

Recommended Installation Procedure
TIMING BELT TENSIONER FOR AFTERMARKET
979272 and 979548 (VW 1.4/1.6L SOHC, I4 EA 111/EA111 RSH)
979344 (EA111 1.0L/1.6L Tasse 16V)
Revision date: 19/JAN/2004

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. 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 TBT (Timing Belt Tensioner)

3. Place a new tensioner onto the engine. Tensioner's Anti-Rotation Fingers should fit over the Guiding Nut on the engine.
4. Rotate the Installation Shaft Washer until the Hex Hole is pointing at the "5 O'clock position" then hand tighten the M8 Mounting Bolt (See Figure 1).

Installation of the TBT

5. Install the timing belt being careful to engage the appropriate teeth of all the corresponding sprockets as per drive layout, see Figure 2 (a) & (b).
(Caution: Do not disturb the position of the crankshaft or camshaft sprockets during this procedure.)
6. Rotate the Installation Shaft Washer **CLOCKWISE** with a Hex Key. Make sure to hold the mounting bolt with a Wrench in order to prevent it from turning when rotating the Installation Shaft Washer. The Tensioner assembly will move against the belt and the Arm will eventually start to move **CLOCKWISE** (See Figure 3).
7. Continue rotating the Installation Shaft Washer until the Arm Pointer is positioned within the Nominal Position Window 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

8. 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.

