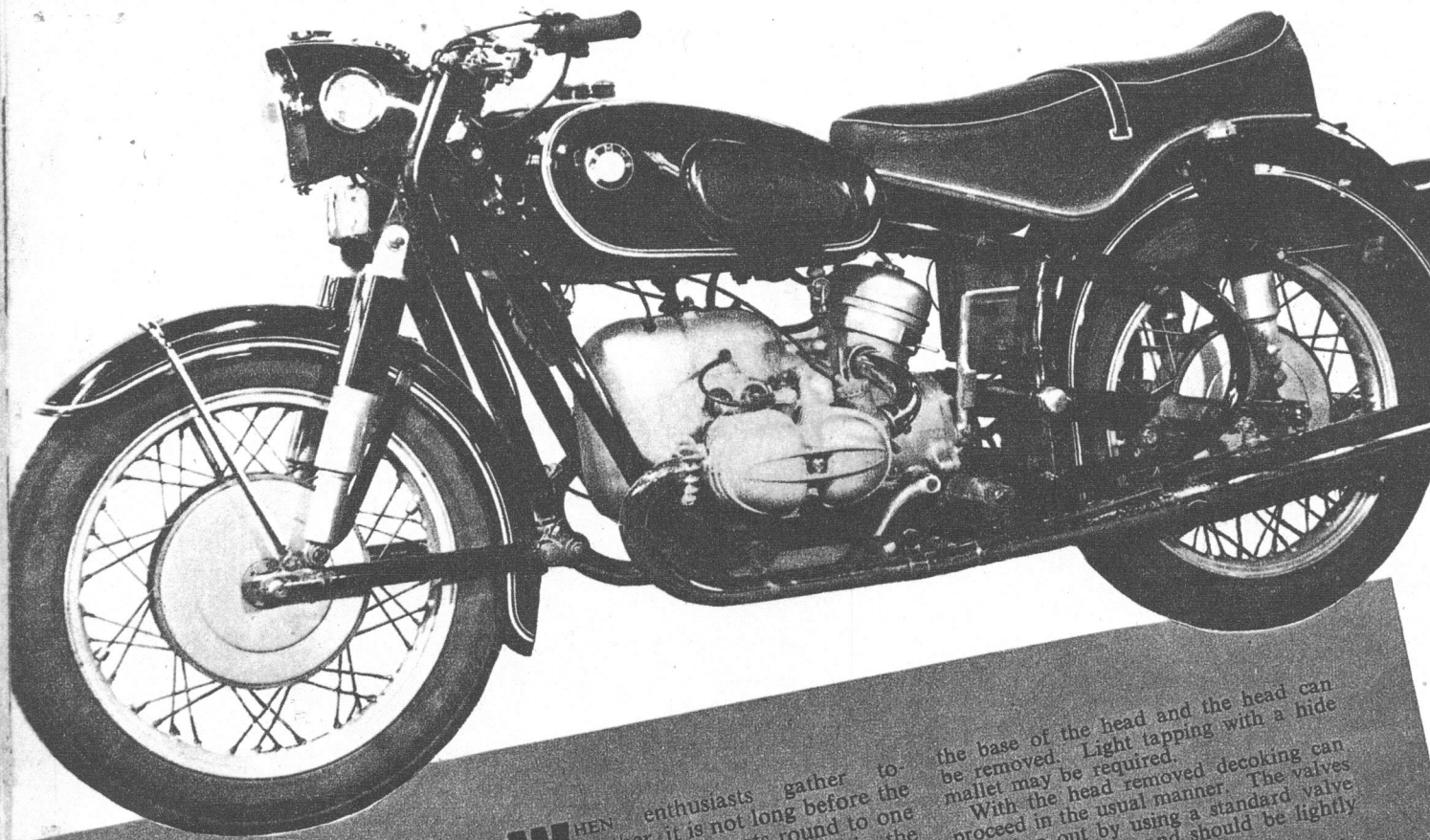




This machine is
the 'Rolls' of motorcycles
and 'Kit' Kite
gives his maintenance tips

SERVICING A BMW

WHEN enthusiasts gather together, it is not long before the conversation gets round to one of the best motorcycles in the world—the B.M.W. And the majority of riders will agree that one has to go a long way to beat this machine. Even so, a B.M.W. does require a certain amount of maintenance if it is to continue to give of its best.

