

RECOMMENDED INSTALLATION PROCEDURE
TIMING BELT TENSIONER 979595 FOR AFTERMARKET
RENAULT F9Q ENGINES

Revision date: 01/07/2002

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). 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 indicators have to line up with equivalent markings on the engine block to indicate TDC.

Removal of Timing Belt (In the case of new engine build, skip step 3)

3. Using an Allen Key, hold the tensioner position and loosen the tensioner mounting bolt. Allow the tensioner to move left until the belt can be removed and then remove the belt.

Initial Setup of the TBT (Timing Belt Tensioner)

4. Place the tensioner in position with the M8 bolt; ensure that the rear plate of the tensioner is rotated to maximize clearance (See Figure 1).

Pre-Installation of the TBT

5. Install the timing belt in a counterclockwise direction starting at the crankshaft, 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 the crankshaft, fuel pump or camshaft sprocket during this procedure.)
6. Using the Allen Key rotate the rear plate of the tensioner counterclockwise (See Figure 3), moving the tensioner into the belt and aligning the orientation tab (See Figure 4) with the slot on the engine. Hand tighten the mounting bolt.
7. Push the tensioner into the belt by rotating the Allen Key counterclockwise (See Figure 5). The tensioner assembly will move against the belt and the Arm will eventually start to move CLOCKWISE. Continue pushing the tensioner until its maximum travel position is reached (See Figure 6).
8. Lock the tensioner in this position by tightening the Mounting Bolt with **20 Nm** of torque.
9. 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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Verify that all timing indicators on camshaft sprocket, fuel pump and crankshaft align with corresponding indicators.

Installation Adjustment

10. Using the Allen Key to hold the tensioner position, loosen the tensioner Mounting Bolt enough to allow movement.

Caution: Do not allow the tensioner to snap free, otherwise steps (7, 8 and 9) need to be repeated.

Watching the movement of the Arm Pointer, slowly retract the tensioner away from the belt, (clockwise rotation of the Allen Key) until the pointer is centered within the notch in the front plate (See Figure 7). If the pointer is not centered, readjust the tensioner as required.

11. Tighten the mounting bolt to **20Nm**. Perform 2 rotations of the crankshaft and verify that the pointer remains aligned with the notch ($0^{\circ}\pm 3^{\circ}$). Confirm tensioner position is correct, if not repeat steps (7, 8, 9 and 10).

