

PEUGEOT BB 104 MOPED

Concessionaires: Layford (Automotive) Ltd., 134-136 King Street, Hammersmith, London, W.6

USEFUL DATA

Engine: air cooled two-stroke with aluminium cylinder and head, chromium plated bore.
Bore and stroke: 40mm. by 39mm. Capacity, 49cc. Compression ratio, 7.4 to 1.
Piston: alloy with two compression rings. Maximum ring gap, 3/10mm.
Ignition: flywheel magneto. Points just breaking with piston 2½ to 3mm. before top dead centre. Contact breaker gap, .016in (.012in to .020in permissible).
Spark plug: Marchal CR35. Plug gap .020in.
Carburettor: Gurtner D12D 621, main jet 210 for engines with Variator. D10D 622, main jet 195 for engines without Variator.
Clutch: automatic with automatic variable gear change when Variator is fitted.
Transmission: belt from clutch to countershaft. Chain for final drive and pedalling.
Chain sizes: pedalling chain: 88 links plus 1 pitch; pitch, 12.7mm; rollers, 7.75; width, 3.30mm. Driving chain: width, 4.88mm; pitch, 12.7mm; rollers, 7.75mm, 93 links plus one spring clip. Driving sprocket, 11T with Variator 12T without Variator. Rear sprocket, 54T with Variator, 48T without Variator. Free wheel, 18T.
Suspension: Neiman rubber suspension units front and rear.
Brakes: drum diameter, 88mm.
Tyre sizes: 2.25in by 15in.
Lighting: headlamp bulb, 6V 15/15W. Rear lamp, 12V 0.6amp.
Fuel capacity: 1½ gallons.
Weight: 103lb.

ENGINE REMOVAL

Remove the right and left footboards by taking out the six screws and washers which secure them—three to each board. Disconnect the decompressor cable attached by a solderless nipple, disconnect the light lead from the flywheel magneto at the snap fastener. Turn off the petrol and disconnect the petrol pipe from the carburettor. Using a tube spanner, slacken the pinch bolt clamping the carburettor to the induction stub. Take off the nut and shake-proof washer from the bottom engine bolt and remove the carburettor drip tray. Remove the nut, plain and shakeproof washers from the top engine bolt, take out the bottom engine bolt, swing the engine rearwards and release the belt from the driven pulley. Note that the bottom engine bolt has a distance piece on the left hand side, there is a large washer under the bolt head, a similar one together with a shake-proof washer under the nut on the opposite side. Withdraw the top engine bolt and the engine will fall free, the carburettor being slid from the induction stub in the process.

ENGINE DISMANTLING

A special tool, 0.91 is available on which the engine may be mounted for dismantling; it allows full accessibility to all sides without it being necessary to lift the engine into any position. Detach the plug lead and remove the sparking plug. Undo and remove the four cylinder head bolts and their spring washers; take off the two engine mounting brackets which are joined together by a tubular bridge piece. Slide the cylinder head from the four studs and remove the gasket below it. Unscrew the large hexagon nut holding the exhaust pipe to the cylinder, release the silencer clip from the stay below the engine and remove the exhaust system, noting that there is a sealing washer for the exhaust pipe at the cylinder end. Turn the engine to bring the piston to the bottom of its stroke and slide the cylinder from the studs; tap it lightly to free it should it be stuck. Use a hide mallet and tap on the induction or exhaust stub, not on the fins. There is a paper washer at the cylinder base.

To remove the decompressor valve for cleaning or renewal, shear the pivot pin anchoring the operating lever, remove the pin, lever, spring and slide, opening the spring with a screwdriver to slide it from the decompressor body. With a 19mm spanner, unscrew the body and remove the copper washer. While doing this the head may be held by passing two scrap bolts through two diagonally opposite cylinder head bolt holes and holding the lower ends of the bolts in the vice below the head.

Piston: with sharp nosed pliers, remove the circlips retaining the gudgeon pin and, with tool 0.12, press out the pin, watching carefully for the needle rollers which are in the small end of the connecting rod. Remove the piston rings and clear any carbon from the ring grooves, piston crown, cylinder head and cylinder ports.