Of course, when you pay £500 for a motorcycle you also expect a very comprehensive tool kit, and the B.M.W. kit is sufficient to do all routine jobs and the spanners are of very high quality.

The horizontal position of the cylinders greatly facilitates the work since the tank and dual seat may be left *in situ*. When carrying out a routine decoke first remove the silencers. Then loosen the cooling ring at the cylinder heads. It is important to loosen both exhaust systems since there is a balance pipe connecting them together. When the pipes are removed note the position of two washers for each pipe. Remove rocker box. Two small nuts and one centre sleeved nut. The gasket can be used repeatedly providing it is undamaged.

Remove sparking plug and disconnect air intake tube. This is metal, but the Neoprene washer at the filter end is very flexible and the tube can simply be pulled off at the carburettor end. The carburettor is attached to the head with two nuts and these present no difficulties.

Remove cylinder head. There are four long bolts which serve a dual purpose and retain the rocker gear as well as helping hold on the head. Two further bolts at

the base of the head and the head can be removed. Light tapping with a hide mallet may be required.

With the head removed decoking can proceed in the usual manner. The valves are taken out by using a standard valve spring compressor and should be lightly ground in.

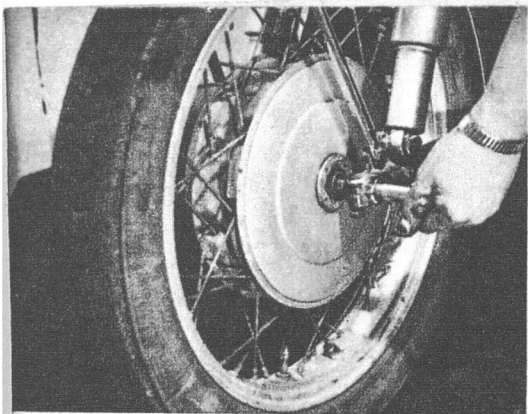
If it is necessary to check the rings, the barrel will come away by taking off the four nuts at the base. Be careful to prevent the piston dropping as the barrel comes off.

The R.69 tappet clearances are inlet .006 and exhaust .008. When resetting the gaps it is not necessary to find T.D.C. by poking wire down the plug hole. There is a rubber grommet on the nearside of the flywheel housing. Remove this and turn the engine until a small timing mark "OT" appears and lines up with an arrow on the housing. The piston is now T.D.C. and the tappets can be set.

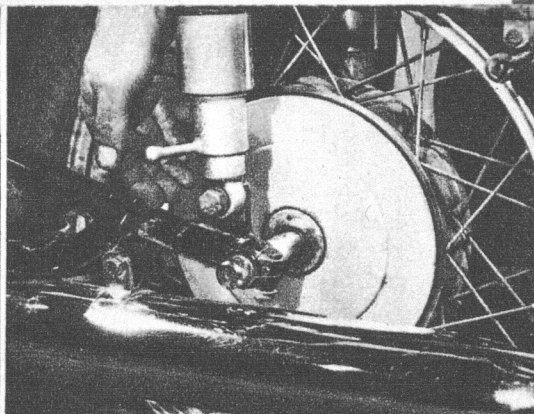
To get at the massive 9 inch, twin leading shoe front brake, the front wheel is removed. Disconnect the front brake cable, undo the spindle nut on the outside, loosen the pinch bolt on the near side, and pull out the spindle. The wheel is then free and the brake plate complete can then be taken out.

To facilitate rear wheel removal, the rear mudguard is hinged. First loosen mudguard stay bolts on the rear spring units, and securing nuts on the mudguard. Spindle nut, pinch bolt, spindle are exactly the same as for front wheel.