Disclaimer

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

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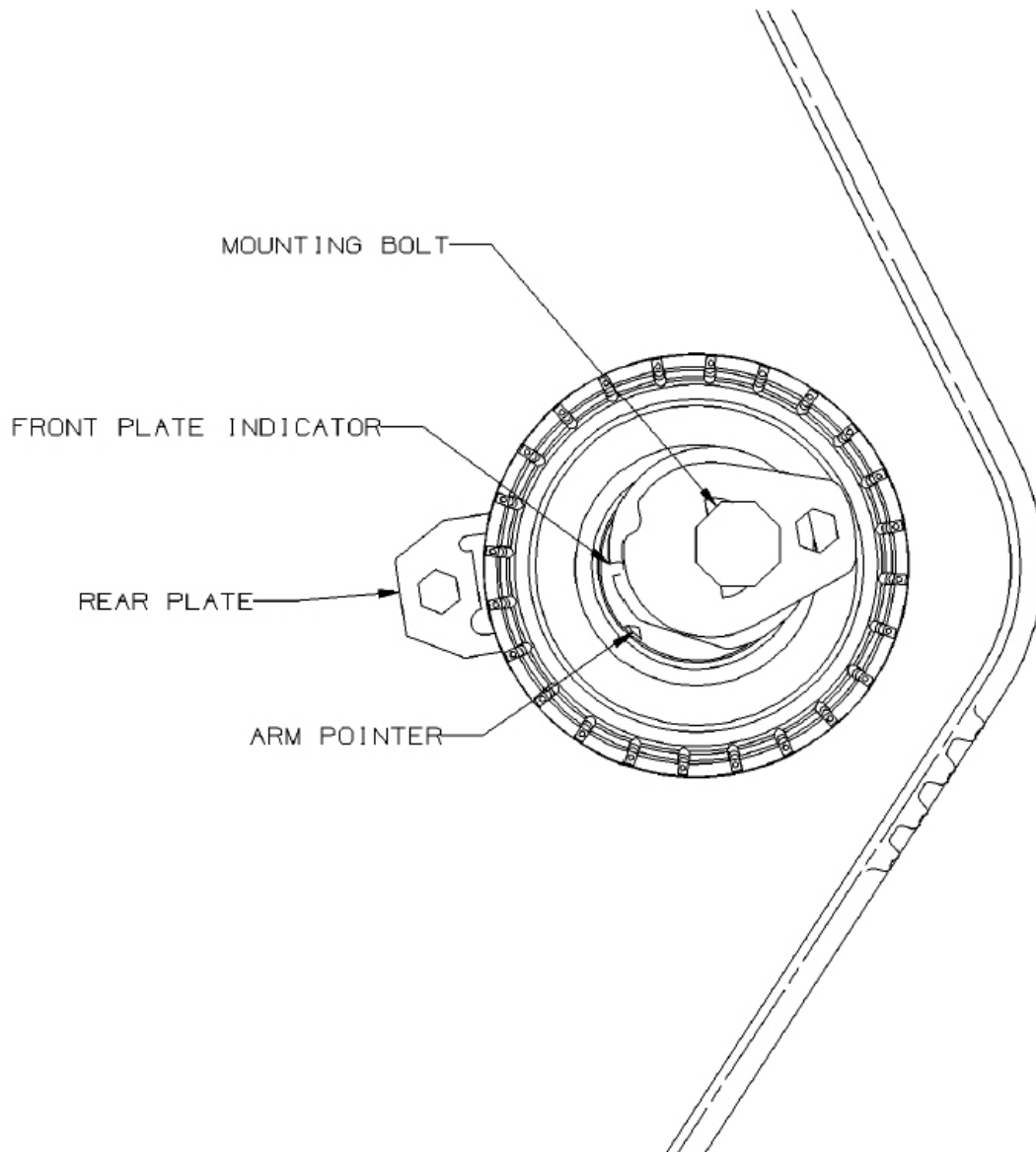


Figure 1: Tensioner shown placed on the mounting bracket.

