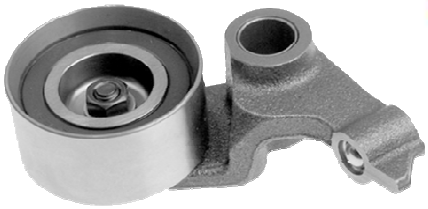
# KD469.22

## Assembly/disassembly recommendations

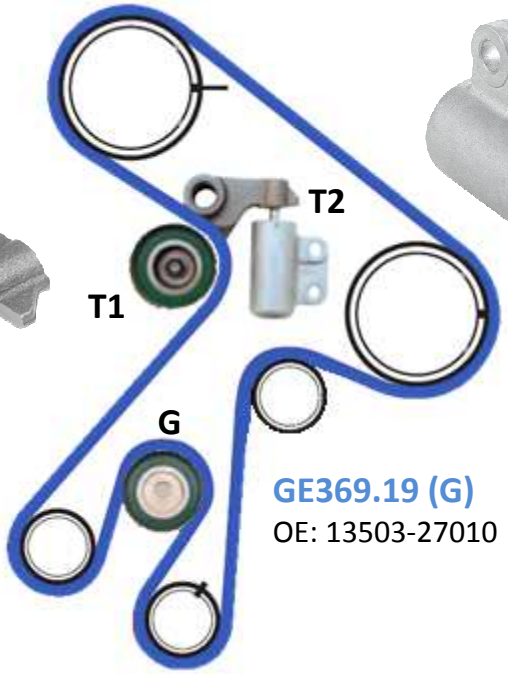
| TOYOTA: Avensis, Avensis verso, Corolla, Corolla verso, Picnic, Previa, RAV4 | ENGINES<br>2.0 D4-D | OE REFERENCE<br>See below |
|---|---|---|

## TIMING KINEMATICS OF THE KIT KD469.22

**GT369.26 (T1)**
OE: 13505-27010



**GT369.40 (T2)**
OE: 13503-27010




**BELT WITH TEETH**
**178 teeth**
OE: 13568-29035

**GE369.19 (G)**
OE: 13503-27010

## FEATURES OF THIS BELT

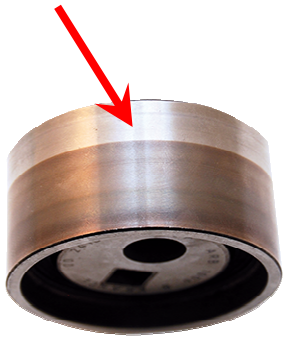
The roller tensioner GT359.26 is actuated by the hydraulic tensioner GT369.40.

The pulley GE369.19, wound on 2/3 of its surface, is particularly used. It is therefore important to check the **correct positioning of the belt** on the roller to avoid any slippage, as a bad load distribution can lead to a malfunction of the roller.

The timing belt is characterized by a white Teflon coating which gives good rigidity and high resistance to wear.

# COMMON PROBLEMS

## 1) BAD BELT POSITIONING

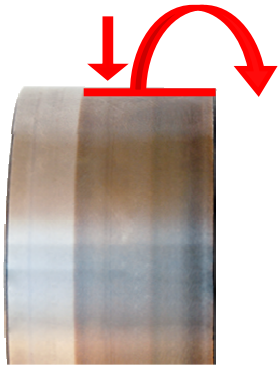


### Probable causes

**Tension adjustment**

- Misalignment of timing components or component wear
- Non-standard belt tension
- Roller tensioner GT369.26 not attached correctly

### Consequences



**Belt slippage**

Improper positioning of the belt may result in a misalignment of the load leading to abnormal bearing running. This anomaly affects other components of the timing system and can lead to in the short-term a seizure of bearings with balls being ejected.

## 2) MALFUNCTION OF HYDRAULIC TENSIONER

### Probable causes

Loss of oil in the damper rod.

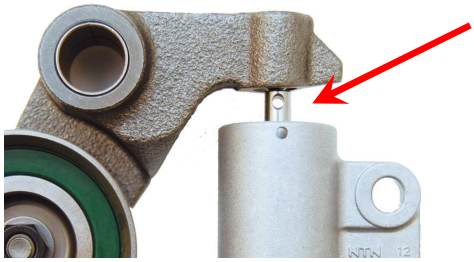
Air infiltration in the oil that can lead to a lack of damping and therefore jumps or destruction of teeth.

Damage to the hydraulic tensioner body.

### Consequences

**The hydraulic tensioner no longer ensures belt tension, nor its course.**

It is imperative to change the hydraulic tensioner as it plays a fundamental role.



In effect it controls the dynamics of the belt, it maintains its constant tension and compensates for changes in length due to temperature changes.

