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Conversion Calculator

1999 Volvo V70 XC AWD L5-2.4L Turbo VIN 56 B5254T[Vehicle Level](#) → [Engine, Cooling and Exhaust](#) → [Engine](#) → [Timing Belt](#) → [Service and Repair](#) ←

Service and Repair

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REPLACING TIMING BELT/IDLER PULLEY/BELT TENSIONER

Special Tools: 999 5433

Note: As the illustrations in the information are used for different model years and/or models, certain variations may occur. However, the essential information in the illustrations is always correct.

Remove components

Caution! Remove the ignition key from the ignition switch before beginning work.

Note! Crankshaft or camshaft must not be rotated under any circumstances more than is listed below. Failure to follow these instructions may cause damage to the valves.

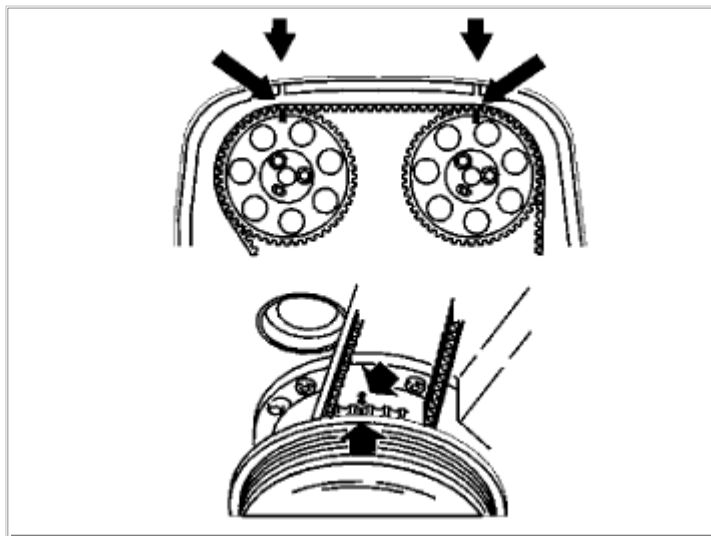
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Remove:

- upper timing belt cover.
- servo reservoir and expansion tank.
- Lift up and place on top of engine.

Note! Take care not to spill servo oil from the bleed hole in the cap.
Place paper wipe around the reservoir and then cover with a plastic bag as protection.
Spilled servo oil is highly inflammable.

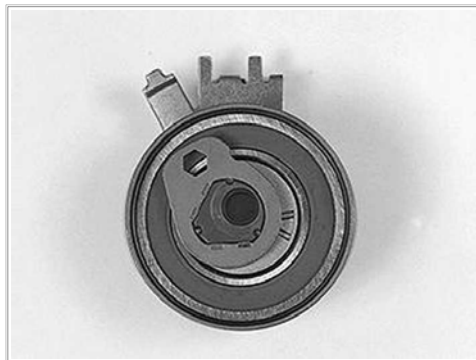
- auxiliaries belt.
- front camshaft belt cover.


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Position engine according to marking

Raise the car.

- Remove right front wheel.
- Remove the nut for the cover in the fender liner.
- Install the upper camshaft belt cover.
- Turn crankshaft clockwise until the markings on the crankshaft and camshaft pulley correspond.
- Turn the crankshaft a further 1/4 turn clockwise and then back again until the markings correspond. The markings are illustrated.
- Remove upper camshaft belt cover.

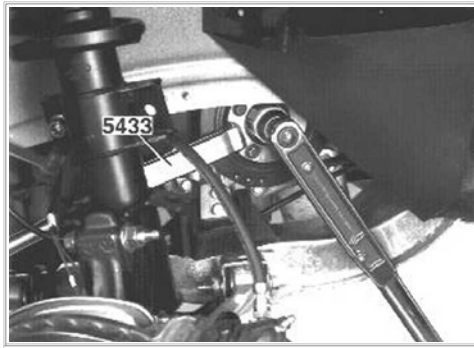

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Removing timing belt

Slacken off belt tensioner

- Slacken off belt tensioner center screw slightly.
- Hold the center screw still and turn the tensioner eccentric clockwise with a **6 mm (15/64")** allen key to "10 o'clock".
- Remove the camshaft belt from the belt tensioner, camshaft pulley and idler pulley

and the water pump.