Clutch: turn the engine mounting fixture so that the unit lies over on its side, clutch uppermost. Bend back the tab of the lock washer from the central nut. Tool 0.103 will hold the outer plate and prevent rotation while, with a box spanner, the nut is removed from the clutch shaft. Lift off the outer thrust plate, the washer behind it and the spring which has four legs. Remove the friction plate and its surrounding spring strip and mark the plate on its outer face to ensure its replacement the same way round. The inner steel clutch plate may now be removed, then the six balls and the thrust drum. Plate, balls and drum may, if preferred, be held and removed together by inserting two 4mm screws through the two 5mm holes in the plate and securing them into the threaded holes in the drum, this will secure the balls and prevent them from being lost.

Take out the greaser from the end of the clutch shaft and, with tool 0.106, extract the driving spline; the clutch drum complete with shoes, roller bearings and Variator will now come away. Note that behind the driving spline is a locking ring and there is a sealing ring in the hub end against

the roller bearings. There is also a thrust washer on the clutch shaft behind the Variator and this should be removed and preserved.

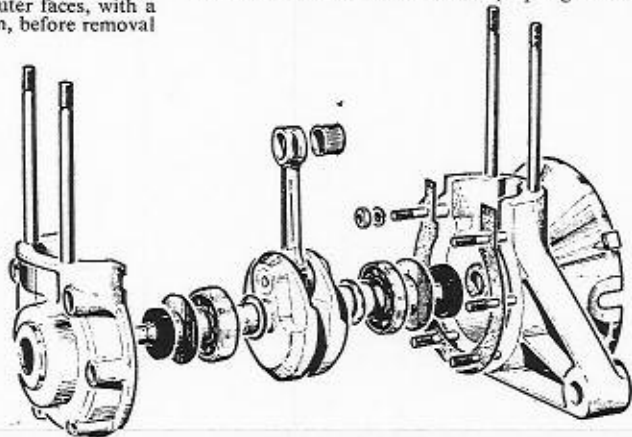
To dismantle the Variator, bend back the tabs of the lock washers beneath the four screw heads securing the inner flange or stiffening plate, remove the screws. This frees the inner nylon plate and the moving flange together with the centrifugal weights with their spring strip between the nylon plate and the moving flange. Withdraw the weights, the moving flange and the four distance pieces.

In the clutch drum hub are roller bearings held in three slotted nylon cages and these may be slid clear. Also, the clutch shoes may be levered out after having removed the shoe return springs with pliers. Mark the shoes on the outer faces, with a corresponding mark on the drum, before removal

case bolts, fitting at the same time the belt guard and the stay for the silencer.

Variator: if the clutch drum and pulley hub have been parted, screw them together using tools 0.87 and 0.88, the former held in the vice with the hub engaged on it, while 0.88 is used to screw the drum onto the pulley hub. When starting to screw the drum onto the hub, remember that the thread is a left hand one. When replacing the needle roller bearings, insert the nylon seal and then see that the two blind ends of the nylon roller sleeves are at either end of the bearing assembly. Put the distance pieces on the drum, place the moving pulley flange over the distance pieces, put the centrifugal weights with their strip spring within

The crankcase of the BB104 split.



so that they may be replaced in the same positions when rebuilding.

In the case of a machine not fitted with a Variator, the inner flange behind the clutch drum may be removed in the following manner. Insert tool 0.100 through the flange and hub, allow the pegs to take up their positions in the slots in the hub and then hold the lower end of the tool, which protrudes beyond the drum, in the vice with the drum sitting on top of the vice jaws. Place the pegs of tool 0.99 in the holes provided in the face of the drum, hold the tool there with one hand and with the other, use tool 0.101, hooked over the rim of the inner flange with the pegs engaging the holes, to unscrew the flange in a clockwise direction—it has a left hand thread.

Flywheel magneto: if it has not already been done, take off the six crankcase nuts and washers and remove the belt guard. Detach the two rubber flywheel cover clips and withdraw the cover. Put a piston stop below the piston to prevent rotation of the crankshaft, remove the flywheel securing nut and, with tool 0.45, extract the flywheel from its shaft. The magneto back plate may be removed by taking out the two retaining screws which have plain and spring washers. A single screw also with a plain and a spring washer holds the contact breaker, the coils are secured by nuts and washers and the condenser by a single screw with washers.

