

**RECOMMENDED INSTALLATION PROCEDURE**  
**Atech Timing Belt Tensioner 979277/900001 and 979479**  
**VW 2.5L 5-Cyl. TDI/SDI**  
**(8 MARCH 04)**

**Caution: The procedure to access the timing belt tensioner and all other timing driven components must be done according to the car manufacturer's guidelines.**

1. The tensioner must be installed on the engine at room temperature by allowing the engine to stabilize to room temperature for proper belt tension adjustment. **Do not attempt to install a tensioner onto a hot engine.**
2. Rotate both the crankshaft and camshaft **CLOCKWISE** to TDC (Top Dead Center) position (i.e. #1 cylinder firing position) and remove the timing belt. 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.

**Initial Setup of the Timing Belt Tensioner**

3. Mount a new tensioner onto the engine with a hand tightened mounting bolt. The tensioner's Anti-Rotation Slot should fit over the Location Pin on the engine (See Figure 1).
4. Rotate the Installation Shaft until the tensioner has moved to extreme "away-from-belt" position (normally between 9:00~10:00 o'clock position), then hand tighten the M8 Mounting Bolt (See Figure 1).

**Installation of the Timing Belt Tensioner and Timing Belt**

5. Install the timing belt **CLOCKWISE** being careful to engage the appropriate teeth of all the corresponding sprockets as per drive layout (See Figure 2). It is recommended that the timing belt be replaced with a new belt when the tensioner is replaced.  
(Caution: Do not disturb the position of the crankshaft or camshaft sprockets during this procedure.)
6. Rotate the Installation Shaft **CLOCKWISE** with a 32mm Wrench. Make sure to hold the mounting bolt with a 13mm Wrench in order to prevent it from turning when rotating the Installation Shaft. The Tensioner assembly will move against the belt and the Arm Pointer will eventually start to move **CLOCKWISE** (See Figure 3).
7. Continue rotating the Installation Shaft until the Arm Pointer and the Nominal Position Tab are closely aligned at their lower edges, and 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**

8. Remove both wrenches. 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.**

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9. Check the position of the Arm Pointer.
  - If the Arm Pointer still aligns with the Nominal Position Notch at their lower edges, the installation is complete (See Figure 5).
  - If not, go to step #10. The installation needs to be repeated until the proper position is achieved.

**Readjustment**

10. Engage the 32mm Wrench and retain its position while loosening the Mounting Bolt with the 13mm Wrench. The Mounting Bolt and the Tensioner do not need to be removed. Rotate the Installation Shaft COUNTERCLOCKWISE with the 32mm Wrench until the Arm Pointer returns to the Free-Arm Position (See Figure 1). Follow step #5~9.

**Disclaimer**

Every step of this installation procedure MUST be properly followed or engine damage can occur.

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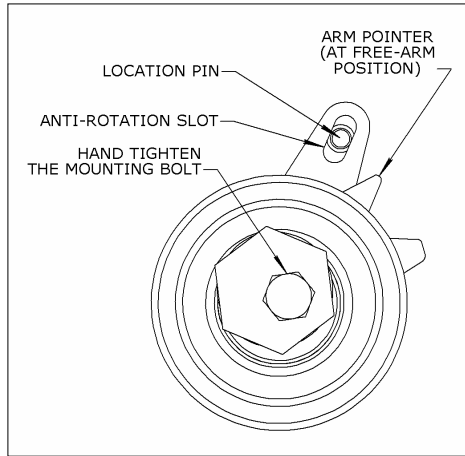
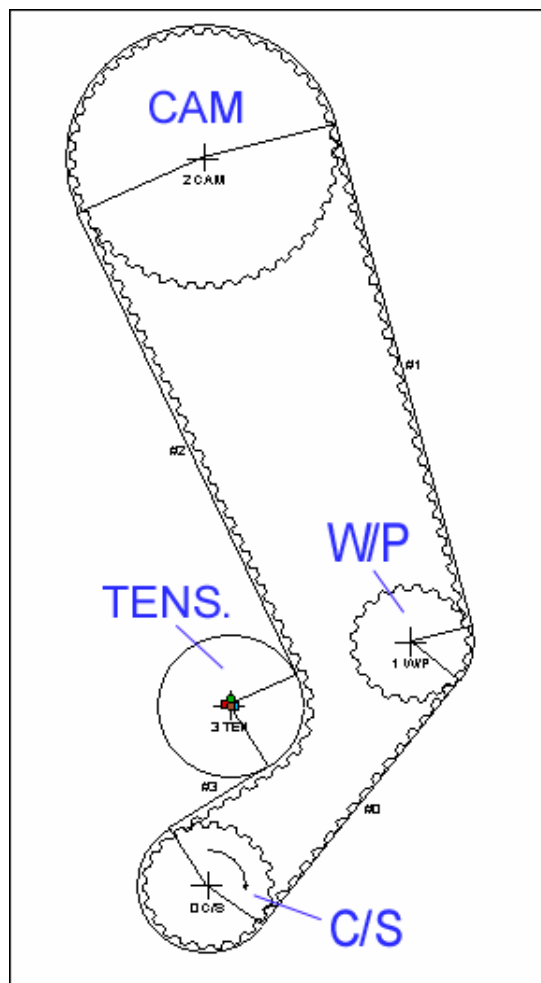


