

Shock Me!

Part I: CB550 rear suspension upgrade



BACK IN 2011, I BOUGHT A 1978 CB550 TO RIDE ON the inaugural two-day Kickstart Classic event. The official ride started at Wheels Through Time in Maggie Valley, North Carolina, and finished at the Barber Motorsports Park in Birmingham, Alabama. This event is hosted by *American Iron Magazine* but is open to all makes and models, so the American kickers welcomed my Honda.

This event is organized for any bike with a manual kickstart, although the lazy electric-start bikes are also welcome. In the time leading up to the event, I didn't own a kicker, so I picked up a vintage Honda from eBay. I was told it was a gem and ran great.

However, the seller's idea of "runs great" and mine varied a bit.

I had three months to prepare the bike for long-distance travel. Steve Lita, editor of *AIM* and *GB*, and I decided that we'd ride from *AIM*'s headquarters in Stamford, Connecticut, to Alabama and back—all or bust.

Over those three months, I went over as many of the mechanics as I could, while bobbing and chopping the bike up into a tight little café: Clubman bars, as cool as they look, were a bad choice. That decision bit me in the lower back two hours into our six-day journey south. I had also overlooked making any upgrades to the suspension, which really should have been addressed. Live and learn.

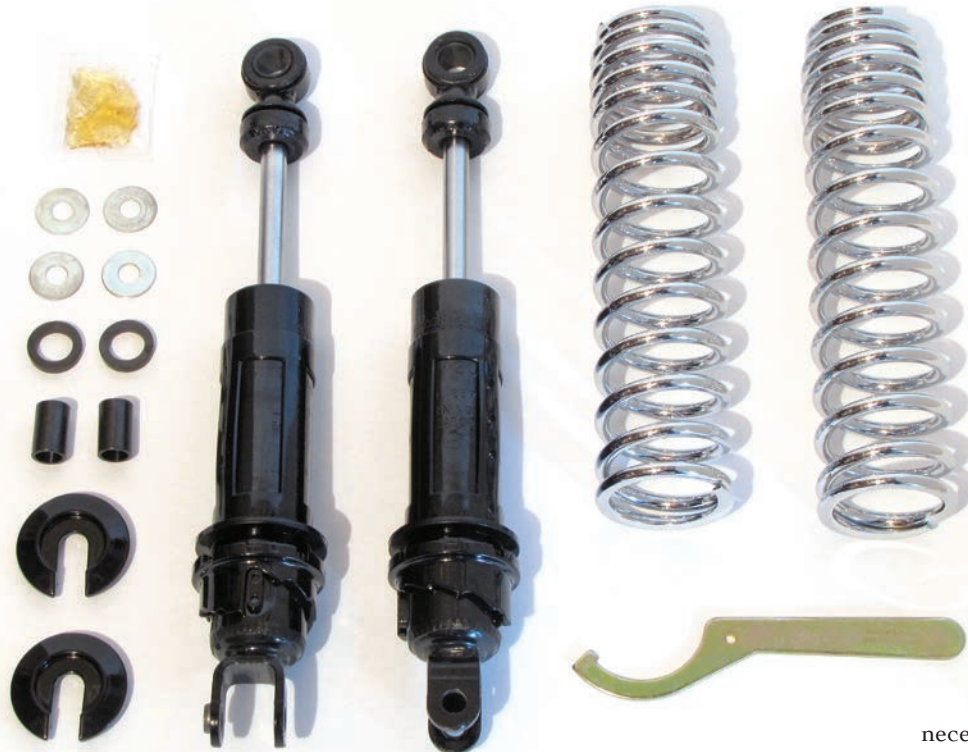
To make a very long and backbreaking story short, the little Honda and I made it to Alabama, but the engine gave all it could on the ride down. We both rode home in a pickup truck.

It's taken a while, but I'm resurrecting the old CB from a corner of the shop where it's sat since 2011. I'm starting with a two-part install of Progressive rear shocks and fork springs. This is part one, the installation of Progressive 12 Series shocks and springs, a comprehensive shock and spring set that includes all the

necessary hardware that you'll need to fit a variety of bikes.

TOOLS NEEDED

- 14mm ratchet/torque
- Shock spring compressor
- Flathead screwdriver
- Blue Locktite



1 Here are the original 1978 shocks.



2 Prop up the rear tire to allow for adjustment when fitting the new shocks.



3 Remove the old shocks using a 14mm socket or impact driver and save original hardware. Penetrating oil may be needed to loosen the nuts and bolts.



