

# Table of Contents

<b>REF: Suspension - Sub-04D</b> .....	1
<b>Installing Progressive 440 Rear Shocks on 1994 XLH</b> .....	1



[Go To Technical Menu](#)

## REF: Suspension - Sub-04D

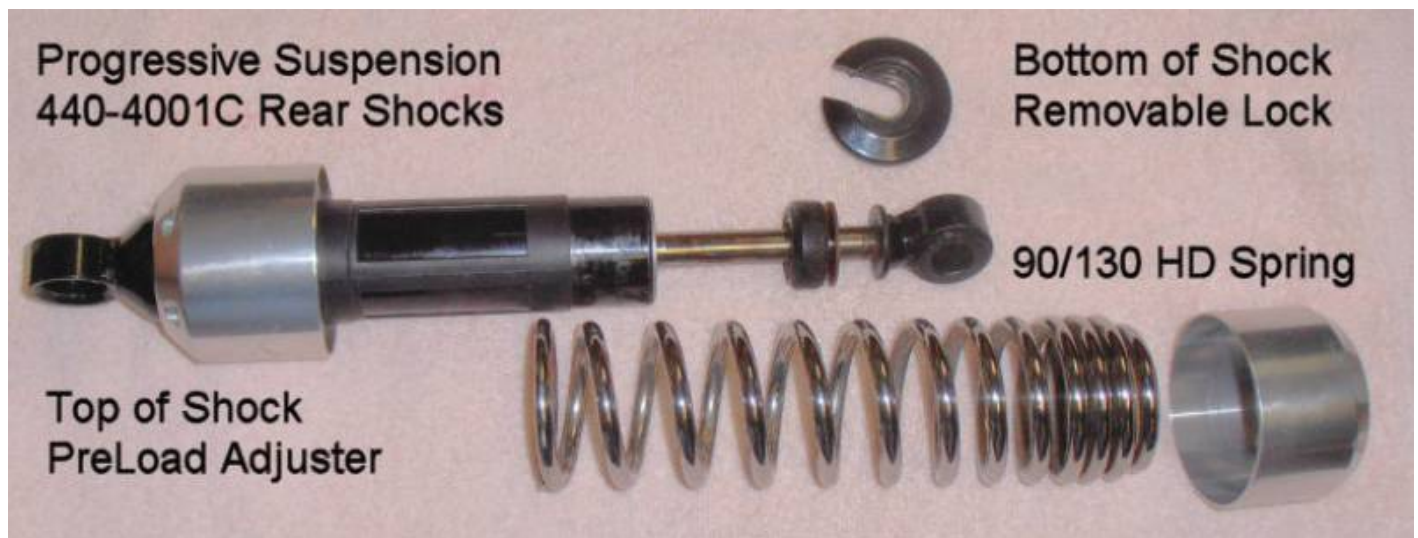
# Installing Progressive 440 Rear Shocks on 1994 XLH

The rear shocks I had with the bike were apparently from the Hugger models (1994 era) because they were only 11-3/4" long. Since they provided a rather harsh ride, I decided to upgrade those to 12-1/2" shocks, but I wasn't settled on a specific brand or model. So I began looking at a number of shocks that might fill the bill.

I found a set of Progressive brand shocks, model 440 (440-4001C), which met my basic requirements. They were a higher quality model than I was intending to buy, but they were purchased for a good price (with some scratches on the finish). The 440 series is no longer available and has been superceded by the release of the 444 series.

The catalog lists my 'new' shocks as 12.5" eye-to-eye with a maximum travel of 2.95". This model has the Heavy Duty springs - 90/130lbs-in. - while the Std springs are 75/120lbs-in.

The XLForum Thread about this is [HERE](#) by IXL2Relax.



1)

So the following chart shows the catalog specs plus my measured specs.

