

1988 Kawasaki KZ1000P
Procedure for cleaning the carburetor jets
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The 998cc Kawasaki engine is nearly bullet proof. The most common problem on the older motorcycles is that they tend to sit in warehouses waiting for a second life. This causes the fuel residue and dirt to form a kind of cement clog in the micro orifi of the carburetor jets. When the jets need cleaning will be mostly obvious. Idle will be rough and opening the throttle will cause fading or stalling.

The KZ1000P engine has 4 carbs in a single cassette. Each carb has two jets, a main jet and an idle jet. Cleaning the jets sounds formidable, but in fact takes only a series of simple steps to complete (as do most things).

Now for the details:

- Remove the seat
 - The seat is held in place with the locking hold down and two pivot pins. Use the key to release the locking mechanism, lift the seat to the self-holding position. Remove the cotter pins from the hinge pins and slide the hinge pins out. Remove the seat.
- Remove the side covers
- Remove the gas tank
 - Remove the the nut holding the tank down. It was formerly hidden by the seat. Partially lift the tank and rest the end on a block of wood. Make sure the petcock is in the off position. Slide off the fuel line hose clamp and remove the fuel line from the petcock. Disconnect the vacuum line to the petcock. Lift the tank more and disconnect the fuel gage sensor wire bundle. Wiggle and pull the tank free from the front hold dogs. As you lift the tank up remember the overflow hose.
- Slide off the air filter retainer springs
 - The retainers are springs circumventing the rubber hoses that come from the air filter box to the intake of the carburetors. Get part of the spring out of the groove in the rubber and the retainer will roll out easily. Do this for all 4 carbs.
- Loosen the intake clamps
 - With a long Phillips screwdriver, loose the hose clamps on the intake hoses from the carbs to the intake ports on the engine. Don't remove the clamps just loosen them.
- Disconnect the back throttle cable
 - There are 2 throttle cables attached to the carb cassette. One pulls and one returns. The one towards the back of the motorcycle is held in place with an adjustment bracket. Loosen the locking nut and free the cable from the bracket.
- Disconnect the vacuum lines
 - There is a network of vacuum lines used for engine performance feedback and to control the vacuum operated fuel switch. There is a connection

point on each side of the carb cassette. Disconnect the vacuum hoses in those 2 places.

- Disconnect the fuel line.
 - The fuel line runs from the petcock to a fuel filter to the center of the carb cassette. At the petcock end slide the hose clamp off and disconnect the fuel line from the petcock.
- Partially remove the carb cassette
 - This part requires some finesse and faith. The air filter rubber hoses should be pliable enough to get very diffomed. If they are hard, use a heat gun to soften them. Some silicon spray will help too. Rotate the cassette so the rear ports slide up and out of the air filter rubber hoses. If you are working from the side of the motorcycle with the foot brake, the cassette will rotate clockwise. Get the carb intake ports out and above the rubber intake hoses. The intake hoses will be mused and smashed but that's ok. Once clear, the cassette can be backed away from the manifold intake hoses. It may take some prying but they will come out. Use a piece of wood like the handle of a hammer or a broom stick. Anything metal will gouge the aluminum head or carb frame.
- Disconnect the throttle cables
 - The throttle cables are attached to the throttle control with ball ends that are held in place because the cables have to slide through a slot. Move the cable in to the exit slot and let the ball ends out of the pivot holes. This may require three hands and a bent awl.
- Remove the carb cassette
 - Wrestle the carb cassette out by wiggling and grunting. The carb cassette should now be free to roam around the garage without the motorcycle attached.

To clean:

- Remove the float bowl covers
 - The float bowls are held in place with 4 screws each. If the engine has been run recently or the fuel petcock was in the PRIME position, there may be gas in the bowls. Lots of gas. Loosen each screw then remove each screw. Gently work the bowl off and set aside. Keep track of which bowl came from which carb. They are all identical but it is best to get them each back home safely, this gives a better chance of the gasket sealing properly.
- Remove the idle jets
 - In each carb, the idle jet is concealed beneath a small plug about the size of a pea. The plug is held in place with an o-ring. The plug removes easily by using the nearby frame to lever against. The idle jet is deep inside and requires your smaller slotted screw driver. Be careful to apply enough pressure while loosening the jet that the screw driver blade doesn't jump or strip the jet's slot. There is usually a pop when the jet comes loose. It's one of those feel good moments.
- Remove the main jets

- The main jets are next to the idle jet well. They will require your larger slotted screw driver. Use your good screw driver. Be sure it's the right size. Again, apply enough pressure to keep the blade in the slot. There will be a pop when the jet comes loose. There is a brass washer below the jet head. Keep track of that washer.
- Clean the jets
 - Examine the orifice by looking through the jet towards a light. Notice the constricted opening. Spray some carburetor cleaner into each end of the jet, wait a moment then blow through the jet with compressed air. Hold on tight though, the compressed air can shoot the jet across the room where you'll never find it. Examine the orifice again. The hole should be larger and clearer. Do this for all four of each kind of jet.
- Replace the jets
 - Put each jet back into the passage it came from. Make sure the main jets have their respective brass washers in place. There is probably a spec for how much torque to use. My guess is about 10lbs. That's a little more than easily snugged.
- Replace the float bowl covers
 - There is an outy dimple on one edge of the float bowl seating flange. This dimple goes towards the cassette frame. Attach the bowls and give the screws about 8lbs.

