



# SCRAPER



## NEED FOR SCRAPER

The loosen earth materials like sand are normally carried out from one place to another by means of man power. For every purpose, it is not possible to use the man power for carrying and discharging the earth materials (sand). Since it is a time consuming process and requires more man power. For overcoming this problem, the scraper is used for carrying the loosen materials from one place to another. The scraper itself grabs the loosen material from the surface and transfer to the required destination, discharging is also done with the use of scraper.

## SCRAPERS

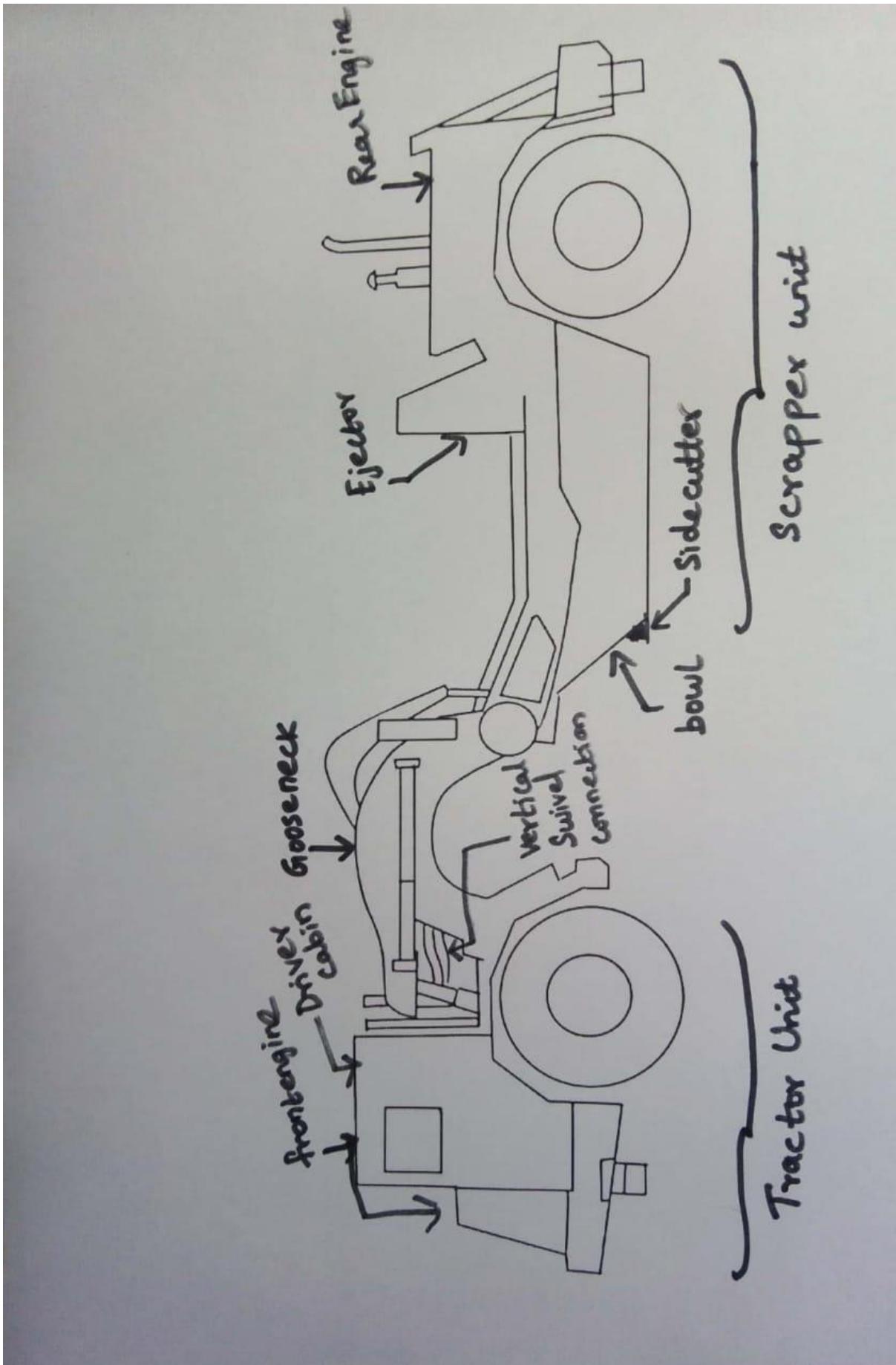
Scraper is a machine used for moving earth loosen materials (sand) over short distances over relatively smooth areas. Either self-propelled or towed, it consists of a wagon with a gate having a bladed bottom. The blade scrapes up earth as the wagon pushes forward and forces the excavated material into the wagon. When the wagon is filled, the gate is closed, and the material is carried to the place of disposal. The scraper is the dominant tool in highway construction.

## MAIN COMPONENTS

- Tractor unit
  - Engine
  - Hydraulic pump
  - Driver cabin
- Scrapper unit
  - Bowl
  - Apron
  - Ejector
- Goose neck
- Push block



# SCRAPER





# SCRAPER



## CONSTRUCTION DETAILS

A wheel tractor-scraper is a piece of heavy equipment used for earthmoving. The rear part of the scraper has a vertically moveable hopper with a sharp horizontal front edge which can be raised or lowered. The front edge cuts into the soil and fills the hopper. When the hopper is full it is raised, closed, and the scraper can transport its load to the fill area where it is dumped. With a type called an 'elevating scraper' a conveyor belt moves material from the cutting edge into the hopper. The rear part has a vertically moveable hopper (also known as the bowl) with a sharp horizontal front edge. The hopper can be hydraulically lowered and raised. When the hopper is lowered, the front edge cuts into the soil or clay like a plane and fills the hopper. When the hopper is full it is raised, and closed with a vertical blade (known as the apron). The scraper can transport its load to the fill area where the blade is raised, the back panel of the hopper, or the ejector, is hydraulically pushed forward and the load tumbles out. Then the empty scraper returns to the cut site and repeats the cycle.

## APPLICATION

- For carrying the loosen material and transfer to another place
- Used in mining areas
- Used in construction sites
- Used in agriculture field

## MANUFACTURING COMPANIES

- Caterpillar
- John Deere
- K-Tec
- Komatsu
- Volvo