

Timing Drive Tech Tip - Important Notice - Please read carefully

Engines affected:

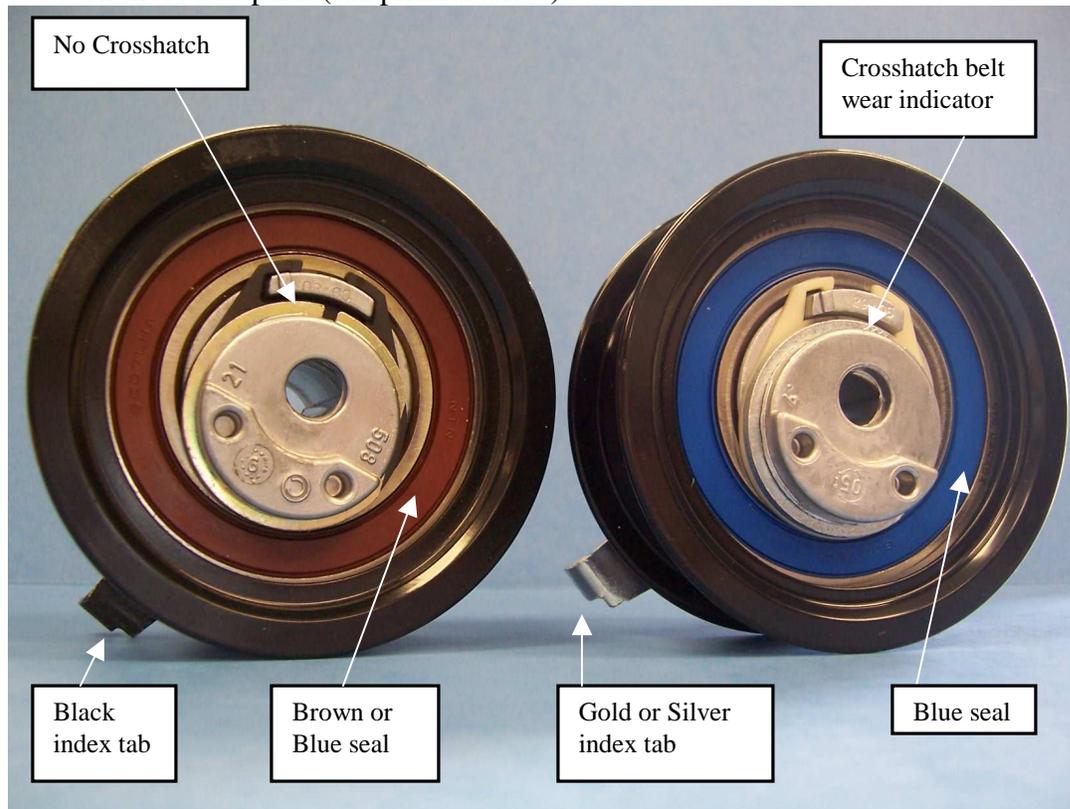
- 1.9L VW TDI – 1996- 2005

Problem:

Misinstallation of the timing belt tensioner causing catastrophic engine failure.

Important part information:

The timing belt tensioner you receive may not look exactly like the one you remove from the engine. It was decided to use the 2002 and newer tensioner (Goodyear P/N 48008) as a direct replacement for the 1996-2002 tensioner (VW P/N 038 109 243 G (for reference only) provided it is used in conjunction with an OE quality belt. Physical differences do exist between these two parts (see photos below).



Obsolete Part
(VW P/N 038 109 243 G (for reference only))

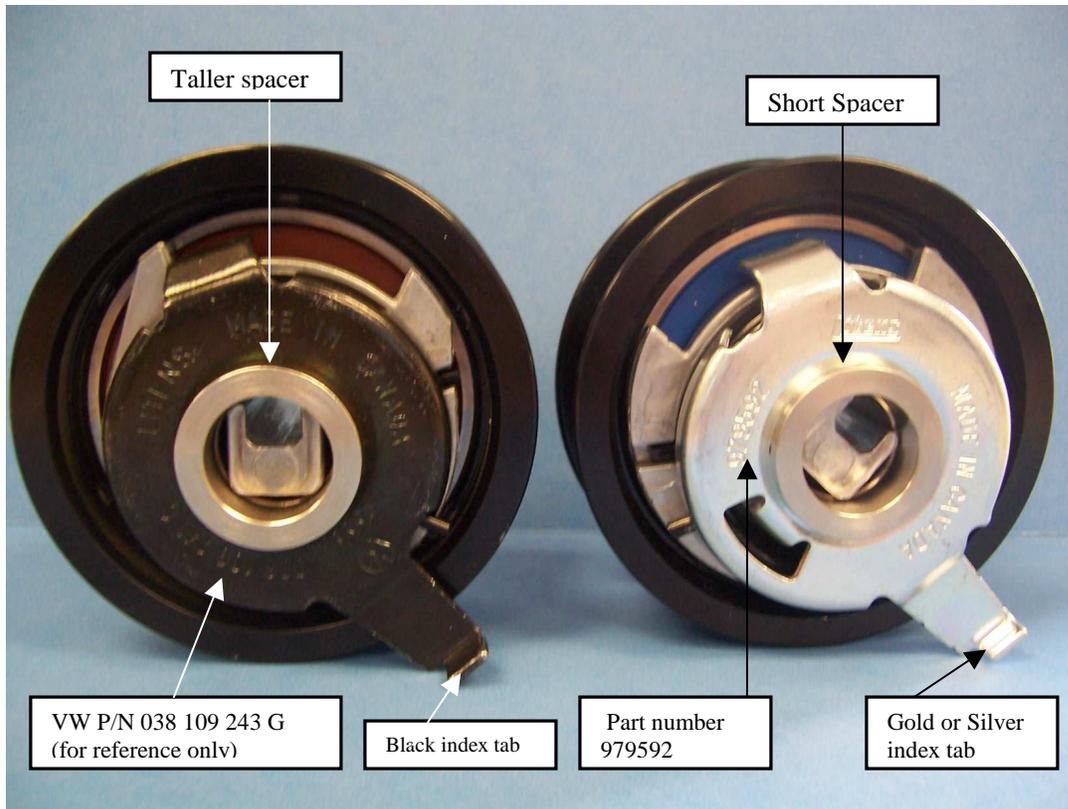
Part identifiers (front) include:

- Brown or Blue bearing seal
- Black index tab and base plate
- No “cross hatch” belt wear indicator

Replacement Part
(Goodyear P/N 48008)

Part identifiers (front) include:

- Blue bearing seal
- Gold or Silver index tab and base plate
- A “cross hatch” belt wear indicator



Obsolete part

(VW P/N 038 109 243 G (for reference only))

Part identifiers (rear) include:

- Black index tab and base plate
- VW part number 038 109 243 “G”
- Taller (6mm) rear spacer

Replacement Part

(Goodyear P/N 48008)

Part identifiers (rear) include:

- Gold or Silver index tab and base plate
- Part number 979592
- Shorter (2.4mm) rear spacer

Important installation information:

Particular attention must be paid with respect to the following installation points below. Always follow every step of the recommended manufacture’s installation procedure to eliminate the risk of catastrophic engine failure. Do not take short cuts.

-Special installation points to remember-

Top Dead Center – It can’t be stressed enough how important this is to get right. Before removing the timing belt you must position the engine at TDC. On this engine it is very difficult due to the compression pulses encountered when turning the engine by hand. The timing mark is located on the flywheel and is viewed from the top through a window in the bell housing. To set TDC, it is recommended to slowly rotate the engine clockwise by hand to the point just before you can get the pin into the injection pump sprocket. Next use a screwdriver to move the flywheel 1 tooth at a time until the timing mark is lined up with the pointer in the bell housing window. You are now at TDC. You may now continue following the manufacture’s recommended procedures.

You must only rotate this engine clockwise as viewed from the front of the engine. NEVER rotate the engine counter clockwise.

OE Quality timing belt- You must use an OE quality or equivalent timing belt. With this application do not use inferior belts.

Use of pry bar - NEVER use a pry bar to help the belt onto the sprockets. It is tempting but it will significantly reduce the life of the belt and may lead to premature engine failure.

Orientation of the index tab- Special attention must be given to not damage the index tab during installation of the tensioner. You must make sure that the index tab is located properly in the corresponding slot.

Crosshatch belt indicator (New part only) - There is a crosshatch section stamped on the new part arm. This section is to indicate when timing belt is worn and needs replacement. **Do not confuse the crosshatch range with the new belt operating range.** NEVER set up the tensioner with a new belt to run in this crosshatch section, or catastrophic engine damage could occur in the very near future.



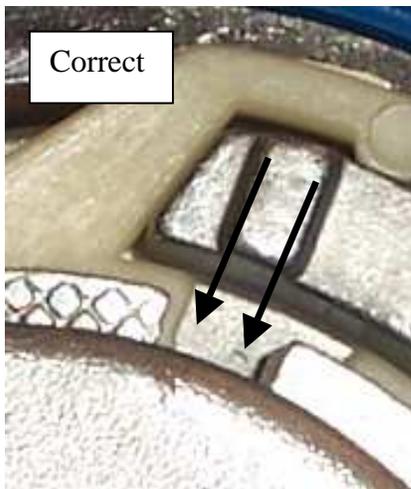
This picture shows the crosshatch belt wear indicator which is only on the new part.

Setting the tension- This is the most important part of the entire procedure. With the new belt and new timing belt tensioner installed, and with the engine at TDC, verify the index tab is located and properly seated in the slot. Now use the special tool to rotate the tensioner so that the tensioner pointer lines up perfectly in the window. You must use a mirror to see this properly in a vehicle. Now tighten the tensioner in place. Do not over tighten. Recommended torque is 23 Nm. Now you must rotate the engine two times clockwise and then re-check the tensioner pointer and window relationship. **Do not skip this step.** Remember when setting top dead center, **NEVER go past TDC and then back up. DO NOT rotate this engine counter clockwise for any reason.** Now you must re-check the tensioner again. Use a mirror to make sure the pointer is lined up perfectly in the window. **Do not proceed with the installation unless the pointer is perfectly positioned. This is very important and is directly related to catastrophic engine failure.**

Tensioner pointer and window relationship



The above picture is also NOT ACCEPTABLE. You must readjust tensioner and rotate engine **clockwise** two times to TDC and re-check again before continuing with installation procedure. **Do not set pointer in crosshatch section.**



The above picture is the ONLY ACCEPTABLE setting.

This is what the tensioner pointer (notice the position of the arrows) must look like after:

- rotating the engine **clockwise** two turns
- bringing up the timing mark on the flywheel slowly
- **Remember...Do not rotate engine counter clockwise for any reason.**