# REPLACEMENT

## Special tools

- Retaining tool for the crankshaft pulley - Toyota No. 09213-54015
- Extractor - Toyota No. 09950-50013

## Tightening torque

- Screw for tensioner GT369.26: **40 Nm**
- Bolts for hydraulic tensioner GT369.40: **21 Nm**
- Screw for pulley GE369.19: **46 Nm**
- Bolt for the crankshaft pulley: **180 Nm**

**Adhere to the tightening torques specified by the manufacturer.**

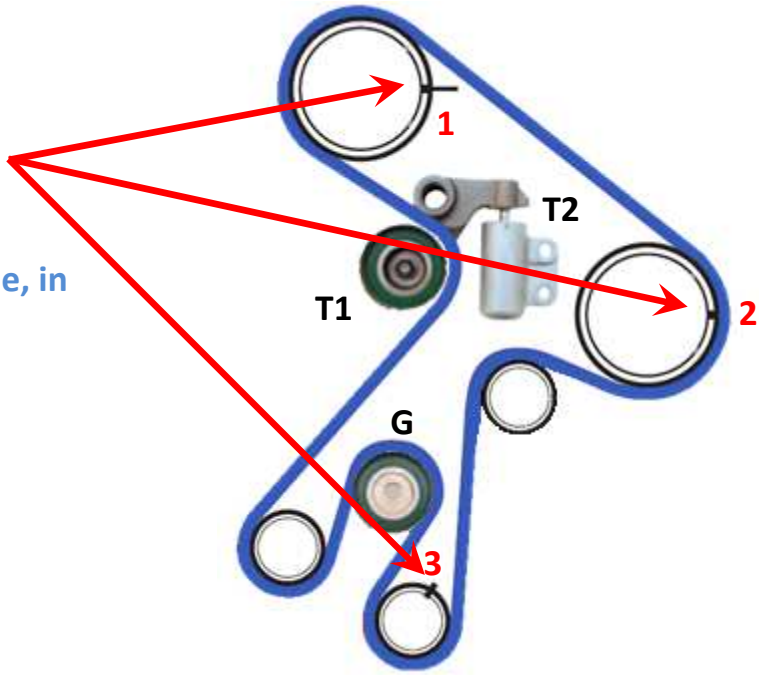
1) **Replace and tighten roller tensioners and tensioner.**
   The tensioner should move freely.

2) **Check the condition of sprockets**
   for the water pump and oil pump

3) **Make sure the timing marks are aligned (1, 2 and 3)**

4) **Fit the timing belt, with a cold engine, in the following order:**

- Camshaft sprocket
- High pressure pump sprocket
- Water pump sprocket
- Crankshaft sprocket
- Pulley → G (GE369.19)
- Oil pump sprocket
- Roller tensioner → T1 (GT369.26)




**Make sure the belt is tensioned on the side where there is no roller tensioner**

## 5) Install the hydraulic tensioner T2 (GT369.40)

- Insert the lower bolt of the tensioner and tighten by hand.
- Turn the tensioner clockwise
- Insert the upper bolt of the tensioner and tighten by hand.
- Tighten the 2 bolts evenly to **21 Nm**
- Remove the locking pin from the body of the hydraulic tensioner

**Be sure to not remove the locking pin before completing the installation.**

## 6) Turn the crankshaft two full turns

clockwise to bring it to TDC of the first cylinder.

## 7) Make sure the timing marks are aligned

If they are not, start the installation and tension adjustment over again.

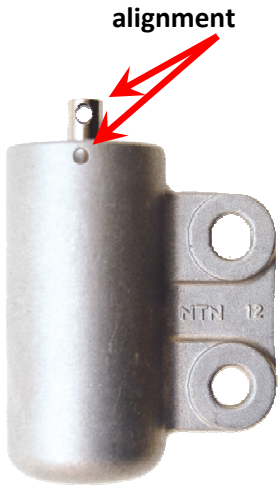
## 8) Remove the crankshaft pulley bolt

## 9) Reinstall the remaining parts in the reverse order of removal.

Tighten the crankshaft pulley bolt to **180 Nm.**

### In case of early unpinning: How to reposition the locking pin on the hydraulic tensioner?

- Slowly compress the piston into the body of the hydraulic tensioner using a press until the holes are aligned.
  This operation must be carried out in a vertical position.




**Do not exceed a force of 1000 kg.**

- Hold the piston in place by inserting the correct locking pin through the hole in the body of the hydraulic tensioner.

## Recommendations

The recommended replacement interval for the timing kit is 100,000 miles or 6 years.

During replacement, all components, roller tensioners and tensioners, should be replaced and not just the belt.

Do not store belts in the sun. Never bend, turn or twist a belt and do not force the belt on the pulleys.

Follow the manufacturers' assembly procedures as well as their indicated tightening torques.

Consult vehicle applications in our online catalogue: **http://lc.cx/catalog-ra**

Use this QR Code to find our online catalogue

**ALWAYS FOLLOW THE VEHICLE MANUFACTURER'S RECOMMENDATIONS!**