

Replacing the timing belt

Special tools: [999 5433](#) , [999 5456](#)

Removing the timing belt

Note! As the illustrations in this service information are used for different model years and / or models, some variation may occur. However, the essential information in the illustrations is always correct.

Preparation

Caution! Remove the ignition key.

Remove

- the screw holding the engine stabiliser brace to the bracket on the engine
- the screws holding the engine stabiliser brace to the suspension turrets
- the engine stabiliser brace.

Applies only to B6xx4T engines:

Remove the plastic pipes between the turbocharger (TC) and charge air cooler (CAC) and between the air cleaner (ACL) and turbocharger (TC). Put them to one side.

Remove the clamp from the intake manifold for the turbocharger (TC) for cylinders 1, 2 and 3. Turn the upper section of the pipe towards the bulkhead.

Relieve the load from the belt tensioner.

Remove the auxiliaries belt.

Remove the upper timing belt cover.

Remove the front timing belt cover.

For cars with chassis numbers **203779-**, see

[Timing cover front, replacing](#) .

Lift up the servo reservoir and place it on top of the engine.

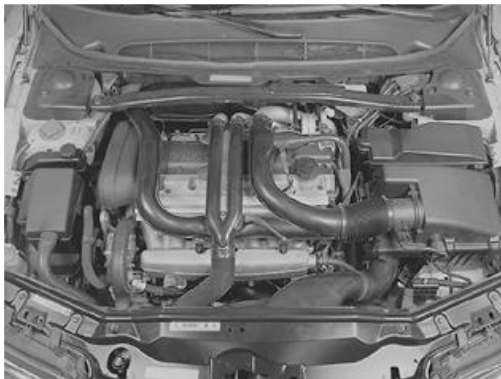
Note! Ensure that the oil does not leak from the ventilation hole in the filler cap.

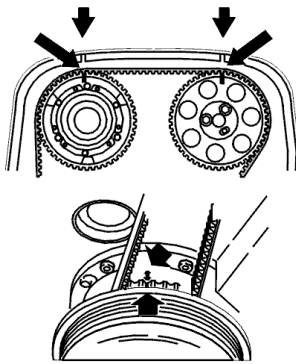
Seal the hose between the expansion tank and the radiator. Disconnect the hose at the tank.

Lift up the expansion tank and place it on top of engine.

Raise the car.

Remove





- the right front wheel
- the plastic nuts on the cover in the wing liner.

Install the upper timing belt cover.

Turn the crankshaft clockwise until the markings on the crankshaft and camshaft pulleys correspond.

Turn the crankshaft a further 1/4 turn clockwise. Then turn back counter-clockwise until the markings correspond.

Remove the upper timing belt cover.

Remove the 4 vibration damper screws.

Counterhold the crankshaft central nut.

Remove

- the vibration damper
- the auxiliaries belt
- the belt cover behind the crankshaft pulley for the auxiliaries belt.

Spray universal oil or similar around the rubber sleeve on the underside of the oil pump.

Remove the rubber sleeve.

Removing the timing belt

Slacken off the belt tensioner

Slacken off the centre screw for the belt tensioner slightly.

Hold the centre screw still. Turn the tensioner eccentric **counter-clockwise** using a 6 mm Allen key. Turn to 10 o'clock.

Unhook and remove the timing belt.

Caution! Do not turn the camshafts or the crankshaft when the timing belt has been removed.

Checking the tensioner pulley and idler pulley

Check bearing wear:

Spin the idler pulley and listen for noise. If replacing with a new idler pulley, tighten to **24 Nm**.

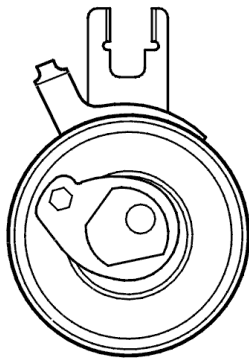
Spin the tension pulley and listen for noise.

When replacing, screw the tension pulley into place using the centre screw.

Screw in the centre screw by hand.

Ensure that the tensioner fork is centred over the cylinder block rib / bracket.

Ensure that the Allen hole on the eccentric is at "10 o'clock".