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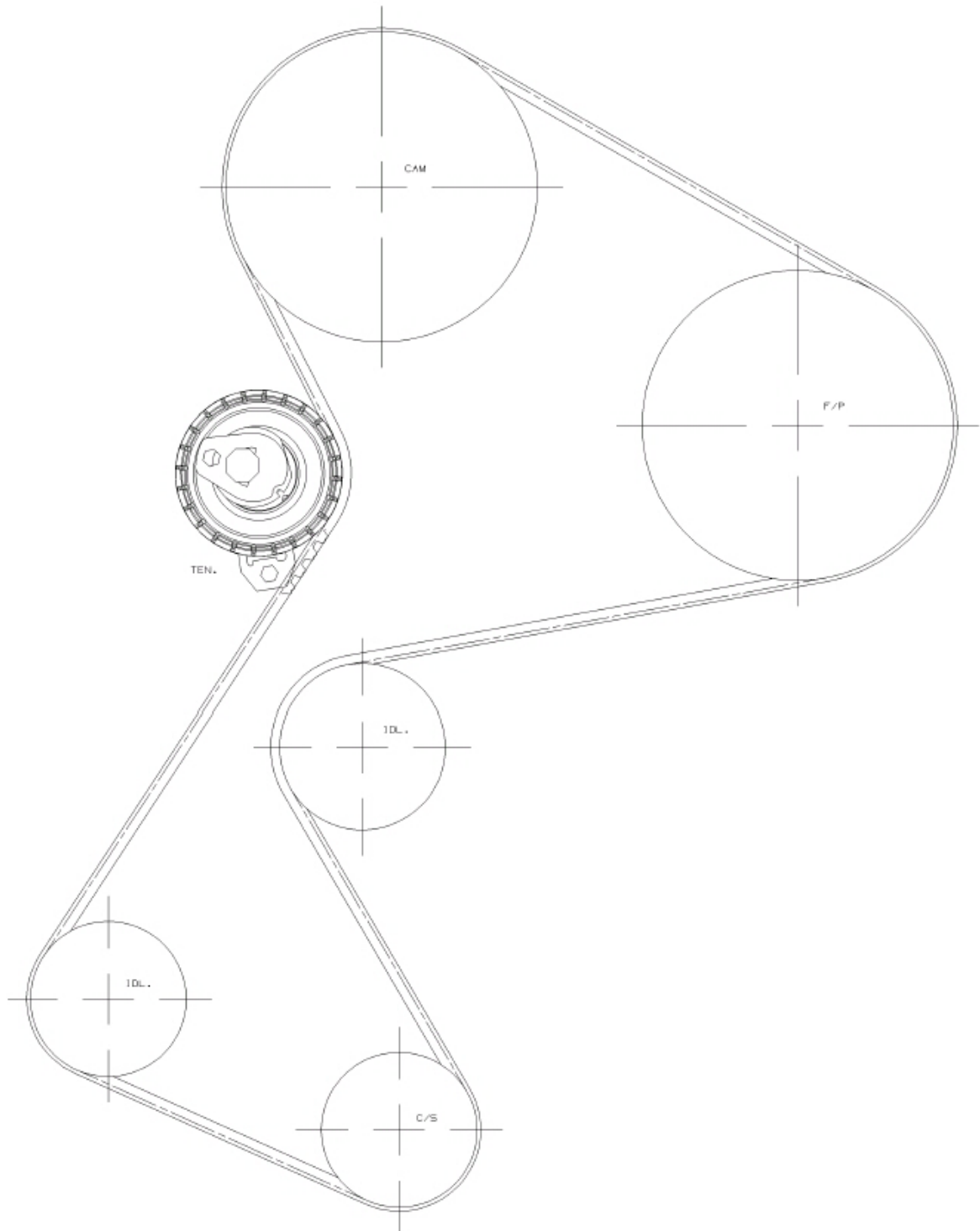


Figure 2: Drive Layout 979595 (1.9L F9Q Engine).

