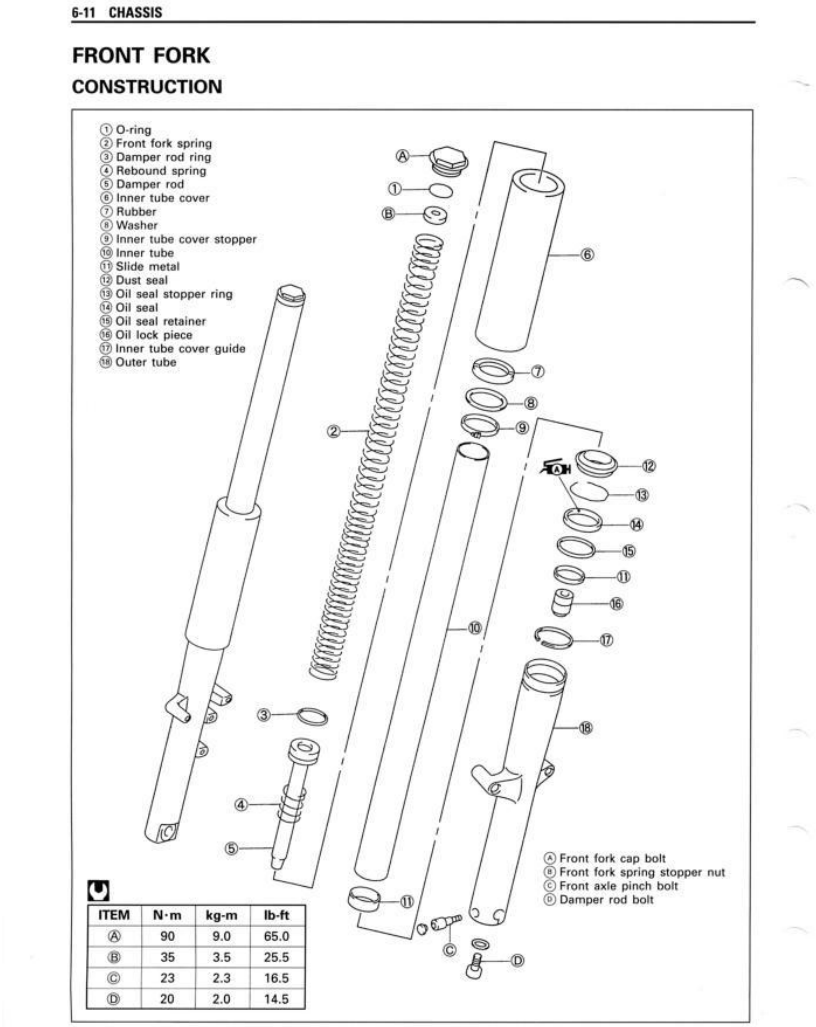
Changing Fork Fluid Made Easy
By Cobra

I like to change my fork fluids about once every year, but it's always been a PITA to take all the stuff off the bike to get to them. So how about leaving all that stuff on.

To do this, a few things need to be understood. There is more than one way to skin a cat. One way of putting the correct fluid level is to compress the strut and measure the depth of the fluid. The other is to refill it with the correct amount of fluid and assume the measurement. This will require you to fill with the correct amount of fluid since you don't drop the fork, hence it won't be level. Yes, that's right, you don't drop the fork. In fact, the only thing that really needs to be dropped off is the front tire.



In the diagram, there is a Damper Rod (5) with a short Rebound Spring (4) wrapped around it held to the bottom of the strut by a Damper Rod Bolt (D) which has a copper washer on it. It is a #6 Allen head bolt.

This bolt protrudes through the bottom of the strut, above the axle bolt, on both sides. To get to them, you need the axle/wheel off.

Also, on top is the Cap Bolt (A) and on the LC, under that is a Spring Stopper Nut (B).

So, let's get started.

1. Take the front wheel off.

2. Take the Cap Bolt (A) off and on the LC, the Spring Stopper Nut (B). Beware, there is a spring under the cap on C90 and under the Spring Stopper Nut on the LC. This will throw either the cap or nut up pretty hard so keep downward pressure on it.

3. Once you get those off, slip the spring out. Keep rags handy and the tank covers covered to keep the fluid from dripping on everything. It doesn't kill paint if you clean it quickly, but, similar to brake fluid, can be harmful.

