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Front Forks - Installing Progressive Springs on 1994 XLH

My front forks (1994 XLH Std) were in need of rebuilding. So I purchased all the wearable parts and disassembled both front forks. I replaced all these parts and put new fluid in the forks - I used a no-name ATF for the fork oil, it being about 5-10wt oil.

At the same time, I replaced my stock fork springs with the Progressive 11-1527 springs. This spring kit is designated for rubbermount models, but the spring specs match for 88-later models with 39mm tubes. But the spacer needed to be shortened.

The XLForum Thread about this is HERE by IXL2Relax.

The company specs & my measurments for this kit:

Progressive Front Fork Springs		The Progressive Suspension Catalog for 2007 shows the same
Factory Specs: - Kit# 11-1527 - Bought Used		spring specs for the following kits. Only the spacer lengths differ.
Free Length	18.50“ (470mm)	Kit# 11-1130 has a 1.00” Spacer) - For 88-93 Std and 88-91 Hugger
Spring OD	1.20“ (30mm)	Kit# 11-1523 has a 2.00” Spacer) - For 94-03 Std and 92-03 Hugger
Rate lbs/in	35/50 (.63/.89 Kg/mm)	Kit# 11-1132 has a 2.40“ Spacer)
Spacer Length	3.00”	Kit# 11-1527 has a 3.00“ Spacer) - For 04-07 All Models
		Kit# 11-1124 has a 3.50” Spacer)
My Measurements:		Kit# 11-1129 has NO Spacer)
Coil Wire Dia.	.195“	I have not actually measured any of the other kits, but if they include the same spring with simply different length spacers, you could buy (new or used) any of these kits & then make your own PVC spacer to fit your forks.
Length of Tight Winding	4.460”	
# of coils Tightly Wound	18	
Length of Loose Winding	14.040“	Since the 11-1527 kit came with 3” spacers, I had to cut them down to 2“ spacers to be right for my 1994 model.
# of coils Loosely Wound	38	

Some notes from my install - I have learned much from the XLForum - The following tips were especially helpful:

1) Loosen (not remove) the Damper Bolts while the forks are still on the bike & under spring tension
2) Use a 1-1/2” PVC coupling for the fork seal driver
3) Align the fork cap on the slider tube (no springs installed) and mark the exact point (on both the cap and the slider) where the threads begin to engage - This tip was extremely helpful in getting the cap back on while compressing the spring

The stock springs stuck out of the extended fork slider by 1-3/8“
The 1527 kit spacer stuck out of the extended fork slider by 1-1/4”
… (that included the spring, washer & spacer which was 3.00“ long x 1.054” OD (.813“ ID))

The damper bolts in the rebuild kit I bought (Bikers Choice Fork Seal Kit) had heads that were too long to clear the axle opening in the right leg - When fully inserted, the bolt head stuck out into the axle cavity. The existing bolt heads were .509” in dia & .237“ thick - the new ones were .518” in dia & .312“ thick. When I tried a new one in the left leg, it fit OK. But I opted to use both the old bolts (thoroughly cleaned) with the new copper washers.

Someone had put silicone up into the damper bolt holes (presumably to stop a leak) - what a mess. It took me an hour of scraping with a flat-blade screwdriver to clean that stuff out of the bolt hole and the surrounding area. The new copper washers crushed & sealed the bolt holes just as they should.

I assembled the slider & fork leg - then installed the Damper Bolts while using the springs to put pressure on the Damper Rod. I tightened them as much as possible. Later, after the forks were fully assembled

onto the bike, before remounting the axle & wheel, I gave the Damper Bolts a final torque tightening.

I refilled the legs (without the springs) before putting them on the bike. When I refilled the right fork leg with 10oz of fluid, that amount measured 7-1/4” down from the top of the fork slider (while fully compressed). When I refilled the left fork leg with the same 10oz amount, and pumped it in compression a few times, the oil in that leg only came up to 8“ down from the top. Therefore, I added more oil to bring that leg up to 7-1/4” down from the top of the left fork slider tube. My thinking is that having the same air gap at the top is more relevant than the total amount of oil in the fork. I'm not sure why there was a difference in the refill amount.

I put the caps on the legs (without the springs) and mounted the legs in the lower triple tree (leaving the top triple tree loose). I removed the caps and installed the springs (washer & spacer). Then, I worked to put the caps back on the fork slider tube.

I set the slider legs so that the top of the caps were exactly 1/2“ above the top of the upper triple tree (this is from the manual) - Then I fully tightened the lower triple tree followed by the upper triple tree clamps.

I reassembled the front wheel, axle, brake caliper and my front fender. I tested the front brake - which worked just fine. The fully extended forks (while on the lift) measured 5-7/8” from the top of the leg cap to the bottom of the lower triple tree. This measurement is used to determine the bike & rider sag setting.

Once off the lift, the measurment was 5-5/8“. That was only 1/4” of sag, which seemed like too little and might make the forks too harsh. When I test rode that config, I found they were a bit too harsh, as expected.

So, later, I replaced the 3“ spacers with 2” spacers (which is what Progressive recommended for my model Sportster). That changed the bike sag to a measurement of 4-5/8“. When I sat on the bike, the compression increased from 1-1/4” to about 1-3/4“ of total sag. So this looked like the right configuration.

That definitely softened up the ride. I've now put on a couple thousand miles and the suspension works much better than the previously lowered-rear and stock front springs. I am sufficiently satisfied to say this is “good enough”.

Having bought all the upgrade parts I needed for less than $200 total, including the wearable parts for the front forks, I think I'm all set for suspension changes for the foreseeable future.

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