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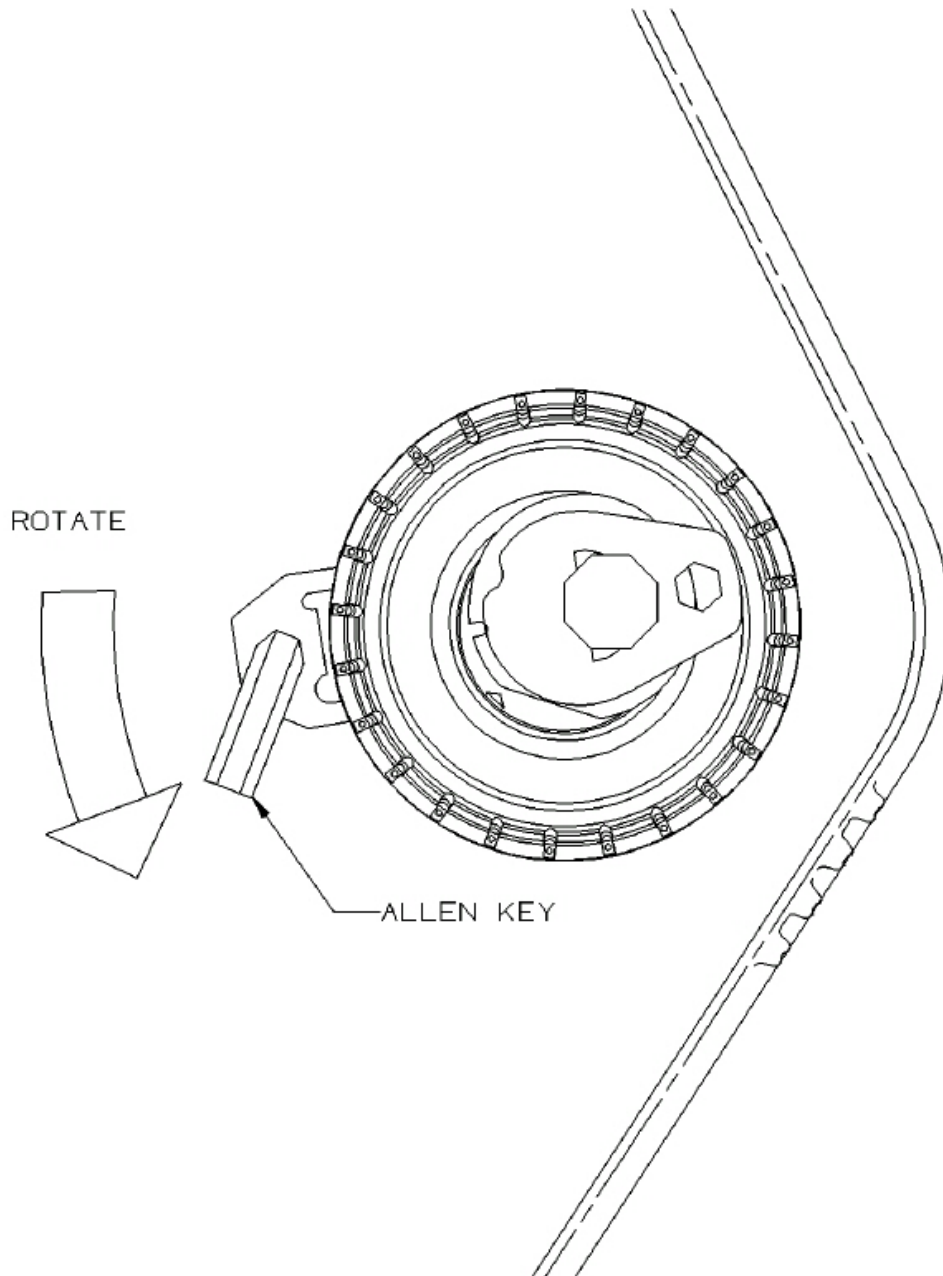


Figure 3: Tensioner rotated to align orientation tab with slot in block.

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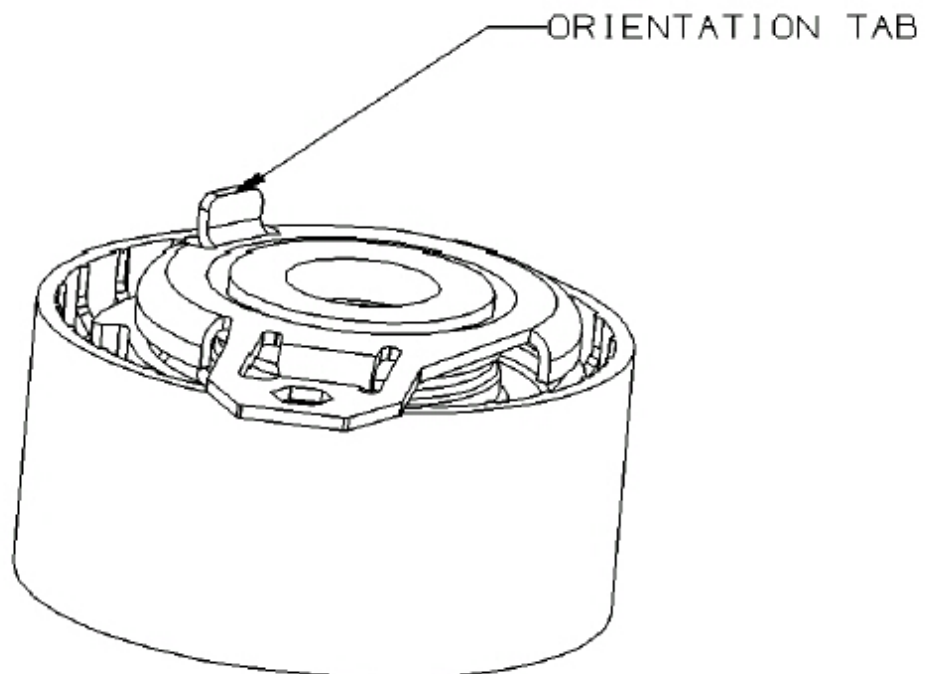


