

Replace the push rod tubes

Push rod tubes are often damaged, they are very fragile. Nevertheless, the good condition of these tubes is necessary to avoid oil leaks, because the oil returns to the engine this way.

To replace them, you need a tool that you could hardly find until now. VGS now offers the tools to both disassemble and assemble the tubes.



Everyone has good cylinder heads on stock of which the tubes are damaged. This means you can no longer use the heads, because you need the right tools to replace the tubes.

In our example, the tubes are barely folded. Removing them can be useful, for example, to correct valve seats, change the guides, ... When the tubes are torn or cracked, it is necessary to replace them.



To dismantle the old tubes, we use a special drill made by VGS 2CV. It has two diameters: at the front it enters the tube and serves as a kind of conductor. Then the diameter increases and the tool drills the tube into place in the cylinder head.

Remove the old push rod tubes:

Tools :

- Tool to disassemble and assemble the push rod tubes VGS
- Metal saw
- Screwdriver
- Oilcan
- Caliper



Place the cylinder head in the vise and use a simple hand drill to insert the front of the drill into the tube along the side of the rocker shaft.



Oil the drill



Then drill out the tube. Note, slowly move the drill in and out of the tube to remove the pieces of metal from the cylinder head.



Frequently oil the drill during this process.



And then drill through to the end by continuously putting the drill in and taking the drill out of the tube.



Clean the drill (take the drill out of the socket for safety reasons).



Repeat the process with the other push rod tube.



Now you have to deal with the other side of the head. Use a metal saw to saw the surplus of the tube.



And like on rocker shaft side, pierce the tubes with the special disassembly drill. Do not forget to take the drill continuously in and out of the tube to remove the metal residues. Oil the drill regularly!



The drill has a slightly smaller diameter than the push rod tube, so the cylinder head can not get damaged. The thickness of the tube becomes as small as possible. With the help of a screwdriver, you can easily fold the last piece and pull it out.



Afterwards it is sufficient to pull the tube down to remove it.



Do the same for the other tube. Start by folding it with a screwdriver.



Remove the tube!



Attention: make sure that all pieces of metal are out of the cylinder head and that no remains are left behind!

As you can see it is not difficult and if you follow the manual carefully, there is no risk of damaging the cylinder head.

Important: clean the openings thoroughly before proceeding!

Mount the new push rod tubes



To continue, you need 2 tubes per cylinder head. You can buy them oversized, but since we have not damaged the cylinder head, you can assemble tubes with the original diameter.

Place the cylinder head on a homemade mold. You can also do without, but it makes it easier to fix the cylinder head.



If you feel that the tube doesn't want to enter in the opening, take some fine sandpaper and shed the tube a little. This way you reduce the diameter and / or remove any burrs.



Place the 2 tubes until they are flush at the rocker shaft side

Place the tubes by hand in the cylinder head. The end with the smallest diameter is the one that comes at the bottom of the engine. You have to install the tubes in the cylinder head on the other side.



Adjust the position of the tube using a caliper. Make sure that the turned part is either 7 cm from the side of the piston or 6.5 cm as measured on our picture.



If you frequently have to repair cylinder heads, we recommend that you make a small mold to easily determine the correct position of the 2 tubes.



Now it's time to use your new VGS tool (or if you're lucky, you still have an old Citroën tool).

There are 3 models for the 2CV engine:

- 1605-T (for 375 cm³ and 425 cm³ 12 hp),
- 3005-T (for 425 cm³, 18 hp and 602 cm³ type M4)
- 3036-T (for 435 cm³ and 602 cm³ type M28).



Oil the rolls of the tool with the help of an oil can.



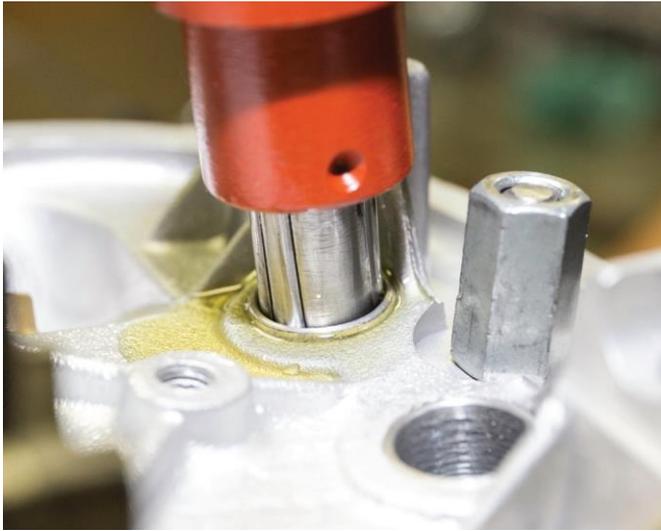
Insert the tool into one of the pushrod tubes, along the side of the rocker shafts.



Oil thoroughly and insert the tool into the tube.



Use a flat wrench to turn the conical side of the tool clockwise. Oil regularly!



By rotating the rolls will open. They will also expand the tube, so that it will get locked into the cylinder head again.



It will become more difficult by continuing rotating. Stop when you feel that you have reached the maximum diameter. There is no need to keep turning like crazy.



Loosen and remove the tool.



This picture clearly shows how the tube on the left has become bigger compared to the tube on the right.

Repeat the process with the other push rod tube.



The 2 tubes are now firmly fixed. You can be sure that no oil will pass here now!

Now you're finished!

Be careful when assembling your heads in the engine. Do not damage the tubes!

