

## **L-14 Oil Leaks**

### **Letters**

*... following is a KMW exchange, illustrating how chapters can and do work together. **Gert Gehlhaar** sent this note to some of his KMW chapter buddies:*

It looks like while I was away, Dr. Murphy visited my house and must have driven my '67 M3. Well, the engine was running fine when I left and it's still running fine but it's leaking oil like an oil well. Checking things a little more I found that I had installed the valve breather mechanism in the wrong order. Don't ask me how I did that—it was easy, even though I had a diagram showing how it goes together.

It looks like I built up enough pressure in the crankcase that it blew out the rear oil pan gasket. I find no easy way to replace the gasket but pull the engine again. **Gert**

*Well Gert, you're lucky. The bolts and nuts holding the engine in are not rusted together. Shouldn't take you too long to get the job done. **Randy***

Thanks for all of your sympathy! On this car it's not as easy as the other three. The reason is that this vehicle has the starter/generator behind the engine and it has to be removed before you can remove the engine. So you raise the back of the car on jack stands, crawl under and try to remove a very heavy starter/generator that is located behind the engine and between the transmission. The rest of the engine removal is easy. I've done it several times and it is getting easier, but each time I do it, the starter/generator has become heavier. How does that happen?

**Gert**

*It's the electrons, Gert.*

*Each time you start the engine, electrons are created by the generator and flow to the starter. Not all electrons are used up by the starter (a process known as orthogonal hysteresis) so the extra electrons are stored in the generator. So the generator gets heavy ... it's a law of physics called Heavy Generator. **Randy***

*Take heart Gert, your generator will become significantly lighter after the electrons of 2016. **Bob***

**To all of my King Midget Fans:** The story of the oil leaking K301 Kohler engine continues with Dr. Murphy still in the garage. If you remember, I got the engine back after breaking the first block and having installed all the Kirk engine parts to make it a 16 hp engine.

The new engine ran fine and with 200 miles on it I was getting to be really happy about it, and then it happened—a massive oil leak. Inspection of the engine showed the leak to come from the crankshaft seal at the power take off side and also from the engine oil pan.

So I removed the engine and cleaned it to locate what might be the oil leak. Everything looked fine. I did replace the crankshaft oil seal and the oil pan gasket and the engine was cleaned and installed in the car again. Oil was added and I was ready for another test drive.

The first test drive seemed to be fine and I drove it to lunch. When I came out of the Elks Lodge after lunch there was a nice puddle of oil under the KM again. Now what? Drove home and by then the engine was covered in oil and the clutches and belts all covered in oil. The strange thing was that the engine ran fine and had plenty of power and just climbed my test hill to home just fine.

That night while I was sitting in front of the computer an idea hit me and I followed it. I went to the internet and Googled “**K301 Engine Oil leaking Problems**” and there I found several possibilities to solve my problem. I didn't sleep well that night thinking about this and early next day, I went to the workshop to solve the problem.

The tractor people recommended removing the breather assembly from the front of the engine to see if anything is blocking it. Before I did that I started the engine again and lo and behold! I

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was not getting any pressure or sucking out to the breather tube. I then checked the dipstick tube and found I was getting lots of air coming out of it. Then I removed the breather assembly and found nothing obvious to be wrong.

I cleaned all the parts and then laid them out in the order that they go back together per the diagram in the K301 Service Manual. I did find that the breather plate has a little hole in it and that was blocked by a piece of sealant. The reed goes on next and that was OK, but the baffle that goes on next was in backwards. All the other parts were good and in the right order. There is also a little hole in the block that relieves pressure in the block through the breather assembly and I made sure that was clean. Then I reassembled the breather assembly to the block and made sure that no sealant would cover that little hole in the breather plate. To test the breather assembly, I blew and sucked on the breather hose and it seemed to clear and flowed air.

I have driven the engine for about 50 miles and all is well—no oil leaks and the breather tube is breathing air just fine. The cause of the oil leaks was the Breather Assembly being plugged. The diagram of the Breather Assembly says nothing about the little holes that are so important to keep clean and open. **Gert**

*Congratulations Gert! Perseverance paid off again!*

*Isn't it interesting that the hardest problems we work to solve have the simplest solutions, once we finally find them! And the frustration turns to humor. I have been through things like this far too often.*

*I still haven't gotten my KM brakes bled yet. Perhaps next week! It's easy to procrastinate when the master cylinder is under the hood! **Don Nichols***

You're right Don—this has been one of the most frustrating things that has happened in a long time. This engine has been in and out three times and this time I said to myself if this doesn't work it will come out for good. The chances of putting in the Predator engine I still have was looking pretty good. So I am glad we finally found the real problem. **Gert** ■