



VOLKS CITY
BEECH AVENUE
CATTEDOWN
PLYMOUTH PL4 0QQ

Telephone: 01752 667007
Fax: 01752 663399
Email: mail@volkscity.com

Important note

Important note

The intervals and procedures given are subject to alteration by the manufacturer at any time. Check the regularly updated Timing Belts section on our website to ensure that you are kept informed of any changes that may occur between issues of the Autodata CD.

<http://www.autodata-cd.com>

Timing belt replacement intervals

Where possible the recommended intervals have been compiled from vehicle manufacturers' information. In a few instances no recommendation has been made by the manufacturer and the decision to replace the belt must be made from the evidence of a thorough examination of the condition of the existing belt.

Apart from the visible condition of the belt, which is explained fully in the General Instructions/Toothed Timing Belts section, there are several other factors which must be considered when checking a timing belt:

1. Is the belt an original or a replacement.
2. When was the belt last replaced and was it at the correct mileage.
3. Is the service history of the vehicle known.
4. Has the vehicle been operated under arduous conditions which might warrant a shorter replacement interval.
5. Is the general condition of other components in the camshaft drive, such as the tensioner, pulleys, and other ancillary components driven by the timing belt, typically the water pump, sound enough to ensure that the life of the replacement belt will not be affected.
6. If the condition of the existing belt appears good, can you be satisfied that the belt will not fail before the next check or service is due.
7. If the belt does fail, have you considered the consequences. If the engine is an INTERFERENCE type then considerable expensive damage may well be the result.
8. The cost of replacing a belt as part of a routine service could be as little as 5 to 10% of the repair cost following a belt failure. Make sure your customer is aware of the consequences.
9. If in doubt about the condition of the belt - RENEW it.
10. Refer to the Toothed Timing Belts/Service Replacement section for further information relating to arduous or adverse operating conditions, inspection and service replacement.

Replacement Interval Guide

Replacement Interval Guide

Audi recommend:

A4:

Replacement every 80,000 miles.

A6:

Replacement every 80,000 miles or 8 years.

The previous use and service history of the vehicle must always be taken into account.

Check For Engine Damage

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

Repair Times - hrs

Remove and install	4,95
--------------------	------

Special Tools

Special Tools

- Crankshaft locking tool - No.T40026.
- Camshaft locking tools - No.T40030.
- Camshaft sprocket adjusting tool - No.T40028.
- Tensioner locking pin - No.T40011.
- PAS pump pulley locking tool - No.3212.
- Two-pin wrench - No.3387.
- Support guides - No.3369.
- Auxiliary drive belt tensioner tool - No.3299.

Special Precautions

Special Precautions

- Disconnect battery earth lead.
- DO NOT turn crankshaft or camshaft when timing belt removed.
- Remove spark 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.

Removal

Removal

1. Raise and support front of vehicle.
2. Disconnect exhaust pipe for auxiliary heater from engine undershield (if fitted).
3. Remove:
 - Engine undershield.
 - Air filter cover.
 - Air intake pipe between front panel and air filter.
 - LH engine cover.
 - Front bumper.
 - Front panel bolts [1] .

4. Install support guides No.3369 in front panel [2] .
5. Remove front panel bolts [3] .
6. Slide front panel forward.
7. Refit upper rear bolts in rear holes to steady front panel.
8. Remove:
 - Front engine cover.
9. Turn auxiliary drive belt tensioner clockwise. Use tool No.3299.
10. Remove auxiliary drive belt.
NOTE: Mark direction of rotation on auxiliary drive belt with chalk.
11. Remove:
 - Auxiliary drive belt tensioner.
 - PAS pump pulley. Use tool No.3212.
 - Crankshaft pulley bolts [4] .
 - Crankshaft pulley [5] .
- NOTE: Thrust washer [6] only fitted to crankshaft sprocket with part No. 06C 105 063 A.**
12. Remove:
 - Timing belt covers [7] .
 - Rear engine cover.
13. Move coolant expansion tank to one side. DO NOT disconnect hoses.
14. Remove:
 - Air filter housing and hoses.
 - Dipstick and tube.
 - Air hose from RH cylinder head.
 - Ignition coils.
 - Both rear crankcase breather hoses.
 - Both cylinder head covers.
15. Turn crankshaft clockwise until camshaft lobes for No.3 cylinder (CA1 & CA2) angled upwards [8] .
16. Fit locking tool to camshafts. No.3 cylinder [9] . Tool No.T40030.
17. Fit locking tool to camshafts. No.4 cylinder [10] . Tool No.T40030.
**NOTE: Rock crankshaft slightly to ensure locking tools located correctly.
 Tighten locking tools no more than 10 Nm.**
18. Disconnect wiring from engine coolant blower run-on motor (if fitted).
19. Remove blanking plug from cylinder block [11] .
NOTE: Blanking plug situated on LH side rear of cylinder block.
20. Screw in crankshaft locking tool. Tool No.T40026.
21. Remove circlip and centre blanking cap from each camshaft sprocket.
22. Slacken bolt of each camshaft sprocket slightly [12] .
23. Turn tensioner pulley (T1) anti-clockwise until holes in pushrod and tensioner body aligned. Use 8 mm Allen key [13] .
24. Retain pushrod with locking pin through hole in tensioner body [14] . Tool No.T40011.
25. Slacken tensioner pulley bolt (T2) [15] .
26. Remove timing belt.
NOTE: Mark direction of rotation on belt with chalk if belt is to be reused.

Installation

Installation

1. Lightly tighten bolt of each camshaft sprocket [12] . Ensure camshaft sprockets can turn freely but not tilt.
2. Fit timing belt in clockwise direction, starting at crankshaft sprocket.
NOTE: Check edge of timing belt aligned with edge of sprockets.
3. Turn tensioner pulley (T2) clockwise until tool aligned with centre of water pump pulley [16] . Tool No.3387.
4. Hold tool and tighten tensioner pulley bolt [15] . Tightening torque: 45 Nm.
5. Install torque wrench to hexagon of tensioner pulley (T1) [13] .
6. Apply clockwise torque of 45 Nm to tensioner pulley (T1) [13] .
7. Turn tensioner pulley (T1) slowly anti-clockwise until locking pin can be removed [14] .
8. Remove locking pin from tensioner body to release pushrod [14] .
9. Tension timing belt in clockwise direction to 25 Nm [13] .
10. Remove torque wrench.

11. Fit adjusting tool to camshaft sprocket CA4. Tool No.T40028.
12. Turn camshaft sprocket clockwise and apply a torque of 10 Nm [17] .
13. Fit adjusting tool to camshaft sprocket CA1. Tool No.T40028.
14. Turn camshaft sprocket clockwise and apply a torque of 10 Nm [18] .
15. Tighten bolt of each camshaft sprocket [12] . Tightening torque: 100 Nm.
16. Fit centre blanking cap and circlip to each camshaft sprocket.
17. Remove:
 - Camshaft locking tools [9] & [10] .
 - Crankshaft locking tool [11] .
18. Fit blanking plug. Tightening torque: 25 Nm.
19. Fit crankshaft pulley.
NOTE: Ensure notches aligned with tab on crankshaft sprocket [19] .
20. Tighten crankshaft pulley bolts to 23 Nm [4] .
21. Install components in reverse order of removal.

