

CONSTRUCTION AND DEMOLITION MACHINES

23.1. Vocabulary

Ex. 1. Match the words to their definitions.

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| 1. blade | a. to put together again after taking apart or disassembling. |
| 2. bulldozer | b. a large machine with a bucket and rotating cab used for digging and moving earth. |
| 3. hydraulic shears | c. a tall, lifting machine with a long arm and hook used for moving heavy objects. |
| 4. dismantle | d. cutting tools powered by hydraulic pressure, used for cutting through thick materials. |
| 5. backhoe | e. at a specific location or place, usually referring to a construction site or project. |
| 6. excavator | f. a heavy-duty attachment for bulldozers or tractors used for breaking up hard ground or rocks. |
| 7. reassemble | g. to take apart or disassemble a machine or structure. |
| 8. paving machine | h. a flat, sharp-edged tool used for cutting or shaping materials. |
| 9. crane | i. to examine something in detail and break it down into smaller parts for better understanding. |
| 10. ripper | j. a machine with a long blade used for leveling or smoothing surfaces. |

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| 11. grader | k. a machine that spreads and compacts asphalt or concrete to create smooth road surfaces. |
| 12. on-site | l. a large machine with a digging bucket on the back and a scoop or blade on the front, used for excavating and moving earth. |
| 13. analyze | m. a powerful vehicle with a wide metal blade attached to the front, used for pushing large quantities of soil, rubble, or other materials. |

Ex. 2. Complete the sentences with the given words:

crane, reassemble, blade, bulldozer, excavator, grader, analyze, backhoe, ripper, hydraulic, on-site, paving, dismantle

It will take some time to _____(1) the data and come up with a plan for the demolition project.

The _____(2) was used to clear out the debris after the building's collapse.

The _____(3) of the bulldozer sliced easily through the rubble, making it easier for the construction workers to access the site.

A _____(4) is an essential piece of equipment in any demolition process.

The heavy-duty _____(5) lifted the pieces of steel beams effortlessly onto the truck bed.

We need to carefully _____(6) the old machinery before installing the new ones.

The _____(7) scooped out tons of dirt and rubble from the construction site.

The _____(8) was used to smooth out the rough terrain for the next phase of construction.

The _____(9) shears are perfect for cutting through thick metal pieces.

All materials are delivered to the _____(10) warehouse for easy access during construction.

The _____(11) machine slowly but surely laid down a smooth layer of asphalt on the road.

After repairing the engine, they had to _____(12) the excavator before using it again.

The _____(13) broke apart the concrete slabs with ease, making way for the new foundation.

23.2. Reading

Ex. 1. Read the text.

Construction and Demolition Machines

Construction and demolition machines are used to move large amounts of earth, dig foundations, demolish old buildings, and prepare sites for new ones. In this article, we'll analyze the different types of these machines and what they're used for.

Backhoe loaders are used in small- to medium-sized construction projects, as well as in urban engineering and light transportation of building materials. The machine has a bucket at the front and a backhoe at the rear. A backhoe is an excavating arm with a digging bucket on the end. It's designed to dig holes and trenches. The backhoe loader also has a blade that can be used to push material away from the machine.

Bulldozers are powerful tracked vehicles equipped with a wide, heavy blade. They're used to push large quantities of soil, sand, rubble, or other materials during construction or conversion work. The blade is typically used to push piles of material such as earth, sand, or snow. Dozers are often used for site preparation, road building, and forestry work.

Cranes are commonly used in the construction industry and in the manufacturing of heavy equipment. They're equipped with wire ropes, chains, and sheaves to lift and lower materials and move them horizontally. Cranes are used for loading and unloading ships, in the

construction of tall buildings, and in the assembly of heavy equipment. There are many types of cranes, including tower cranes, mobile cranes, and telescopic cranes.

Excavators are heavy construction equipment consisting of a boom, dipper (or stick), bucket, and cab on a rotating platform known as the "house." The house sits atop an undercarriage with tracks or wheels. Excavators are used in many ways, such as digging trenches, holes, and foundations; handling materials; and driving piles. The bucket can be removed and replaced with other tools, such as hydraulic shears, a grapple, or an auger.

Graders are heavy equipment used to create a flat surface during the grading process. They're commonly used in road construction and maintenance. Graders can also be used for snow removal. The operator of a grader controls the blade and moves it from side to side, allowing for precise control of the final surface.

Paving machines are used to lay asphalt or concrete on roads, bridges, parking lots, and other similar surfaces. They consist of a feeder, conveyors, and a screed. The screed is attached to the back of the machine and levels the asphalt or concrete to the desired thickness and smoothness.

Demolition machines are used to dismantle buildings and structures. They often have specialized attachments, such as hydraulic shears, crushers, and hammers. Demolition machines can be used to break concrete, steel, and other materials, making them easier to remove and recycle. Some common types of demolition machines include excavators with hydraulic breakers, high-reach excavators, and skid steer loaders with attachments like hydraulic breakers and rippers.

Ex. 2. Answer the questions.

1. What are backhoe loaders used for?
2. How do bulldozers push large quantities of material?
3. What are cranes commonly used for in the construction industry?
4. What are excavators used for?

5. In what industries are graders commonly used?
6. What is the purpose of paving machines?
7. What types of attachments do demolition machines often have?