

**RECOMMENDED INSTALLATION PROCEDURE**  
**TIMING BELT TENSIONER (979278) FOR AFTERMARKET**  
**- VW 2.5L, TDI, FUEL PUMP DRIVE (EA 153) -**  
(Revision date: March 2008)

1. Allow the engine and tensioner to stabilize to the same relative ambient temperature before installing a tensioner for proper belt tension adjustment. Do not attempt to install a cool tensioner onto a hot engine or vice versa.
2. From the front of the engine, rotate the crankshaft clockwise to TDC (Top Dead Center) position (i.e. #1 cylinder firing position). This defined position is to be the position where there is no action (positive or negative) from the camshaft or other sprockets. One should find no sudden movement or abrupt action from either of the sprockets.  
Generally cam & crankshaft sprockets have to line up with equivalent markings on the engine block to indicate TDC.
3. Then remove the timing belt for the fuel pump drive on the back of the engine.

**Initial Setup of the TBT (Timing Belt Tensioner)**

4. Place a new tensioner onto the mounting bracket. Tensioner's Anti-Rotation Tab should fit in the Tensioner Position Guiding Slot on the bracket.
5. Rotate the Installation Shaft Washer until the Hex Hole is pointing at the "10 O'clock position" then hand tighten the M8 Mounting Bolt (See Figure 1).

**Installation of the TBT**

6. Install the timing belt being careful to engage the appropriate teeth of all the corresponding sprockets as per drive layout (See Figure 2).  
(Caution: Do not disturb the position of any sprockets during this procedure.)
7. Rotate the Installation Shaft Washer counterclockwise with a 6 mm Hex Key. While rotating the washer, hold the mounting bolt with a Wrench to prevent the bolt from locking itself.  
The Tensioner assembly will move against the belt and the Arm Pointer will eventually start to move counterclockwise (See Figure 3).
8. Continue rotating the Installation Shaft Washer until the Arm Pointer is aligned with the Nominal Position Indicator on the base plate, then lock the tensioner in this position by tightening the Mounting Bolt with **19±3 Nm** of torque (See Figure 4).

**Verification of the Nominal Position**

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9. Remove both the Hex Key and the Wrench. Rotate the crankshaft two (2) complete revolutions manually for proper seating of the belt until the crankshaft is repositioned at the TDC position.

**Note: Repositioning the crankshaft to the TDC position must be done only during the clockwise rotation.**

10. Check the position of the Arm Pointer.  
- If the Arm Pointer still remains aligned within the Nominal Position Indicator, the installation is complete.  
- If not, go to step #11. The installation needs to be repeated until the proper position is achieved.

**Readjustment**

11. Engage the Hex Key and retain it's position while loosening the Mounting Bolt with the Wrench. The Mounting Bolt and the Tensioner do not need to be removed. Rotate the Installation Shaft Washer counterclockwise with the Hex Key until the Arm Pointer returns to the Free-Arm Position (See Figure 1). Follow step #6~10.

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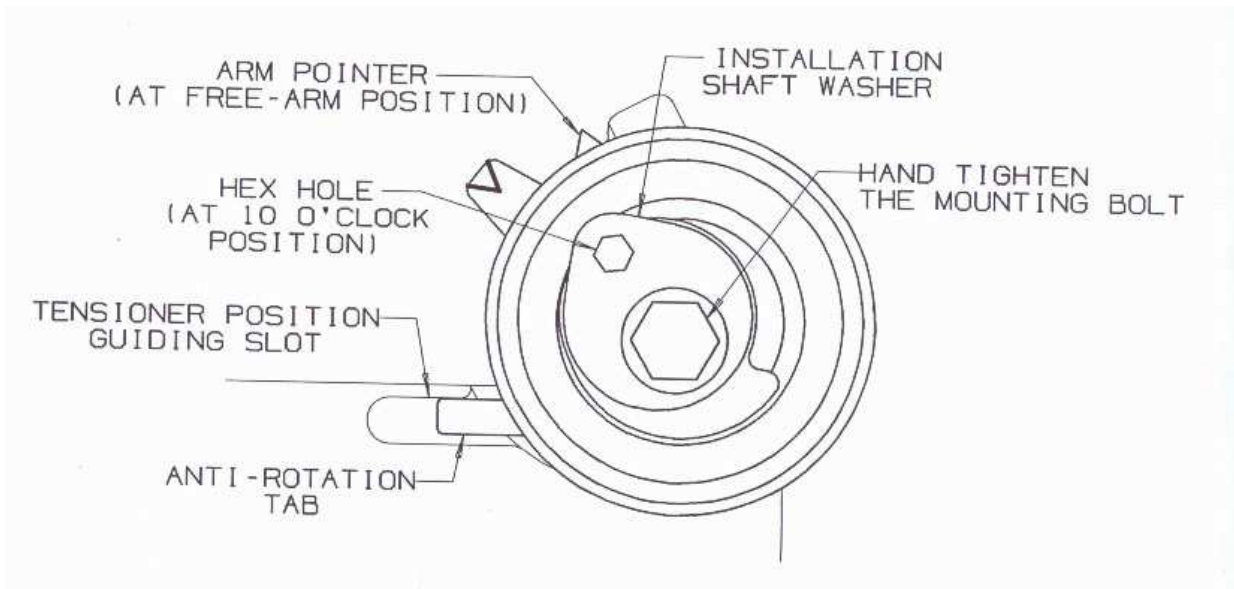