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

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Readjustment

10. Engage the Hex Key and retain its 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 #5~9.

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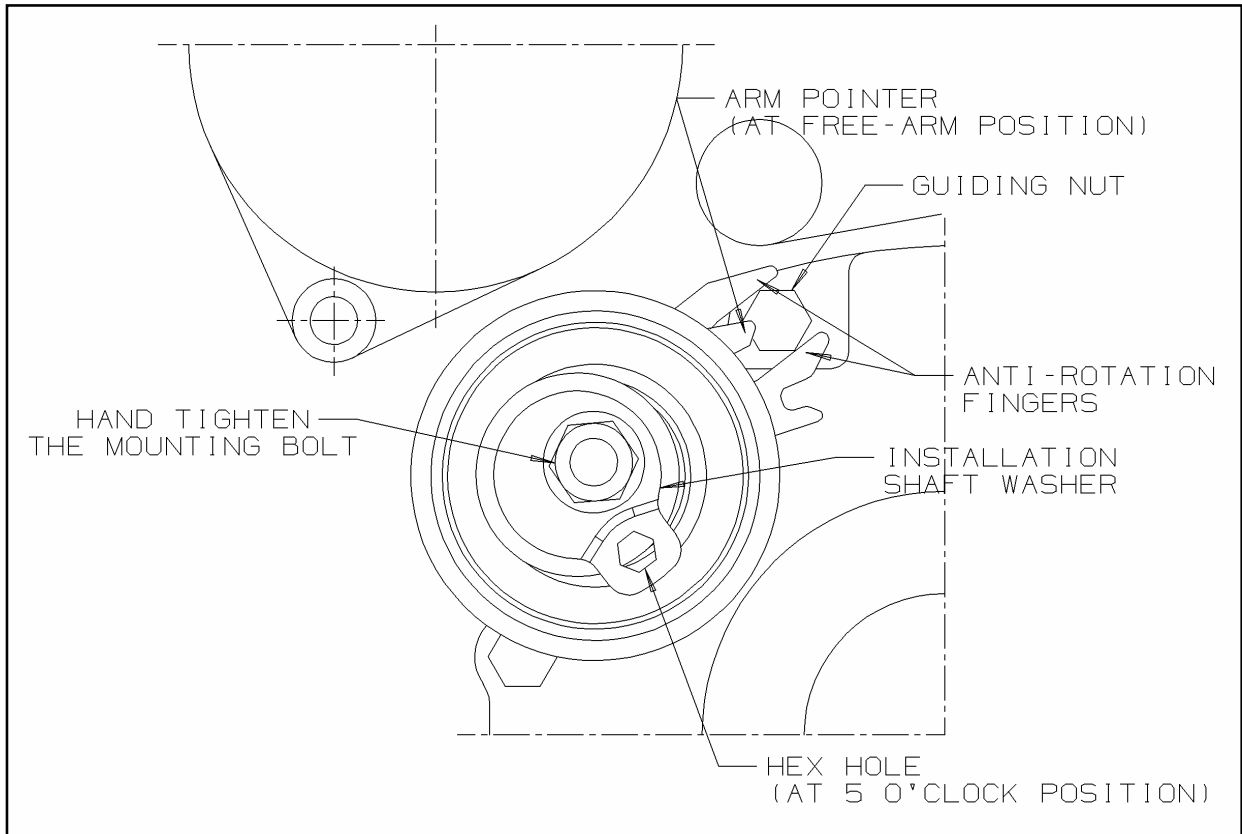
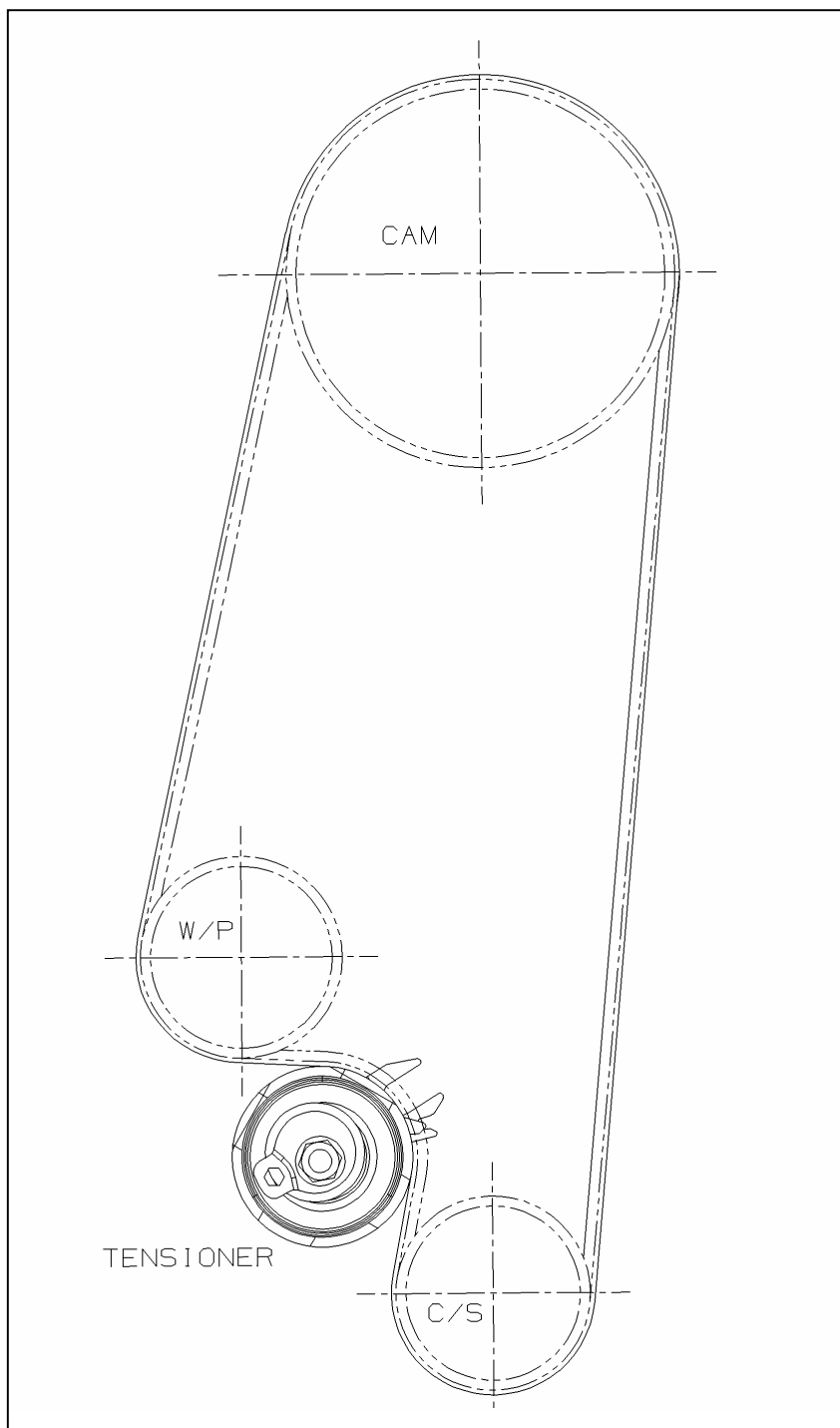