Splitting the crankcase: with the six crankcase nuts removed, fit tool 0.47 by means of two screws to the flywheel backplate bosses. Place tool 0.47D on the end of the engine shaft and screw down the extractor screw on to it. Continue screwing until the crankcase is free. It may be possible to drive out the crankshaft from the left hand half of the crankcase or the same tool, 0.47, may be used. This is bolted to the two engine mounting bosses with a distance piece, 0.47F between the crankcase and the base flange of the extractor tool. Then, with 0.47D on the end of the shaft to protect the thread, screw down the extractor screw until the crankshaft is forced from the crankcase.

There is a gasket between the two crankcase halves and two of the crankcase studs have locating dowels which should be taken care of. Heat the crankcase halves and rap them sharply face downwards on the bench to dislodge the bearings. Behind each bearing is a backing washer and an oil seal and the flywheel side has an additional felt seal. Between the bearings and the crank check, on either side, is a spacing washer.

ASSEMBLING THE ENGINE

Heat the crankcase to a temperature of 80 to 90 degrees centigrade. Place guide 0.81A on the bench and put the left hand half of the crankcase over it, the inside of the crankcase being uppermost. Into the bearing orifice, insert the oil seal guide 0.81C, smooth end in the bearing housing. Push the oil seal through this guide and into position with the small diameter of tool 0.81B. Remove 0.81B and 0.81C, put the bearing backing washer in position, place the bearing into its housing over the guide 0.81A and press it home with the large diameter of 0.81B.

For the right hand crankcase, screw the guide 0.82B into the block 0.82A, place the crankcase over the guide, inside upwards, put in the felt ring and then, with the oil seal guide 0.82C in the bearing housing, press in the oil seal with the tool 0.82D. Remove the oil seal guides 0.82C and 0.82B, put in the bearing backing washer, slide the guide 0.82E in place of 0.82B and press the bearing over it and into position with 0.82D reversed with the large diameter against the bearing.

Replacing the crankshaft: for the left hand half of the crankcase, put the thrust washer over the crankshaft and with screw 0.78B or 0.78D in tool 0.47, bolt the tool to the crankcase with the distance piece 0.47F between the crankcase and the foot of the tool. Screw the extractor screw on to the crankshaft then screw the tommy bar 0.74A on to the extractor screw and keep on screwing until the crankshaft is truly home. A similar procedure is followed for the right half of the crankcase, but in this instance the distance piece is not needed. Before replacing the right hand half, do not forget to fit the crankcase gasket and to see that the two locating dowels are in place. Refit the washers and nuts to the crank-

the moving flange, then put on the inner nylon plate followed by the stiffening plate. Replace the tab washers and the four screws, tighten the latter and lock with the tab washers.

Re-assembly of the clutch: take one of the shoes and insert the retaining spring or circlip in the slot in such a manner that it will slide over the pivot pin when required to do so. Turn the shoe until the marks you made on its outer face when dismantling coincide with those made on the drum; press the shoe over the pivot pin until the circlip engages the groove in the end of the pin. Do the same with the second shoe and then fit the shoe return springs. Having assembled the Variator, put the thrust washer on the engine shaft and slip on the Variator assembly. Place the lock washer over the shaft and follow it with the tapered driving spline, hammering this tightly home with a drift. Put on the clutch thrust plate having the holes for the balls, place the balls in position in the holes and on top of them put the steel clutch plate with the four grooves for the spider-shaped spring uppermost. Of course, if this assembly has been removed as a unit with the keeper screws to retain the balls, it may be replaced as a unit and the screws then removed. Put the friction plate in the drum together with the strip spring around its outer edge. Put the spider-shaped spring in place with the ends of the legs in the grooves in the steel clutch plate, replace the shim, put on the outer thrust plate, the lock plate with the two pegs in the slots in the outer plate, replace the tab washer and nut. Put the piston stop below the piston to prevent rotation while tightening the nut, turn over the tab of the lock washer.