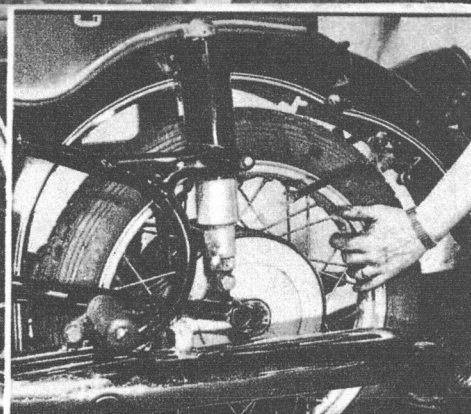
The rear springing units have two adjustments. When the lever is forward springing is in hard position. Push to alter point.



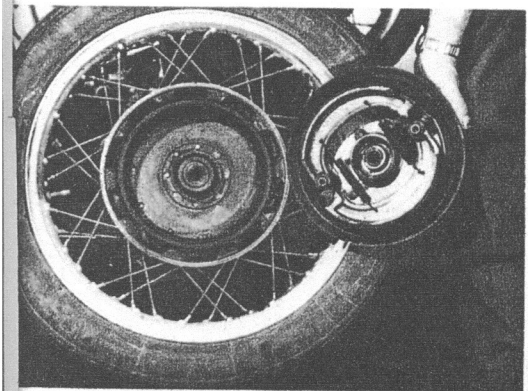
To remove front wheel first disconnect the front brake cable. Undo the spindle nut and slacken pinch-bolt. Withdraw spindle



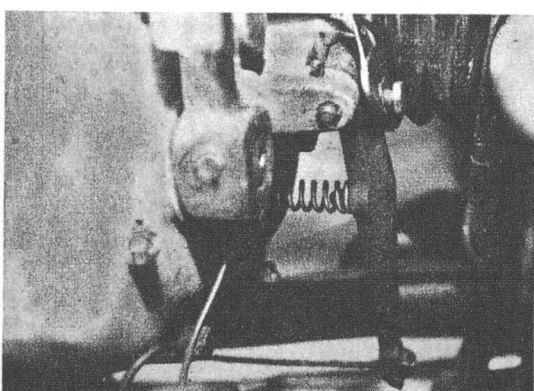
The rear suspension units of the machine can easily be adjusted by hand. A large peg on the unit allows instant tensioning



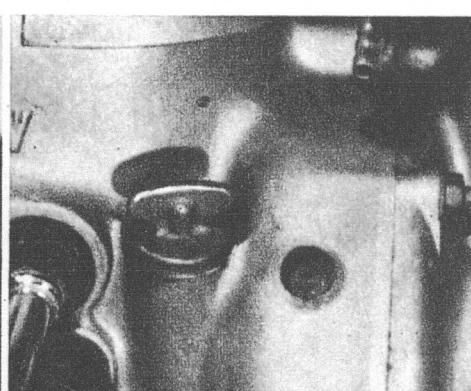
To take out rear wheel first lift mudguard on hinges. The procedure then is exactly the same as for removing the front wheel



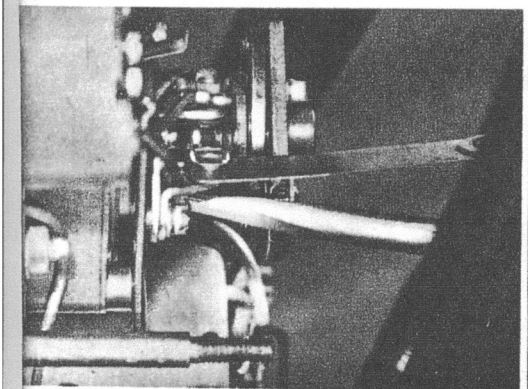
The front brake has a twin leading shoe which gives particularly good braking under all conditions—clean away all dust