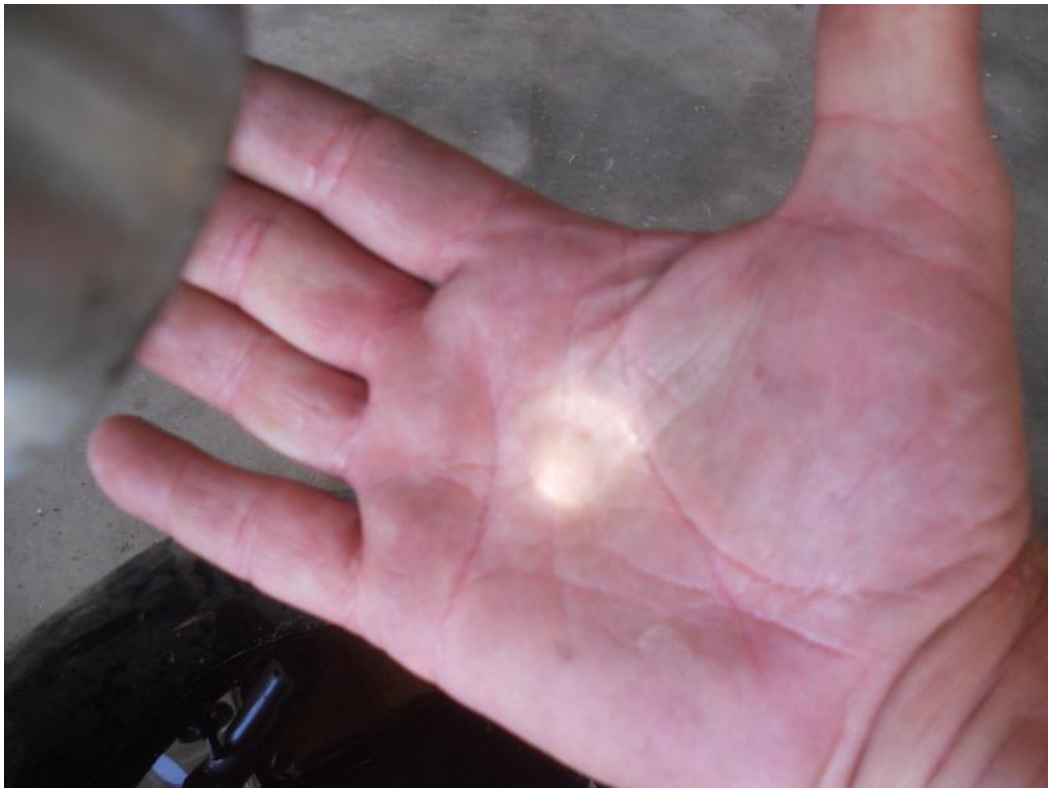
4. Put a drip pan under one of the forks, big enough to capture about 29 oz of fluid. It's best to have one that can span both forks. Remember, we didn't take the fender off so the forks are still joined together.

5. Using a #6 Allen, remove the Damper Rod nut and washer from the bottom. Oil WILL FALL OUT, so be prepared. Plenty of rags.

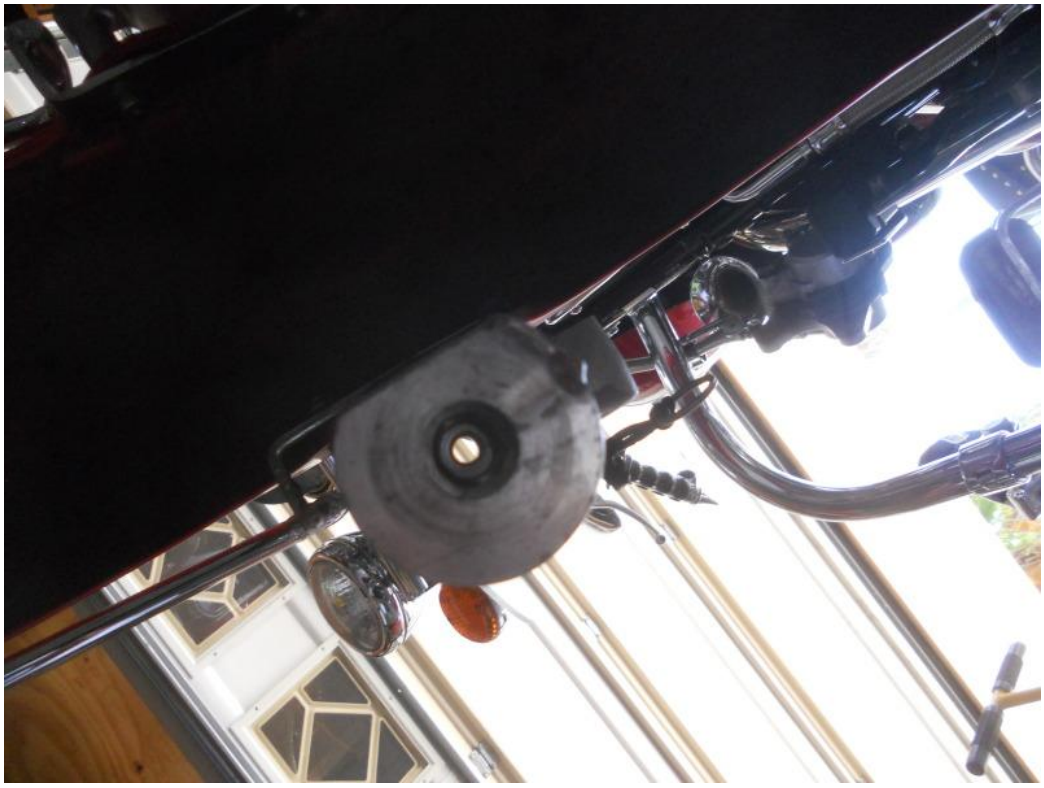
6. Repeat for other fork.