Clutch adjustment: the clutch drum must be free on the crankshaft and should have end float of between 4/10 and 6/10 of a millimetre; there should also be running end float between the friction plate and the inner steel plate behind it. This may be ascertained in the following manner.

Grip, in a vice, an old crankshaft (clutch side) with the shaft pointing upwards. Put on it, in the order given here, the driving spline, the drum thrust plate which carries the balls, the six balls, the inner steel clutch plate, the friction plate, the spider-shaped spring, the distance washer on top of it, the outer steel clutch thrust plate, the tab washer and the locknut. Tighten this with torque spanner 6.104 to a torque of 3mkg. Now check with a feeler gauge the running play between the friction plate and the inner steel plate. Play should be between 5/10 and 7/10 of a millimetre. If there is not the correct amount of play, replace the distance washer with another one of a different thickness to achieve the right measurement. Washers are available under the numbers of 4201 A,B,C,D. and the respective thicknesses are 1.2, 1.4, 1.6, and 1.8mm.

Magneto: turn the engine over and refit the magneto back plate with the lead through the grommet in the crankcase. Put on the flywheel and loosely screw on the securing nut. Turn the engine until the piston is 2 to 3mm before top dead centre. Hold this position and move the flywheel until the arrow on its rim coincides with the arrow formed on the cable grommet, tighten the securing nut. In this position, the contact points should just be breaking. To adjust the points, slacken the contact securing screw, move the point with a screwdriver in the slot provided until the points are just breaking, testing this with the usual tissue paper test between the points. When the points are fully open the gap should measure .016in. It may vary between .012in and .020in, without risk of harm. Do not forget to retighten the contact breaker screw after making the adjustment and recheck the gap.

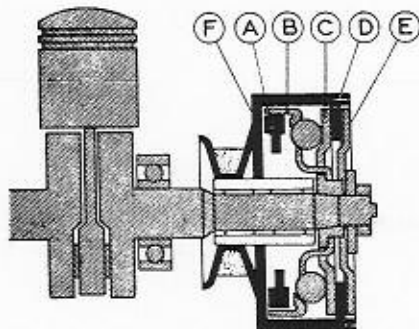
Piston, cylinder, cylinder head: if the old piston rings are being used again, test them in the cylinder bore to see that the ring gap does not exceed 3/10mm. Replace the rings in the grooves with the gaps at the pegs. Pass the gudgeon pin into the boss until the inner end of it is level with the inside face of the boss. Immerse the needle roller cage with the rollers in oil and insert it into the small end of the connecting rod. Place the piston over the small end with the letter "A" on the crown at the front. Put gudgeon pin extractor 0.12 over the piston and insert the bearing centering tool 0.93 through the hole in the extractor strap and into the gudgeon pin hole in the piston. From the opposite side, screw 0.12 on to the gudgeon pin until the pin has passed through the needle roller and has entered the other piston boss. Remove the tool 0.93 and put in

one of the circlips. Push the gudgeon pin on to the circlip, remove the gudgeon pin tool 0.12 and put in the other circlip.

Fit a new cylinder base gasket, see that the copper washer is in the exhaust outlet in the cylinder and the insulating washer on the studs of the inlet flange. Verify that the pegs in the piston ring grooves are at the ring gaps, oil the bore, fit a piston ring compression tool and slide on the cylinder. Fit a new cylinder head gasket, noting that the exhaust release hole is clear. Make sure that the decompressor valve is in perfect condition and seating properly; put in the copper washer, smear the threads of the decompressor body with jointing compound, tighten the body home firmly, replace valve, spring and retaining pin and flatten the end of the pin to ensure that it cannot escape and so allow the valve to fall into the cylinder. Having fitted the decompressor in the cylinder head, refit the head and remember to position the top engine mounting bracket before putting on the cylinder head nuts and washers. The bracket is fitted with the connecting tube to the rear.

Silencer: the rear end comes away on removal of the locknut and washer. Clean out the holes if needed, replace the end and tighten the nut. In fitting the silencer and exhaust pipe, note that the silencer stay on the engine goes at the back of the clip on the silencer. Tighten the large exhaust pipe hexagon at the cylinder then the silencer stay nuts. Fit the magneto cover having the slots at the bottom.

