BULLDOZERS:

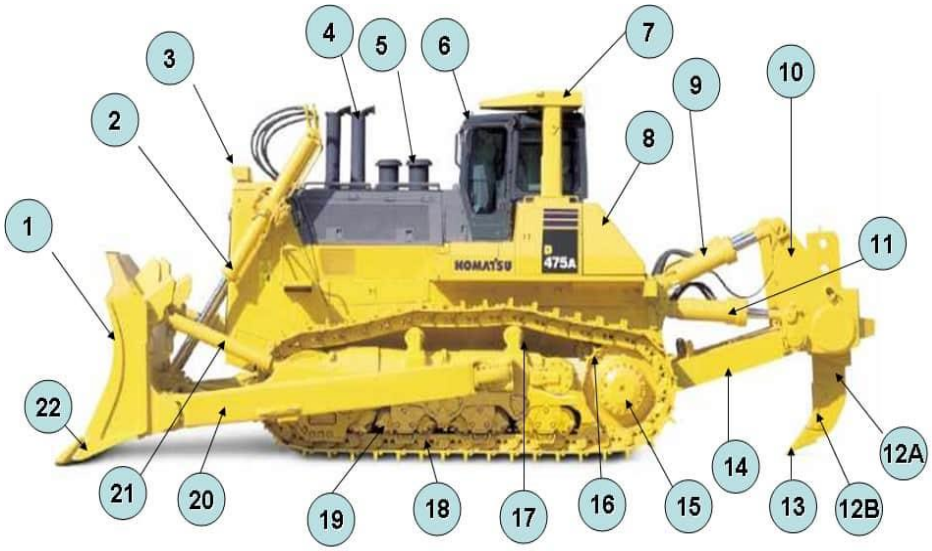
Bulldozers are heavy equipment that is often seen at construction or land clearing. In the construction process, this bulldozer was the first to enter the field for land clearing. It is used to move materials and make the construction area flat.

Apart from leveling this tool is used for digging, dredging, pushing, and moving material. In short, this heavy equipment is used to move soil, sand, rocks, or other materials on a large scale because of its strong pushing force.

The tractor-engined bulldozer is equipped with a train/chain as a means for moving. It is also equipped with a shovel in front of it to move material. This heavy equipment is capable of being operated on fields that are difficult to reach by other heavy equipment like on rocky, muddy terrain, in hills, or in forests.

This is because the bulldozer has components that support each other so that it can carry out its function properly. The components are driven hydraulically from the bulldozer cabin control. Well, in this article we will describe the components of the bulldozer so that readers can find out the function of each of these components.

To make it easier to understand the components of the bulldozer, here is a picture of the bulldozer, accompanied by the numbered instructions.



Down below is a description of the bulldozer's components' numbers and an explanation of their functions:

1. Blade

This component is the most visible of the bulldozer because it is placed in the front. This blade serves to lift, move or push material. The shape is like a scoop made of iron or alloys making it easy to move the material. The blade has various forms according to its use.

2. Lift Cylinder

The lift cylinder is connected directly to the blade which works to move the blade using hydraulic power. With this component, workers can position the blade as desired. The control panel of this component is in the cabin.

3. Work Lamp

As the name suggests, a work lamp is a component that works to provide sufficient lighting for the contractor to see the land he will work on.

4. Muffler

Muffles is used as exhaust gas protection. Generally these components are found in other heavy equipment.

5. Pre-cleaner

The pre-cleaner functions as an initial air filter from the surrounding environment to prevent coarse impurities from entering the main air cleaner which will then go to the engine combustion chamber.

6. Cabin

The cabin is the bulldozer control area or control room. In this section, the contractor/worker sits as the operator and controls the movement of the bulldozer since there is a bulldozer control panel in this section. This cabin is located on the upperstructure of the bulldozer.

7. ROPS Canopy

ROPS stands for Roll-Over Protective Structure which works to protect operators in the event of a rolling incident.

8. Fuel Tank

As the name suggests, the fuel tank is a component for entering or storing bulldozer's fuel.

9. Ripper Tilt Cylinder

This component is actually a subsection of the ripper (12A). The ripper tilt cylinder can tilt the position of the ripper to destroy a land.

10. Shank Ripper

The ripper shank is also a sub-component of the ripper that functions as a support for the movement of the ripper as well as the use of the calf for the foot.

11. Ripper Lift Cylinder

This one is also a sub-component of the ripper which works to move the ripper.

12A. Ripper

The ripper is the component of the bulldozer that is used to unload material that the blade cannot dig.

12B. Shank Protector

This component is directly connected to the ripper which functions as a protection for the ripper from materials that can damage the movement of the ripper.

13. Point Ripper

The point ripper is tapered, which is the component that can unload the material.

14. Arm Ripper

The ripper arm is the arm of the ripper that is connected to the bulldozer's body.

15. Final drive/sprocket

The final drive or also called the sprocket is a component of the bulldozer that works to move the track. The sprocket is a gear that transmits the rotating power from the engine to drive the bulldozer.

16. Teeth Sprocket

This is a sub-component of the sprocket in the form of teeth.

17. Carrier Roller

The carrier roller serves to hold the track shoe in place so that the bulldozer can move properly.

18. Track Shoe

The track shoe works as a tool for moving the bulldozer in the form of sheet metal. This sheet metal is driven by a track roller so that it can move and the bulldozer can mobilize properly.

19. Track Roller

The track roller serves as the wheel of the bulldozer. When the track roller rotates, the track shoe will move so that the bulldozer moves and runs properly.

20. Straight Frame

The straight frame works as a support rod for the blade that connects the blade to the bulldozer's body. This component is connected by hinges to allow the blade to move freely so that the blade can perform its function properly.

21. Brace

The brace is a sub-component of the straight frame that clips between the blade and the straight frame so that it can move properly.

22. Cutting Edge

The cutting edge is used for leveling the ground or dredging the soil to be moved. The cutting edge is a sub-component of the blade which is usually serrated with various shapes according to its function to level or dredge the soil properly.

Bulldozer’s components that have been described earlier are common components that are owned by bulldozers in general. Along with the advance of technology, these components may increase or even decrease because they have been replaced by more sophisticated technology.