4 The bump rubber and washer may need to be lubed in order to move down the piston shaft, making room for the spring assembly.



5 A flathead screwdriver assists in moving the bump rubber and washer.



6 Install one new shock without the spring and check the clearance between the tire and fender by raising the rear wheel until the shock bottoms. There should be a minimum of 1" of clearance.



7 Assemble the springs onto the shocks using a spring compression tool. This tool will be needed and many options are available for a variety of spring and shock sizes. For this installation, we used a simple lever compression tool.



8 A look at the fully assembled shock with the spring retainer clip (arrow A) and top cap (arrow B) in place.

Spring Thing

Build a tool for under \$20

EVERYONE HERE AT THE MAGAZINE KNOWS where to come when they need a tool for a job. I have tools stashed in my desk drawer, my storage closet—heck, some even find their way back into my toolbox (where they belong). But Matt stumped me when he came in looking for a rear shock spring compressor the other day (see page 60). Sorry, that's just not a common item to keep hanging around. After a futile attempt with a couple of screwdrivers, we figured it would be best to wait a day and install the coil spring safely with a proper tool. See Step 7 of the shock install on page 61.

Shock absorber coil springs are under a tremendous amount of pressure. The energy stored in a compressed spring is enough to more than give you a black eye. So we needed to devise a method to slowly and safely squeeze the spring to reduce its overall length enough to install the retaining clip. Let me insert this word of caution right here: While this homebuilt tool worked for me, please use your best judgement when attempting to reproduce

this device. We make no claims to the safety or integrity of this device.

Actually, I can't take credit for the design of this tool. Admittedly it's a homebuilt copy of another homebuilt tool I saw on the internet.

TOOLS NEEDED

- 7/16" wrench
- 1/2" wrench



I paid a quick visit to the local big box building supply store for these special items.



Supplied spacers were needed for this install when hanging the new shocks.



Install the new, fully assembled shocks using the original nuts and bolts, lock washers, and provided washers. A little blue Loctite can be applied to the bolts.



Here's a look at the new shocks installed and standing proud. GB

SOURCES

Progressive Suspension
12 Series shocks
12 Series springs
ProgressiveSuspension.com



The length of angle iron bolts to the lower shock eye, and the threaded rods are connected to the J-bolts with coupling nuts. The J-bolts will pull down on the upper spring coil by tightening the coupling nuts under the angle iron.



The upper spring retaining flange can be removed once the spring is compressed about 1/4".

The principal is simple. The two long J-bolts are actually made up of straight threaded rod connected to two short J-bolts with long coupling nuts. The length of angle iron is sturdy enough to not flex while compressing the spring. These pieces were scrap metal I had lying around in my workshop, but a length of new angle iron might set you back

around \$12-\$15. I added some common flat washers I had, so I only really had to purchase the odd components.

My original intention was to use a length of U-channel, or two lengths of angle iron, one on each side of the lower shock eye. But the strange arrangement on this Honda shock has a shackle that bolts to a block on the bike's swingarm, so my U-channel idea would not work.

For shocks with a conventional lower shock eye, I'd use two lengths of angle iron and draw the threaded rod through both pieces. I trimmed a little steel from the end of the J-bolt because the tip of the J was close to contacting the shock body under tension.

Be sure to lube the threads of the threaded rod with anti-seize lubricant or oil to keep the drawing nuts from galling. Go slow, alternating one turn on each nut to draw the spring down. And in a few minutes, your spring will be squeezed. GB

SUPPLIES NEEDED

- Two 5/16" J-bolts, \$1.92
- Two 5/16-18" threaded rods, \$3.98
- Four coupling nuts, \$6.70
- Two 12"-length sturdy angle iron
- Total: \$12.60**

ALWAYS OVERBUILT

No. 5830

Milwaukee-Eight® Engine Main Seal Puller

No. 5834

Milwaukee-Eight® Softail® Engine Stand

No. 5829

Milwaukee-Eight® Cylinder Torque Plates

LIFETIME WARRANTY ON TOOLS

MADE IN USA

ISO 9001:2015 CERTIFIED COMPANY

Performance Parts For Harley-Davidson® Motorcycles
555 Dawson Drive, Camarillo, CA 93012 • Phone 805-482-6913 • www.jimsusa.com