Figure 1: Tensioner shown at Free-Arm position placed on the mounting surface

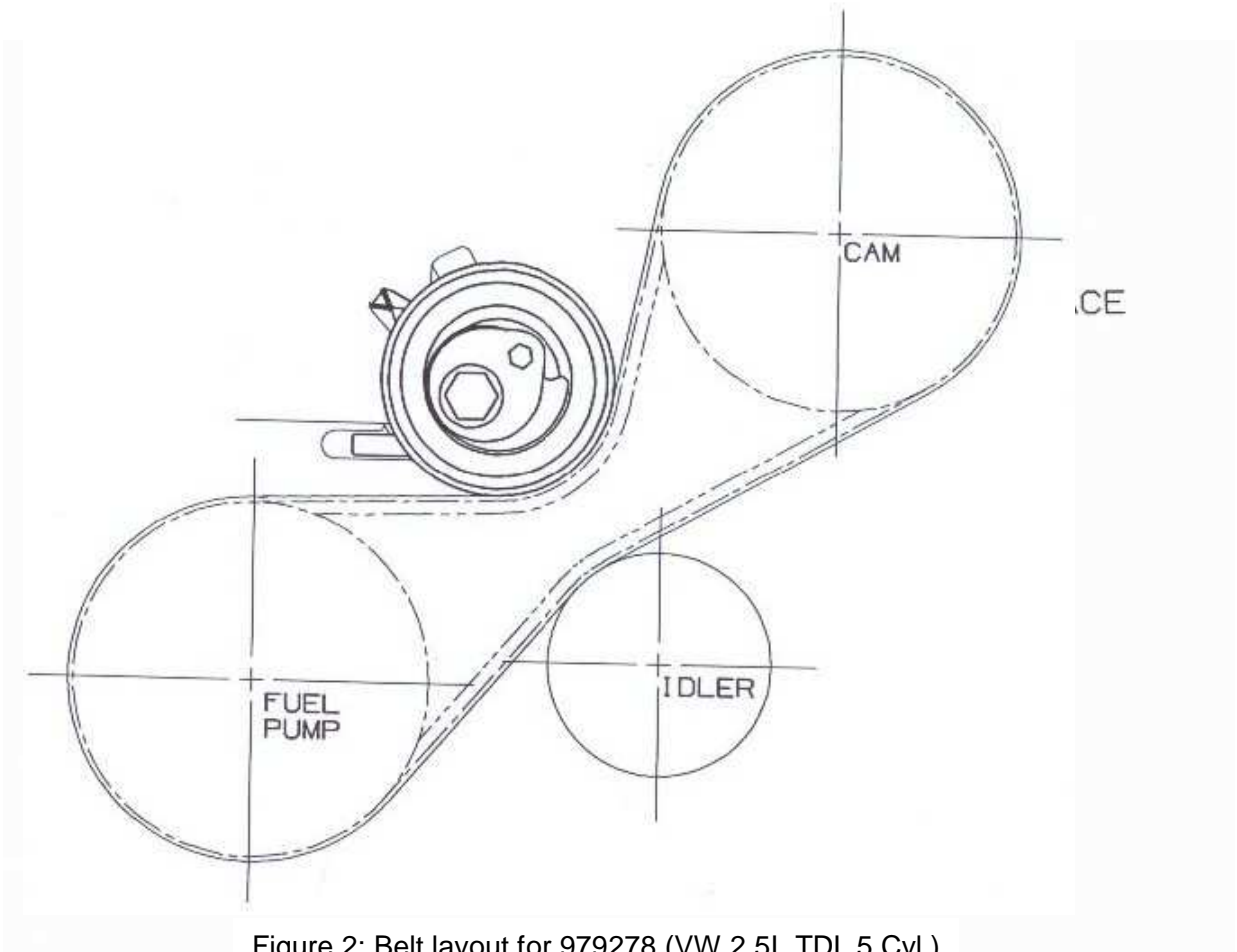


Figure 2: Belt layout for 979278 (VW 2.5L TDI, 5 Cyl.)