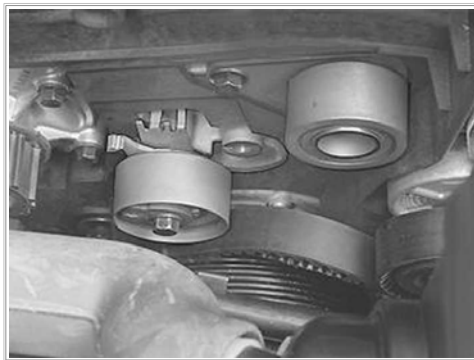
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Remove vibration damper

Raise the car

- Remove vibration damper. Use counterhold 999 5433. Work the vibration damper loose.
- Remove camshaft belt



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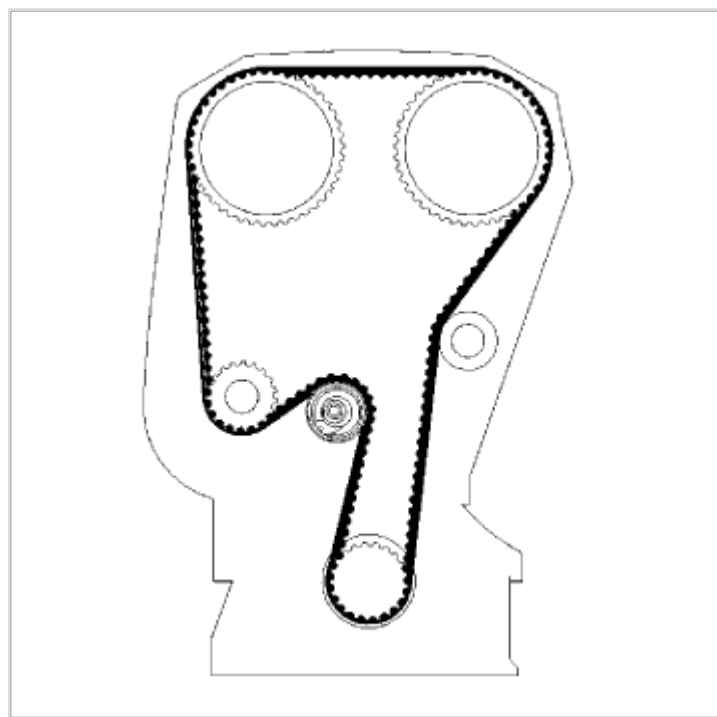
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Checking the belt tensioner and idler pulleys

Check bearing wear:

- Replace if necessary. Idler pulley:
- Spin the idler pulley and listen for noise.
- If replacing with a new idler pulley, tighten to **24 Nm (18 lb ft)** Tension pulley:
- When replacing, screw the tension pulley into place with the center screw.
- Screw in the center screw by hand.
- Ensure that the tensioner fork is centered over the cylinder block rib.
- Ensure that the allen hole on the eccentric is at "10 o'clock".

Installing camshaft belt

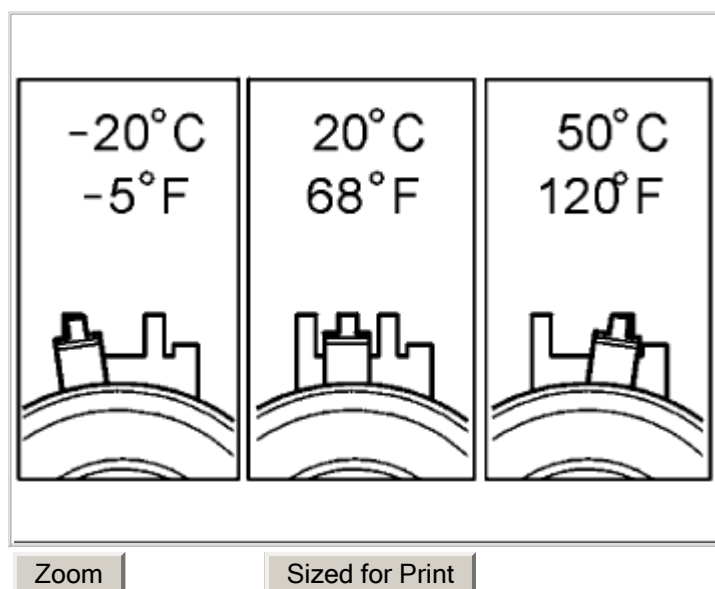
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Install the new belt as follows:

- Install new camshaft belt over crankshaft pulley wheel.
- Install vibration damper. Tighten the center nut to **180 Nm (133 lb ft)** Use counterhold 999 5433. Remove counterhold and install new screws. Tighten the screws to **25 Nm (18 lb ft) and angle tighten 30 degrees**

Then install the new belt in the following order:

1. idler pulley.
2. intake camshaft pulley.
3. exhaust camshaft pulley.
4. water pump.
5. belt tensioner.



