

AutoShack Weekly Tip



- Anyone who has ever had a breakdown due to a 'timing belt' failure can tell you how expensive a repair it can be. Never mind the inconvenience.
- Before we go any further, it's important to understand that some vehicles use a timing belt while others use a timing chain. Most people say timing belt although it may actually be a chain.
- When a timing belt breaks the engine can not run. In order to understand why let's first talk about what a timing belt does.
- **What does a timing belt do?**
- The timing belt connects the crankshaft to the camshaft. The crankshaft and the camshaft must be connected for the engine to run.
- The camshaft in turn controls the intake and exhaust valves which also control air intake and exit.
- Thus it is easy to see why a break in timing belt/chain prevents the engine from running.

Photo showing timing belt, crankshaft and camshaft

Camshaft

Camshaft

Timing belt

Crankshaft

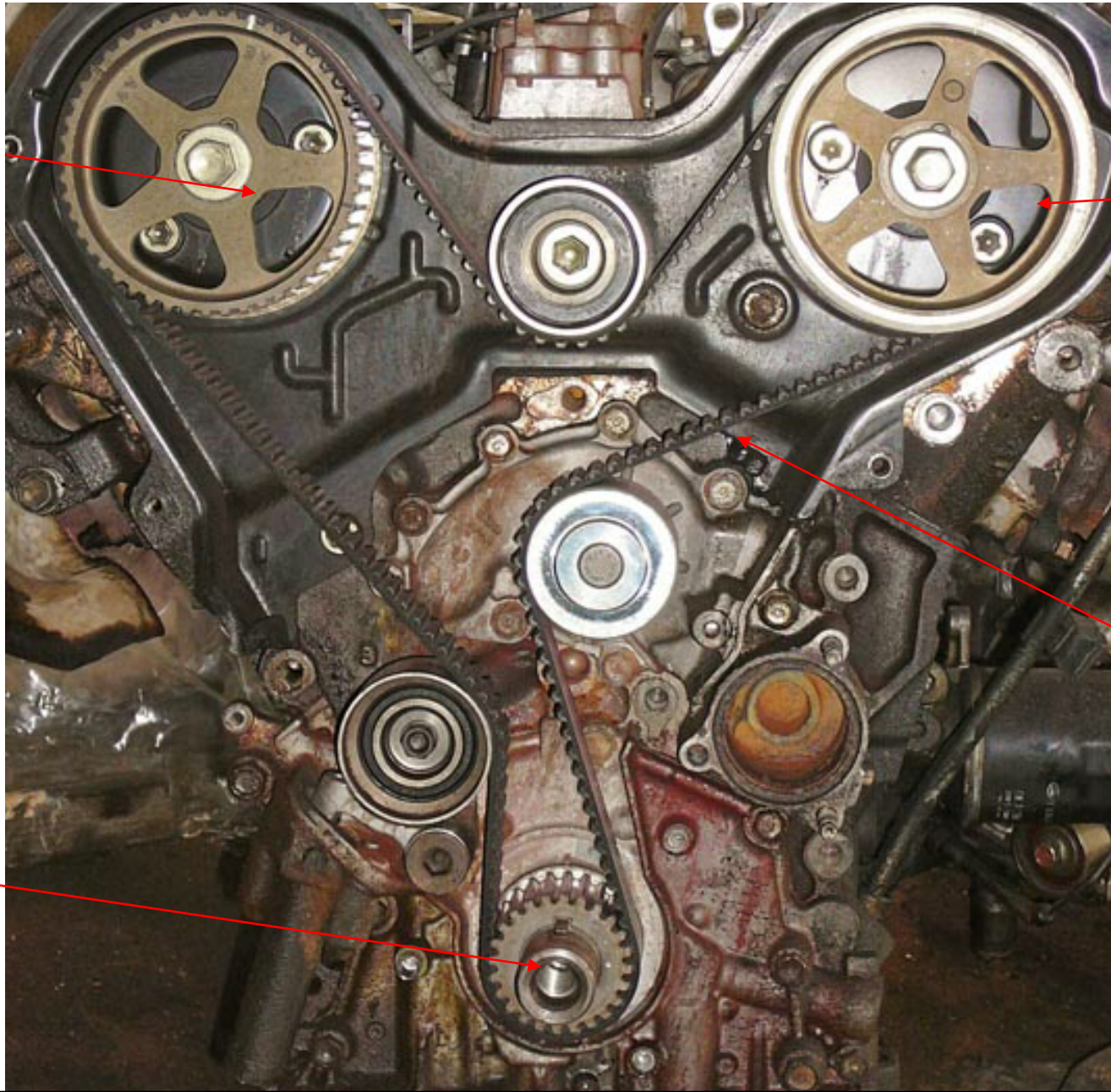
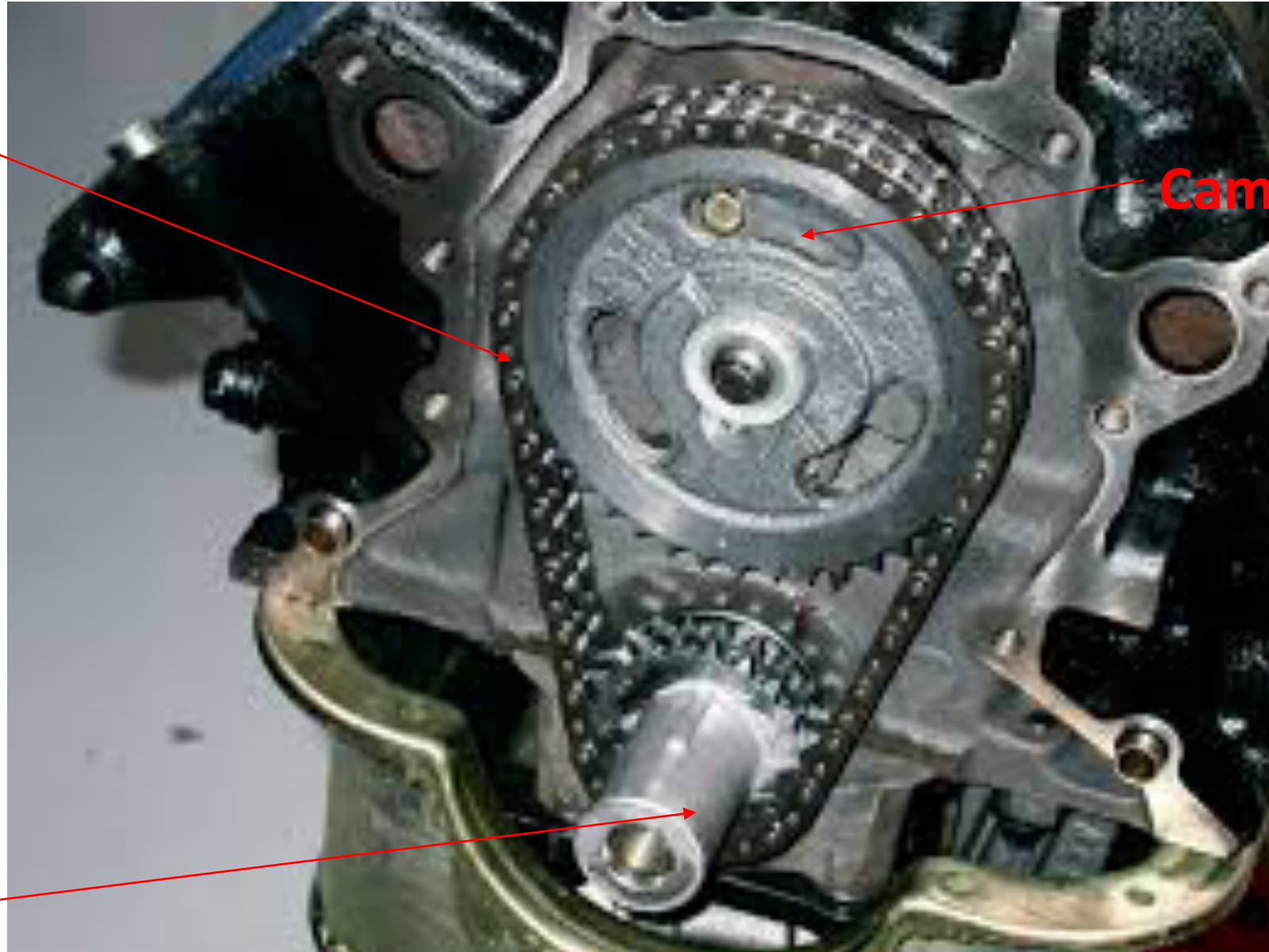