AUTOMATIC CLUTCH



The clutch consists of two main parts: the starting clutch consisting of two shoes (A) mounted on the outer drum (F). Under centrifugal force these shoes throw outwards and grip the drum (B) mounted on the crankshaft. The automatic multi plate clutch consisting of a drum thrust plate (B) supporting six balls, a clutch flange (C), a clutch disc (D), and external thrust plate (E). The clutch disc (D) is tongued to take the drive from the outer drum (F) which is joined to the pulley and thus drives the belt.

CARBURETTER

Start dismantling by turning off the petrol and detaching the choke cable without disturbing the solderless nipple. A single screw with a shake-proof washer secures the top cap which will come away complete with the cable adjuster, throttle slide and spring; within the throttle slide is a separate throttle slide guide. Another screw with a shake-proof washer holds the float chamber top in which the needle seats. There is a gasket for this and another one for the filter bowl which is screwed to a central bolt depending from the float chamber top assembly. Unscrew the filter bowl and remove the gauze for cleaning. A screw in the side of the float chamber top may be removed to clean out the petrol orifice. The main jet is screwed into the side of the carburetter body at the bottom and above it is the throttle stop screw, spring loaded, by means of which slow running is adjusted. To remove the air filter, slacken the hose clip and free the air intake sleeve, remove the circlip and free the element from the body by turning the skeleton disc and withdrawing it. Replace the element in the body by putting in first, the coarser wire gauze disc, then the steel wool followed by the fine gauze and the locking disc.

COUNTERSHAFT

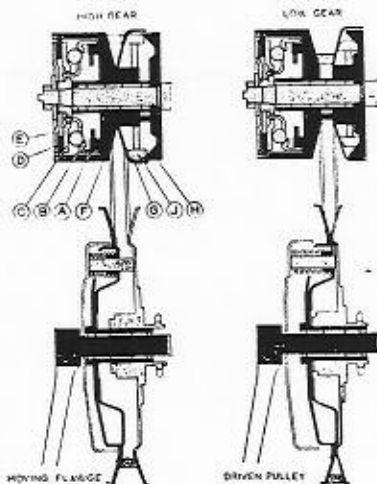
Drive out the cotter and remove the left crank. Behind it will be found a Bellville washer, a

shaped nylon washer, a steel shim and a bronze washer. Disconnect the driving chain and slide the pulley assembly from the shaft; there is a large washer at the back of the pulley which must be preserved. Remove the chain from the pedalling gear and the crank may then be driven out of the bottom bracket to the right. Note that, behind the pedalling sprocket there is a dished washer located by a spring. At the back of the pulley is the small driving sprocket integral with a heavy sleeve. Needle roller bearings—two of them—separated by a spacer are in a tube attached to the outer pulley flange and at the bottom of the tube is a felt seal held in place by a circlip. Take careful note of the positions of all these small parts when dismantling and replace them in the right order. The outer pulley cover is held by six screws with shake-proof washers and a further, longer screw forms a spring anchorage. Undo these screws to remove the cover and the springs; the pulley flanges are now free. On the inner pulley flange are six short pillars at the base of which are six rubber washers.

PULLEY ASSEMBLY

Place the felt seal in the inner pulley sleeve and fit the circlip into the sleeve. Put in a nylon-caged bearing, the spacer and the second bearing; secure them with a circlip. Put the small plunger in the housing, see that the rubber washers are on the six pillars on the pulley flange and put the outer flange over the pillars. Place the plunger spring

VARIATOR



The variator comprises two principal parts: driven and driving pulley. The driving pulley consists of the outer drum (F) which carries the shoes of the starting clutch and of the moving flange (G) which can move sideways. Between flange (G) and the internal plate (H) are centrifugal weights which under the effort of centrifugal force can alter the separation of the flanges of the pulley. The driven pulley consists of two flanges held together by six springs.

in its hole in the outer flange, engaging its inner end in the small hole in the plunger, the flanges are now together. Fit the six springs in their holes, place the outer cover over them with the plunger spring hole lining up with the plunger spring. Press down on the outer cover to compress the springs, hold it while inserting the screws—this is not easy and may require more than one attempt. Ease the sleeve with the small sprocket into position in the centre hole, push the long end of the plunger spring into the slot provided in the edge of the outer cover, tighten the six spring screws.

