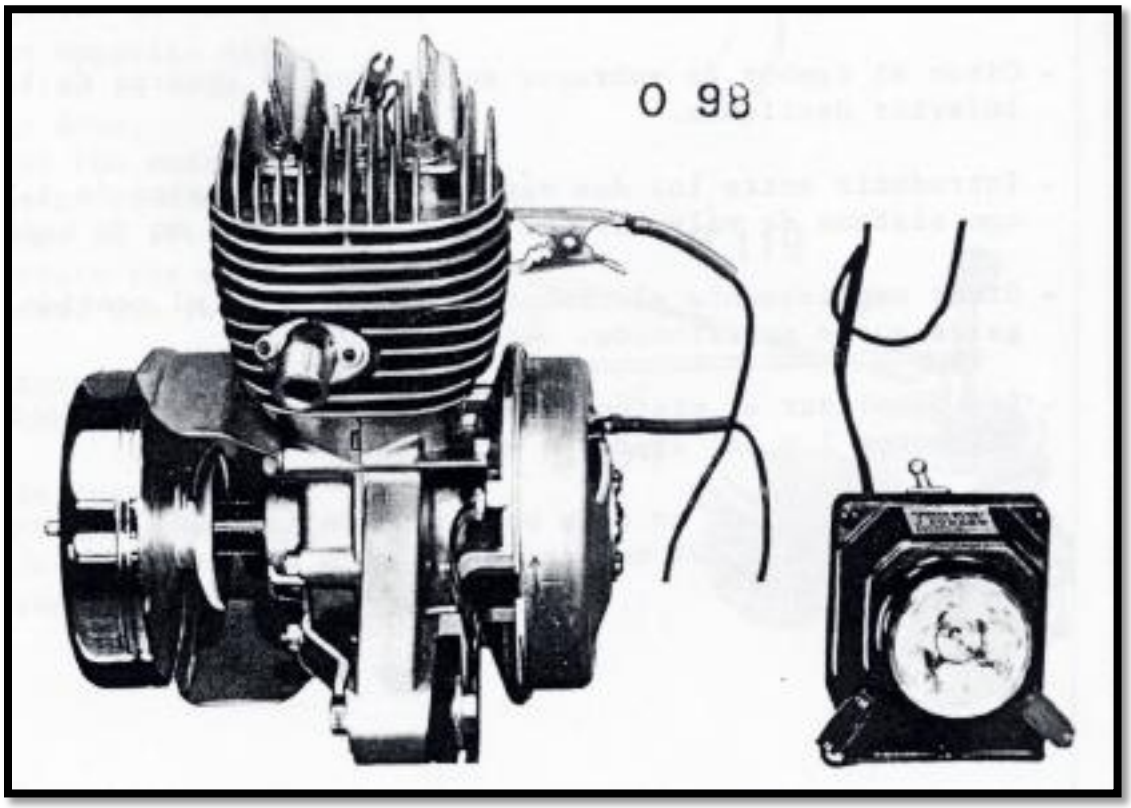
Timing adjustment of the points

-Place the rotor mark 1 and the stator mark 2 so as to have them face each other. Untighten the points -insert a screwdriver between the adjusting notches and actuate them until the breaker points just start to open in that position (use the test tool 0.98 to check this operation). Then tighten the breaker point holding screw securely.

Very important:

When the timing adjustment is accurate, the maximum gap between the breaker points is about 0.4mm.

Nevertheless, that gap can vary from 0.3-0.5mm without any adverse effects. Do not adjust the gap between the breaker points on a definite width. The proper functioning of the magneto flywheel does not depend on the gap value itself, but on the precision of the breaker points opening and the very moment the rotor and stator marks face each other.



