ELECTRICAL SYSTEM

4.1. Vocabulary

Ex. 1. *Match the words to their definitions.*

1. positive terminal	a. the process of adding electrical energy to a battery or other electrical device.
2. fuse box	b. a cylindrical safety device used in electrical systems to protect against overcurrent or short circuits.
3. tubular fuse	c. the end of a battery or electrical device where electrons flow out during discharge.
4. negative terminal	d. a small safety device used in electrical systems to protect against overcurrent or short circuits.
5. blade fuse	e. the end of a battery or electrical device where electrons flow in during charging.
6. feeler gauge	f. the space between two objects or surfaces.
7. battery	g. a tool used to measure small gaps between two objects.
8. gap	h. a container that houses multiple fuses to protect electrical circuits from damage caused by excess current.
9. distributorless ignition system	i. no longer functioning due to excessive heat or use.

10. charge	j. a type of ignition system that does not use a traditional distributor to distribute high voltage electricity to the spark plugs.
11. distributor cap	k. a device that stores chemical energy and converts it into electrical energy to power a vehicle's engine.
12. burned-out	l. a protective cover for the distributor, which distributes high voltage electricity to the spark plugs in an internal combustion engine.

Ex. 2. *Complete the sentences with the given words:*
battery, gauge, negative, distributorless, terminal, blade, distributor, tubular, burned-out, fuse

In order to start my car, I need to replace the _____(1) battery.
The car mechanic found a blown _____(2) fuse while inspecting the electrical system.
My car wouldn't start because the charge in the _____(3) was too low.
When I went for a battery replacement, the mechanic also checked the _____(4) cap.
The new car model features a _____(5) ignition system for better performance.
Before checking the spark plugs, make sure to use a feeler _____(6) to measure the gap.
The technician inspected the _____(7) box and found a short circuit causing the issue.
The manual states that the battery should be connected to the _____(8) terminal first.
I had to replace the positive _____(9) of the car battery as it was corroded.
The owner's manual also includes information on how to replace a _____(10) fuse if needed.

4.2. Reading

Ex. 1. *Read the text.*

Electrical System

If you're having problems with your car's electrical system, there are a few simple checks you can make to find out what's wrong before you take it to the garage.

First of all, check that the battery is charged. You can do this by turning on the headlights and then trying to start the engine. If the headlights go dim when you try to start the engine, the battery is probably flat. In this case, you'll need to jump-start the car or charge the battery.

If the battery is fine, the next thing to check is the fuses. The fuse box is usually under the bonnet (US: hood) or under the dashboard. Open it and look for any burned-out fuses. You can tell if a fuse is burned out because the metal part inside it will be broken. If you find a burned-out fuse, replace it with a new one of the same type. Fuses are usually colour-coded according to their strength, so check that you're using the right one.

If the fuses are OK, the problem may be with the spark plugs. To check them, remove the distributor cap and use a feeler gauge to test the gap between the two electrodes. The gap should be about 0.6 mm. If it's too big or too small, you'll need to adjust it. If the gap is OK, the spark plugs may be dirty or worn out. You can clean them with a wire brush, but if they're very old, it's best to replace them.

If the spark plugs are fine, the problem may be with the distributor itself. On older cars, the distributor is usually at the front of the engine. Remove the cap and rotor arm and check that the contacts are clean and in good condition. If not, you'll need to replace them. On newer cars, which have a distributorless ignition system, the problem may be with the ignition coil or one of the sensors. In this case, you'll need to take the car to a garage for repair.

Ex. 2. *Answer the questions.*

1. How can you check if the battery is charged?
2. What should you do if the headlights go dim when you try to start the engine?
3. Where is the fuse box usually located in a car?
4. How can you tell if a fuse is burned out?
5. What should you do if you find a burned-out fuse?
6. How can you check the gap between the two electrodes of the spark plugs?
7. What should you do if the spark plug gap is too big or too small?

4.3. Communication

Ex. 1. *Put the sentences in the correct order to make a dialogue. In pairs, act it out.*

David: No problem, glad we got it sorted out. And now you know what to do next time this happens.

Sophie: Yes, I did. But they all seem to be intact. Maybe it's a bigger problem than just a blown fuse.

David: Hey, are you ready to start working on the car?

David: Don't worry, we can figure it out together. What have you learned so far?

David: Hmm, let me take a look under the hood. Ah ha! Looks like the battery connector is loose. That could definitely cause some issues with the electrical system.

Sophie: Well, apparently there's a fuse box that controls all the different parts of the electrical system. And if a fuse is blown, then that part won't work properly.

Sophie: I'm not sure. I was reading about the electrical system and it seems quite complicated.

David: Right, that makes sense. Have you checked the fuses yet?

Sophie: Well, thank goodness it was an easy fix. Thanks for your help, David.

Sophie: Oh wow, good catch. How did you know to check that?

David: My dad used to always remind me to check the battery connectors when something electrical wasn't working in our cars growing up. Nothing too serious.