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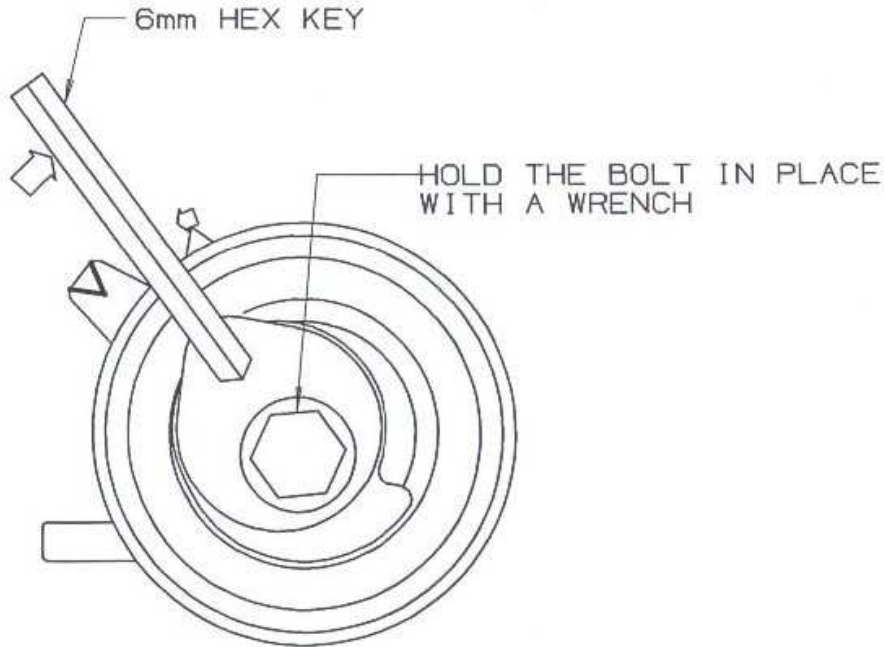


Figure 3: Adjustment of Tensioner with Hex Key

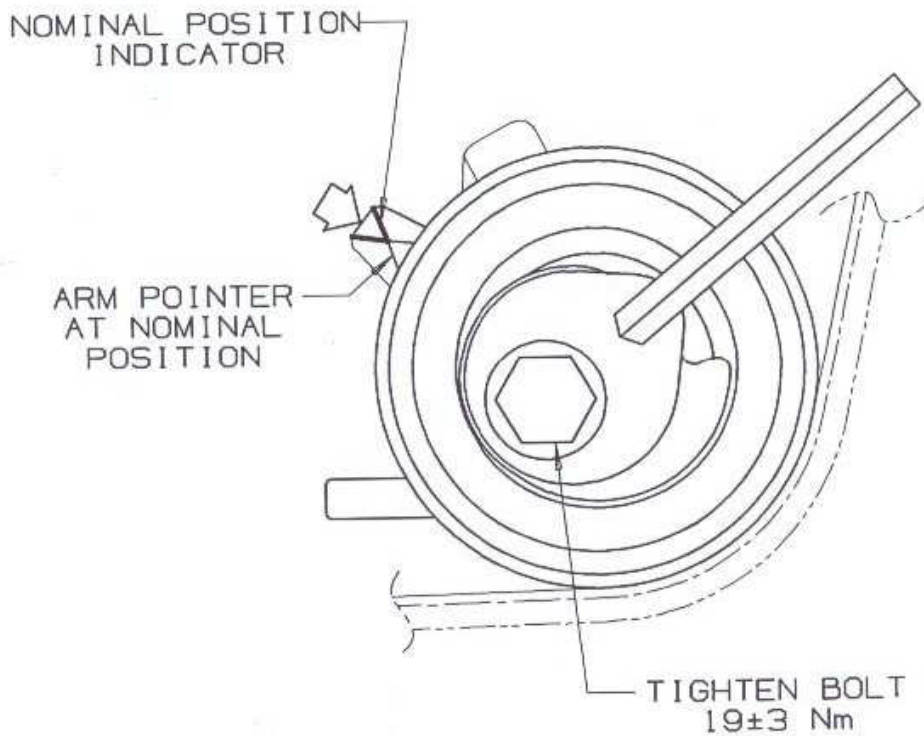


Figure 4: Proper Installation of tensioner at room temperature (20°C)