Put the "V" shaped spring and dished washer on to the pedalling sprocket axle, pass the axle through the swinging fork pivot after having greased it. Put the assembled pulley on the axle followed by the bronze washer, black shim, steel washer, shaped nylon washer, Bellville washer and left hand side crank. Replace the cotter, put on the nut and tighten it, fit the chains.

SWINGING ARM, REAR SUSPENSION

Detach the brake cable and remove both chains. Remove the rear wheel spindle nuts and pillion footrests on both sides, free the brake anchorage and withdraw the wheel. At the front end of the swinging arm, remove the locknut on the right hand side then the washer, securing nut and large, serrated washer. Slacken the two clamp bolts in the bottom bracket using a tube spanner; watch for the nuts that will be released when the bolts have been screwed free. These two bolts will be found pointing upwards between the lowest, downwardly jutting frame members. Take them right out, they act as cotters, and the axle may be driven out from the right hand side. As this takes place, two more serrated washers, one on either side of the left arm will fall free. Note that the forward ends of the swinging arm are bushed and the bushes may be pressed out and renewed if worn. Remove the bolts anchoring the lower ends of the rear suspension stays. These ends have rubber bushes with inner metal spacers. On removal of the bolts the swinging arm will fall free together with the chain guard and tensioners. To remove the suspension unit, take out the four short bolts or screws securing the mudguard. Two of these at the front are reached from inside the main frame while the rear ones are accessible from above. Remove the two long bolts which pass through the main frame sides towards the top and the suspension unit and mudguard assembly may be withdrawn downwards. The upper ends of the suspension stays are anchored by a bolt passing through the rubber rings in a spacer and secured by a nut with a lock washer. Renewal of the rubber rings will involve the unringing of the two fixing pins which have spacers.

Assembly of swinging arm: put in the mudguard and suspension assembly and hold it in position while inserting the two side bolts, put on the washers and nuts. Put in the two top seat bolts and screw them into the mudguard. Slide a serrated washer on to the swinging arm axle and, holding the swinging arm in position at the bottom bracket, push the axle through the left arm and pass it through a second serrated washer held between the arm and the bottom bracket; push the axle home. Move the axle about while trying to insert the clamp bolts until the position is found where the clamp bolts can be fed upwards through the clamps. Put on the nuts which will be held from turning by the clamps and screw the bolts with a tube spanner into the nuts. Put on the final serrated washer, screw on the securing nut followed by the plain washer and locknut.

Secure the swinging arm at the rear end to the suspension stays; the bolts pass from the outside through the rubber bushes with the steel cores. Put in the wheel, enter the brake anchorage, put on the chain adjusters, pillion footrests and spindle nuts.

HUBS

Rear: assuming that the rear wheel is out of the frame, remove the nut on the chain wheel side and the washer which is located by a projection fitting in a groove along the spindle. Take off the brake back plate and shoe assembly. They may be dismantled by taking out the hexagon headed screw securing the operating lever to the squared end of the brake cam spindle. Note that the hole in the lever which fits over the squared end of the cam spindle has eight serrations thus providing a means of adjustment. Behind the brake assembly on the wheel spindle comes another locating washer, a nut and an adjusting cone for the cup and cone ball bearings; there are eleven 5.5mm balls on either side of the hub. Next, come two large washers sandwiching a felt. On the opposite side of the hub in the order of removal are, the spindle nut, washer, bearing cone and dust washer. The free wheel screws on to the hub.

