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Vauxhall Vectra Owners Network

How-to replace a Vectra B 2.0 16v X20XEV cambelt

Part of the How-to series produced by VVON.co.uk

Credit to & PDF of original How-to by Leeky

Disclaimer

The owners of VVON accept no responsibility for any damage to any person or any vehicle by following or using the information contained within this how-to Guide.

Before you start

Contained in this how-to is the information required to change your cambelt. It is not a substitute for experience, and you should not attempt to do this yourself unless you are absolutely sure of your abilities to do the job. Below is pretty much all the information that you should need in order to do the job correctly, using the correct tooling.

Replacement Interval Guide

Vauxhall recommend replacement as follows:

Replacement every 40,000 miles or 4 years, whichever occurs first (tensioner pulley must also be replaced).

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

Labour time

To remove and replace: 1.2 hrs
Skill level: Intermediate to advance.

Special Tools

1. Kent Moore No.KM-853 Camshaft sprocket locking tool
2. Kent Moore No.KM-6001 Engine support tool
3. Kent Moore No.KM-909-B Engine alignment tool

This how-to assumes you have the correct tools or equivalent as required to change the cambelt.

Suggestions

1. It is recommended that you also replace the water pump whilst changing the cambelt.
2. Disconnect battery earth lead.
3. DO NOT turn crankshaft or camshaft when timing belt removed.
4. Remove spark plugs to ease turning engine.
5. Turn engine in normal direction of rotation (unless otherwise stated).
6. DO NOT turn engine via camshaft or other sprockets.
7. Observe all tightening torques.

Removal of cambelt

WARNING: Certain engines require modification to tensioner pulley/guide pulleys due to possible failure. Refer to dealer.

1. Remove: Air filter housing.
2. Raise and support front of vehicle.
3. Remove RH front wheel.
4. Mark direction of rotation on auxiliary drive belt with chalk.
5. Turn auxiliary drive belt tensioner clockwise to release tension on belt. Use ring spanner.
6. Insert 4 mm pin through hole in tensioner and into mounting bracket [1]
7. Remove: Auxiliary drive belt, Engine torque bracket [2] & Timing belt cover(s) [3]
8. Fit engine support and alignment tools. Tool Nos.KM-6001/KM-909-B.
9. Remove: Auxiliary drive belt tensioner. & RH engine mounting and bracket.
10. Turn crankshaft clockwise until timing marks aligned [4]
11. Remove: Crankshaft pulley bolts [5] & Crankshaft pulley [6]
12. Ensure crankshaft timing marks aligned [7]
13. Timing marks on camshaft sprockets must be aligned with notches in timing belt rear cover [8]
14. Lock camshaft sprockets. Use tool No.KM-853 [9]
15. Slacken tensioner bolt [10]
16. Turn tensioner clockwise until pointer on LH stop: Use Allen key [11]
17. o Type 1 - [12]
18. o Type 2 - [16]
19. Lightly tighten tensioner bolt [10]
20. Remove timing belt.

NOTE: It is recommended that at this point you also replace the water pump as a precautionary measure.

Installation of new cambelt

NOTE: Ensure lug on water pump aligned with corresponding lug on cylinder block [20]

1. Ensure timing marks aligned [7] & [8] .

NOTE: If camshaft sprockets removed: Ensure correct dowel location of sprockets.

2. Fit timing belt in anti-clockwise direction, starting at crankshaft sprocket. Ensure belt is taut between sprockets.
3. Slacken tensioner bolt [10]
4. Turn tensioner anti-clockwise until pointer on RH stop: Use Allen key [11]
   - Type 1 - [13]

- Type 2 - [17]

5. Lightly tighten tensioner bolt [10]
6. Remove locking tool [9]
7. Turn crankshaft two turns clockwise. Ensure timing marks aligned [7] & [8]
8. Lock camshaft sprockets. Use tool No.KM-853 [9]
9. Slacken tensioner bolt [10]
10. Turn tensioner clockwise until pointer aligned as follows:
    - Type 1:
    - New belt - 'V' notch in bracket [14]
    - Used belt - LH edge of 'V' notch [15]
    - Type 2:
    - New belt - 'NEW' notch in bracket [18]
    - Used belt - 'USED' notch in bracket [19]
11. Tighten tensioner bolt to 20 Nm [10]
12. Remove locking tool [9]
13. Turn crankshaft two turns clockwise. Ensure timing marks aligned [7] & [8]
14. Check pointer aligned as follows:
    - Type 1:
    - New belt - 'V' notch in bracket [14]
    - Used belt - LH edge of 'V' notch [15]
    - Type 2:
    - New belt - 'NEW' notch in bracket [18]
    - Used belt - 'USED' notch in bracket [19]
    - **If not: Repeat tensioning procedure**.
15. Install components in reverse order of removal.

NOTE: Observe direction of rotation marks on auxiliary drive belt when refitting. It is recommended you replace this belt when you change the cambelt.

16. Tighten crankshaft pulley bolts to 20 Nm [5]
17. Tighten engine torque bracket bolts to 60 Nm.