

Stripped Oil Drain Plug Repair

(by BassCliff)

Yes, it happened to me. During one of my regular maintenance days in the garage – adjusting the valves, synchronizing the carbs, changing the oil and filter – I decided to use a new crush washer on the oil drain plug. You're supposed to replace them once in a while, right? I guess I tried to crush it a little too much and this was the result.



As you can see, the threads are now full of aluminum from the oil pan. The plug itself looks OK, the bolt is harder than the oil pan. But the oil pan threads have been stripped so that is where the repair must take place. There are several ways to repair stripped threads. One is to use something similar to a [Fix-a-Thread Plug Saver kit](#). This kit repairs the threads for a spark plug which is the same size (M14 x 1.25).

A [Heli-Coil](#) is often used to repair stripped threads. But that repair is generally for permanent fasteners and may not be ideal for bolts that will be removed and replaced often. A [TIME-SERT](#) is a similar repair but is more suitable for bolts that are likely to be inserted and extracted periodically.

For my repair I chose a quick and simple procedure using an oversized, self-tapping drain plug. Here are a couple of examples:



This is a straight self-tapping oversized drain bolt with a nylon washer. You can find it in most any auto parts store for \$3 or less. My local Pep Boys and AutoZone carry these under the Dorman brand name.



This is a "piggyback" drain bolt and can usually be found right alongside the single bolt (above) for about the same price. I chose this bolt so that I could leave the big plug in the pan and use the piggyback bolt to drain my oil. This would cause less wear and tear on the oil pan itself.

I am planning to either replace the oil pan with a good used part or fix my current pan with a TIME-SERT. However, I had a weekend ride planned and didn't want to miss it. And this quick fix has been proven to be quite reliable.

The stock drain bolt for my bike (1980 Suzuki GS850G) is a 14mm x 1.25 pitch thread. I searched high and low, locally and online, and could not find a +1 oversize (or *any* oversized, for that matter) bolt in the M14x1.25 size. However, the M14x1.50 were plentiful in +1, +2, and +3 oversized varieties. So I picked up an M14x1.50 (+1 OS) at my local Pep Boys.

The bolt was a little harder to insert than I thought it would be. The self-tapping bolt wanted to go in crooked. So I used an M14x1.50 tap to create the initial threads for the oversized bolt.

I put my bike on the side stand and took great care to align the tap perpendicular to the oil pan before I cut the new threads. Use some grease on the tap so that it catches the aluminum shavings from the cut. You don't want those circulating in the oil. Once the threads are cut we can install the new oversized drain bolt.



Instead of a liquid metal, like JB Weld, I used Permatex #2 on the threads of the big bolt. Since I eventually plan to use a TIME-SERT, this would allow extraction of the bolt without destroying the pan but provide a good seal. I also used the Ultra Black permatex on the smaller piggyback bolt since there is no washer or gasket.

I had to buy a new 15/16" socket to install the new drain plug. Again, be sure the plug is aligned properly and slowly turn the bolt so that it taps itself in using the new threads you cut earlier. Take care not to over-tighten the new plug or you will be in the same boat as when we started. I used a little mirror as I tightened the bolt to check the nylon washer was squeezed just enough. Of course, this would be a little easier if the oil pan was removed.



My little operation was a success and I was able to make my weekend ride. Here is the new M14x1.50 +1 oversized piggyback oil drain plug.



Future oil changes will involve using a large crescent wrench to hold the larger bolt stationary while using a small socket to remove the piggyback bolt and drain the oil.

If you take precaution to use proper torque and don't over-tighten your oil pan drain plug, you can avoid this repair. If you do strip your drain plug, repair it immediately. You don't want your drain plug to come out while riding, oil your rear tire, and seize your engine.

Please visit the knowledgeable group at the [GS Resources forum](#).

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