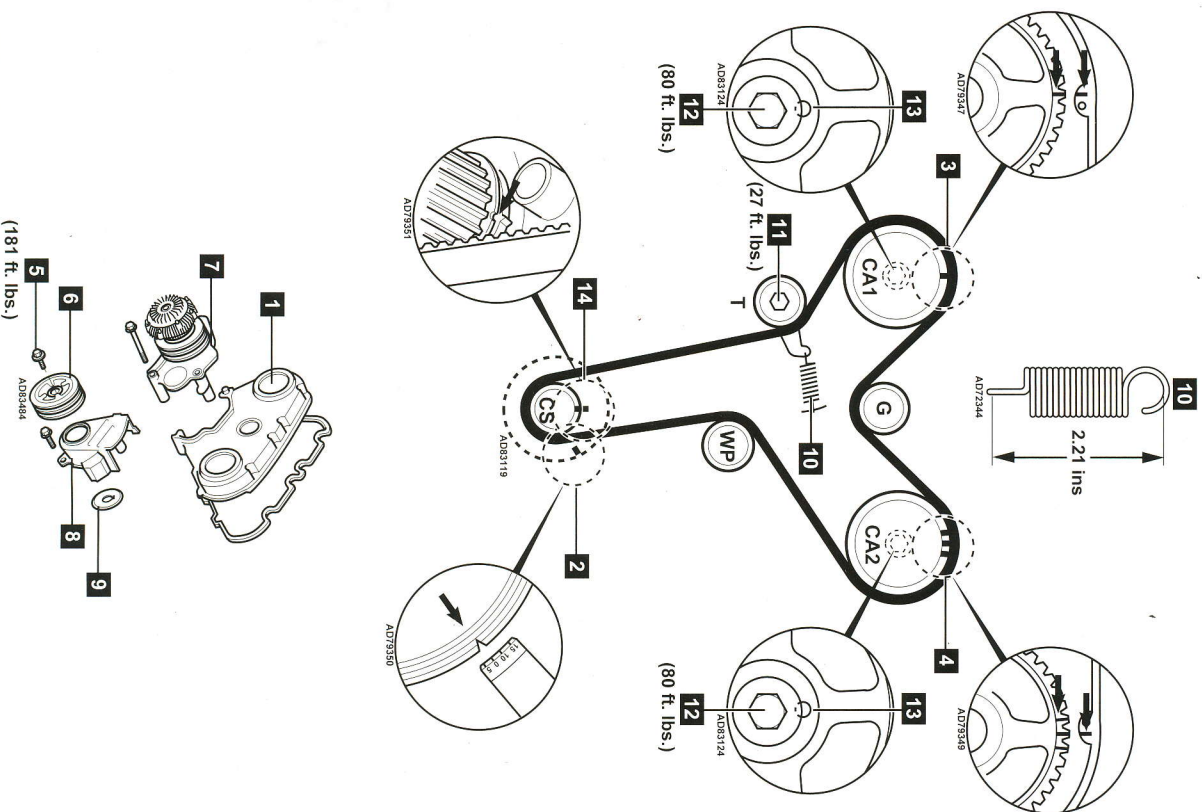


Model:	4Runner 3.0L V6	Year:	1988-92	Model:	Pickup 3.0L V6	Year:	1989-92
Engine Identification:	3VZ-E						



### Replacement Interval Guide

The OEM has not recommended a timing belt replacement interval for this engine. Typical trade practice indicates that, as a precaution, the timing belt should be replaced at 60,000 mile intervals. The previous use and service history of the vehicle must always be taken into account.

### Check For Engine Damage

**CAUTION:** This engine has been identified as a FREEWHEELING engine in which the possibility of valve-to-piston damage in the event of a timing belt failure may be minimal or very unlikely. However, a precautionary compression check of all cylinders should be performed.

### Labor Times - hrs

Remove & install With A/C 4.10  
+0.70

### Special Tools

- General purpose puller.

### Special Precautions

- Disconnect battery ground cable.
- Do NOT turn crankshaft or camshaft with timing belt removed.
- Remove spark plugs to ease turning engine.
- Turn crankshaft in normal direction of rotation (unless otherwise stated).
- Do NOT turn crankshaft via camshaft or other sprockets.
- Observe all tightening torques.

### Removal

1. Drain cooling system and remove:
  - Radiator.
  - Water outlet (including studs) and hose.
  - Cooling fan.
  - PAS pump (leave lines connected).
  - Air intake hoses.
  - Accessory drive belt(s).
  - Timing belt upper cover **1**.
2. Turn crankshaft clockwise until No.1 cylinder at TDC of compression stroke with timing marks **2**, **3** & **4** aligned.
  - 3. Remove:
    - Crankshaft pulley bolt **5**.
    - Crankshaft pulley **6** (using puller).
    - Fan pulley bracket **7**.
    - Timing belt lower cover **8**.
    - Timing belt guide washer **9**.
    - Timing belt guide washer **9**.
4. Unhook and remove tensioner spring **10**.
5. Loosen the tensioner bolt **11**, push tensioner pulley away from timing belt and lightly tighten bolt.
6. Remove the timing belt and tensioner.

**IMPORTANT:** To enhance timing belt system performance replace all tensioners and pulleys during timing belt replacement.

### ENG

### Installation

**NOTE:** Kit contents adhere to the latest OEM specifications but may differ visually from components found on the vehicle. Observe and follow any alignment and installation marks as required.

**NOTE:** Ensure engine is cold before installing timing belt.

1. Check tensioner pulley and guide pulley for smoothness of operation.
2. Check free length of tensioner spring **10** is 2.21 ins. Replace spring if necessary.
3. Install tensioner and spring **10**, ensuring spring is correctly connected.
4. Push tensioner pulley to left and lightly tighten bolt **11**.
5. Remove bolts **12** from camshaft sprockets CA1 & CA2 (leave sprockets on camshafts).
6. Remove dowel pins **13** from camshaft sprockets.
  - NOTE:** Do NOT turn the camshafts, dowel pin holes **13** should remain at 12 o'clock position.
7. Install camshaft sprocket bolts **12**, ensure bolt heads do NOT touch sprockets and sprockets are able to turn freely.
8. Ensure timing marks **3**, **4** & **11** are aligned.
9. Install the timing belt to the sprockets and pulleys in the following order:
  - Camshaft sprocket CA1.
  - Guide pulley.
  - Camshaft sprocket CA2.
  - Tensioner pulley.
  - Water pump pulley.
  - Crankshaft sprocket.

**NOTE:** Observe direction of rotation marks if re-using old belt.
10. Ensure timing belt taut between sprockets on non-tensioned side.
11. Temporarily install the crankshaft pulley bolt **5**.
12. Loosen the tensioner bolt **11** to allow the tensioner to operate.
13. Turn crankshaft two turns clockwise until No.1 cylinder at TDC of compression stroke, check timing marks **3**, **4** & **11** are aligned.
14. Torque the tensioner bolt **11** to 27 ft. lbs.
15. Remove bolts **12** from camshaft sprockets, check alignment of holes and insert dowel pins **13**.
  - NOTE:** Ensure sprockets do not become detached from camshafts.
16. Install bolts **12** and torque to 80 ft. lbs.
17. Remove the crankshaft pulley bolt and install the guide washer **9**.
18. Install the timing belt lower cover **8** and crankshaft pulley **6**.
19. Install the crankshaft pulley bolt **5** and torque to 181 ft. lbs.
20. Install components in reverse order of removal.
21. Refill cooling system.

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