



Left—Oil seals should be installed with a special “driver” made specifically to fit your make and model motorcycle. Any twisting, binding or uneven pressure on the seal during installation will virtually ensure reduced service life, if not result in almost immediate seal failure. **Right**—Even though the exact amount of carefully measured fluid was installed with reassembly, you should double-check the levels by measuring from the tops of the tubes with the forks fully compressed.

seal failure. When you do, try to keep these few tips in mind to save yourself unnecessary expense and headaches.

1. Don't put it off.

Once a seal has blown, try to get it repaired as soon as possible. Besides providing rebound damping, that oil you lost was responsible for lubricating the slider bushing inside your fork. Without it, the bushing will eventually score the fork tube surface and you could be facing a much larger repair bill in the end. In addition, always remember that if the oil can get out, dirt can get in.

2. Do both of them.

The odds against the seals blowing in both forks at the same time are pretty slim, but it will usually be to your advantage to go ahead and overhaul both sides at the same time. Though not always true, it stands to reason that the undamaged side has been subjected to almost exactly the same amount of wear as the side that failed, and is close to following suit. Doing both sides at once can save you as much as \$100 in labor charges from doing each separately.

3. Check those brake pads.

The most overlooked and potentially dangerous problem arising from fork seal failure is damage to your front brakes caused by the oil leakage. In many cases, the oil leaking from your forks will drop directly onto one or more of your front brake pads, permeating the pad material. In some cases, depending on the amount of oil that contacts the pads, you might be able to

get by with sanding the pad surfaces enough to clean them up and make them usable. However, in all good conscience we would have to recommend against this.

It is nearly impossible to tell just how much fork oil has permeated the pads, or to what extent that contamination is going to affect your braking ability at any given time in the future. By far the smartest, safest thing to do is to simply replace your front brake pads in conjunction with the fork seal overhaul. Better safe than sorry.

4. Double-check the oil levels.

During fork reassembly you (or preferably, your mechanic) will refill the fork tubes with a precisely measured amount of fork oil, as designated by the shop manual for your bike. This should be all the measurement of your fork oil level that is needed—but don't count on it. The amount of oil needed for proper damping can be altered by several factors, including whether or not you have replaced the OEM spring assemblies in your bike. Also, we have found at least two shop manuals that contained errors in listing the proper amount of oil to add.

To protect yourself from inadvertently creating an over- or under-damped suspension, double-check the oil levels in both forks using the “top end measurement” system. With the front suspension fully compressed, the springs removed and the top caps off, carefully measure the distance between the tops of the tubes and the oil,

using a good ruler. The proper lengths of these distances should be listed in your shop manual. Check to make sure your measurements agree with the manual's. If not, add or subtract oil to the forks until they do.

The easiest way to make sure you have the correct amount of oil is to purposely overfill the tubes and then “pump out” the excess. Shop Foreman Tom Smith at Huntington Honda in Huntington Beach, Calif., demonstrated his own method of doing this: Using a steel tube with a piece of rubber hose slipped over the outside, Tom slides the hose back from the end of the tube into the fork until the rubber hose hits the top. With the pump turned on, the oil level is automatically pumped down to the exact level called for by the manual.

Tom was surprised when we told him a hand-pump device for performing this exact same operation is manufactured and sold by Progressive Suspensions of Hesperia, California.

In Conclusion

Back when I rode only about 5000 miles a year and a fork seal job cost me around \$40, I didn't pay much attention to why the seals failed, or how I might have prolonged their life. Now that I ride about 40,000 miles a year, and fork seal overhauls cost me over \$350, it has become a major concern. That's why I set about to learn as much as I could about fork seals, to save me from the time, expense and hassle of replacing them. 🍷