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Technical assistance



1 Read the text about maintenance and answer the questions.

Any machine and device must be controlled regularly in order to avoid the risk of damage or breakdown of single parts **due to** long usage. Sometimes, if a proper maintenance is not done, a fault could occur, with negative consequences on the production process and on the workers' safety. The primary goal of maintenance is to avoid or mitigate the consequences of **failure** of equipment. This includes performing routine actions to keep

the device in working order and prevent the failure before it actually occurs (preventive maintenance), or fixing equipment after breakdown (corrective maintenance).

Preventive maintenance is designed to preserve and restore equipment reliability by replacing **worn** components before they actually fail. It includes maintenance activities such as partial or complete **overhauls** at specified periods, oil changes and **lubrication**. The ideal preventive maintenance is a combination of technical, administrative and managerial actions to prevent all equipment failure. If carried out properly, preventive maintenance can extend the life of the equipment.

Corrective maintenance, sometimes simply called 'repair', is carried out to get equipment working again. It **aims at** restoring the functionality of a machine so that it can continue to perform its work. This type of maintenance can be very expensive because sometimes equipment needs to be replaced, with substantial costs for the company.

Generally, maintenance is **scheduled** according to:

- the original equipment manufacturer's recommendations;
- codes and legislation within a country;
- **consultancy** advice;
- previous maintenance;
- most important measured values and performance indications.

- 1 Why is maintenance important?
- 2 What are the main types of maintenance?
- 3 What is the function of preventive maintenance?
- 4 Which activities does it include?
- 5 What is maintenance called if it occurs after a failure?
- 6 Why can corrective maintenance be expensive?

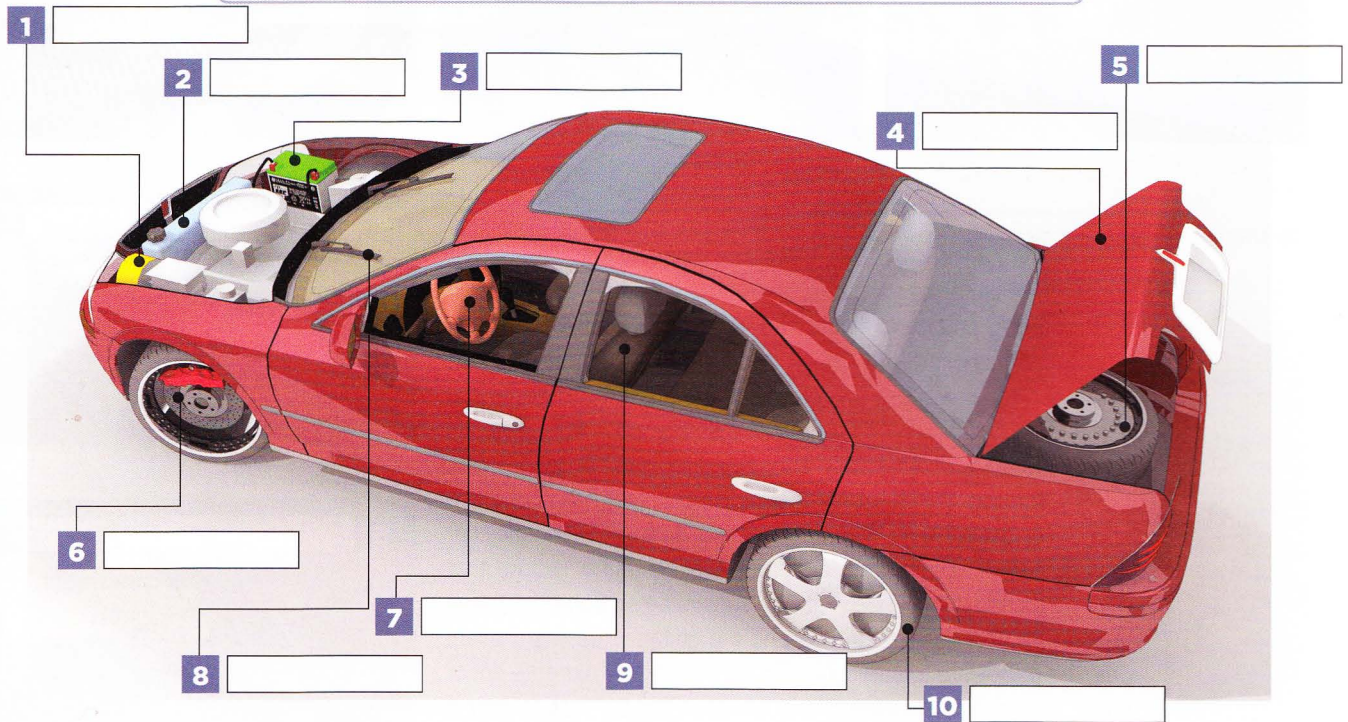
2 Read the text again and match the words with their definitions.