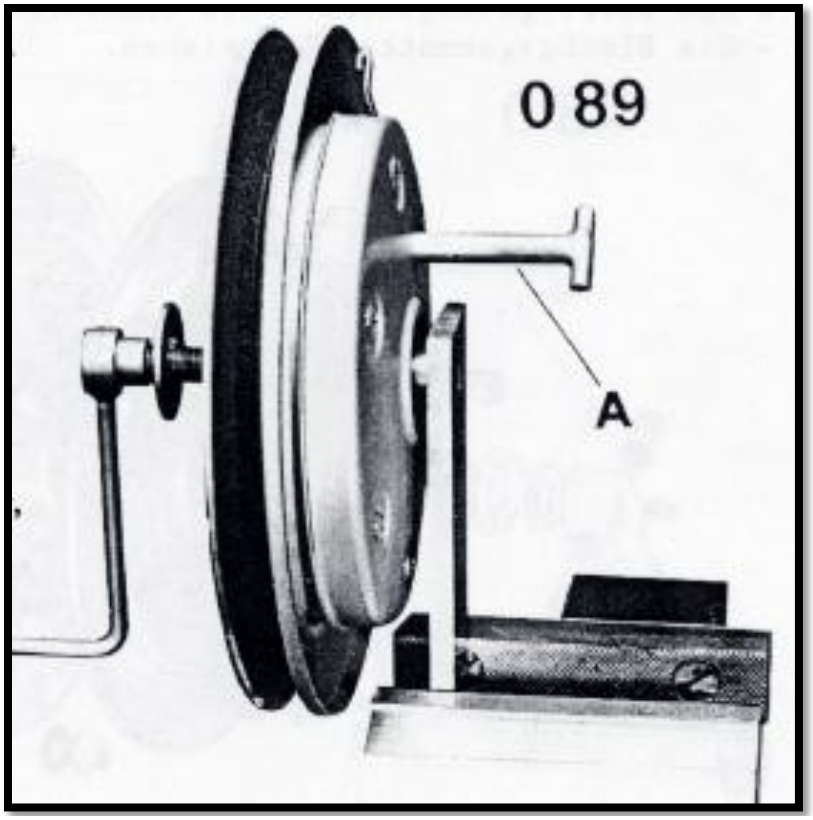
DISASSEMBLING AND REASSMELBING THE DRIVEN PULLEY

Disassembling

-Position the locking device on “bicycling”
-Take out the intermediate sprocket
-Unscrew and remove the stamped sheet-steel nut
-Unscrew the locking spring pin and take it out
-Press the assembly together using the tool 0.89
-Remove the screws with their lock washers
-Release the assembly and remove:
    -the spring cover
    -the springs
    -separate the flanges
    -remove the locking-stop
-Remove the retainers and the needle bearing races

Reassembling

-Put the nylon bushing into its housing in the mobile flange
-Place the rubber washers onto the distance pieces, the thin washer onto the distance piece bearing the nylon bushing
-Lubricate with grease and put the locking stop onto its housing (the taper being turned centerwards), directing the locking stop hole towards the port of its housing.
-Put the intermediate sprocket in position.
-Fir the second flange of the pulley, taking care of its accurate positioning (the port of the distance piece with the fitting in must be located diametrically opposite of the locking spring.)
-Fit the locking spring. Make sure its mounting and functioning are accurate.
-Put the springs in position on the distance pieces.
-Place the spring-cover.
-Screw the pin (A) into the locking spring pin hole.
-Press the assembly together (tool 0.89). Take care of the locking-spring.
-While keeping the assembly pressed together, place the lock washers and turn in the 6 screws.
-Unscrew and remove the pin (A).
-Screw in the locking-spring pin.
-Screw on the stamped sheet-steel counter-nut.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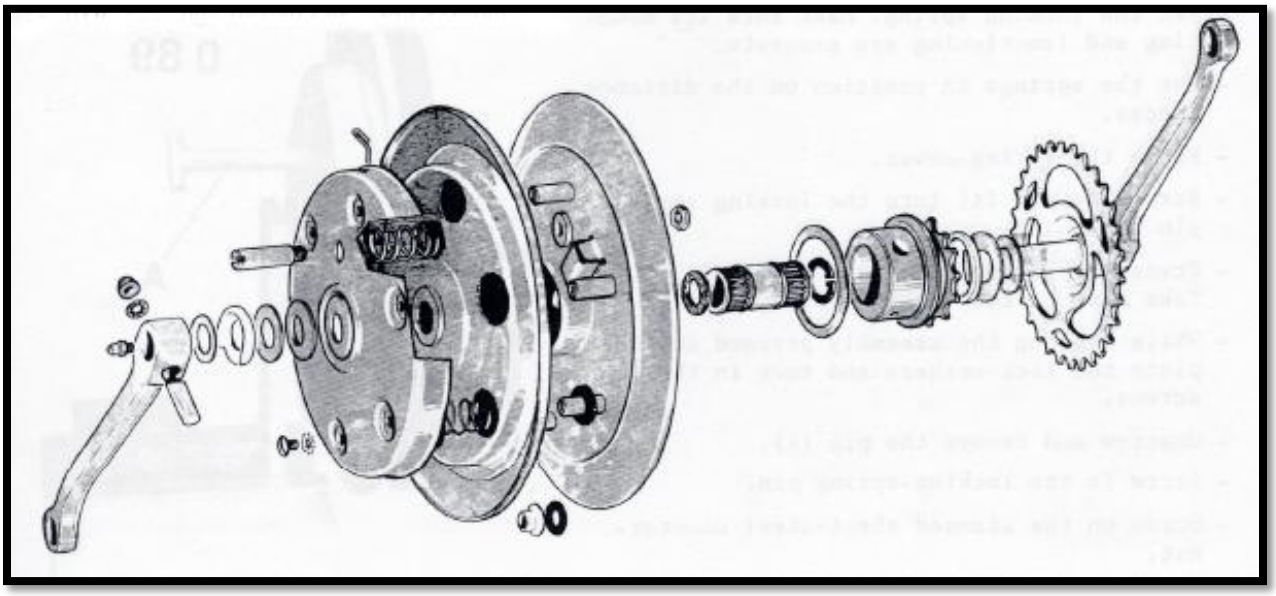