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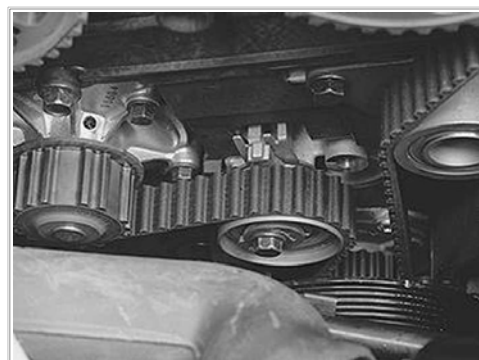
Tighten timing belt

This adjustment is always carried out on a cold engine.

Suitable temperature is approximately 20°C/68°F.

At higher temperatures, for example with engine at operating temperature or at higher ambient temperature, the needle is further to the right.

The illustration shows the needle position when adjusting the camshaft belt tensioner at different engine temperatures.



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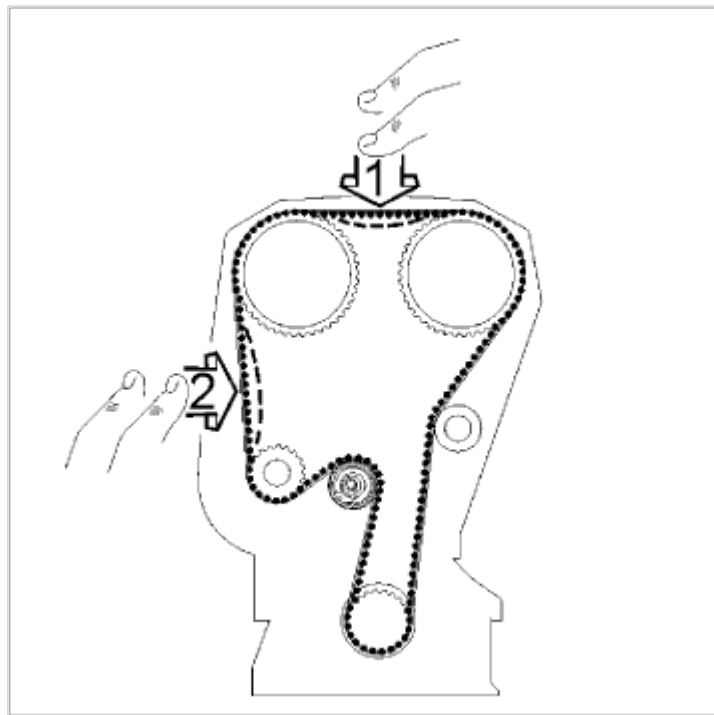
Tighten the timing belt as follows:

- Turn crankshaft clockwise carefully until the camshaft belt is tensioned.
- The belt must be tensioned between intake camshaft pulley, idler pulley and crankshaft.
- Hold the belt tensioner center screw secure and turn the belt tensioner excenter counter clockwise until the tensioner needle passes the marked position.
- Then turn the eccentric back so that the needle reaches the marked position corresponding to the relevant temperature.
- At **20°C (68°F)** the needle must be centered in the window.
- See figure above.

- Secure the eccentric and tighten the center screw to **20 Nm (15 lb ft)**

Check that the needle is in the correct position

If this is not the case a new alignment must be carried out.



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Check

Checking markings:

- Press the belt to see that the indicator on the tensioner moves easily.
- Install the upper timing belt cover.
- Turn crankshaft 2 turns and check that the markings on the crankshaft and camshaft pulley correspond.
- Check that the indicator on the belt tensioner is within the marked area.

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Reinstall components

Reinstall

- Front camshaft belt cover. Tighten to **12 Nm (8.8 lb ft)**
- Upper camshaft belt cover. Tighten to **8 Nm (6 lb ft)**
- Auxiliaries belt.
- Servo reservoir. Wipe clean.

Check the level and top up as necessary.

- Expansion tank.

Note! Ensure that hoses are correctly positioned.

- Wipe clean and check engine compartment.
- Cover in fender liner.
- Front wheel.

Checking work

Note! Write the date and mileage on the decal and stick it on the camshaft belt cover.

Function test:

- Test drive engine.
- Wipe dry steering wheel and gear selector lever.

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