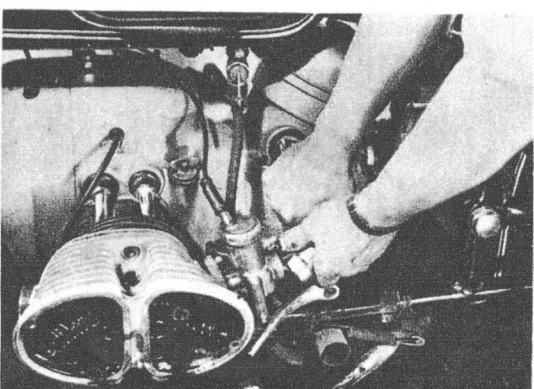
Clutch adjustment is simple. Slacken off locking nut and then adjust with the small bolt on the clutch lever arm on gearbox



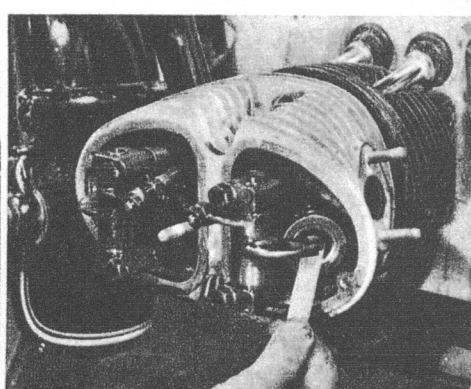
Timing is made easy and positive with "OT" mark on the flywheel. This can be seen through the small hole on the nearside



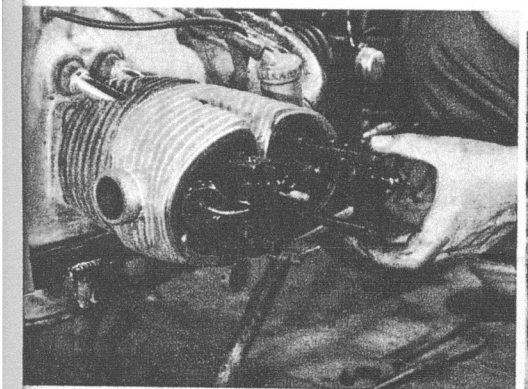
The contact breaker gap is adjusted by loosening the stationary plate with the screwdriver—move until gap is accurate



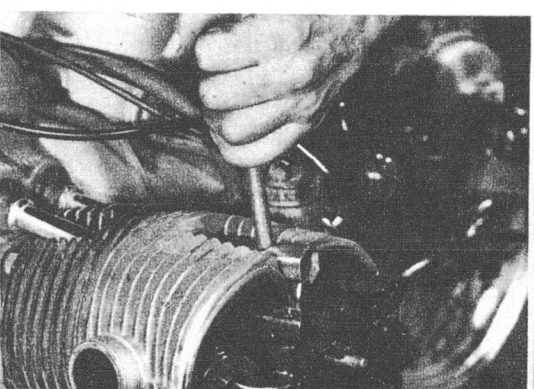
Air intake tube is pulled free at carburetor mouth—it is held in place by a Neoprene washer. The carb is held by only two nuts



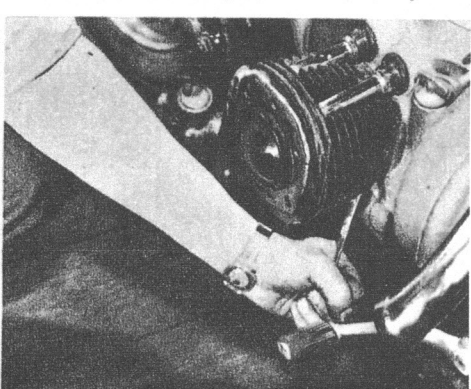
Tappet clearances are as follows: Intake is .006 and exhaust is .008. Always ensure that these settings are accurately maintained



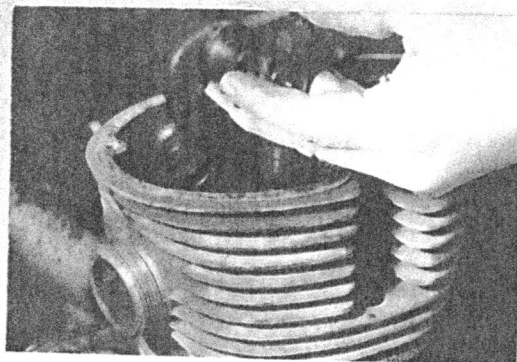
The rocker gear is held to the head by long bolts—make sure that these are not confused if removed for any maintenance