Progressive Specs for P/N 440-4001C Rear Shocks

Fully Extended	12.50"
Fully Compressed	9.55"
Maximum Travel	2.95"
Mounting Style	Eye with rubber bushing
Spring Utilized	1370-20B/30
Spring Rate Multiple	90#/130# per inch aka Heavy Duty Version
Measured:	
Spring Unsprung Length	8.50"
Spring Coils - Count	13.5 coils
Spring Cavity - Max	7.88"
Damper Max Travel	2.57in - Piston Body To Rubber Bumper (Might Crush .13in extra)
Preload Travel	0.64in
Spring Outside Diameter	2.40"
Spring Wire Diameter	0.29"
Spring Cap Diameter	2.75" (OEM is 2.50")
Spring Keeper Diameter	2.00"
Spring Coil Spacing While Unsprung - Measuring from 1/2 coil from start (distance gap (in inches) between coils - not center to center)	
Top to Bottom - .392 / .707 / .674 / .621 / .597 / .540 / .420 /	
..... Cont'd - .331 / .259 / .077 / .038 / .102	
- Adding those together, there is a minimum of 4.758" of gap (for max movement)	
- while the rated travel max is only 2.95", plus .620" preload - therefore no coil bind	
If rider + luggage weighs less than 250#, Progressive recommends . . . . Rear Shock 440-4007 which has 75#/120# spring rate	
If rider + luggage weighs 250# or more, Progressive recommends . . . . Rear Shock 440-4001 which has 90#/130# spring rate (Heavy Duty)	
Progressive Shock Mounting Kit# 5011-092 - Bushings, sleeves, washers, etc.	

**The Installation:**

After taking both shocks apart for measurements & cleaning, I reassembled them and made sure they worked correctly. I installed them with no preload set.

As with most purchases of used stuff, what I got was not ready to install. The Progressive 440's did not have the steel inserts in the bottom bushings and the upper bushings were missing. There was part of the original install kit included but the bushings in that looked a little tired.

So I went to the local HD dealer and bought two standard Sportster shock bushings for the top (54556-84). I then stopped by the local big box hardware store and found some 5/8 to 1/2 reducing steel spacers for the bottom bushings. The spacers were 1" long so I had to cut them down to the right length to fit the rubber bushings. I also had to struggle to get the new bushings into the top eye - what a pain! I wish I had a press.

I put my bike up on my lift and strapped it down. Then I put 2x4 blocks under the rear wheel to support it

while I removed the current shocks. The old ones came off without a hitch. Then I lowered the block pile to match the swingarm to the length of the 440 shocks.

However, when I started to test fit the 440s, I found that their wider body hit the support leg of the belt guard. So I took the belt guard off and manipulated the offset bends to get a bit more clearance. It took me a few tries to get it exactly right. You need to make sure you still have enough clearance between the guard and the rear sprocket while not rubbing against the shock's bottom cup.

I wanted to set the shocks as close to the frame as possible - that would keep the stress on the bolts as close to their mounts as possible. In the end, I was actually able to mount the 440s closer to the frame than the previous shocks were mounted. I used only one spacer washer at the top and only 2 wide and 1 narrow washers at the bottom.

All in all, not as simple a job as I hoped, but I got them fitted up nicely.



Here's the final install picture showing them on the bike.



I finished installing them early enough in the day to take them for an extended test ride. It was a nice day in February and I wanted to enjoy the unexpected weather opportunity.

I put about 120 miles on the new-to-me shocks. The preload was set to the minimum. I found them to be a definite upgrade from the previous short shocks.

During my ride, I hit a number of manhole covers (on purpose) and not once did the shocks bottom out. On the small bumps I could feel the cushion of springs working. The bigger bumps or potholes highlight the higher spring rate of the Heavy Duty springs. While the shocks never bottomed out, they still provided a somewhat harsh response to the big potholes. Not a bone-jarring kind of harsh, but also not a cushy response.

However, they are Good Enough - I am pleased with the change. I am glad I got them, especially at a good price. Over the following months the springs 'wore into' a better functioning range - especially after I changed the front fork springs.

Later Update: I have now put on several thousands of miles. The shocks are still set on the minimum preload and they have become a bit more 'cushy' over the miles, although certainly not spongy. I'm very satisfied with them.

### Go To Technical Menu

1) 2) 3)

Pic by IXL2Relax

From:

<http://sportsterpedia.com/> - **Sportsterpedia**

Permanent link:

<http://sportsterpedia.com/doku.php/techtalk:ref:susp04d>

Last update: **2022/12/04 03:34**