Reassembly:

- Partially insert the carb cassette
 - Before the cassette gets near the engine, position each of the forward intake clamps with the screws at the 12 o'clock position. This will save some frustration later.
 - Insert the cassette into position about half way so it grabs 2 to 3 of the rubber manifold hoses both filter side and engine side. This is necessary so you can reattach the cables and hoses.
- Reconnect the throttle cables
 - You may need a special tool like an awl with a bent tip. Lots of light is helpful too. Start with the return cable. That's the one toward the rear of the motorcycle. Put the ball end of the cable into its hole, hold it in place with the flat side of a standard screwdriver. Push down on the cable so it arcs downward and tries to align with the cable slot. The slot points downward from the ball opening. If that doesn't work, try the bent awl to push the cable down until the ball slides in from the pressure of the screwdriver blade. Once the cable is seated properly, the cable mounting can be rehung in the bracket. Don't tighten the nuts yet.
 - The front cable is a little easier. It's best if the throttle bar is rotate to an open position. This raises the cable ball hole to a visible position. Three hands are good here. The throttle bar can be wedge open gently. Insert the cable ball into the hole and hold with a standard screwdriver. Push the cable down so it aligns with the cable slot. If the throttle bar is mostly in

the full open position, the cable slot will be in the 4 o'clock direction. Once the cable is seated, rehang the cable sheath in the hanger bracket.

- Reconnect the vacuum hoses
 - There are three vacuum hose connections. The #4 and #1 connections are the vacuum feedback lines that come together at a T in the center then route to a vacuum sensor for emissions (Thanks to Kuliforneea). The #3 vacuum port goes to the fuel shutoff on the petcock. The #2 vacuum port should be covered with a rubber cap or sealed piece of vacuum hose. This is important as I found out the hard way. The engine runs very poorly if this cap is missing.
- Position the carb cassette
 - Wrestle the cassette fully into position. It helps to have the rear side a little high and the front side a little low. You just gotta believe it will go, just as so many have gone before. The rear rubber hoses are made to flex and crush a lot. It looks bad but works ok. I had one hose fall into the filter box. If that happens to one of the outside hoses, just complete the carb cassette installation. The fallen hose can be fixed with the cassette inserted into the front intake hoses. If the fallen hose is one of the center two, you can attempt to fix it but it might be easier to start over. Once aligned, the cassette will make a satisfactory thunk when the front of each carb slides into place completely. After the thunk, get the rear intake hoses to slide over the intakes of the carbs. They fit a little loose.
- Reseat the filter retainers
 - The retainer springs are playful. Sort of like trying to pickup wet spaghetti. But when they fall home you know. Make sure the fit in their respective grooves all the way around. Your bent awl is helpful here too.
- Tighten the intake clamps
 - Find the home position for each clamp and tighten the hose clamps. Snug is sufficient.
- Fix the throttle cable adjuster
 - Check the alignment and vertical position of the return cable sheath and tighten the hold nuts to the bracket. The vertical position is a matter of feel. Not too tight or loose.
- Position the gas tank
 - Set the tank into position so the rubber mount dogs are in place. Use a block of wood to keep the rear of the tank elevated.
 - Send the overflow hose between the #1 and #2 carbs then to the bottom of the frame through the position ring.
- Reconnect the fuel gauge
 - Reconnect the molex connectors for the fuel gauge.
- Reconnect the fuel line and vacuum line
 - Lower the tank a bit more.
 - Attach the fuel line to the petcock and slide the spring clamp back into place.

- Attach the vacuum control line to the petcock. Don't switch the fuel line and vacuum line or it might get very messy. The fuel line points to the right side of the frame, the vacuum line points toward the rear.
- Put the tank back on
 - Remove the block, position the rear of the tank on the mounting bolt and tightened the nut.
- Check engine performance
 - Set the petcock to PRIME.
 - Set the ENRICHMENT (choke) to the appropriate position.
 - Start 'er up.
 - Once running, set the petcock to RUN or RES depending on the amount of gas in the tank.
- Put the side covers on
 - All back to normal.

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