The head is secured by two long bolts and these are placed above and below. Use a box spanner when removing these from head



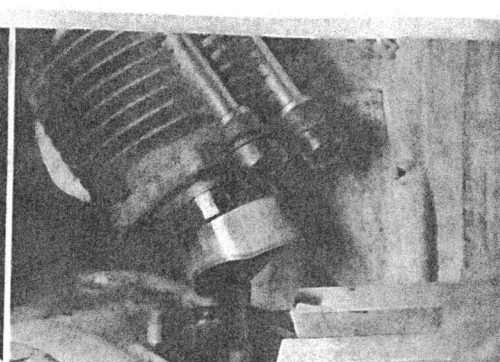
Removal of the barrel presents no trouble but ensure that great care is used when replacing—it is easier with two people



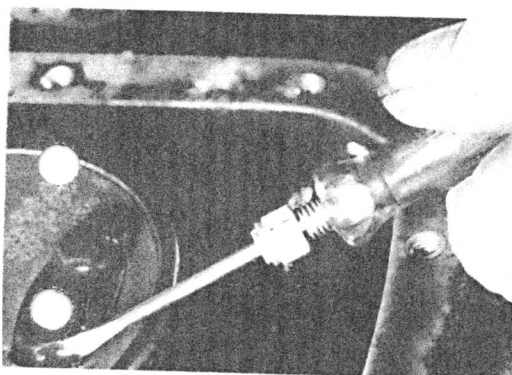
After draining oil out of the rocker covers, and removing them by undoing central nut, the rockers are unbolted. Only 69 S has needle bearing for these



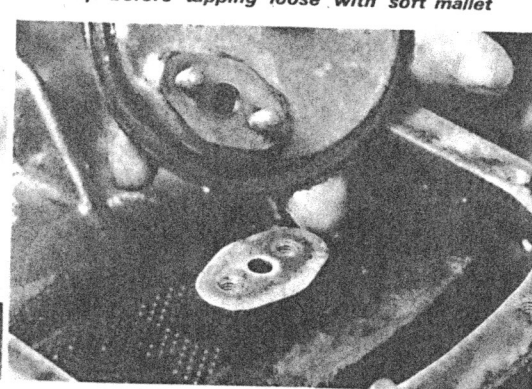
The head is a close fit on a spigot, which is deeper on the sports model. To free head, it should be gently warmed up before tapping loose with soft mallet



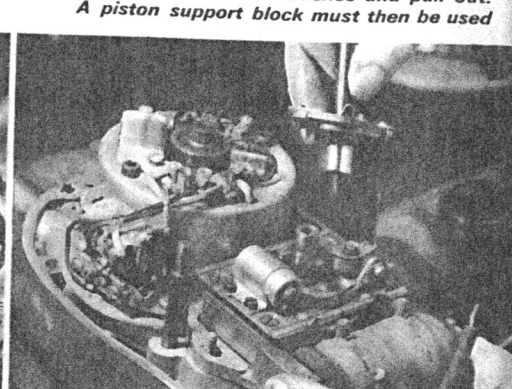
With head clear, the barrels can be slid off the pistons quite easily. Push-rod covers sit in rubber bushes and pull out. A piston support block must then be used



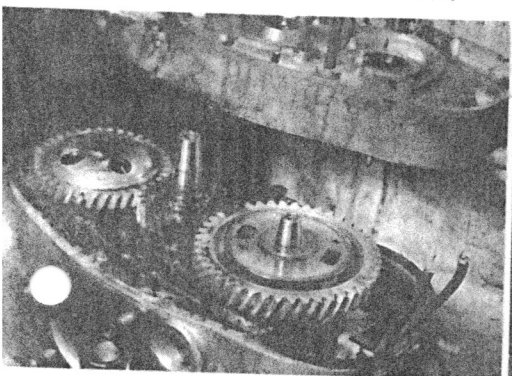
Pancake-shaped oil pick-up filter is held by two bolts with locking plate. This plate should be replaced as any slackness in nuts endangers oil supply



