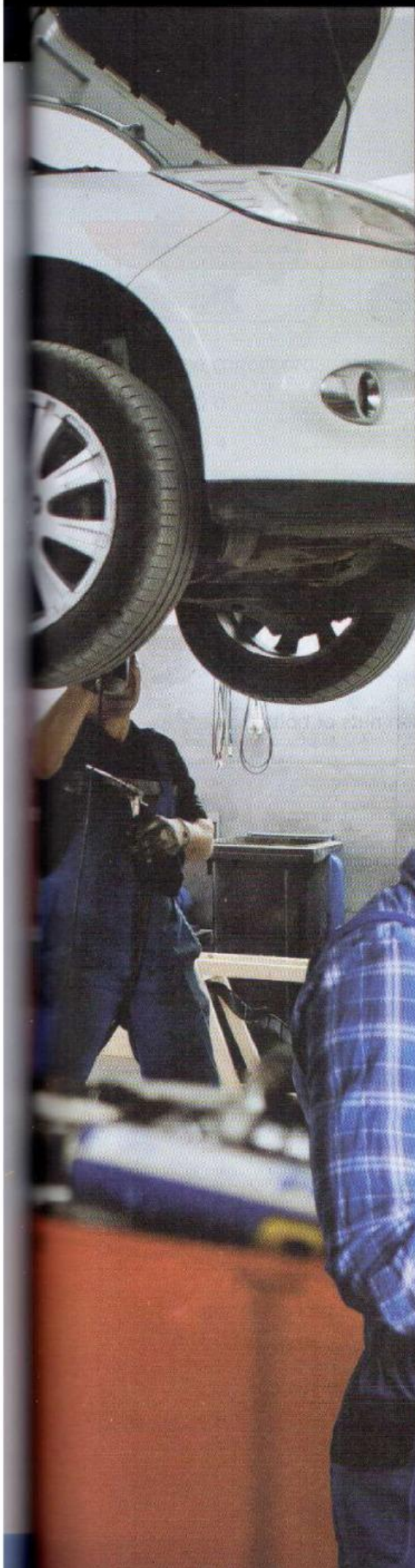


LESSON 8

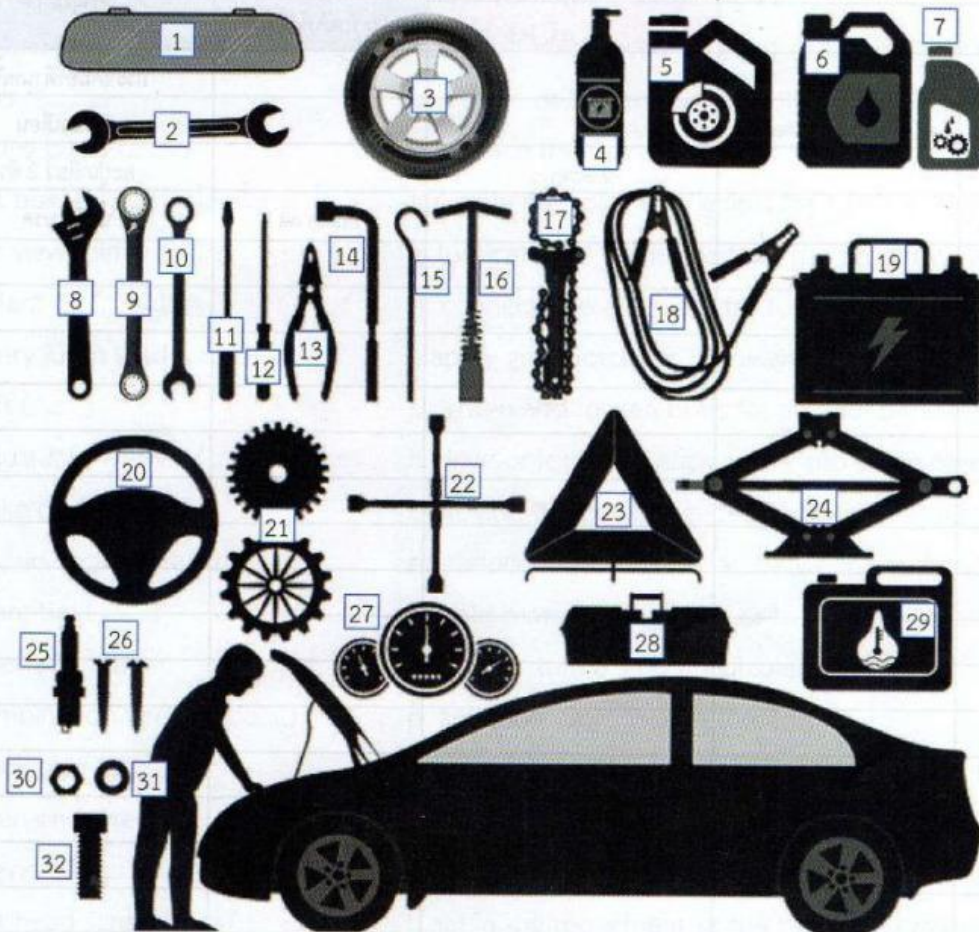
AUTOMOTIVE WORK INSTRUCTIONS



Automotive Tools

Warm Up

1. Match the correct pictures to the words in the list.



- | | | |
|-------------------------------------|--------------------------------|-------------------------------|
| a. Ratcheting wrench | b. Speedometer | c. Car jack |
| d. Gear..... | e. Cutting pliers | f. Tool box |
| g. Rear view mirror | h. Coolant oil | i. Battery jump lead |
| j. Bolt | k. Adjustable wrench | l. Brake oil |
| m. Angled socket wrench | n. Spare tire | o. Screw |
| p. Combination wrench | q. Spark plug | r. Open-end wrench |
| s. Engine oil | t. Flat-head screwdriver | u. Car wash shampoo |
| v. Jack handle | w. Lubricant oil | x. Washer |
| y. T-handle spark plug wrench | z. Lug wrench | a1. Steering wheel |
| b1. Chain wrench | c1. Car battery | d1. Triangle road flare |
| e1. Phillips-head screwdriver | f1. Nut | |

The Uses of Automotive Tools

3. Match each name of tool with its use.

- | | |
|--|---|
| 1. Ratcheting wrench (.....) | a. see rearward through the vehicle's rear window. |
| 2. Speedometers (.....) | b. grip something or cutting wire. |
| 3. Car jack (.....) | c. tighten and loosen different size of bolts or nuts. |
| 4. Gears (.....) | d. tighten or loosen nuts or bolts. |
| 5. Cutting pliers (.....) | e. replace the flat tire. |
| 6. Tool box (.....) | f. supply the spark that ignites the fuel for engine produce power. |
| 7. Rear view mirror (.....) | g. lubricate the engine parts to run properly over time. |
| 8. Coolant oil (.....) | h. connect into a car jack for turning it. |
| 9. Battery jump lead (.....) | i. apply great forces to lift heavy vehicles. |
| 10. Bolt (.....) | j. tighten and loosen bolts for all your different jobs. |
