



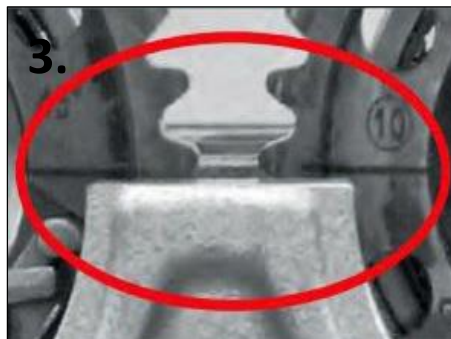
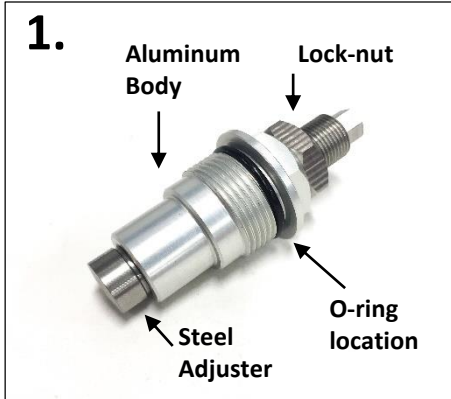
Beta Manual Cam Chain Tensioner

Part# AB-22009

Fits: 2010+ Beta 4-strokes (except 125 RR-S)

Installation Instructions:

Note: This Manual Cam Chain Tensioner is a replacement for the OEM hydraulic tensioner, & should only be installed by an experienced mechanic. Clean & dry the bike & engine before beginning installation.



1. Remove the seat, side panels, & gas tank with radiator side panels, disconnect the battery.
2. Remove engine valve cover & spark plug, select transmission 4th gear to turn the engine.
3. Turn the engine until TDC (top dead center) is reached on the power stroke.
4. The cam lobes should be at 10 & 2 o'clock position at TDC on the compression stroke, fig 2.
5. Check that the ignition timing marks are set correctly on camshaft gear sprockets, fig 3.
6. Measure valve clearances & if necessary, adjust valve lash per factory specifications.
7. Use a 21mm wrench to remove the stock cam chain tensioner, along with its o-ring.
8. Remove this o-ring & install it on the new manual cam chain tensioner, as shown in fig 1.
9. Insert a shaft into cam chain tensioner port & apply tension onto the cam chain.
10. Re-check that ignition timing marks are still aligned on camshaft gear sprockets, fig 3.
11. Before installing the manual cam chain tensioner, check that its center steel adjuster is fully screwed (recessed) into the aluminum body.
12. Screw aluminum cam chain tensioner body into the engine barrel, fig 4.
13. The center steel adjuster should not be touching the timing chain at this point.
14. Torque the 21mm aluminum cam chain tensioner body onto the barrel to 25nm.
15. Screw the 8mm end of center steel adjuster inwards by hand until it's finger tight which will manually take out any initial slack in the timing chain.
16. 1-2 more turns inwards on the 8mm steel adjuster may be needed for correct chain tension, & to ensure there's no sideways movement of the timing chain on the cam sprocket.
17. Once the chain tension is set (with camshaft gear sprocket marks positioned correctly), hold the 8mm end of the steel adjuster with a wrench & tighten the 19mm locknut.
18. Re-check the tension on the timing chain, & re-adjust tension if necessary.
19. Mark tensioner body & steel adjuster with a sharpie for a future reference point.
20. Install valve cover, spark plug, gas tank, reconnect battery, select neutral, & start the engine.
21. If the cam chain is too slack it will clatter, if it's too tight it will make a "whirring" noise.
22. Too-tight timing chain tension causes loss of power, stress on bearings, chain, gears, etc. Too-slack timing chain tension risks the timing chain possibly jumping the cam sprockets, altering the valve timing & causing severe valve & cylinder damage.
23. Check cam chain tension every 30-40 hours of run time or when checking valves.