

Cogent Dynamics Inc. DDC Fork Kit Instructions

Each Cogent DDC kit has been engineered to enhance the performance of your bike. The Cogent Dynamics DDC modification will improve both compression and rebound damping characteristics of the DR650 forks, providing outstanding feel and traction.

These instructions assume familiarity with damper rod type fork internals and the necessary technical tools and ability.

We also recommend that you incorporate the appropriate straight rate springs for your application. Installation of the DDC kit will likely require altering the OEM spacer length or use of a new spacer of appropriate size.

Installation Procedure: *(We highly recommend you perform a 'dry run' to familiarize yourself with the installation procedure before you complete the install with oil.)*

1. Elevate motorcycle and remove front wheel.



2. Loosen top triple clamp bolts.
3. Loosen fork caps while fork tubes are still held by the lower triple clamp.
4. Remove forks from motorcycle.

5. Remove fork cap, preload spacers, washer and main spring from each tube.
6. Remove fork oil by inverting fork over a suitable container and pump forks until no more oil is in the fork. Let fork stand upside down for 15 minutes to thoroughly drain all oil.
7. Add new fork oil and bleed fork by slowly the pumping the fork tube up and down until air bubbles quit coming up.
8. Ensure oil level is set by **fully compressing fork** and measuring from the top edge of the steel fork tube to the oil level (this measurement is 190mm - 120mm in most cases).
9. Carefully lower the DDC into the fork, orienting the smaller O.D. locating ring and nylock nut downward.



The Nylock Nut down into the fork.



This side up!



Ensure that the DDC is fully seated into the damper rod head.

The Cogent DDC Installation tool is ideal for this.

10. Install spring with the OEM washer at the top. Install the OEM spacer or cut a spacer if you are not using a Cogent spring to provide correct spring preload (5mm-12mm in most cases).



11. Extend the fork and measure from the top of the spacer to the top edge of the fork tube. The same measurement that you have in dry assembly with oil assures that the DDC is seated in the damper rod

12. Install fork cap and reinstall forks into your bike.

13. Install front wheel. Always cycle the front suspension up and down a few times while holding bike stationary with the front brake before tightening the axle pinch bolts. This will assist in aligning front suspension and assure front brake operation.

14. Ride and enjoy!

Special notes:

Spring "Pre-Load":

When your forks are not on the bike, there is an amount of "pre-load" where the fork spring is constrained by the space provided for it by the internal length of the fork – DDC valve - free length of the spring - washer – spacer – fork cap = pre-load (expressed as a negative number).

Once you are riding your bike the pre-load setting serves to determine the front "sag".

Oil Height:

The oil in your forks serves as a lubricant, damping fluid and air pressure control when the fork is compressed. We measure oil height with the forks **FULLY COMPRESSED** to approximate the trapped air space that firms up the spring rate in a very progressive way during the last 1/3 of the travel. The fork oil will do the other two jobs of lubrication and damping as long as the DDC valve is always under the oil level. Changing this parameter can be a very powerful tuning tool.