| 11. Adjustable wrench (.....) | k. drive or loosen Phillips screw into some objects. |
| 12. Brake oil (.....) | l. provide the power needed to boost the dead vehicle battery. |
| 13. Angled socket wrench (.....) | m. reduce the friction, heat, between mechanical components. |
| 14. Spare tire (.....) | n. hold materials together, or to position objects. |
| 15. Screws (.....) | o. hold or turn a smooth circular object. |
| 16. Combination wrench (.....) | p. assemble objects with threads. |
| 17. Spark plug (.....) | q. help alert traffic and drivers should be aware of something ahead. |
| 18. Open-end wrench (.....) | r. join with a bolt to fasten multiple parts together. |
| 19. Engine oil (.....) | s. transmit rotary motion from one shaft to another. |
| 20. Flat head screwdriver (.....) | t. aid in the movement of the hydraulic braking systems. |
| 21. Car wash shampoo (.....) | u. loosen and tighten lug nuts on automobile wheels. |
| 22. Jack handle (.....) | v. tighten and loosen hex bolts and nuts. |
| 23. Lubricant oil (.....) | w. protect the joint surface from damage during the tightening. |
| 24. Washer (.....) | x. remove heat from cooling system. |
| 25. T-handle spark plug wrench (.....) | y. provide an electric current to start a motor vehicle. |
| 26. Lug wrench (.....) | z. fasten and demolish of the spark plug sleeve. |
| 27. Steering wheel (.....) | a1. carry and protect the tools. |
| 28. Chain wrench (.....) | b1. slid over the nut where there isn't space for a socket. |
| 29. Car battery (.....) | c1. drive or loosen flathead screw into some objects. |
| 30. Triangle road flare (.....) | d1. clean the car thoroughly leaving behind a shiny look. |
| 31. Phillips-head screwdriver (.....) | e1. measure speed and distance traveled. |
| 32. Nut (.....) | f1. control the direction of a vehicle. |

