CBX Technical: Advanced

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How to Adjust the CBX Ignition Timing if the Marks Are Way Off Alignment?

Jan Ringnalda

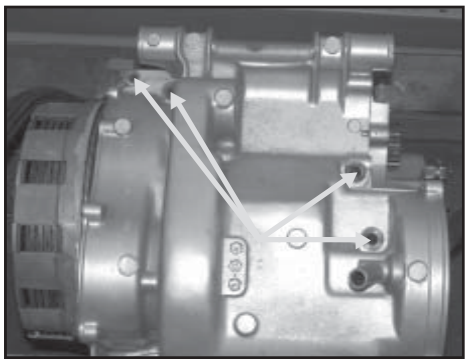
One of the things which can be annoying on CBX engines that have been overhauled or rebuilt, is that the ignition marks do not align. This is due to the fact that when the primary shaft and crank shaft are put in, there are marks that have to be aligned. When the clutch cover is taken off, the shaft that drives the ignition rotor can be seen. If the engine is put at TDC (tod-dead-center), the 'T' mark on the crank on the side with the 17mm hex on the crank is lined up with the crank-case split line, then the cut-out in the shaft has to be vertically upwards.

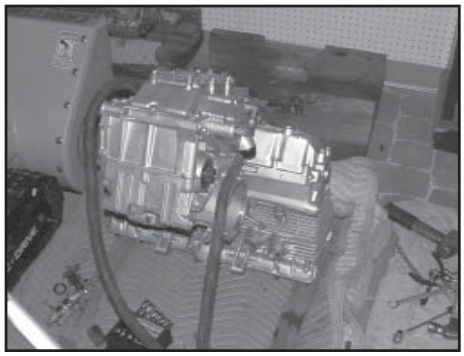
If this is not the case, then the timing is off. The bike can run with a suitable adjustment of the ignition base plate, but it isn't right…!

This article deals with how to adjust this scenario and make it correct. The engine has to be completely removed, and the oil needs to be drained.

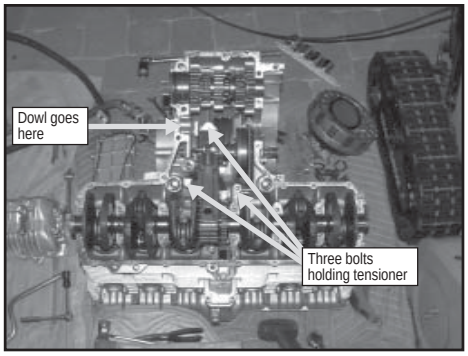
First there are 4 bolts that have to be removed from the top part of the engine, as shown in fig 1. The remaining bolts are all on the bottom, so what I typically do is to position the engine as shown in fig 2. Protect the cam cover with suitably soft material or remove it (as shown) and you will need two pieces of 2x2 as shown to protect the center oil feeds.

The clutch will need to be removed, and large nut that holds the primary drive gear on will also have to come off. The three 10mm bolts that hold the primary





shaft (also known as jackshaft) can now be undone. This is where you ask yourself: "Do I feel lucky?" The jackshaft can be pushed out with a little persuasion; i.e. a mallet. It needs to go far enough out so you can turn it independently from the crank. Once you reach that point, time it correctly, and now try to push the shaft back in. I have managed this ONE TIME only; usually this goes to part 2: Now you need to remove all the other bolts on the bottom of the engine, according to the pattern shown in the manual. Basically a criss-cross pattern. Lift the bottom of the engine off, and then remove the input gearshaft, in order to gain access to the 3 10mm bolts that hold the primary drive chain tensioner in. Shown in fig 3



Remove the tensioner, and NOW you should be able to push the jackshaft back in.

Reassembly is obviously a reversal of the above process, however make sure you put the bearing race of the gear shaft back with the hole for the dowel in the correct place, Shown by the big yellow arrow in fig. 5 otherwise you will crack the case and basically write off your engine.

Clean of the mating surfaces really well, and put a light (!) coating of hylomar on the joint faces before assembly. A little more can be put in the very corners of the final driveshaft seal behind the main sprocket. Upon assembly, take some care of the selector forks, they obviously have to be in their channels, and on the correct gear shaft. Do not use force AT ANY TIME to put the cases together, if things are correct they will close with a satisfying clunk. If the sound is a 'squelch' you used too much hylomar.

Happy X'ing, Jan