Figure 1: Tensioner shown at Free-Arm position placed on the mounting surface

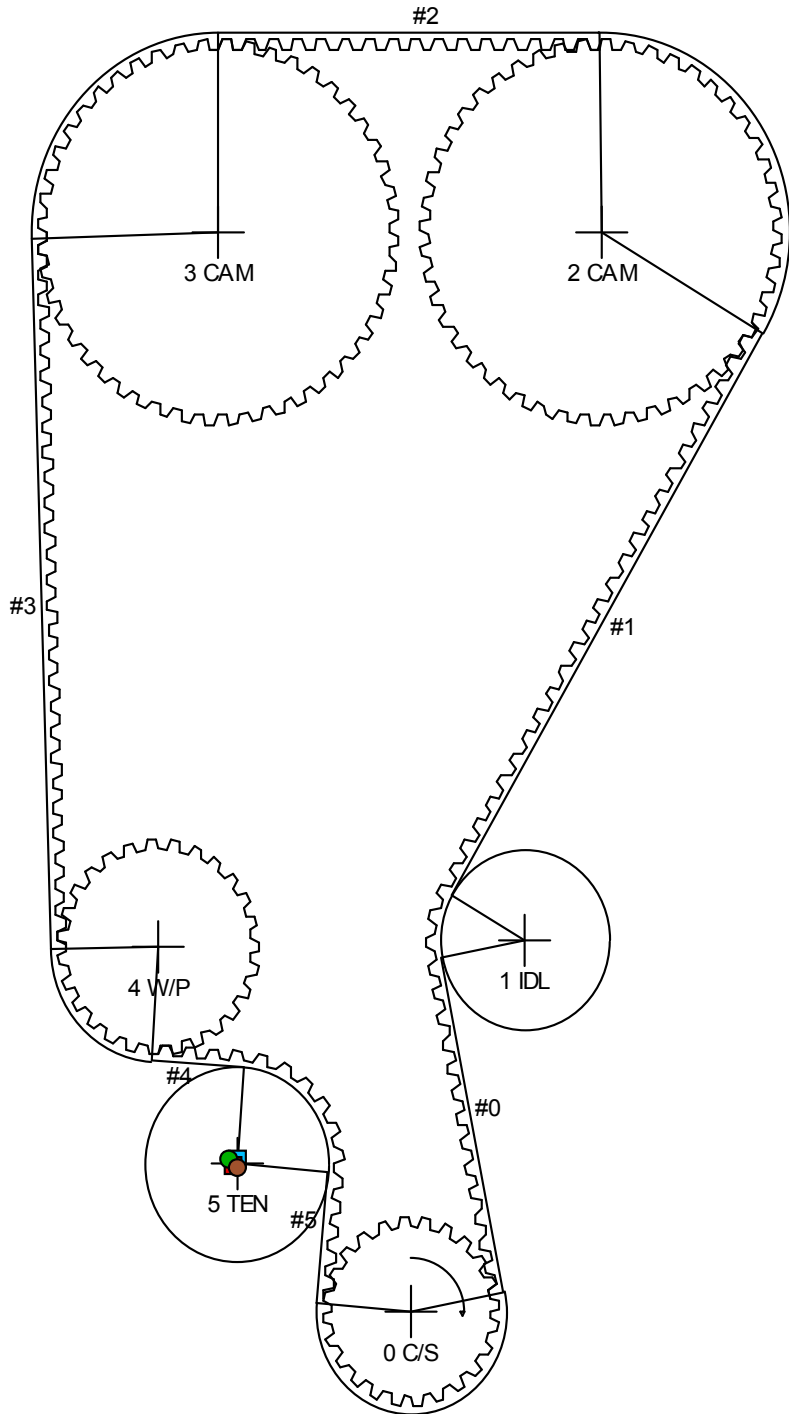
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C/S: Crankshaft, CAM: Camshaft, W/P: Water Pump, Tensioner

