

Progressive fork spring install

Replacing the springs without fork removal

Progressive fork springs from WIRTH will greatly improve the handling of your bike and should be considered one of the first upgrades to your bike.

This procedure of changing the front fork springs will just take about 20 minutes, with a change of fork oil a trifle longer.



1.

Work one fork leg at a time. If you remove both springs at same time the front will collapse and the bike will roll off the centerstand. With the bike on its centerstand, if necessary, remove the bolts holding the handlebars and remove handlebars. No need to remove any switchgear, all you have to do is moving bars just far enough to clear the fork caps. Sometimes you have to loosen upper pinch bolts on fork leg before removing fork cap bolt.



Using a drive socket wrench without a socket or other necessary tool, remove the fork cap bolt and attached o-ring (see photo). There is usually a little spring tension so be careful – best is to put a thick cloth on and around the gas tank. The cap sometimes requires a special tool for removal but wrench sockets often fit perfectly. At this point you can see the top of the stock spacer. Remove it.



The stock fork spring are sometimes very short compared to the WIRTH-springs. You will need to fish the spring and the spring seat out with either a bent wire (like a clothes hanger-just be careful not to scratch the inside surface of the fork) or you can use an extended magnet, like shown in picture - much easier. The spring seat will be sitting on top of spring and is a seat for the spacer. This comes out too.

2.

After the fork cap has been removed, extract the stock washers, spacers and springs. It is HIGHLY recommended that you change your fork oil now. If you are not going to change your fork oil, then remove the stock fork spring as if you were unscrewing a bolt. This will keep as much oil as possible in the fork, and only slightly affect the level. At a MINIMUM, you should check the oil level. We recommend setting the oil by level, not by pouring in a pre-measured volume. Oil level is measured from the top of the fork tube with the spring out, and all parts of the fork collapsed as far as possible. Please see our homepage www.wirth-federn.de for a recommended oil level.

Replacing fork oil - The Lazy way

Get a large syringe or something similar with a catheter hose end on it and add some stiff plastic tubing. Make sure the tubing is long enough to reach the entire length of the fork. The syringe needs to hold about a pint when full so the job won't take too long.

Check the fork oil level with a folding rule, straight wire, rod or straightened coat hanger that reaches all the way to the bottom-use as a dipstick. Fill one leg at a time until you have the correct amount of oil; verify this with the dipstick often. Make sure not to use a wire too short and drop it. Use the dipstick to match the other fork leg oil

level. There is always some oil left in the tube after draining so this keeps them equal.

WARNING ABOUT THIS METHOD OF FORK OIL REPLACEMENT: This will not completely drain the old oil out of a fork. For one, there is valving in the bottom end that the suction tube will not penetrate. And it takes a while for all the oil to drain off the walls and out of the tubes even when they are properly taken out of the bike and turned upside down. Additionally, if there is any crud such as the minute bits of filings that accumulate at the bottom of the tubes, this will not be removed either.

But the only other way is to take the legs completely out and hold them upside-down to drench them completely.

3.

Installation is the reverse of the step no 1. Insert the WIRTH-spring, tight coils upward, and – if necessary - spring seat or washer and new spacer-cut to size (comes with the springs if necessary). If spacers are used, they should always sit on top. If in need you can use a PVC pipe to cut a spacer from or you can also cut the stock spacer if you choose.

Because of pre-tension sometimes you have to use some force to depress the spring when installing the end cap, but the threads are fine, so use caution.

The new spacer will stick out above the top. To replace the fork cap bolt its easiest to place it on spacer, place drive socket wrench on it and turn it slowly while applying pressure with your palm, feeling for the threads to catch – you can mark the right spot in advance without spacer or springs inside the fork. Be very careful not to cross-thread the cap. Once you are done with one side continue to the other side using same steps.



Picture shows the stock spring, spring seat (not always existent) and spacer on top and the progressive WIRTH-spring and stock spacer cut down on bottom. You re-use your stock spring seat. Notice how much longer and thicker the WIRTHs are compared to stock.

The ride should be greatly improved without fork oil replacement but will be even better with thicker oil – because the springs are stronger than the originals, you should increase the dampening also, i.e. for instance use oil SAE 15 instead of SAE 10 (see our homepage for recommendations for you bike).