

Before we get in to how to change the Timing Chain (TC) tensioner on an N20 motor, a little background is in order. As far as I can tell, BMW has used at least three different versions of the tensioner with following part numbers:

- 1) 2001 – 2007: 1131 143 09851
- 2) 2007 – 8/15/2016: 1131 756 7680
- 3) 8/15/2016 – present (July 2018): 1131 868 5091

These tensioners are common to many (all 4-cyl engines?) models across the BMW model lineup. My car is an X4 (F26) built in 8/2014, so it was built with 2) above.

The first tensioner above 1), can be identified by a deeper head, about 1 cm, whereas the two latter tensioners both have a head that is only 6–7 mm deep.

There are some noteworthy differences between 2) and 3) above:

- The spring on 3) is much stiffer than on 2)
- The holes near the head are position differently. On 3) they are placed closer to the head of the bolt where the bolt tapers up to the head. The holes are also slightly larger.
- The top of the head of the bolt looks different and 3) has a colored dot on it.



New one (1131 8 685 091) on the left – old one (1131 756 7680) on the right.



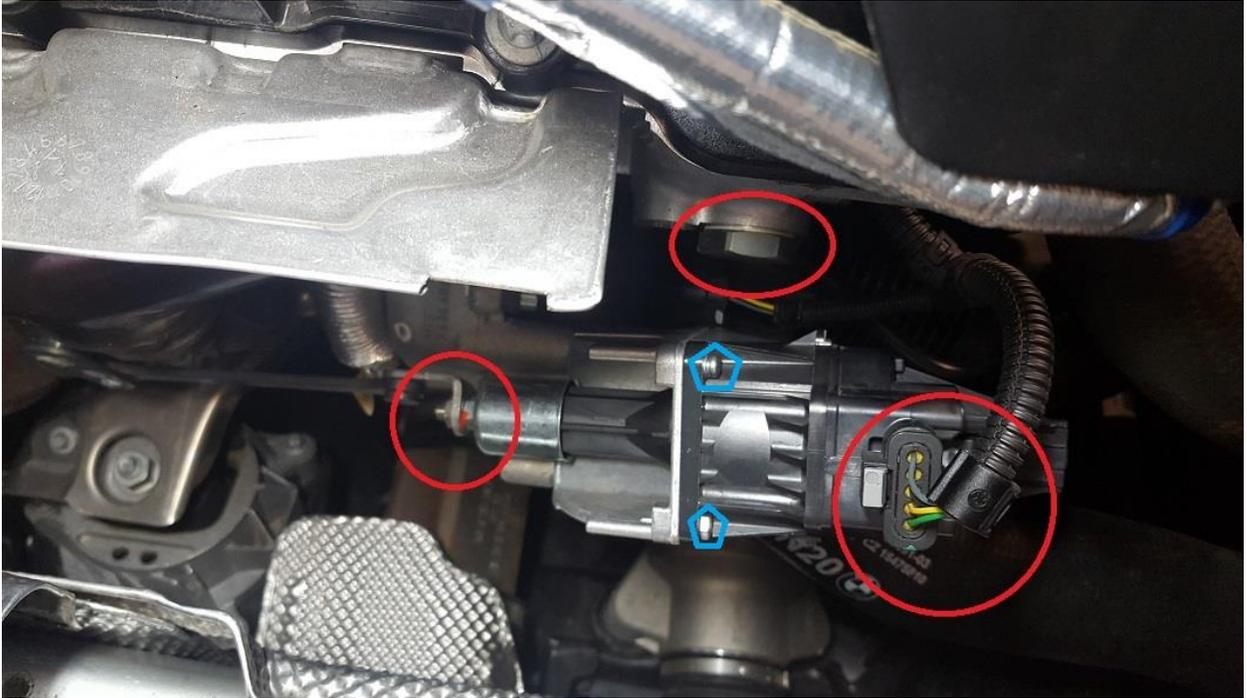
Hole on new (left) is bigger and position differently.



New one (left) has a green dot which would be visible when installed.