Figure 2(a): Belt layout for 979272 and 979548 (VW EA111/EA111 RSH.)

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0: Crankshaft, 1: Idler, 2&3: Camshaft, 4: Water Pump, 5: Tensioner

Figure 2(b): Timing Drive Layout for 979344 (VW EA111 1.L/1.6L Tasse 16V)

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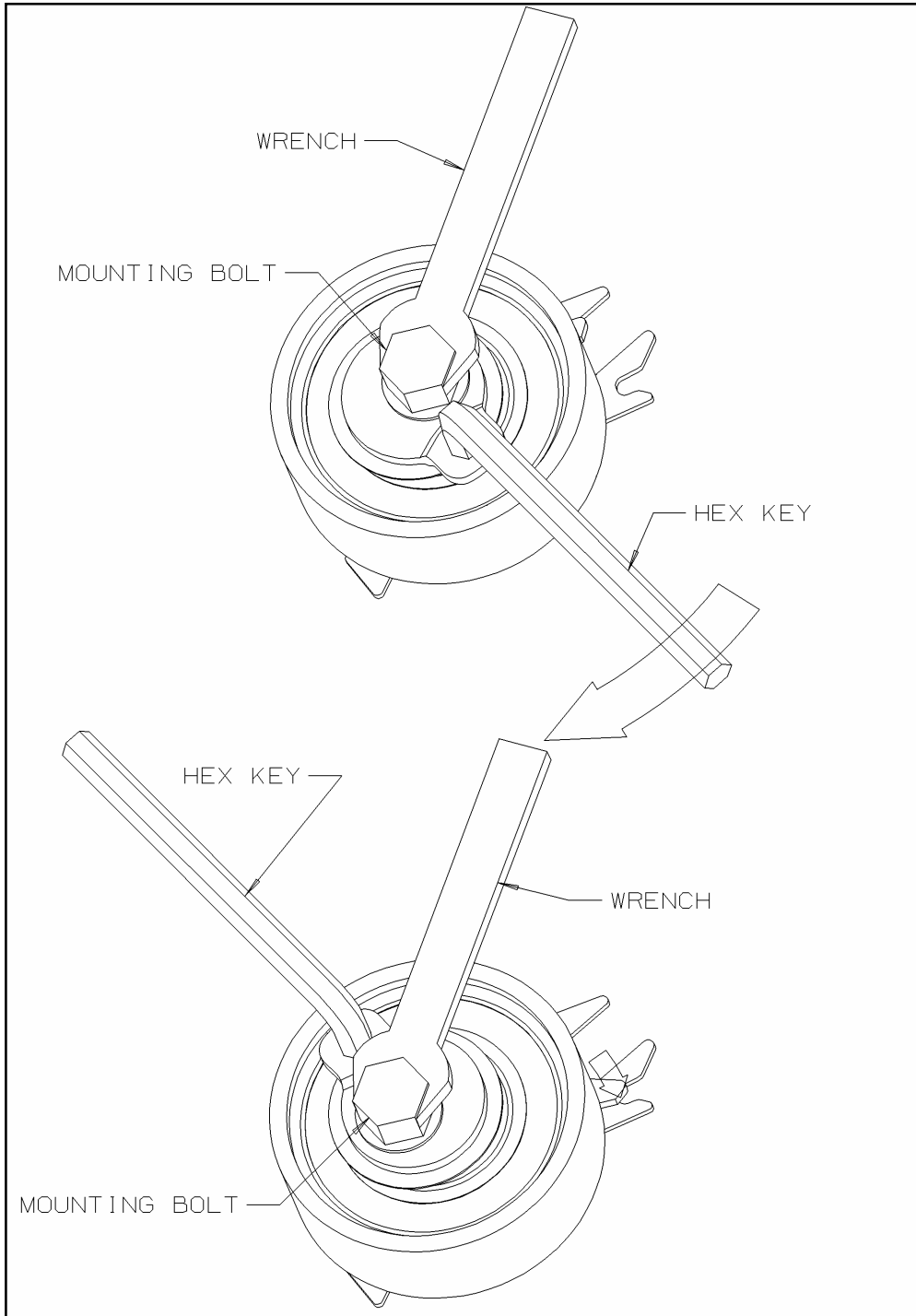