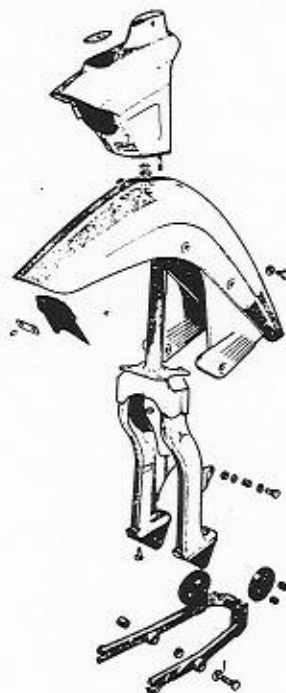
When rebuilding the hub do not forget the washers locating in the grooves in the spindle, they prevent the cones from turning when the nuts are being tightened.

Front: very similar in design to the rear hub, the front hub has the same brake lever and cam spindle arrangement and the order of parts on the brake side of the wheel spindle is, main spindle nut holding the wheel in the forks, a washer, nut, tongue washer then the brake back plate. Behind the brake assembly is a nut, then the bearing cone, nine 6.35mm balls, washer-felt-washer arrangement. On the opposite side are, main spindle nut, spacer, smaller nut, tongue washer, cone, nine balls and a dust cover.

Front wheel removal: disconnect the brake cable and speedometer drive. Slacken the spindle nuts, withdraw the wheel forwards from the fork end.

FRONT SUSPENSION

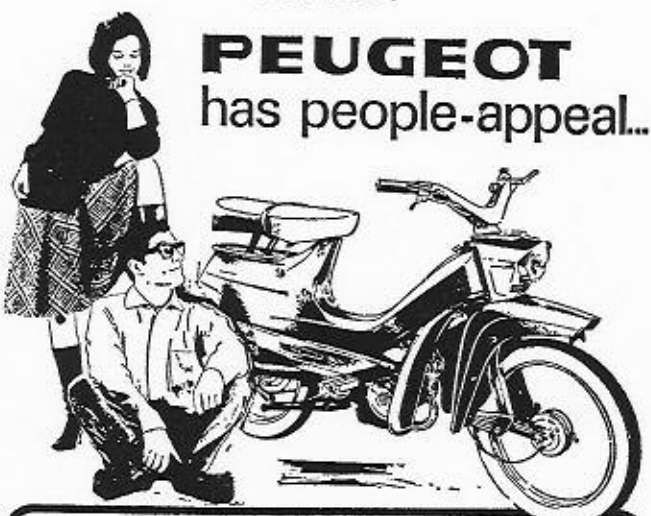
On the inside of the front fork ends are two slotted nuts with split pins, one nut on each fork end. These are the pivot pins of the swinging arm. Remove the split pins and nuts and withdraw the bolts from the outside, there are spacers and washers. Take out the six bolts—three on either side—from the sides of the front mudguard, they have nuts and spring washers on the inside; the



Front fork removal and dismantling the Neiman suspension.

swinging arm will now drop clear complete with the rubber suspension rings and two rubber spacers. There are two rubber buffers in the top of the bracket taking the swinging arm pivot, these can be renewed if necessary. Also, the

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6-2 PEUGEOT BB 104 MOPED

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swinging arm pivot point has silent-bloc bushes which are renewable.

Front suspension refitting: put the bolts through the mudguard and rubber rings and screw on the nuts lightly; a plain washer goes under the bolt heads and a shake-proof one under the nuts. Fit the fork pivot bolts and slotted nuts loosely, lever the swinging arm to middle distance of travel and tighten the slotted nuts, fit the split pins. For this operation use a long lever with a hooked end on top of the rear of the swinging arm and lever upwards against a rod passed through the wheel spindle slots at the front end of the swinging arm. Refit the wheel, connect the brake cable and the speedometer drive.

HANDLEBAR, FRONT FORK

Unscrew the nut, remove the washer and spacer and take out the bolt which passes transversely

through the clamp below the handlebar; lift the handlebar away. Undo the two small nuts holding the headlamp cowling to the mudguard, allow the cowling and lamp to hang downwards. Take off the steering head locknut, it is a slotted ring nut, the spring washer beneath it and the locking plate which comes next, unscrew the knurled ring and the front fork and steering stem may be withdrawn downwards. Watch for the ball bearings in the steering head. Refit in the reverse order, using grease to hold the 25, 5.5mm balls in each race. Tighten the knurled ring until all play has disappeared while the steering remains perfectly free. When fitting the handlebar, note that the distance piece goes in the orifice in the lug on the left side and the bolt passes through from the left.