Photo showing timing chain, crankshaft and camshaft

Timing chain

Camshaft

Crankshaft



- **How can I tell my timing belt is failing ?**

- Ticking and rattling noises when accelerating.
- Check Engine light
- Poor performance issue such as sluggish acceleration and poor fuel economy.
- In some vehicles the timing belt runs the water pump. Failure will cause overheating to occur.
- Engine vibration

- **What causes timing belt failure?**

- Timing belts are very durable and usually get worn out from regular use.
- Therefore, there isn't a cause of timing belt failure per se.
- Sudden timing belt failure is rare but if it happens, you have most likely missed the warning signs.

• **What do I need to know about timing belt replacement?**

- First things first. **DO NOT** entrust a timing belt job to an inexperienced mechanic.
- There have been cases where engines don't run or experience damage after a timing belt replacement.
- The general recommendation is to change your timing belt every 100,000 miles (160,000 kilometers).
- We strongly recommend checking your manual as each manufacturer has a different service schedule.
- Ask your mechanic if your water pump is run by your timing belt. If it is, replace the water pump as well. It will save you a ton of money down the line because you won't have to pay the mechanic labor fees for a water pump replacement later.

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 - t: +1-517-962-0616
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 - w: www.autoshackghana.com
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- A majority of the tip topics are suggested by others based on their experiences.
- Consider helping others to benefit from your experiences by suggesting a topic for our tip bank based on your car troubles, experiences or observations.

CREDITS

- ✓ Timing belt assembly photo: www.miata.net
- ✓ Timing chain assembly photo: www.wardsutomotive.net