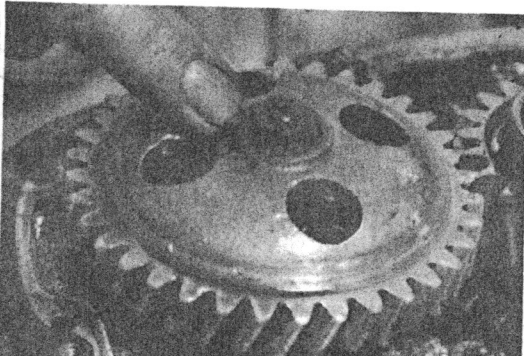
A small gasket goes between filter and oil suction pipe. Make sure on reassembly that gauze filter face goes in facing downward. It can go on upside down, too



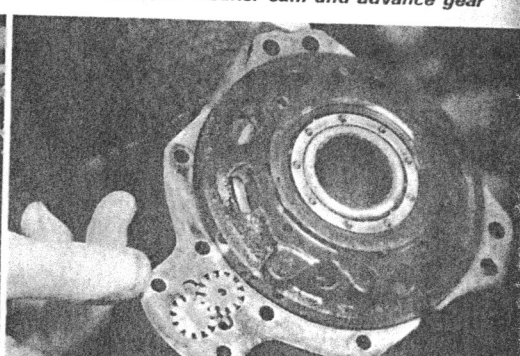
Next step in stripdown is to remove front cover and start on the electrics. First component to come off its taper is the contact breaker cam and advance gear



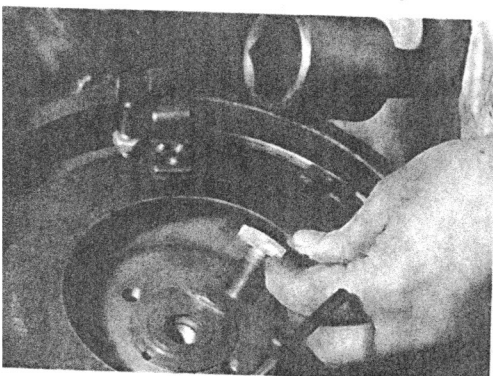
The complete end cover can now be lifted the engine, exposing the camshaft oil pump gear pinions. Larger gear drives cams and engine breather plate



First pinion to remove is the lower, smaller one which drives the gear-type oil pump. The nut, which must be carefully locked, is LEFT-handed, so watch it



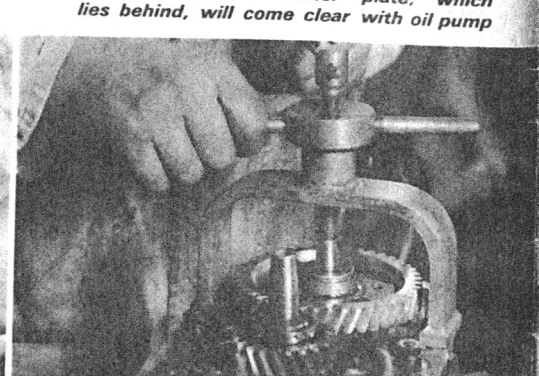
The bearing and drive pinion on the end of the camshaft must be removed, and then the whole carrier plate, which lies behind, will come clear with oil pump



A pretty gigantic ring spanner is used by MLG to shift this important bolt—while flywheel is locked with a steel plate, using same clutch extractor bolts



Flywheel is held on a taper, and when it is off, the rear of the engine-case can then be heated to free rear camshaft bearing. If you don't, bearing will stick

