



TECH NOTE

AUTOMOTIVE – SYNCHRONOUS BELT DRIVE SYSTEM

CAUTION REQUIRED TO CORRECTLY INSTALL THE TENSIONER ASSEMBLY AND AVOID PREMATURE FAILURE

IMPORTANT:

- The hydraulic actuator that sits on the tensioner pulley is not fixed and can easily be dislodged from its correct, ready to be installed, packaged state. This can occur from dropping or fumbling the unit during installation. **Keeping the rubber sleeve over the bolt threads until the very moment that the tensioner is to be installed** can help in preventing the hydraulic mechanism from separating from the tensioner pulley.
- **DO NOT remove the pin before installation.** Removing the pin before it's required will cause the hydraulic actuator to separate or partially separate from the pulley. This will cause the piston of the actuator to either completely exit the hydraulic chamber or fully extend to the end of its stroke suddenly.



- **Do not use** if hydraulic actuator has become separated from the tensioner pulley. There is an internal spring that will also need to be repositioned which can lead to premature failure if not done precisely.

BULLETIN: TSB017_AU

PART NUMBER:

- TCKH1601

MAKE:

- Ford
- Mazda

YEAR:

- Ford: 2006-8/2011
- Mazda: 2006-10/2011

MODEL:

- Ford Ranger (PJ, PK) 2.5L (WLAT) TD
- 3.0L (WEAT) TD
- Mazda BT50 2.5L (WLAT) TD
- 3.0L (WEAT) TD



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- If the piston does exit the chamber completely **do not use**.
- If the piston of the hydraulic actuator projects suddenly without actually completely exiting the chamber, air flows into the chamber and causes sponge effect. You can check for sponge state by carefully forcing the piston to retract against a solid, flat structure (such as a metal pillar or concrete wall). You should not be able to move the piston at all, if there is even slight movement then sponge state has occurred. If this occurs, bleed the air from the pressure chamber using the bleed-out procedure described below.

CORRECT INSTALLATION PRACTICE IS CRUCIAL TO THE PROPER OPERATION OF THE TENSIONING SYSTEM; INCORRECT INSTALLATION CAN CAUSE ENGINE DAMAGE, VOIDING THE WARRANTY.

BLEED-OUT PROCEDURE:

- Install the tensioner to the engine.
 - Rotate the tensioner with a force of 39NM or less in an anticlockwise direction using an Allen wrench.
 - Then turn it back slowly.
 - Repeat this procedure several times.
 - Verify that the piston has resistance when it is in the most projected position. If there is no resistance, repeat the above procedure.
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- **Do not remove** set pin before installation of the belt and idler. Also ensure the tensioner bolts are tightened to specifications before releasing the pin. Refer to the OEM recommended installation procedure.
 - **T43009 Tensioner.** This tensioner unit is available separately from Gates.
 - If the piston has expelled before installation, it is likely that a bleed-out of air from the pressure chamber is required.



This is the correct state of the tensioner before installation.
DO NOT install if the tensioner assembly does not resemble the image above.

GATES AUSTRALIA PTY LTD

200 National Drive, Dandenong South VIC 3175
PH: +61 3 9797 9666 FAX: +61 3 9797 9600

WWW.GATES.COM/AU/EN.HTML
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