Figure 4: Orientation tab location.

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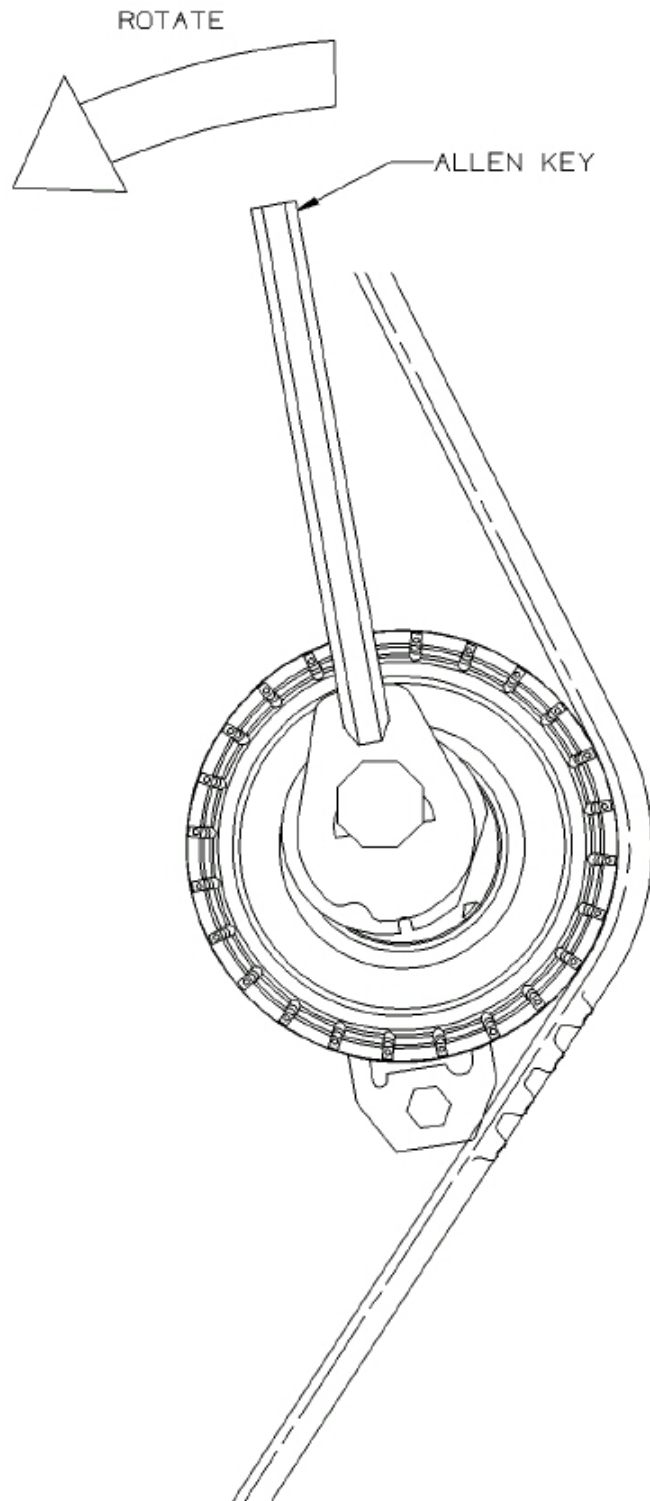


Figure 5: Tensioner rotated counterclockwise into belt.