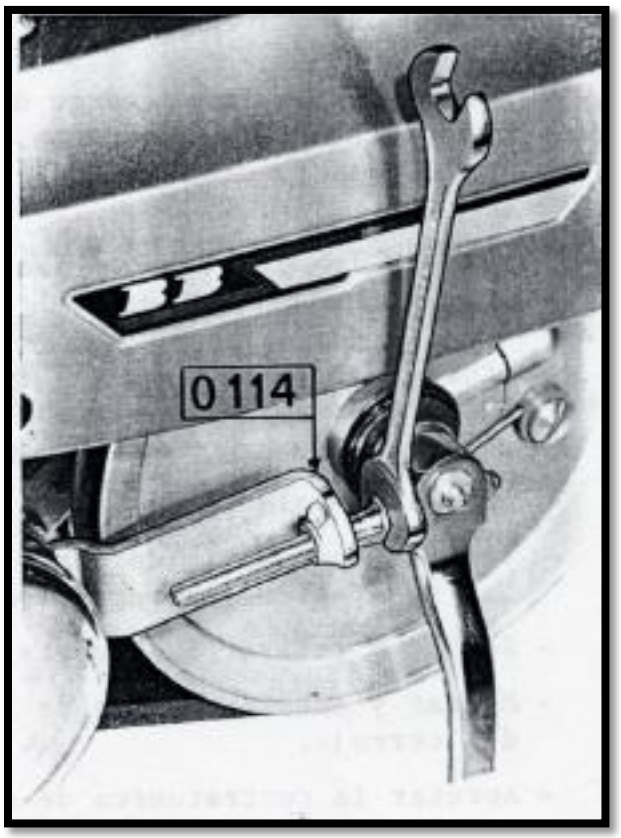
BELT TENSION ADJUSTING

(A) Mopeds with variable speed transmission:
The two flanges of the driven pulley are always pressed together by the springs. Thus, the belt is tensioned. If too loose, the tension causes the belt to slip. A belt that is too tight reduces the variation range of the device.

Checking the belt tension:
At a standstill, the back of the belt should normally remain underneath the outer circumference of the large pulley by 2-3mm (to be measured on the upper belt section).

Adjusting:
To perform the adjustment, tip over the engine frontwards and rotate the driven pulley by hand in the direction of normal operation until the belt is correctly positioned as explained above. Then, tighten securely the rear and front attaching bolts of the engine.

(B) Mopeds without variable speed transmission
To perform the adjustment, tip over the engine frontwards (to do so, use the tension tool 0.114). The belt deflection should not exceed a maximum of 1cm when the belt is pushed in with the finger between the two pulleys.



