

Model: **Transporter 2,4D**
 Year: **1990-01/95**
 Engine Code: **AAB**

Replacement Interval Guide

Volkswagen recommend check & adjust every 20,000 miles (replace if necessary) and replacement every 80,000 miles. The previous use and service history of the vehicle must always be taken into account. Refer to Timing Belt Replacement Intervals at the front of this manual.

Check For Engine Damage

CAUTION: This engine has been identified as an **INTERFERENCE** engine in which the possibility of valve-to-piston damage in the event of a timing belt failure is **MOST LIKELY** to occur. A compression check of all cylinders should be performed before removing the cylinder head.

Repair Times - hrs

Remove & install 3,70

Special Tools

- Injection pump sprocket locking pin - No.2064.
- Tension gauge - No.210.
- Camshaft setting bar - No.2065A.
- Sprocket holding tool - No.3036.
- Crankshaft damper locking tool - No.3248.

Special Precautions

- Disconnect battery earth lead.
- DO NOT turn crankshaft or camshaft when timing belt removed.
- Remove glow plugs to ease turning engine.
- Turn engine in normal direction of rotation (unless otherwise stated).
- DO NOT turn engine via camshaft or other sprockets.
- Observe all tightening torques.
- Check diesel injection pump timing after belt replacement - see Autodata Diesel Injection Manual.

Removal

1. Hinge radiator grille forward.
2. Remove:
 - Auxiliary drive belt(s).
 - Injection pump belt cover.
 - Cylinder head cover.
 - Timing belt upper cover 1.
3. Turn crankshaft clockwise to TDC on No.1 cylinder.
4. Ensure flywheel timing marks aligned 4. Ensure injection pump sprocket timing mark aligned 3.
5. Lock injection pump sprocket. Use tool No.2064 5.
6. Hold camshaft rear sprocket. Use tool No.3036. Remove bolt 6.

7. Remove camshaft rear sprocket and injection pump belt.
8. Lock crankshaft damper. Use tool No.3248 11. Remove crankshaft damper centre bolt 7.
9. Ensure crankshaft at TDC on No.1 cylinder 4.
10. Remove:
 - Crankshaft damper bolts (4 bolts).
 - Crankshaft damper 9.
11. Fit setting bar No.2065A to rear of camshaft 8. Centralise camshaft using feeler gauges.
12. Slacken water pump bolts 12. Turn water pump clockwise to release tension on belt.
13. Remove timing belt lower cover 2. Remove timing belt.

Installation

1. Ensure crankshaft at TDC on No.1 cylinder 4.
2. Ensure camshaft setting bar fitted correctly 8.
3. Slacken camshaft sprocket bolt 10. Tap sprocket from behind to loosen it from taper.
4. Fit timing belt in clockwise direction, starting at crankshaft sprocket.
5. Fit timing belt lower cover 2.
6. Attach tension gauge to belt at 7. Tool No.210.
7. Turn water pump anti-clockwise until tension gauge indicates 12-13 units. Tighten water pump bolts to 20 Nm 12.
8. Ensure crankshaft at TDC on No.1 cylinder.
9. Hold camshaft sprocket. Use tool No.3036. Tighten bolt to 85 Nm 10.
10. Remove camshaft setting bar 8.
11. Fit crankshaft damper 9. Fit four bolts. Tighten bolts to 20 Nm.
12. Fit crankshaft damper centre bolt 7. Lock crankshaft damper. Use tool No.3248 11. Tighten bolt to 460 Nm.
13. Remove locking tool.
14. Fit camshaft rear sprocket and injection pump belt. Ensure timing marks aligned 3.
15. Tighten bolt 6 until sprocket can just be turned by hand.
16. Attach tension gauge to belt at 7. Tool No.210.
17. Move injection pump on mountings until tension gauge indicates 12-13 units.
18. Hold camshaft rear sprocket. Use tool No.3036. Tighten bolt to 100 Nm 6.
19. Remove locking pin from injection pump sprocket 5.
20. Check injection pump timing.
21. Install components in reverse order of removal.