Grammar Focus

Imperative Sentences with Sequence Adverbs

การใช้ Imperative Sentence

Imperative sentence (ประโยคคำสั่ง/ ประโยคขอร้อง) คือประโยคที่ใช้ในการให้คำแนะนำหรือบอกวิธีการปฏิบัติงานต่าง ๆ โดยไม่ต้องมีประธานนำหน้าประโยค

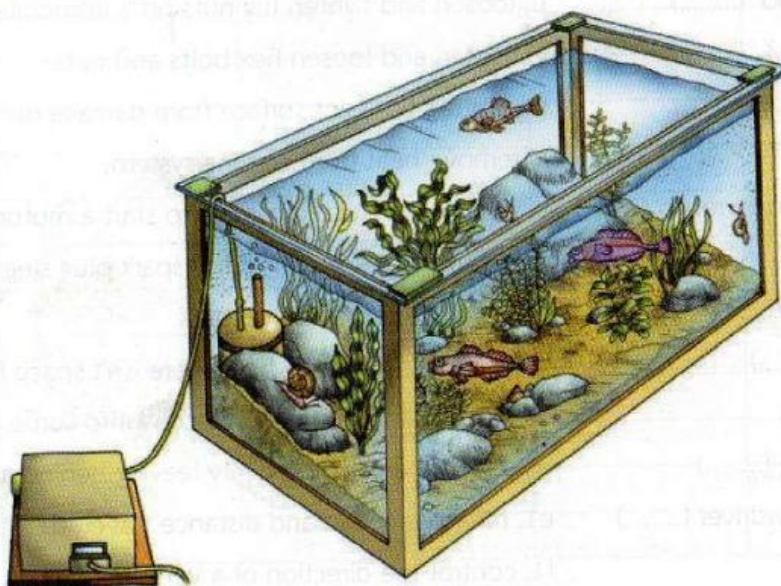
โครงสร้างประโยค

ประโยคคำสั่งสามารถนำ Sequence Adverbs มาขยายในประโยคเพื่อบอกลำดับการปฏิบัติงาน โดยวางไว้หน้าประโยค

Sequence Adverbs + Base form of verb (กริยาช่องที่ 1) + Object + Complement

Example

Sequences Adverbs (กริยาวิเศษณ์บอกลำดับ)	Verb1	Object (กรรม)	Complement (ส่วนเติมเต็มประโยค)
First	attach	one end of your airline	to the air pump.
Then	attach	a stone filter	to the end of the airline.
Next	place	a stone filter	into the fish tank.
Finally	plug in	the air pump	to power.



Grammar Exercise

4. Use the sequence adverbs to put the instructions in order. Write them on the space provided.

Sequence Adverbs

First (ขั้นแรก)

Then (ต่อมา)

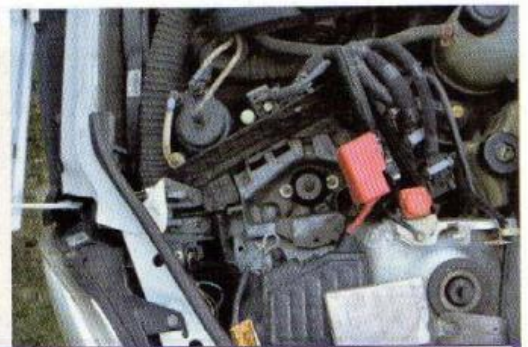
Next (ต่อไป)

After that (หลังจากนั้น)

Finally (ขั้นสุดท้าย)

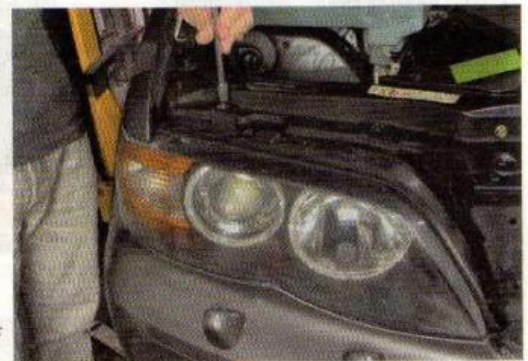
1. Remove an old battery

-, loosen the negative cable clamp.
-, unfasten the battery holder.
-, loosen the positive cable clamp.
-, lift the battery out of the car.