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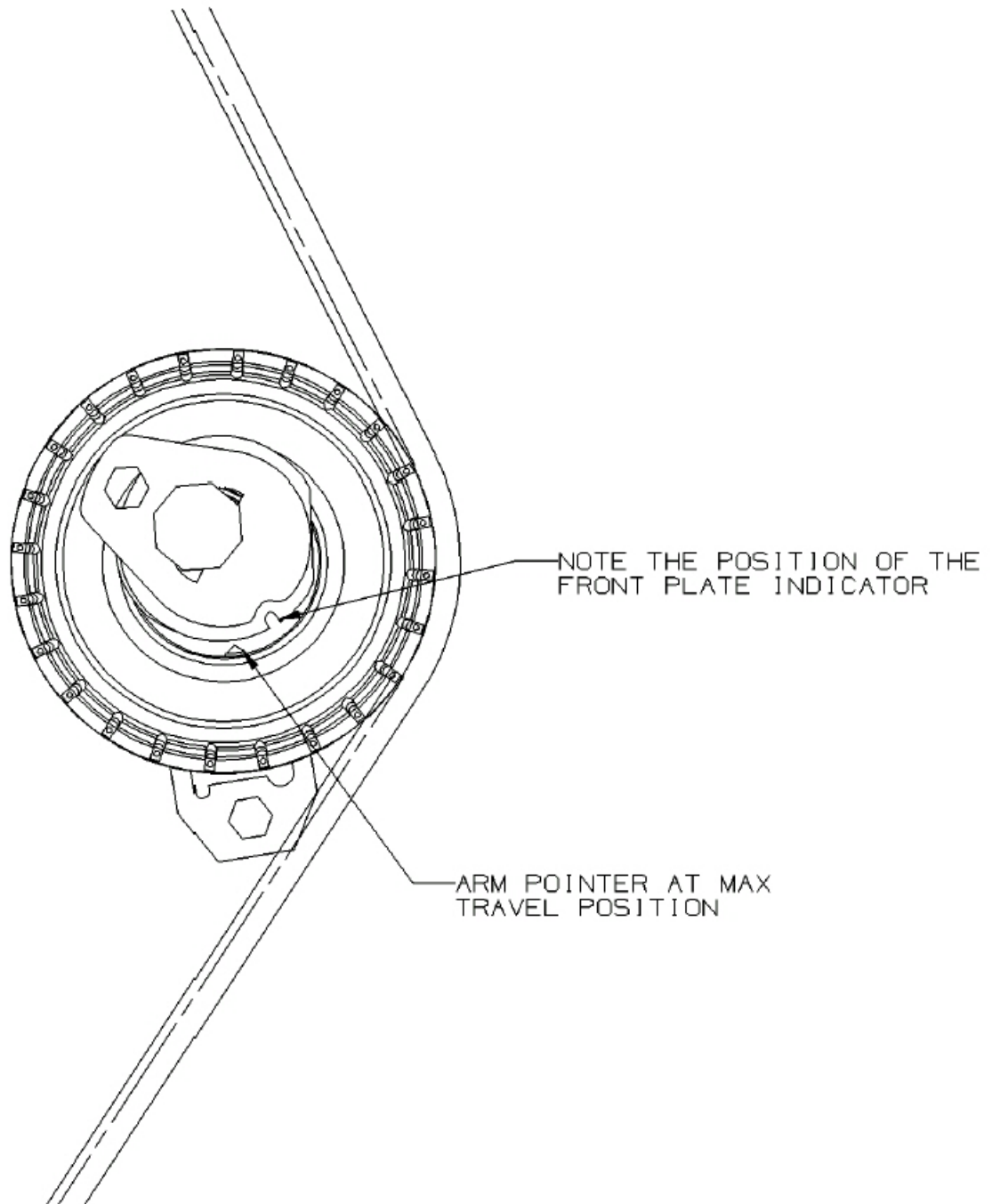


Figure 6: Proper initial setup of tensioner.