Figure 3: Adjustment of Tensioner with Hex Key

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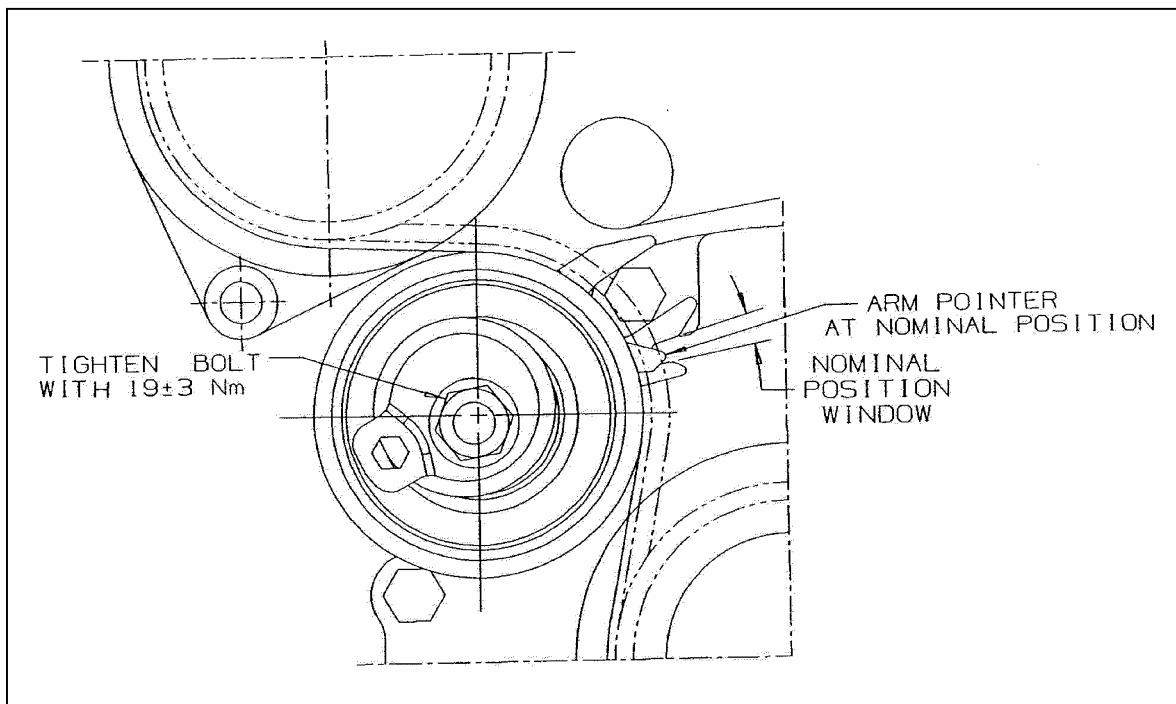


Figure 4: Final Installation