Figure 1: Tensioner shown at Free-Arm position



C/S=Crankshaft, W/P=Water Pump, CAM=Nockenwelle,  
TENS=Timing Belt Tensioner

Figure 2: Timing Drive Layout for 979277/900001 and 979479

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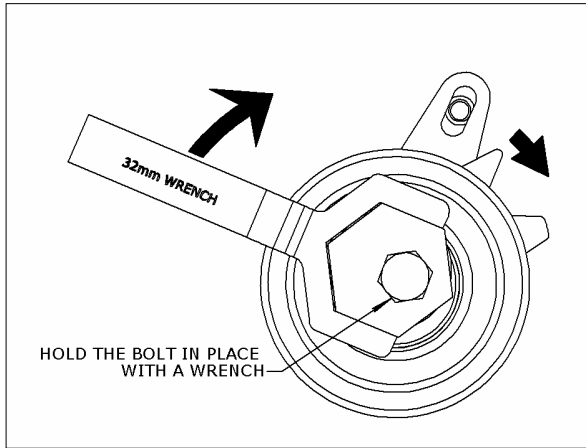


Figure 3: Adjustment of Tensioner with a 32mm Wrench

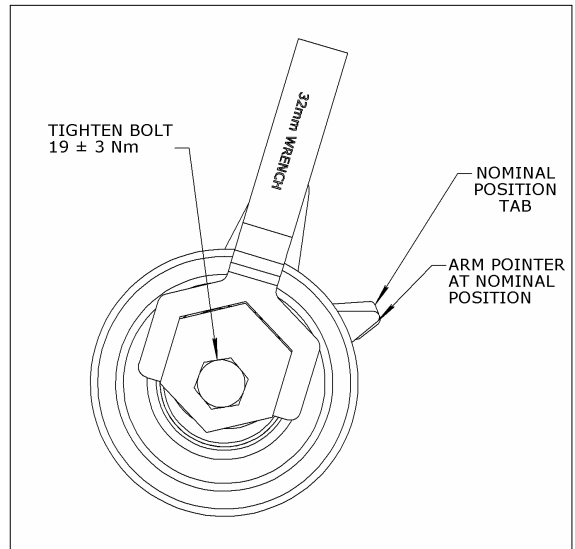


Figure 4: Proper installation of the tensioner.

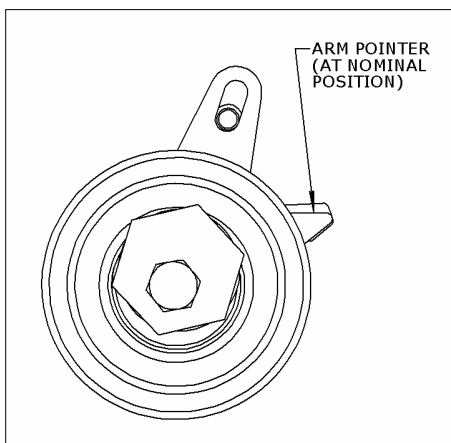


Figure 5: Verification of the Tensioner installation.

Arm pointer aligns with the nominal position tab.