- | | |
|---------------|--|
| 1 fault | a <input type="checkbox"/> damaged and in poor condition as a result of much use |
| 2 to mitigate | b <input type="checkbox"/> a set of rules about how something must be done |
| 3 to fix | c <input type="checkbox"/> expert advice within a particular field |
| 4 overhaul | d <input type="checkbox"/> applying a greasy substance to reduce friction |
| 5 worn | e <input type="checkbox"/> a break or other defect in a piece of machinery |
| 6 lubrication | f <input type="checkbox"/> to do the necessary work to repair something that doesn't work properly |
| 7 code | g <input type="checkbox"/> to make something less severe or unpleasant |
| 8 consultancy | h <input type="checkbox"/> a careful examination of a machinery or system that must be repaired |

Auto maintenance

3 How well do you know the components of a car? Look at the picture and label each part with the words in the box.

seat battery radiator tyre spare wheel steering wheel
disk brake oil filter trunk windshield wiper



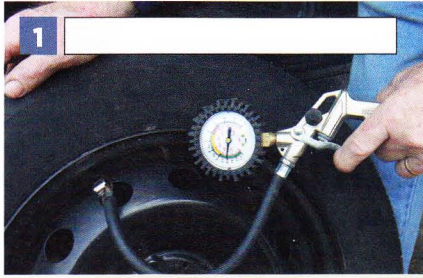
4 In pairs, take this quiz about car maintenance, then read the text to check your answers.

Cars are not just a luxury item to purchase one day and forget about until something happens. A properly maintained car not only lasts longer, but it is also less likely to break down unexpectedly. Take this quiz and test your knowledge of car maintenance!

- 1 Auto maintenance doesn't entail replacing fluids.
True False
- 2 It is not possible to do preventive maintenance to cars.
True False
- 3 Car maintenance must be scheduled keeping in mind different factors.
True False
- 4 The distance travelled every day doesn't affect the functionality of a car.
True False
- 5 If a car is exposed to extreme weather conditions it must be checked more often.
True False
- 6 It is not possible to replace windshield wipers.
True False
- 7 Brake fluid lasts forever.
True False
- 8 Car maintenance tasks should never be combined in one single service.
True False



5 Read the text and match the correct maintenance task with each picture.



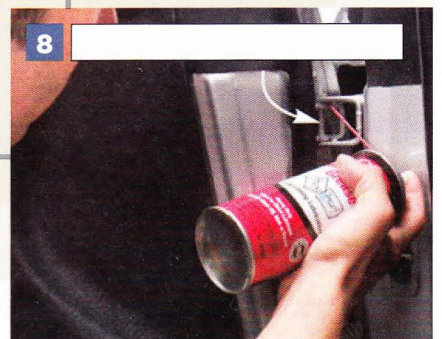
Auto maintenance describes the act of inspecting or testing the condition of car subsystems (e.g.: **engine**, brakes, radiator, etc.) and replacing parts and fluids. Thanks to regular maintenance it is possible to ensure the safety, reliability and comfort of a car, while during preventive maintenance, a number of parts are replaced to avoid major damage or for safety reasons.


Car maintenance is usually scheduled according to different factors, such as the year or model of the car, its driving condition and driver **behaviour**. When scheduling auto maintenance, car manufacturers recommend keeping in mind some factors that may affect the functionality of car subsystems. Some of these factors are: the number of trips and the distance travelled every day; the **exposure** to particular climate conditions (extreme hot or cold); long-distance cruising and whether the car has to **tow** a **trailer** or other heavy loads.