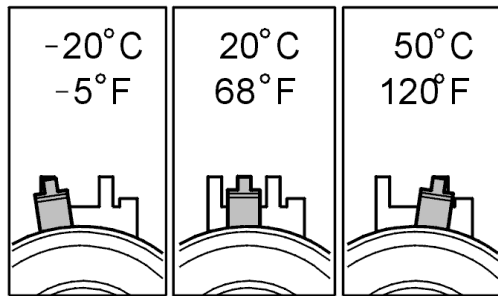
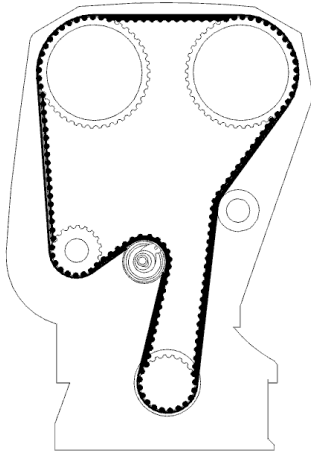
Installing the timing belt

Installing the timing belt

Install the belt in the following order:

- crankshaft
- the idler pulley
- intake cam
- exhaust cam
- water pump
- tension pulley.

Note! The variable valve timing unit on B6304S engines does not have a return spring. The unit is easily dislodged when reinstalling the timing belt.



Tensioning the timing belt

This adjustment is carried out on a cold engine. A suitable temperature is approximately 20 ° C / 68 ° F.

At higher temperatures (with the engine at operating temperature or a high outside temperature for example) the indicator is further to the right.

The illustration shows the position of the indicator when aligning the timing belt tensioner at different temperatures.

Carefully turn the crankshaft clockwise until the timing belt is tensioned. The belt must be in tension between the intake camshaft pulley, the idler pulley and the crankshaft.

Hold the belt tensioner centre screw secure. Turn the belt tensioner eccentric **clockwise** until the tensioner indicator passes the marked position.

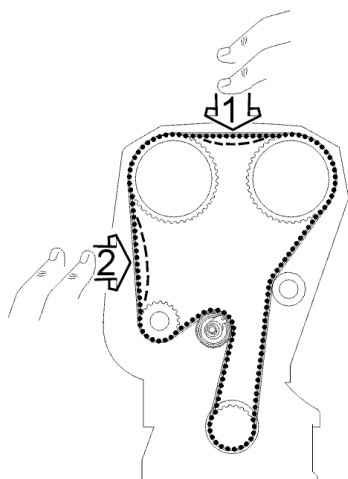
Then turn the eccentric back so that the indicator reaches the marked position in the centre of the window.

Hold the eccentric secure. Tighten the centre screw to **25 Nm**.

Check that the indicator is in the correct position.

Check

Press the belt to check that the indicator on the



tensioner moves easily.

Install the upper timing belt cover.

Turn the crankshaft 2 turns. Check that the markings on the crankshaft and camshaft pulley correspond.

Check that the indicator on the belt tensioner is within the marked area.



Finishing

Install the auxiliaries belt around the pulley on the crankshaft.

Install

- the rubber sleeve on the underside of the oil pump
- the vibration damper. Use **new screws**. Tighten to **35 Nm**. Angle-tighten **50°**. Use the crankshaft centre nut as a counterhold
- the plastic nuts for the cover in the right-hand wing liner
- the right front wheel. See [Installing wheels](#).

Lower the car.

- the front timing belt cover.
For cars with chassis numbers **203779-**, see [Timing cover front, replacing](#).



Tension the auxiliaries belt.

- the expansion tank
- the hose between the expansion tank and the radiator. Remove the lock grip pliers
- the servo reservoir
- the upper timing belt cover.

Applies only to B6xx4T engines:

Twist the intake pipe for the turbocharger for cylinders 1, 2 and 3 into position. Tighten the clamp.

Install the plastic hoses between the turbocharger (TC) and the charge air cooler and between the air cleaner (ACL) and the turbocharger (TC).

Tighten the hose clamps.



- the engine stabiliser brace. Tighten to **50 Nm**
- the screw holding the engine stabiliser brace to the bracket on the engine. Tighten to **80 Nm**.

Final check

Check and top up if required

- coolant level
- the servo fluid level.

Test drive the engine.