



# BULL DOZER



## NEED FOR BULL DOZER

Normally before the construction of road and building, the main work is to level the land surface. With the help of man power, a small amount of sand can be moved and the levelling takes more time. So in order to overcome this problem, bulldozer is used. It can move large amount of soil.

## BULL DOZER

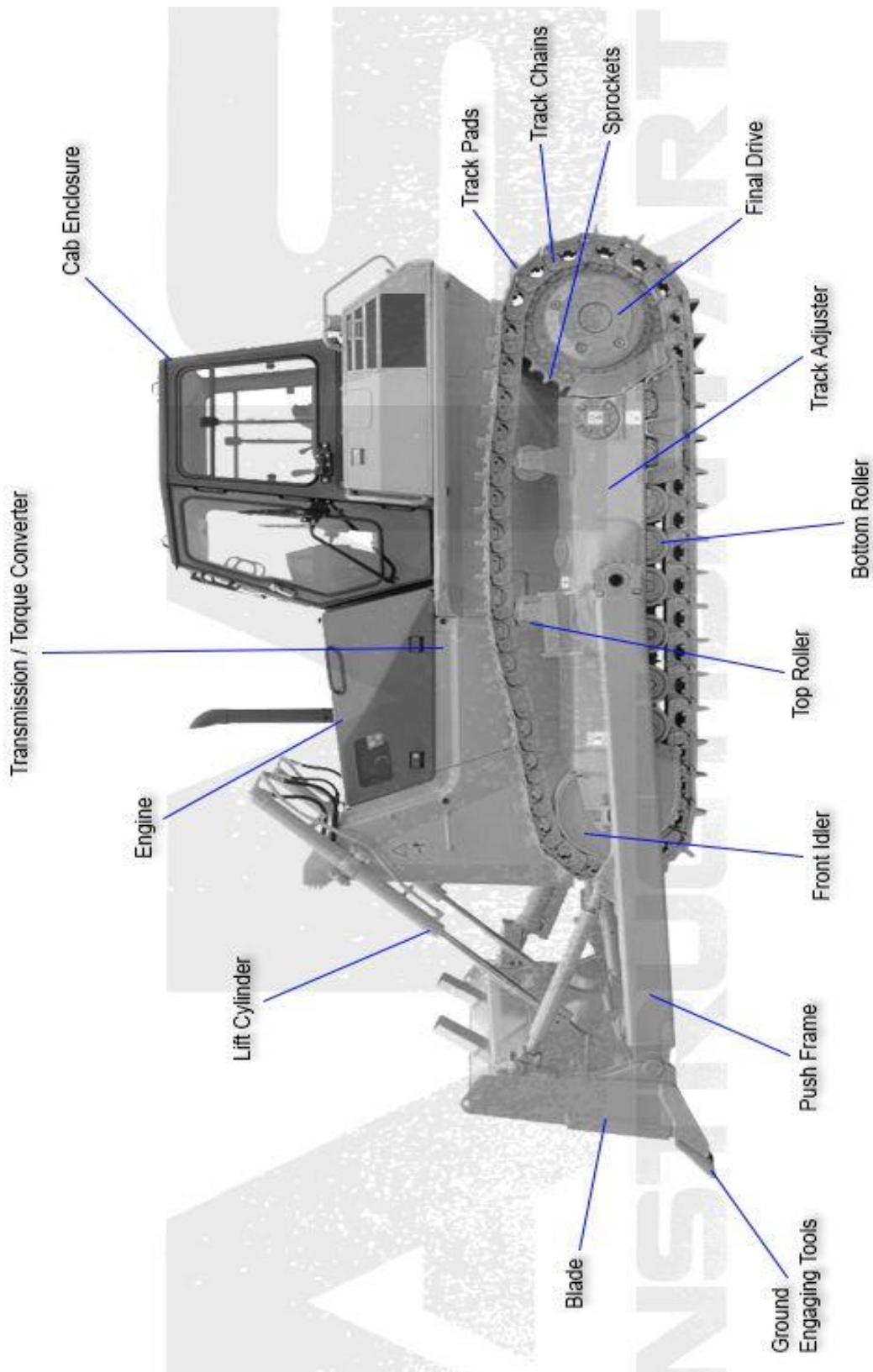
A **bulldozer** is a crawler (continuous tracked tractor) equipped with a blade used to push large quantities of soil, sand, rubble, or other such material during construction or conversion work and typically equipped at the rear with a ripper to loosen densely compacted materials. Bulldozers can be found on a wide range of sites, mines and quarries, military bases, heavy industry factories, engineering projects and farms. The term "bulldozer" correctly refers only to a tractor (usually tracked) fitted with a dozer blade.

## MAIN COMPONENTS

- Engine and Transmission unit
- Hydraulic pump
- Main control valve
- Hydraulic cylinder
- Front Loader
- Track assembly
- Driver cabin
- Cletrac Differential steering
- Pneumatic braking System
- Ripper



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## CONSTRUCTION DETAILS

Bulldozers are large and powerful tracked heavy equipment. The tracks give them excellent ground holding capability and mobility through very rough terrain. Wide tracks help



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distribute the bulldozer's weight over a large area, thus preventing it from sinking in sandy or muddy ground. Bulldozers have transmission systems designed to take advantage of the track system and provide excellent tractive force. Another type of bulldozer is the wheeled bulldozer, which generally has four wheels driven by a 4-wheel-drive system and has a hydraulic, articulated steering system. The blade is mounted forward of the articulation joint, and is hydraulically actuated. The bulldozer's primary tools are the blade and the ripper. The word "bulldozer" is sometimes used inaccurately for other similar construction vehicles such as a large front loader.

The bulldozer blade is a heavy metal plate on the front of the tractor, used to push objects, and shove sand, soil, debris, and sometimes snow. Blades can be fitted straight across the frame, or at an angle, sometimes using additional 'tilt cylinders' to vary the angle while moving. The bottom edge of the blade can be sharpened. The ripper is the long claw-like device on the back of the bulldozer. Rippers can come as a single (single shank/giant ripper) or in groups of two or more (multi shank rippers). Usually, a single shank is preferred for heavy ripping. The ripper shank is fitted with a replaceable tungsten steel alloy tip, referred to as a 'boot'. Ripping rock breaks the ground surface rock or pavement into small rubble easy to handle and transport, which can then be removed so grading can take place.

### APPLICATION

- Building of the roads
- Demolishing old unnecessary structures
- To move huge quantities of earth
- For construction purposes
- For clearing enemy's base
- For deforestation

### MANUFACTURING COMPANIES

- Volvo
- Caterpillar
- Mahindra
- JCB
- Komatsu
- John Deere