Common car maintenance tasks include:

- car wash
- check or replace the engine oil and oil filters
- inspect or replace windshield wipers
- inspect tyre pressure and **wear**
- check wheel **alignment**
- check, clean or replace battery terminals
- inspect or replace **brake pads** and fluids
- inspect or replace air filter
- lubricate **locks** and **hinges**
- check all lights
- inspect or replace **spark plugs**
- **tighten chassis bolts**

Some tasks that have equivalent service intervals can be combined into one single service known as a tune-up. In modern cars, where electronics control most of the car's functions, the traditional tune-up has been replaced by incorporated software that takes care of the engine by constantly checking thousands of sensor signals. Completed maintenance services are then recorded in a **service book** which is very useful for keeping track of the car service history.



6  **13** Listen to the dialogue between Mrs Farrell and her mechanic and complete it with the missing words.

- Mechanic** Good afternoon, Mrs Farrell.
Mrs Farrell Good afternoon, John. How are you?
Mechanic I'm fine, thank you. How can I (1) *help* you?
Mrs Farrell Well, I need a complete (2) _____ for my car. Next week my husband and I are going on holiday by car. It's going to be a long journey all the way to Spain and I want my car to be in (3) _____.
Mechanic Sure. No problem. Have you checked your car recently?
Mrs Farrell Let me think... It must have been last year, in June, when the car wouldn't (4) _____. Anyway, it should all be written in the (5) _____. It's in the **glove compartment**.
Mechanic OK, I'll take it. Let's see... Oh, yes, it was the battery and I changed it. Are there any problems at the moment?
Mrs Farrell Not really, but I think the (6) _____ needs to be replaced.
Mechanic Sure. I'll check the filters too.
Mrs Farrell Yes, I think it's a good idea. Could you (7) _____ the tyres as well? And maybe wash it; it's so dirty. Well, John, when do you think the car will be ready?
Mechanic Actually, I'm quite busy at the moment, Mrs Farrell, so I could give it back to you next Friday. Would that be convenient for you?
Mrs Farrell Yes, it'd be perfect, because we're leaving on Sunday. I'll call you on Tuesday for a confirmation then.
Mechanic All right. Goodbye, Mrs Farrell.
on Friday...
Mechanic Good morning, Mrs Farrell. Here are your keys. I replaced the engine oil and the (8) _____. Then I checked the tyres and the brakes too. I had to (9) _____ the spark plugs because they were **fouled**. I also (10) _____ the electronics and then I washed the car. Now everything is OK, you can **set off** with no worries.
Mrs Farrell That's great! Thank you very much, John.

7 Read the dialogue again and answer the questions.

- 1 What does Mrs Farrell want?
- 2 Why does she need a complete tune-up?
- 3 What is written in the service book?
- 4 What does the car need to be done?
- 5 When will the car be ready?
- 6 What did John replace in the car?

MY GLOSSARY

to aim at /tu: eim ət/ _____
 alignment /ə'laɪnmənt/ _____
 behaviour /br'heɪvjə(r)/ _____
 bolt /bɔʊlt/ _____
 brake /breɪk/ _____
 brake pad /breɪk pæd/ _____
 chassis /'ʃæsi/ _____
 consultancy /kən'sʌltəntsi/ _____
 due to /dju: tə/ _____
 to entail /tu: m'teɪl/ _____
 exposure /ɪk'spəʊʒə(r)/ _____
 failure /feɪljə(r)/ _____
 fouled /faʊld/ _____
 glove compartment /glʌv kəm'pɑ:tmənt/ _____
 hinge /hɪndʒ/ _____
 lock /lɒk/ _____

lubrication /lu:b'rɪkeɪʃn/ _____
 overhaul /əʊvəhɔ:l/ _____
 to schedule /tə 'ʃedju:l/ _____
 service book /sɜ:vɪs bʊk/ _____
 to set off /tə set ɒf/ _____
 spare wheel /speə(r) wi:l/ _____
 spark plug /spɑ:k plʌg/ _____
 steering wheel /stiəriŋ wi:l/ _____
 to tighten /tə 'taɪtn/ _____
 to tow /tə təʊ/ _____
 trailer /treɪlə(r)/ _____
 trunk /trʌŋk/ _____
 tyre /taɪə(r)/ _____
 wear /weə(r)/ _____
 windshield /wɪndʃi:ld/ _____
 worn /wɔ:n/ _____