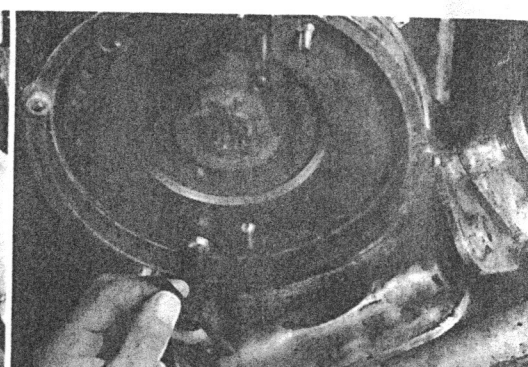


Turning now to the front of the motor, the camshaft can now be extracted, using a bridge-type extractor, which pulls light alloy gear pinion off with shaft

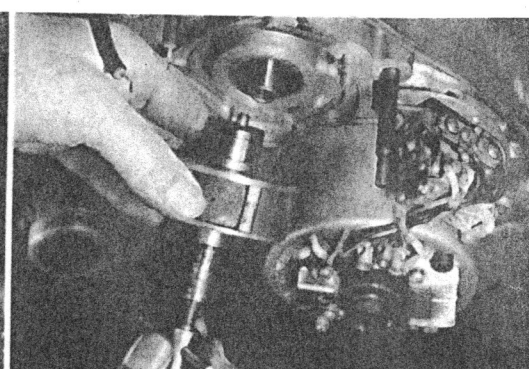
This is the end bearing of camshaft. If casting is not warmed, this bearing, which goes in housing at back of engine, may be left inside and be hard to shift.



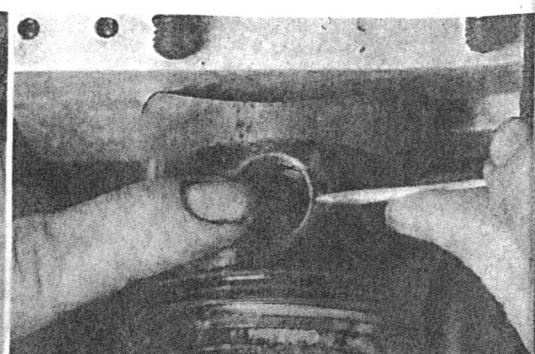
Before you can go any further, the clutch and flywheel should now be dismantled. Two extractor bolts are needed, and these fit screw holes to take spring pressure.



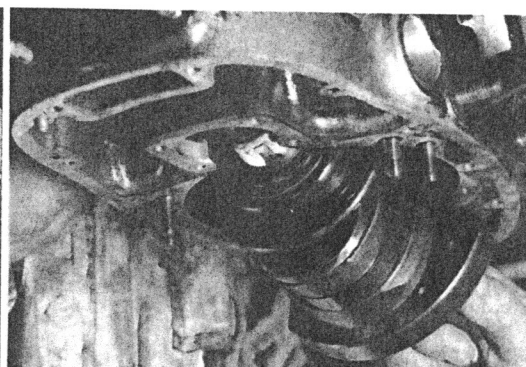
Magneto itself is then unbolted. Wires disconnected and lifted clear. Rotor pulls off its taper, and as it is made of permanent magnets, use a "keep" on it.



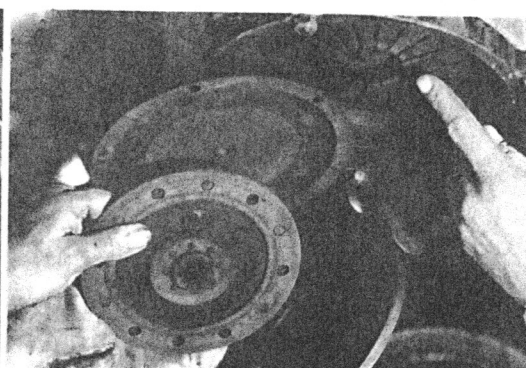
Straightforward wire clips are located at each end of gudgeon pin, and small slots in the piston wall enable you to prise clips out with small point tool.



