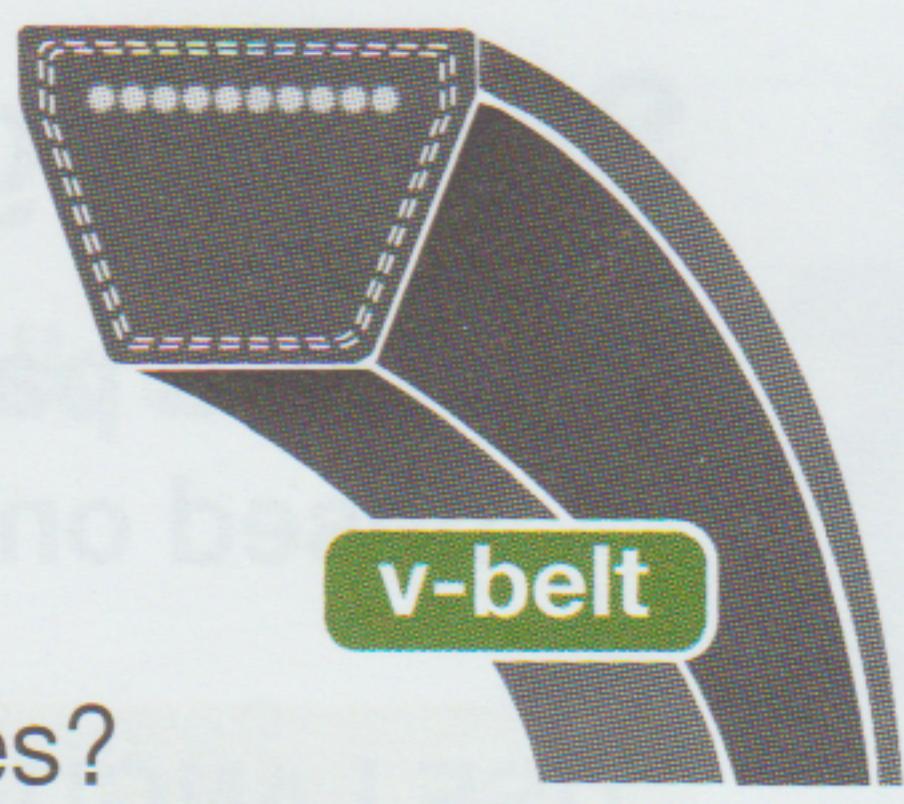


Get ready!

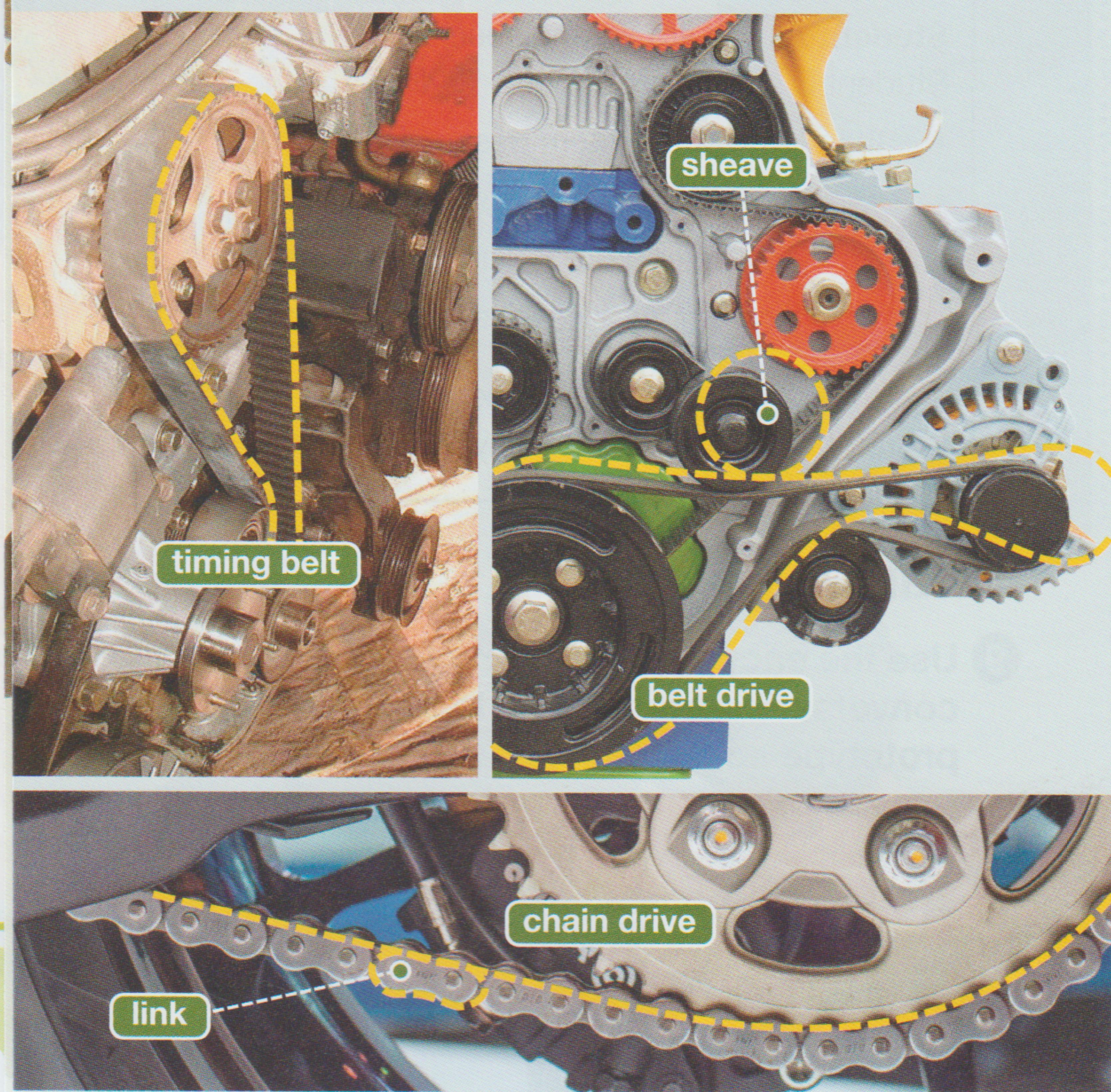
1 Before you read the passage, talk about these questions.

