

What is the purpose of the expander and how does it work?

- The expander is a compression bolt that helps to adjust the headset and its entire assembly (headset + fork + stem).
- It is placed inside the fork's steerer tube. By tightening the cap, it compresses the whole steering system (headset + fork + stem), similar to how an expansion bolt works on a wall.
- **WARNING:** Its role is not to hold the stem in place but to alert you when there is an issue with the steering system (headset, fork, or stem).



You have loose in the steering system

You tighten the stem or the headset, but the loose persists



You tighten even more, and the expander ends up rising, or you over-tighten the expander bolt, and it eventually breaks



The expander is not to blame!



If you have loose in the steering system, follow these verification steps:

1: Check that the headset is enough tightened

- Loosen the side bolts of the stem.
- Tighten the expander bolt (4mm hex) to a maximum of 6 Nm.
- Tighten the side bolts of the stem, one by one, 3 times to 20 Nm.

2: Check the expander's tightening

- it should be tightened to 14 Nm (6mm hex bolt).
- If your expander is correctly tightened, proceed to next step.



steps verification: next part

3: Prevent the stem from slipping on the steerer tube

- Lightly sand the upper part of the steerer tube, both inside and outside, using fine sandpaper.
- Degrease the sanded areas with a degreaser.
- Apply Bikeworkx carbon paste inside the steerer tube, then reinsert the expander into the fork and tighten to 14 Nm (6mm hex bolt).
- Follow steps 1 and 2 from the last page of this document.
- Apply Bikeworkx carbon paste to the outside of the steerer tube.
- Follow steps 3 and 4 from the last page of this document.

4: I still have play despite proper tightening

- Check the condition of the parts:
 - Upper bearing
 - Lower bearing
 - Base plate (headset cone)
- Replace any defective parts.



How to install your fork on the bike

- Step 1: Install the lower headset spacer and the lower headset bearing onto the fork.
- Step 2: Place the fork in the frame, then install the upper headset bearing, the headset spacer, the 0.1mm bearing ring, and the dust cap.
- Step 3: Place the stem onto the fork and add the 35mm spacer on top. Install the headset cap and tighten the screw into the expander to 6Nm.
- Step 4: Check that there is no play in the fork. If there is, tighten it slightly.
- Step 5: Tighten the lateral stem bolts, one at a time, 3 times each to 20Nm.