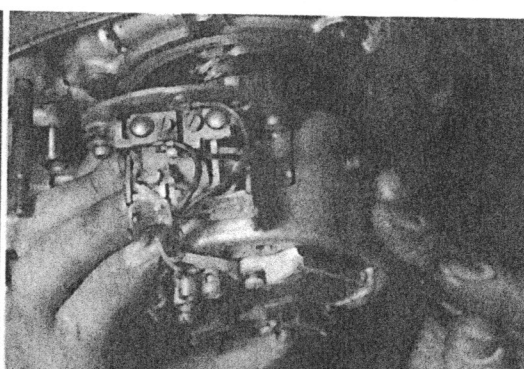
Crankshaft and rods are all one unit—got out. Secret is that entire assembly is tilted inside, through 90 deg. first.



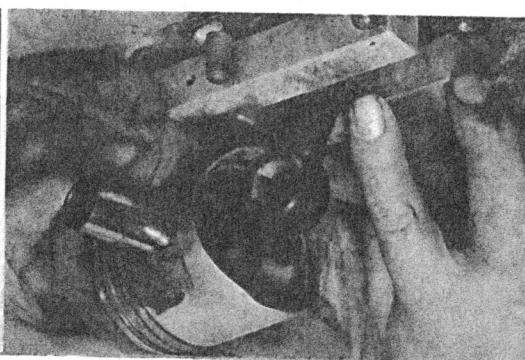
Diaphragm spring clutches may be the new rage on cars, but BMWs have had them for 10 years. Clutch is single plate car-type and lifts out in four single pieces.



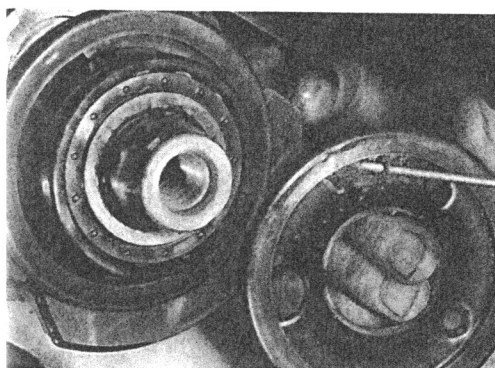
Next item off is the 6-volt Bosch dynamo. Watch brushes don't jump out when taking off. Regulator unit is mounted on side.



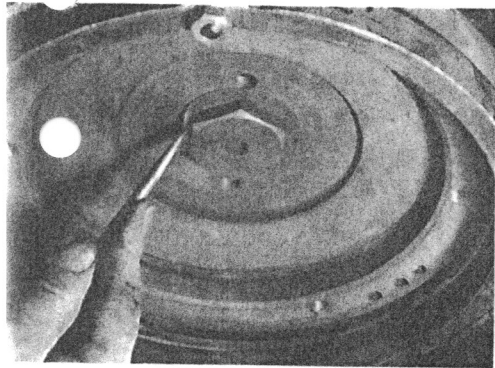
Piston has to be warmed to allow gudgeon pin to be pushed out, and this is just the same operation as with any other engine. Lock rod and do not use force.



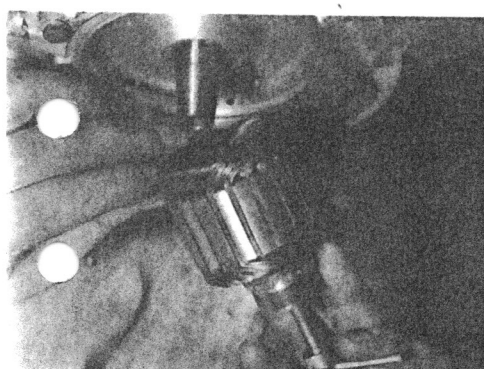
There are two centrifugal sludge rings on crank assembly. Regular oil changes—and clean air filters—keep sludge down until they can be cleaned at overhaul time.



Removing the clutch exposes the flywheel which is held by a single central bolt. This bolt head is locked by a tag-washer—and for safety it is best to replace.



Once again mounted on a taper, the dynamo armature comes off complete—and should be handled and stored with care to prevent damage to the insulation.



With pistons and cylinders removed, it is best to now remove sump, which is rectangular pressed steel type, with rear drain. Plug is magnetic on R69 S.

