
Subject: CB 750 petrol tank breather
Posted by [Tiger t](#) on Wed, 24 Oct 2018 19:35:00 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi, I have a 1996 CB 750. I would like to know what the function of the petrol tank breather is. Inside the petrol cap there are two breathers. The biggest one, I would think is for petrol overflow when the tank is too full. It's the second breather that I would like some info on. In the petrol cap, this breather is surrounded by a rubber seal, and when the petrol cap is shut, it would appear that this breather is shut off by the cap. What does this breather do. The reason I'm asking is because the tank is leaking petrol from this breather at the underside of the tank, so it looks like the breather tube has a hole in it inside the tank. The breather in question is the smallest of the two pipes on the bottom of the tank. Thanks in advance for any info.

Subject: Re: CB 750 petrol tank breather
Posted by [Kermit](#) on Wed, 24 Oct 2018 20:43:34 GMT
[View Forum Message](#) <> [Reply to Message](#)

I've always believed beside the fuel overflow (which may or may not on some bikes be the same as a breather, I'm not sure) is as you say, to allow overfilled tank to escape to the ground safely rather than over the top of a hot engine.

The breather I'm fairly sure is to prevent a vacuum building up in the tank as the tank empties thus allowing the fuel to continue to flow freely (with gravity or fuel pump) to where its needed.

Not sure specifically about a 96 CB750 but isn't the complete assembly (fuel pump, breather tubes etc) removable from the bottom of the tank which would allow you to better see the problem tube?

Subject: Re: CB 750 petrol tank breather
Posted by [Tiger t](#) on Thu, 25 Oct 2018 05:40:19 GMT
[View Forum Message](#) <> [Reply to Message](#)

Thanks Kermit. The breather tubes at the bottom of the tank are fine, it's the breather tube inside the tank that is leaking and fuel is coming out of the metal tube at the bottom of the tank. I was wondering if I could block the tube off, if not I will have to replace the metal breather tube that runs through the tank.

Subject: Re: CB 750 petrol tank breather
Posted by [Kakugo](#) on Thu, 25 Oct 2018 13:27:12 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi Tiger.

If you look carefully at your fuel tank cap you'll see a very small (actually tiny) hole in it aligning with the fuel tank breather gasket. That's where air gets into the tank.

The principle of a fuel tank breather is actually very simple: as fuel comes out of the tank (and into the carburetors), air enters through the breather as to prevent a vacuum from forming.

That's why you should never plug a tank breather. :no2:

Why? If you do so the vacuum inside the tank will "pull" the tank inside. Usually this results in a very expensive trip to the body shop but in the worst case scenario the fuel tank welds may collapse with easily imaginable consequences. :o

Repairing those breather tubes is a major pain in the arse, to put it mildly. Most older Japanese bikes had internal piping made of brass, zamak or other light alloys and decades of vibrations can cause them to crack, as you learned yourself. If you can get the piping in and out without losing your sanity it can be easily welded, otherwise you may want to consider using a piece of Tygon 4040 (fuel and ethanol resistant) and two stainless steel jubilee clips.

Subject: Re: CB 750 petrol tank breather
Posted by [Tiger t](#) on Thu, 25 Oct 2018 17:15:09 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi Kakugo,

Thank you for your informative reply. I like the sound of the Tygon tube, but I don't understand where I would attach it to using the Jubilee clips.

My first thought was to cut out the old pipe from inside the tank and replace with a length of copper pipe silver soldering the joints at each end. I must admit I don't fancy doing it myself using a flame to solder the joints, so I will get it done professionally, I now need to find someone that welds petrol tanks.

Is copper tube a wise choice ?.

Would ordinary solder be ok using a solder gun. Not sure if this would get sufficient heat to melt the solder properly.

Once again thank you for your input.

Subject: Re: CB 750 petrol tank breather
Posted by [Kakugo](#) on Thu, 25 Oct 2018 17:43:21 GMT
[View Forum Message](#) <> [Reply to Message](#)

I am very bad at welding and soldering, but I've prepared a lot of tanks for welding using the method I learned from my grandfather (WWII aircraft mechanic and master welder): remove tank and flush it thoroughly with water: putting a water hose at low pressure in it and washing it thoroughly for several minutes is usually fine. Then put it outside in the open without fuel cap, pettycock etc overnight and for half a day. The sunnier, the better. If you still smell fuel, repeat the treatment. At this point the chances of fuel vapor being left in the tank are nigh on non-existent.

The Tygon tubing repair works basically as a replacement for your old pipe: just leave enough to secure the clips... and before cutting the pipe off be sure you have enough room for the clips

and that you can find tubing in the right size. Tygon 4040 is available with inside dimaeters from 0.08" to 1/2". It's an amazing material but also mucho £££, so measure how much you need and price it beforehand.