- 1 What are some types of belt drives?
- 2 What do timing belts and chain drives have in common?



Automotive

Monthly



Need Advice – Ask Rick!

Dear Rick,

I just bought a twelve-year-old car. Should I change the **timing belt** to avoid **slippage**?

Jamie, North Springfield

Dear Jamie,

Your timing belt already has **grooves** that prevent slippage. The grooves also ensure **synchronous rotation**. They work like the **links** on a **chain drive**. But unlike chain drives, timing belts are rubber. Eventually they wear out and break. Have a mechanic check the strength of your timing belt.

On the other hand, other **belt drives** can experience slippage. This occurs between the belt and the **sheave**. **V-belts** with shallow **wedge angles** are the most likely to slip. Check and re-tension your belt drives regularly.

Rick Wallace, Automotive Expert

Reading

2 Read the advice column. Then, choose the correct answers.

- 1 What is the column mainly about?
 - how to replace a timing belt in a car
 - a comparison of belt and chain drives
 - the importance of maintaining belt drives
 - the pros and cons of synchronous rotation belts
- 2 What does the expert recommend to correct slippage?
 - using V-belts with shallow wedge angles
 - replacing belt drives with chain drives
 - increasing friction between the belt and sheave
 - adjusting belt tension regularly
- 3 Which is NOT a consequence of improper belt maintenance?
 - widening of the wedge angle
 - slippage between belt and sheave
 - belt breakage
 - loss of synchronous rotation

Vocabulary

3 Match the words (1-7) with the definitions (A-G).

1	link	5	timing belt
2	V-belt	6	wedge angle
3	sheave	7	synchronous rotation
4	chain drive		

- a state in which input and output shafts move in perfect time
- a machine component that uses a metal chain to transmit power
- a grooved pulley that partners with a belt
- a drive with a belt that is wider along one edge
- a measurement of a belt drive's sheave angle
- a belt constructed with grooves to ensure that movement is timed correctly
- an individual segment of chain

4 Write a word or phrase that is similar in meaning to the underlined part.

- 1 A sheave is constructed with a(n) long, narrow indentation to hold the belt.
_r__ve
- 2 We installed a machine component that uses a flexible belt to transmit power.
b_e__ _ri__
- 3 Loose belts lead to gradual movement away from the original position.
_i_p a_e

5 Listen and read the advice column again. Why do timing belts have grooves?

Listening

6 Listen to a conversation between two engineers. Mark the following statements as true (T) or false (F).

- 1 ___ The woman replaced a broken part.
- 2 ___ The maintenance problem damaged an engine.
- 3 ___ The man plans to perform further maintenance on a belt.

7 Listen again and complete the conversation.

Engineer 1: Hey, Jay. I just finished working on that 1 _____.
 Engineer 2: Thanks, Beth. What was wrong?
 Engineer 1: There was a lot of 2 _____. I retensioned the belt.
 Engineer 2: I see. It was a 3 _____ - _____, right?
 Engineer 1: Yeah. We should replace it soon. We don't want it to keep slipping on the 4 _____.
 Engineer 2: Yeah, we don't want the engine to 5 _____, either. How long do you think it'll last?
 Engineer 1: 6 _____ no longer than two months.
 Engineer 2: I'll put it on the maintenance schedule.

Speaking

8 With a partner, act out the roles below based on Task 7. Then, switch roles.

USE LANGUAGE SUCH AS:

I just finished ...

We don't want ...

I'd say ...

Student A: You are an engineer. Talk to Student B about:

- maintenance on an engine
- what parts need to be replaced or repaired
- how soon the additional maintenance should be performed

Student B: You are an engineer. Talk to Student A about maintenance on an engine.

Writing

9 Use the advice column and the conversation from Task 8 to fill out the maintenance schedule.



Engine Maintenance Schedule

Maintenance Date: _____

Part Name: _____

Describe the maintenance: _____

How soon is the maintenance needed?