One screw secures the lamp front; after removing this, turn the lamp front to right or left to release it. Note when refitting the rear brake cable that it passes alongside the pulley outside the frame, through a wire loop and is held by a

bent tab on the underside of the rear swinging arm.

REMOUNTING ENGINE

Put in the top bolt from the left hand side, connect the decompressor cable (it passes through the eye of a spring and below the top engine mounting). Connect the lead from the magneto to the lights at the snap fastener. Ease the carburetter on to the induction stub, insert the spacer between the frame and the lower engine lug and put in the bottom engine bolt with a washer behind the bolt head. Fit the carburetter drip tray on to this bolt and put on the nut with its plain and shake-proof washers; leave it slack. Tension the belt, tighten the bottom engine mounting nut, tighten the top nut. Connect the petrol pipe, tighten the carburetter clip bolt, fit the footboards.

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- No. 12—Velocette LE.
- No. 13—AJS and Matchless 350 c.c. models.

- No. 14—Simplex Tour de France derailleur gear.
- No. 15—Triumph Tiger Cub 200 c.c. model.
- No. 16—Cycle frame and fork repairs.
- No. 17—Ariel Colt 200 c.c. model.
- No. 18—Hercules Her-cu-Motor.
- No. 19—Carrier-cycle servicing.
- No. 20—Lambretta scooter.
- No. 21—Phillip's Gadabout moped.
- No. 22—BSA Dandy lightweight scooter.
- No. 23—Villiers two-stroke twin.
- No. 24—Norman Nippy de luxe moped.
- No. 25—Miller AC4 generator.
- No. 26—Raleigh moped.
- No. 27—Phillips Panda moped.
- No. 28—Norman mopeds fitted with Villiers Mark 3K engine.
- No. 29—Diana TS scooter.
- No. 30—Ariel Leader and Arrow motor cycles.
- No. 31—Capri scooter.
- No. 32—Campagnolo Gran Sport Gear.

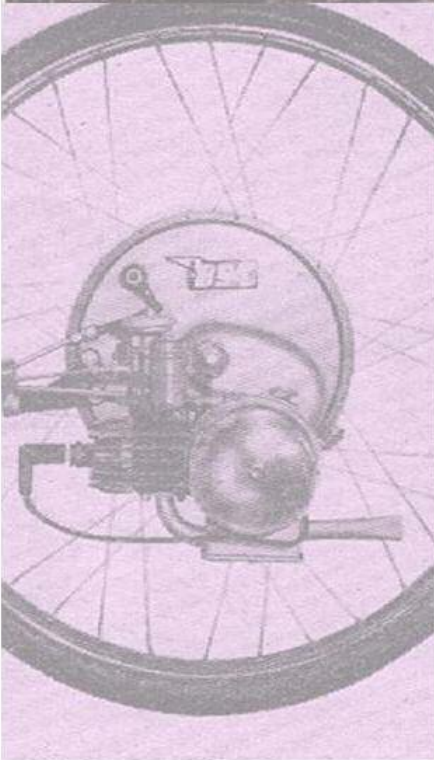
- No. 33—BSA B40 350 c.c. motor cycle.
- No. 34—Raleigh RM4 and RM5 mopeds.
- No. 35—Velocette Viceroy scooter.
- No. 36—Manet S100 scooter.
- No. 37—Bicycle wheel building.
- No. 38—Raleigh Roma Mark I scooter.
- No. 39—Tina scooter.
- No. 40—NSU Quick 50.

SECOND SERIES

- No. 1-2—Reliant Regal Mk6 Three-wheeler.
- No. 2-2—Honda C100 motor cycle.
- No. 3-2—BSA Beagle motor cycle.
- No. 4-2—Suzuki M15 and M15D motor cycles.
- No. 5-2—Jawa 05 scooter.

Copies of these Service Sheets, which are invaluable to dealers' repair departments, may be obtained by readers at 1s. each or 11s. a dozen.

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