At this point, the fluid is draining, but you have to manipulate a little to make sure you get it all out. The pics below show that there is a path for the fluid to escape all the way through.

Looking down from the top, you can faintly see the path. Kinda hard to see with this pic though.



Flashlight sitting on top of the fork, light shines through.



Looking up from under, you can obviously see there is a path and the fluid will drain.

Now, once you have agreed, move both forks all the way up, and ALL THE WAY DOWN a few times. It won't come out on you so no worries. It's a tube inside a tube so we are moving it full travel to disperse the gaps of fluid.

To be sure I wasn't missing anything and that this will work, I measured the fluid that I took out. Each fork takes 14.8 ounces. So, both struts should hold 29.6 oz. Taking into consideration that when I removed the springs, fluid was attached and is now in the rag, and some residual was left in the pail, I got just over 29 oz out of it. So, did I get it all? I believe I did. I moved the strut up and down a lot and nothing was left in there.

If you want to, you can run some mineral spirits through it to "wash" it out. If the fluid is really dark and dirty looking, this might be a good idea. Just remember to move the struts full travel to rinse them out.

Putting it back together is just the reverse, but there's some things to pay attention to.

First, when you move the forks all the way down, you probably noticed that they come down A LOT. Even past the chrome guide plastic. This also means that you have extended beyond the Damper Rod. At this point, it is possible that the Rebound Spring is no longer wrapped around the Damper Rod. No worries, it won't turn itself sideways in the tube, it's too long for that, as with the rod. What you may need to do to get the Spring to slide back over the Rod is bump it around just a little bit. I ran into that and moving the strut up and down a little lined it up pretty easy. The center of the rod is narrower than the widths, so it won't land on a flat against the spring, but it might hit the edge.

Next, you need to have the strut compressed enough to get the Damper Rod all the way to the bottom of the strut. I had a hand, but I'm sure this can be done alone. Put the spring back in the top and let the weight of it push down on the Damper to help hold it. You will have to hold up the struts while putting one of the bolts back into it. Maybe a jack, or a milk crate, to hold it up but not fully compressed.

Make sure the copper washer, bolt head, and landing are clean of debris. Don't want any leaks later on. Once the bolts are started, the Damper Rod will bind against the bottom of the strut as it is con-caved and hold it from spinning so that you can tighten that bolt. The torque on it is 14.5 lb-ft.

Now, FILL IT UP. On the LC, each strut uses 14.8 oz. On the C90, each strut takes 14.1 oz.

Put the Spring Stopper Nut in place. This ain't easy and don't force it. Last thing you want to do is cross-thread that area, just take your time and press down straight. If it tightens at all while threading it, BACK OFF. Torque is 25.5 lb-ft.

Put the caps on. Make sure they are clean, and it's a good idea to put some sort of lubricant on the seal so it doesn't get pinched when installing. LC Torque 65 lb-ft. C90 Torque 16.5

Put your tire back on.

I would venture to say that this whole procedure can be done in less than an hour, including wheel removal and installation. Plus, you can leave your fairing, headlight, running lights, and all that stuff in place.

Now, get out there and ride it like ya stole it.