

Assembly manual 720cc Kit VGS

How to install the 720cc kit?

The completely detailed manual is not ready yet, but the next steps will probably already guide you through the installation process. If you have any other questions, don't hesitate to contact us.

Step 1 : Take the engine out of the car and completely disassemble it

For the installation of the 652cc kit, you don't need to demount the engine from the car, but for the 720cc kit, this is necessary. The reason is that you need to modify the crankcase and the cylinderheads;

Clean all parts properly.

Step 2: Demount the studs

Step 3 – 6: If you want, you can also order this at VGS

Step 3: Modify the crankcase

The height of the crankcase is 99mm. The 2 parts of the crankcase should have the same height, so please machine them at once. If you need to make adjustments afterwards, VGS sells cylinder base gaskets.



Step 4: Demount the push rod tubes

Step 5: Modify the cylinder heads



Step 6: Mount the new push rod tubes





Dent the push rod tubes a little bit.

For mounting the push rod tubes, you do need special tools. If you want, VGS can also do this job for you (price includes modified crankcase, modified cylinderheads with new push rod tubes mounted € 350; with exchange of crankcase and cylinderheads)

Step 7: Check the condition of crankshaft and camshaft

If necessary, please replace the camshaft and crankshaft. For the best result, we do recommend you to time the crankshaft and the camshaft together. VGS can take care of this.

Step 8: Check the oil pump

If necessary, replace the oil pump

Step 9: remount the engine, according to the specifications Citroën gives you

The next steps are the same as for the 652cc kit. So we've copied them from that manual.

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Step 10 : Mounting the kit

The pistons are pre-mounted into the cylinders and the segments are already correctly fitted. So, don't take the piston completely out of the cylinder. To assemble the gudgeon pin, you should push back the piston (deeper into the cylinder) to prevent the segments leaving the cylinder.



The gudgeon pin is mounted into the piston with 2 circlips. There are 2 little holes in it to help facilitate the assembling process. You might want to put a piece of cloth into the opening of the crankcase to avoid the circlip falling into this. You should only demount 1 circlip from the piston. If the gudgeon pin is mounted under light pressure, you can often take it out without using any tools.



Use oil to lubricate the small end of the con-rod and the gudgeon pin. Carefully push the gudgeon pin into the piston. Make sure that the small end is kept at the right height and that the pin is lined up straight with the hole before pushing.



! Please note that the piston is marked with an arrow. The arrow must always point to the front side of the engine (opposite fly wheel, direction fan) (because of the pin offset).

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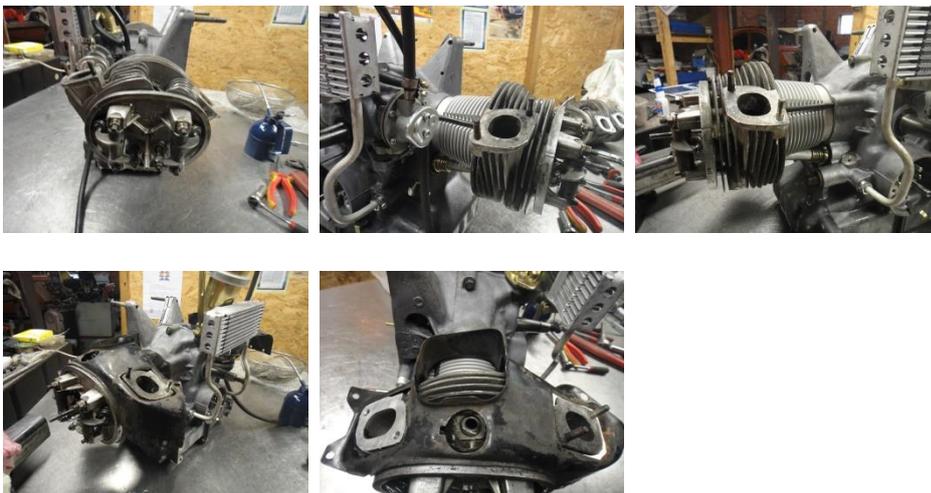
Prepare the cylinder heads: Mount new pushrod tube seals onto the push rods.



Check that the valves don't leak. You can check this by pouring a bit of petrol / diesel or degreaser into the cylinder head at the manifold side. If the valve gets wet, it needs to be grinded. We always grind them by default.

Now push the cylinder onto the crankcase. At this moment you can still move the cylinder to the left and to the right. Mount the cylinder in the centre.

If you have properly checked the condition of the cylinder heads, and if the valves still fit well, you can mount the cylinder heads again. Be careful not to damage the push rods. You can do this by tightening the bolts slightly at the bottom and then at the top. Then screw all the bolts in bit by bit. At this moment you don't need to tighten them with a spanner, it's sufficient to secure them by hand.



Repeat all steps for the other side of the engine. Please note that the arrow on the pistons point to the front of the engine (opposite fly wheel).

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Step 11 : Assembling the engine parts

You just mounted the new kit. All you have to do now is mount the disassembled parts again. Please clean them properly before mounting.

- Start by mounting the cylinder cowlings. Ensure you mount new inlet and outlet gaskets (included in kit). Check that the surface from the manifold is 100% clean.



- Now carefully mount the manifold. You can loosen the cylinder heads a bit to ease this mounting. First screw in the inlet side, then the outlet side.



- It's still possible to move the manifold forwards and backwards. Position the manifold in the centre and check that it has clearance from the oil dipstick and the crankcase.



- Now carefully tighten the cylinder heads and set the valve clearance correctly.

Step 12 : Replace the jets

In the kit the following jets are included: 2x 115 and 2x 120. Start by putting in 2x 115. It's a matter of finding the right jet for your engine. We now replace the first and the second jet (see picture).

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Your engine is ready! Please drive at ease for the first 2000km (1,250 miles): all of the parts are brand new and the engine still needs to run in a bit. It's best for your engine to frequently warm up and cool down. In the beginning the engine might make some noise, but this will disappear when all parts are run in. Good Luck !