Okay, let's get this sucker changed:

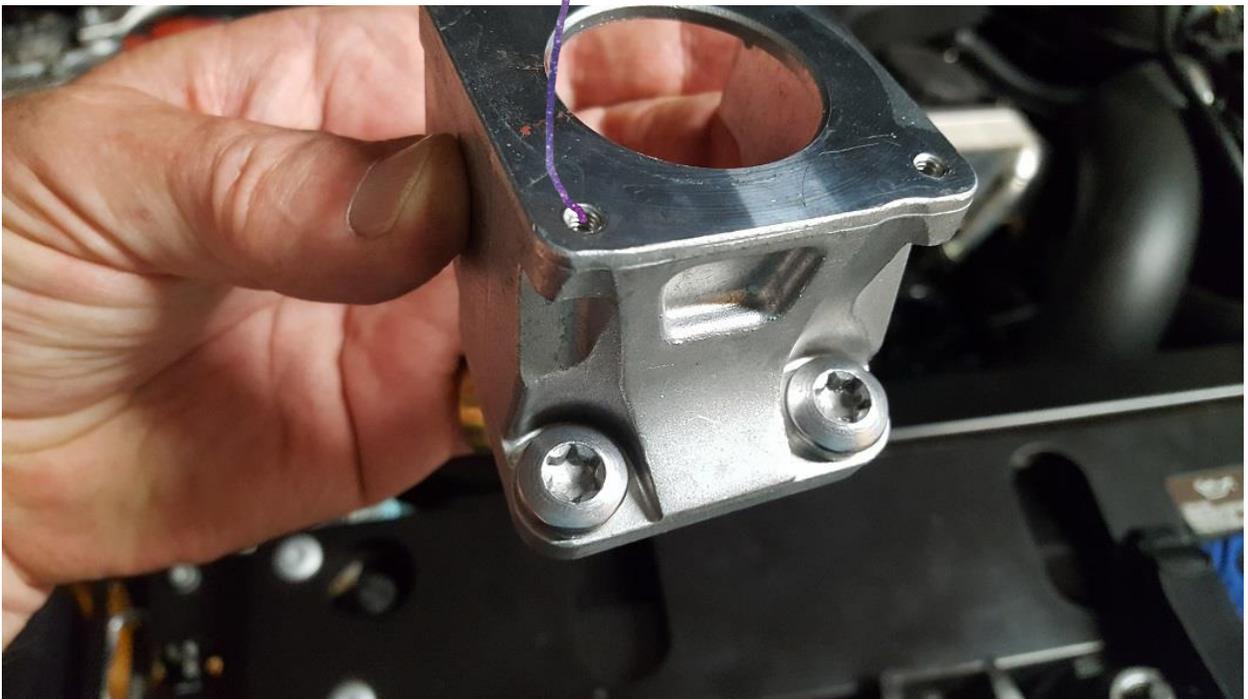
In the picture below, the top red oval is the actual tensioner – a 27mm “bolt”. The red circle to the left is the linkage to the waste gate(?) – a 10mm nut. The red circle to the right covers the electrical connection. Finally, the blue shape indicates two of the four Philips screws. The other two are below in the corners of the black plastic body.



- A) Working at the passenger side, front of the engine, unplug electrical connection to waste gate solenoid (or whatever we call that). Red circle to the right.
- B) Disconnect the mechanical linkage – 10 mm nut. The inner nut is for adjustment of the linkage and it is important that it not be moved. Put some tape over the metal tube and the black plastic so that it stayed in place.
- C) Unscrew the four Philips head screws to remove the waste gate solenoid (or whatever we call that black plastic thing).
- D) Unscrew two T40 bolts underneath the aluminum bracket which holds the solenoid.



- Solenoid removed with tape preventing adjustment of the linkage (I think/hope). Metal cylinder will spin around.



Aluminum holder removed to show position of the two T40 bolts underneath. Torque to 20NM when installing. The smaller holes are for the Philips screws.



With the aluminum holder out of the way, you can now unscrew the tensioner – 27mm head. About a tablespoon of oil will come out. Have cloth underneath to catch. Torque new tensioner to 80 NM.

Getting the thread to catch on the new tensioner took a bit of unexpected effort. You must press in the tensioner as you turn it by hand. With the new stiffer spring, that took a few tries.

The TC tensioner cost me about \$65 at my local BMW dealership.

Otherwise, reassemble everything in reverse.

A couple of helpful links:

<https://www.newtis.info/tisv2/a/en/f26-x4-xdrive28i-sac/repair-manuals/11-engine/11-31-camshaft/HtiBPV3K>

<https://bmwtechnician.com/2017/08/02/timing-chain-bmw-bulletin/comment-page-1/#comment-4477> Scroll back up to the top to see BMW's Extended Limited Warranty for the TC on N20 motors.