

Tensioner Removal/Installation Procedure

DANGER: DO NOT DISASSEMBLE TENSIONER! The enclosed spring has been pre-loaded under high tension during assembly. Disassembly of the tensioner could result in severe injury.

- To ensure your safety, shut the engine off and disconnect the negative battery cable from the battery to prevent the fan blades from operating during installation.
- Make sure there is a belt routing diagram in the engine compartment. If one does not exist, make a sketch of the belt routing to refer to when installing the belt.
- **Note: Never force the tensioner beyond the stops!**
- **Note: Make sure that the wrench or belt installation tool is firmly engaged on the cast feature on the tensioner!**

Removal Instructions

- Install a ½" extension into the square hole on the grooved pulley (outer) arm.
- Using a breaker bar, rotate the tensioner arm counter clockwise to release tension from the belt. Maximum allowable torque is 130 Nm (96 lb ft).
- Insert the supplied M10 bolt or 10mm x 80 mm pin into the feature on the arm to hold the tensioner while removing the fan drive belt.
- Remove the fan drive belt.
- Install the ½" extension/breaker bar in the square hole on the smooth pulley (inner) arm.
- Rotate the arm counter clockwise to release tension on the accessory drive belt. Maximum allowable torque is 90-100 Nm (66-73 lb ft).
- Insert the supplied M10 bolt or 10mm x 80mm pin into the feature on the body of the tensioner and on the arm to hold the tensioner in place.
- Remove the accessory drive belt.
- Use the extension/breaker bar on the smooth pulley tensioner arm, rotate the tensioner counter clockwise to remove the pin/bolt. Slowly allow the tensioner to rotate in a clockwise direction until the tensioner reaches the low stop.
- Use the extension/breaker bar on the grooved pulley tensioner arm, rotate the tensioner counter clockwise to remove the pin/bolt. Slowly allow the tensioner to rotate in a clockwise direction until the tensioner reaches the low stop.
- Remove the three bolts that attach the tensioner to the engine. Save these bolts as they will be needed to install the new tensioner.

Special Installation Instructions

- Before installing the new replacement tensioner ensure the tensioner mounting surface is free of foreign materials.
- Install the replacement tensioner and ensure that the tensioner mounting face is flush with the mounting surface.
- Torque mounting bolts to the proper value as given in the Original Equipment Service Manual.
- Using a ½" extension and breaker bar, rotate the grooved pulley tensioner arm counterclockwise until the M10 bolt or equivalent pin can be inserted into the feature to hold the arm in place. Maximum allowable torque is 130 Nm (96 lb ft).
- Using a ½" extension and breaker bar, rotate the smooth pulley tensioner arm counterclockwise until the M10 bolt or equivalent pin can be inserted into the feature to hold the arm in place. Maximum allowable torque is 90-100 Nm (66-73 lb ft).
- Install the v-ribbed belts using the correct belt routing diagram. Ensure belt ribs are properly positioned in the pulley grooves.
- Insert the ½" extension/breaker bar to rotate the smooth pulley tensioner arm counterclockwise to remove the bolt/pin. Slowly allow the arm to rotate clockwise to tension the accessory drive belt.
- Insert the ½" extension/breaker bar to rotate the grooved pulley tensioner arm counterclockwise to remove the bolt/pin. Slowly allow the arm to rotate clockwise to tension the fan drive belt.
- Ensure belts are routed correctly and centered on the flat pulleys.
- Then check that the belt ribs are positioned properly in the groove pulleys.

Installation & Inspection

As a final check, run the vehicle and make certain both belts are tracking properly on all pulleys. Pay particular attention to backside or flat pulleys in the drive. If the belt tracks to the edge of any pulley, inspect the drive for any signs of pulley or shaft misalignment and that the belt is centered on grooved pulleys. Ensure that no debris is present between the tensioner and its mounting surface that could cause misalignment of the tensioner pulley.