Copper is fine as far as chemical resistance goes, but it can succumb to vibrations by work-hardening and then snapping: just ask owners of vintage Lotus cars. You don't want to go through that again. :lol:

Cupronickel and Cunifer are much better choices: the latter was actually developed for Aston-Martin's and other high end British cars back in the days to avoid previous problems with copper piping but it's getting harder and harder to source despite being an amazing metallic alloy.

Subject: Re: CB 750 petrol tank breather
Posted by [Tiger t](#) on Thu, 25 Oct 2018 18:31:52 GMT
[View Forum Message](#) <> [Reply to Message](#)

Once again, thank you Kakugo, I think that I may be a bit thick because I still can't understand where I secure the Jubilee clips to. If I cut out the old pipe, then where do I secure the Tygon pipe with the Jubilee clips.

Subject: Re: CB 750 petrol tank breather
Posted by [Yorkie](#) on Fri, 26 Oct 2018 06:59:14 GMT
[View Forum Message](#) <> [Reply to Message](#)

Kakugo wrote on Thu, 25 October 2018 18:43

The Tygon tubing repair works basically as a replacement for your old pipe: just leave enough to secure the clips... and before cutting the pipe off be sure you have enough room for the clips and that you can find tubing in the right size. Tygon 4040 is available with inside dimaeters from 0.08" to 1/2". It's an amazing material but also mucho £££, so measure how much you need and price it beforehand.

I think that's the clue :)

Subject: Re: CB 750 petrol tank breather
Posted by [Tiger t](#) on Fri, 26 Oct 2018 16:26:07 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi Yorkie, The pipe runs through the tank from the cap exiting at the bottom. Can you advise me how to attach a jubilee clip inside the tank at the bottom rear.

Subject: Re: CB 750 petrol tank breather
Posted by [Kakugo](#) on Sat, 27 Oct 2018 11:42:24 GMT

[View Forum Message](#) <> [Reply to Message](#)

Tiger t wrote on Fri, 26 October 2018 18:26Hi Yorkie, The pipe runs through the tank from the cap exiting at the bottom. Can you advise me how to attach a jubilee clip inside the tank at the bottom rear.

Can you leave just enough of a stub down there? Or is the breather cracked exactly there? :-?

Subject: Re: CB 750 petrol tank breather
Posted by [Tiger t](#) on Sat, 27 Oct 2018 17:02:00 GMT

[View Forum Message](#) <> [Reply to Message](#)

I'm not sure where the crack is but it leaks petrol when the tank is half full. I think it would be almost impossible to fit a Jubilee clip.

I've decided to go for the Cunifer pipe and silver solder both ends. They sell it on eBay. I just need to make sure the tank hasn't got any fumes left behind.

If you hear a bang in the next few days, it's probably me.

Thank you for your replies.

Subject: Re: CB 750 petrol tank breather
Posted by [Tiger t](#) on Mon, 05 Nov 2018 17:42:37 GMT

[View Forum Message](#) <> [Reply to Message](#)

:-h Sorted the breather. New pipe fitted, silver soldered each end..

The next task is to check the front disc brakes out. The guy that I bought the bike from told me that the pads kept sticking to the discs. It's really hard work pushing the bike, so he's not kidding. He did say that the pistons in the calipers had been sorted, but they still won't release the pads.

I'm going to take the calipers off and inspect them. If they seem to be ok, could the master cylinder be at fault ?.

Subject: Re: CB 750 petrol tank breather
Posted by [Yorkie](#) on Mon, 05 Nov 2018 18:52:13 GMT

[View Forum Message](#) <> [Reply to Message](#)

Good to hear that you have sorted the breather out :up:

I don't feel qualified to comment on the brakes but my initial thought, as you say, would be to check the pistons. Seems most likely to me.

Subject: Re: CB 750 petrol tank breather
Posted by [Kakugo](#) on Mon, 05 Nov 2018 19:26:27 GMT

[View Forum Message](#) <> [Reply to Message](#)

Good news about soldering, you are surely better than me at it. :up: :lol:

Regarding the brakes now.

First thing put the bike on a front stand, remove the calipers from the discs and try spinning the wheel by hand. If it spins freely you can rule out the wheel bearings, a strong possibility in a 20+ years old bike whose previous owner had little idea what was done to the calipers themselves. ;)

There are several possible causes to what may cause the binding, but most often is due to corrosion around the outer end of the caliper bore. You can clean it up, but eventually it will come back over time. Luckily used brake calipers for that bike, while not exactly easy to come by, are not expensive and are usually in good shape.

First thing I'd is to put the bike on a front stand and remove both calipers, then try to spin the wheel by hand to see if the front wheel bearings are sound. From there I'd try to exactly discover which part of the brake system is responsible: it's very likely you'll find out when prying the brake pads to refit the calipers. ;)

Subject: Re: CB 750 petrol tank breather
Posted by [Tiger t](#) on Mon, 05 Nov 2018 22:34:01 GMT
[View Forum Message](#) <> [Reply to Message](#)

Thank you guys, much appreciated.