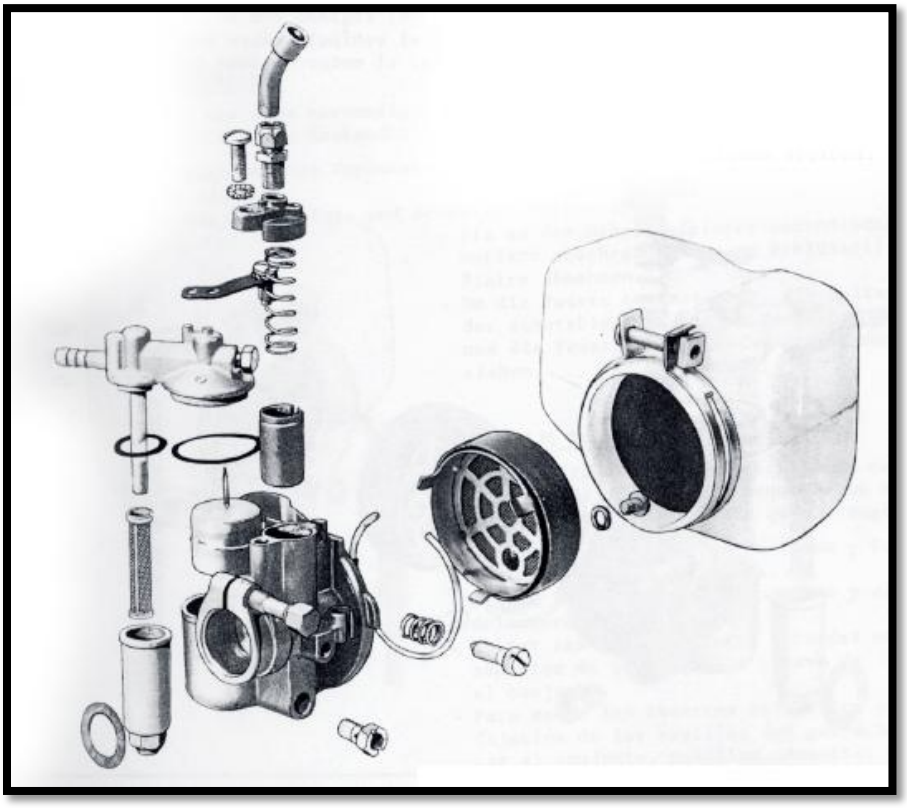
CARBURETOR

Description: Gurtner carburetor with sedimenting bowl

Engine with cylinder intake:
D.12.D type, inlet diameter 12mm, adjustment 666, main jet 230 (engine with variable transmission)
D.10.D type, inlet diameter 10mm, adjustment 665, main jet 200 (engine without variable speed transmission)

Reed valve engine, intake through crankcase
D.12.D. type, inlet diameter 12mm, adjustment 713, main jet 250 (engine with variable transmission)
D.10.D type, inlet diameter 10mm, adjustment 716, main jet 240 (engine without variable transmission)
The carburetor is preadjusted by leaving the factory. Only the idle run may be reset, but this idle adjustment is very important. When the vehicle is at a standstill, a good setting allows the engine to run smoothly so the moped can start easily when the throttle is applied. The idle screw has to be adjusted while the engine is warm, by setting the scew located on the lft side of the carbuettor (thes crew can be reachd through a port in the left hand engine fairing).

Adjusting:
-Start the engine (the moped on the stand)
-Put the throttle in the closed position
-Turn in the adjusting screw until it is all the way in.
-When the engine is warm, slowly turn out the adjusting screw as to set the engine speed as low as possible. The rear wheel should not be driven.
-Once the engine idle speed is sufficiently slow, take the moped off the stand and get on. The engine should not stall.



DISASSEMBLING THE FRONT FORKS

The disassembling of the front fork is only necessary in case of an inspection, for this fork needs no maintenance other than lubrication.

-Disconnect the brake controls and the speedometer drive.

-Remove the front wheel.

-Unclamp the front brake and speedometer cable sheaths

-Untighten and remove the blind nuts on top of the upper fork plate, then remove the assembly.

-To take out the springs, untighten and remove the bolts attaching the mudguard stay to the form, and pull out the assembly, rod, and spring.