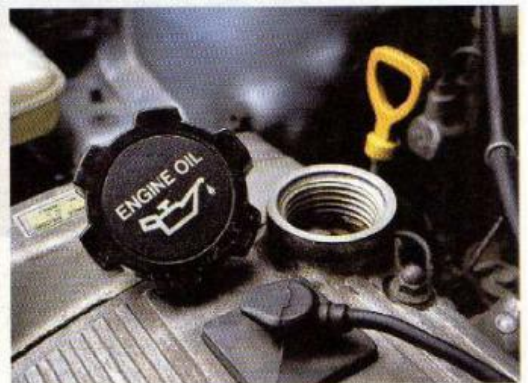
b. Replace a car headlight bulb

-, install the new headlight bulb.
-, reconnect the wires when the new bulb is in place.
-, test to make sure the new bulb's working.
-, remove the power cables from the back of the headlight.
-, open your car hood and locate the headlight.



c. Change engine oil in a car

-, pour new oil into the car at the fill hole.
-, jack up the vehicle by using your car jack.
-, park the car on a flat surface.
-, place the oil drain pan underneath the engine drain plug.
-, check oil levels by pulling out the dipstick.



Automotive Work Instructions

Reading & Writing

5. Read the work instructions and write the correct order of steps.

Instruction 1

Replacing Motorcycle Spark Plugs

Use your fingers to remove the wires from the spark plugs. Use a ratchet wrench and a spark plug socket to turn the spark plugs in a counter - clockwise direction until they are loose. Blow out the cylinder heads with compressed air. Insert the new spark plug and tighten with a ratchet wrench. Reinstall the motorcycle's spark-plug wires. It is vitally important to put the wires back in the right place.

Writing

There are 5 steps in replacing motorcycle spark plugs. (in)



.....

.....

.....



.....

.....

.....



.....

.....

.....



.....

.....

.....



.....

.....

.....

Instruction 2

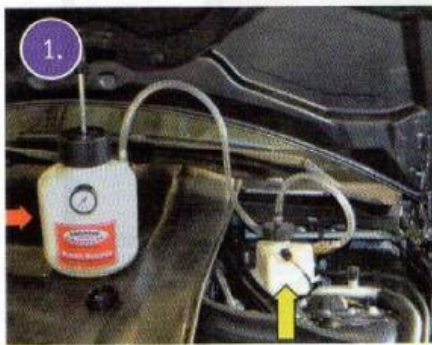
Taking Care of Hydraulic Brakes

You will need to clean any sludge out of the brake system. Refill with brake fluid. Remove all trapped air from your brakes while changing fluids. Clean break carefully without leaving any residue that causes your brakes to work improperly. Replace the brake pads. Check the connections and condition of all cords.



Writing

There are (in)



.....

.....

.....

.....



.....

.....

.....

.....



.....

.....

.....

.....



.....

.....

.....

.....



.....

.....

.....

.....



.....

.....

.....

.....

6.

Read these sentences and mark them true (✓) or false (✗).

- ☐ 1. Use a ratchet wrench and a spark plug socket to loosen the spark plugs.
- ☐ 2. Removing the spark plugs, you need to turn an adjustable wrench in a counter-clockwise direction.
- ☐ 3. You need to blow out the cylinder heads of a motorcycle with compressed air.
- ☐ 4. You need to insert the new spark plug and tighten with a ratchet wrench.
- ☐ 5. It is very important to put the spark plugs in the right place.
- ☐ 6. Taking care of hydraulic brakes, you need to clean any sludge out of the brake system first.
- ☐ 7. Any residue can cause the brake system to work improperly.
- ☐ 8. You need to refill brake fluid with distilled water.
- ☐ 9. New brake pads need to be replaced in the process of taking care of the hydraulic brakes.
- ☐ 10. Checking the connections and conditions of all cords is the second step in the process of taking care of the hydraulic breaks.

Listening

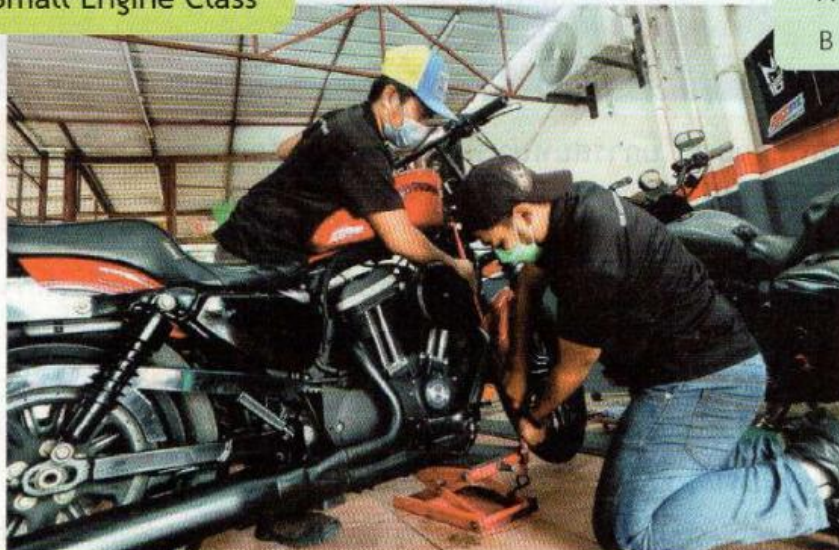
7. Listen to the conversation and complete the sentences.