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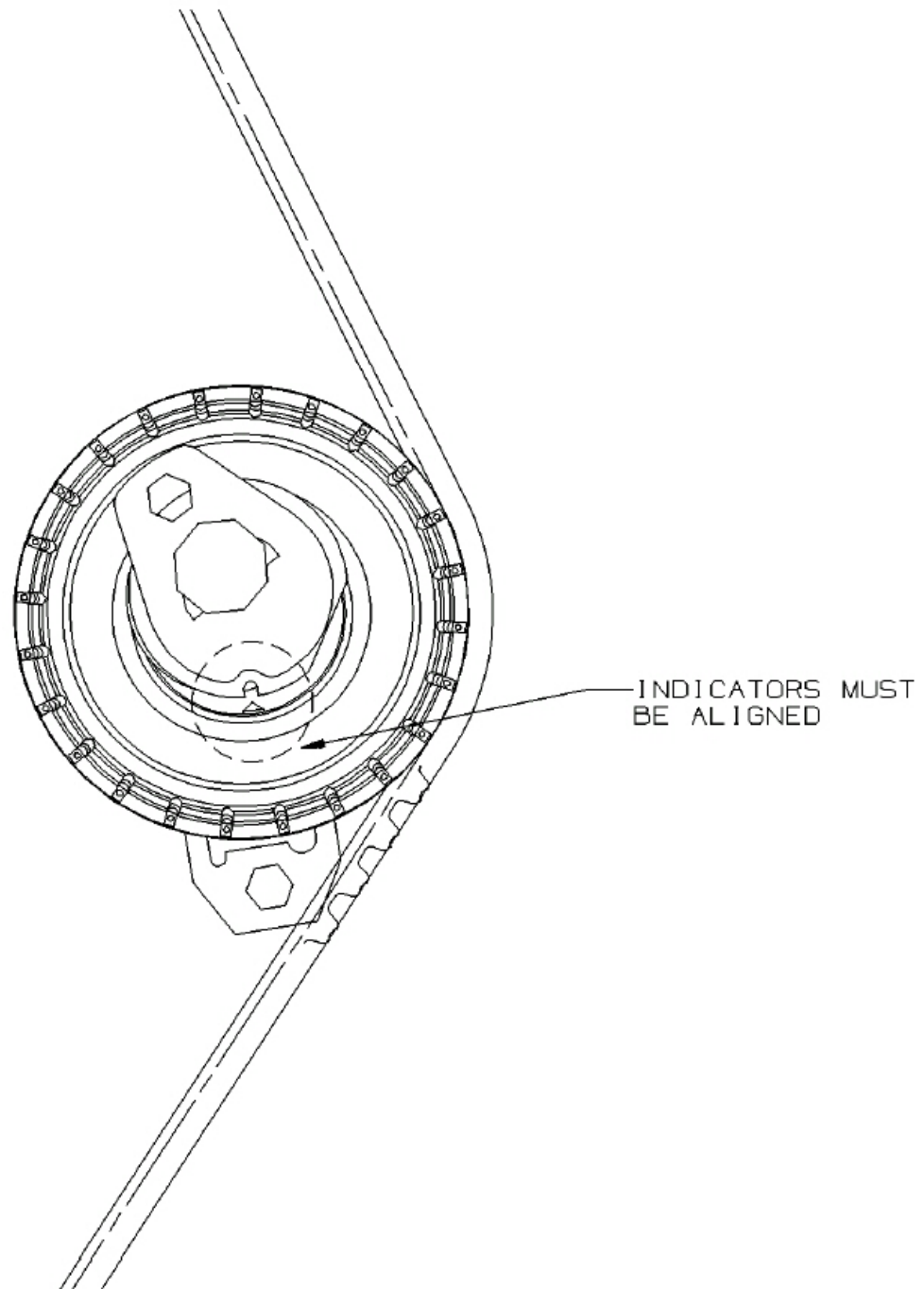


Figure 7: Verification of tensioner installation.