

Chain Tension Adjustment For Eccentric Bottom Bracket

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Introduction

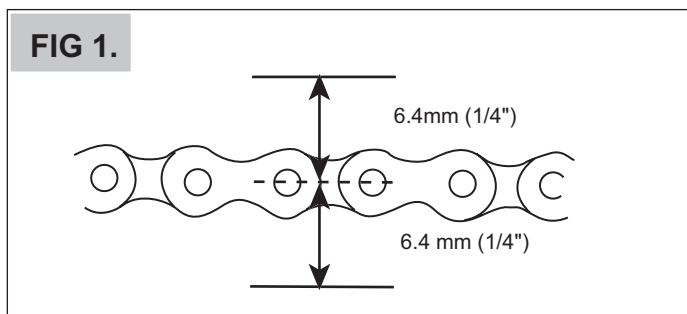
Your bike's chain tension should be checked periodically to make sure it is not too tight or too loose. A chain that is too loose can come off and a chain that is too tight can bind, break or accelerate wear on other parts. Both conditions can lead to an accident.

⚠ WARNING: An incorrectly adjusted chain is unsafe and it can cause you to have an accident. If you do not understand these instructions or are unable to complete them as described, please have the chain tension checked and adjusted by a professional bike mechanic.

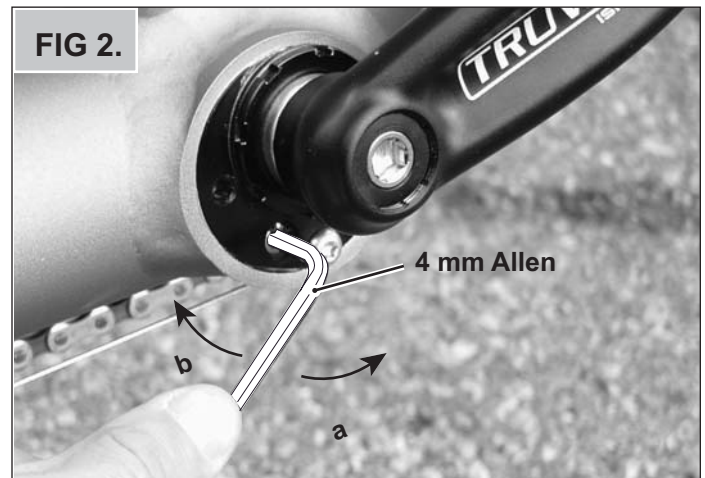
HOW TO MEASURE AND ADJUST CHAIN TENSION

The chain must be in good condition and lubricated before the tension is measured or adjusted.

1. On the upper length of the chain in the middle of the front and rear sprockets, move the chain up and down. You should be able to lift it up 1/4" and move it down 1/4" easily. This total movement is called vertical deflection and it should be no more than 1/2." **See Fig.1** Turn the crank to rotate the wheel so you can check tension at different links of the chain. The amount of deflection at the mid-point for all links should be uniform. If the chain seems tighter in some places, it may be an indication of chain damage or some other problem. Have the chain replaced or the damage repaired before attempting any adjustment. If the chain is in good condition continue to step 2.



2. On the right (drive) side of the bike, insert a 4 mm Allen key into the wedge bolt and turn it in direction (a) to loosen the wedge. See Fig 2. (A Tandem bicycle shown). For other bikes such as the 1FG or Recumbent models, the front chainrings are located on the right side. To access the bolt head easily, use a ball-end allen key, which permits a slight angled approach to the wedge bolt.



a . Loosen

b. Tighten

NOTE : After the first turn or so, the wedge bolt will feel loose then it may seem to tighten as it pushes the wedge backward. Consult Fig. 4. You should never turn the bolt if the resistance felt in the tool is high; the threads of the wedge can suffer damage. The wedge may be stuck in the bottom bracket shell due to the lack of grease or light corrosion. It may be helpful to loosen a "sticky" wedge by taping the head of the wedge bolt after it is loosened a turn or two. To do this, insert the 4 mm key of an allen tool set (or T-handle) and tap only lightly. Never strike the eccentric or bike frame or use hard force. If lightly tapping the head of the wedge bolt doesn't loosen the wedge, the assembly should be checked out by a bike mechanic.

3. When the wedge is loose and the eccentric assembly is free to rotate, insert the ends of a pin spanner tool into the eccentric holes and rotate it until the correct vertical chain deflection is reached. **See Fig 3.**

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4. When the chain tension is set, tighten the wedge bolt in direction (b) to 6.75 N•m (5.0 Ft•Lbs). See Fig. 2.

5. Recheck the chain tension.

TECHNICAL

Please consult Fig. 4. for the following:

- A. Be sure to grease the mating surfaces between the eccentric body (1) and wedge (2).
- B. Thoroughly clean and grease the inside surfaces of the bottom bracket shell before installing the eccentric assembly.
- C. Insert the eccentric assembly into the bottom bracket with the centering bolt (3) on the right (drive) side.
- D. It is unnecessary to remove the centering bolt once it is installed into the eccentric body. It offers no type of adjustment and it must remain in place.
- E. The thin stainless steel washer (4) between the wedge bolt (5) and circlip (6) provides a sliding surface for the bolt head.
- F. To remove the wedge bolt from the eccentric body, remove the circlip and washer first.
- G. On each side of the eccentric, two 5 mm Allen key holes (A) enable the use of a Park SPA-4 spanner tool for chain tension adjustment.

REPLACEMENT PARTS

A complete replacement eccentric assembly can be obtained by ordering Cannondale P/N A181/. See Fig 4.