Scan to Watch Video
(Muangthai Smartbook)



At Small Engine Class



A = Arjan Pram

B = Students

This is a small (1) class at Nakhonsawan Technical College.

A : Good morning class. I'm very glad to see everybody here.

B : Good morning Arjan Pram. Nice to be with you too.

A : OK, I will demonstrate how to (2) a motorcycle frame.

B : Is it easy to (3) this task?

A : Yes, I will show you first before you do it in groups.

B : That sounds (4).....

A : First, (5) a motorcycle frame after a crash.

Then, use hydraulics to (6) the frame.

Next, (7) the motorcycle frame without overextending the metal.

After that, get it back into alignment after you (8) it.

(9), take a final measurement to verify your motorcycle.

B : We think, we have no difficulty in doing it.

A : Every group tries to do it now. I hope you will (10) with this workshop.

- | | | | | |
|----------------|-----------------|------------|------------|------------|
| a. interesting | b. interpreting | c. English | d. remove | e. feed |
| f. splash | g. fix | h. perform | i. repair | j. place |
| k. Firstly | l. engine | m. enjoy | n. inspect | o. Finally |
| p. finish | | | | |

Language Learning

Asking and Giving Correct Sequencing

การสนทนาเพื่อถาม - ตอบข้อมูลเกี่ยวกับขั้นตอนหรือลำดับการปฏิบัติงานก่อน - หลังเป็นสิ่งที่จำเป็นเพราะทำให้การปฏิบัติงานสำเร็จลุล่วงอย่างปลอดภัยทั้งต่อผู้ปฏิบัติงานและต่อบุคคลอื่น รวมถึงไม่ก่อให้เกิดความเสียหายต่องาน เครื่องจักรและอุปกรณ์ต่าง ๆ ทำให้งานต่าง ๆ สำเร็จลุล่วงไปได้ด้วยดี

ประโยคพื้นฐานที่มักจะพบในการสนทนาเพื่อถาม - ตอบข้อมูลเกี่ยวกับขั้นตอนหรือลำดับการปฏิบัติงาน มีตัวอย่างดังต่อไปนี้

ประโยคสนทนาที่ใช้เพื่อถาม - ตอบขั้นตอนหรือลำดับการปฏิบัติงานของอุปกรณ์ เครื่องจักร เครื่องมือต่าง ๆ ที่ใช้ในการปฏิบัติงาน

- Ask** :
- How can I/ you use? (this equipment/ machine/device; a washing machine)
 - How can I/ you operate? (this equipment/ machine/device)
 - How can I/ you make? (something; a tasty sandwich)
 - How can I/ you repair? (this equipment/ machine/ device; a washing machine)
 - How can I/ you? (perform work; align tires)

Example

Ask : How can I make a tasty sandwich?

Answer :

- First, place one slice of bread on a plate.
- Then, apply a spread to one slice of your bread.
- Next, place protein foods on top of your spread.
- After that, pile on fruits or vegetables.
- Finally, place the remaining slice of bread on top and enjoy!



Speaking

8. Find information on the internet about work instructions to perform the auto mechanic works correctly.

Example



Student A : How can you use a cell phone charger?

- Student B :
- First, insert the end connector into your phone.
 - Then, plug your charger into a wall outlet.
 - Next, leave your phone charging until it is complete.
 - Finally, unplug your charger from the wall outlet.

9. Prepare information for making a conversation following the given example.

- How can I use / operate / make / repair / perform work?

- How can I
- Steps of each process

.....

.....

.....

.....

.....

1. Search engine used:
2. Keywords in searching:
3. Present the answers to the class through Line, application or WebBoard. Review the answers with your friend and teacher.



Top 5 Search Engines

Google

YAHOO!

Baidu 百度



DuckDuckGo

Bing

10. Read the steps of each process in exercise 9 and make a conversation with a partner following the given example.

Student A :

Student B :

First,

Then,

Next,

After that,

Finally,

11. Work with the class with a conversation pair work activity. Students take turns asking and answering questions from the conversation in exercise 10 to each other in front of the class.

2. First, insert the end connector into your phone.

3. Then, plug your charger into a wall outlet.

4. Next, leave your phone charging until it is complete.

5. Finally, unplug your charger from the wall outlet.

1. How can I use a cell phone charger?

