



MOTOR GRADERS



NEED FOR MOTOR GRADER

The construction of road require more even surfaces, levelling the surface by using man power is a time consuming process. In order to complete the process in a less time, the motor graders were used for levelling the surface.

MOTOR GRADER

A grader, also commonly referred to as a road grader or a motor grader, is a construction machine with a long blade used to create a flat surface during the grading process. Although the earliest models were towed behind horses or other powered equipment, most modern graders contain an engine so are known, technically erroneously, as "motor graders". Grader in excavation, precision finishing vehicle for final shaping of surfaces on which pavement will be placed. Between its front and rear wheels a grader carries a broad mechanically or hydraulically controlled blade that can be extended from either side. Either end of the blade can be raised or lowered. Graders may be used for shallow ditching, but most models are used to assist other earth-moving equipment and to smooth roads, fills, and cuts.

MAIN COMPONENTS

- Engine
- Driver cab
- Blade
- Hydraulic system
- Ripper or Blade or Compactor (optional)

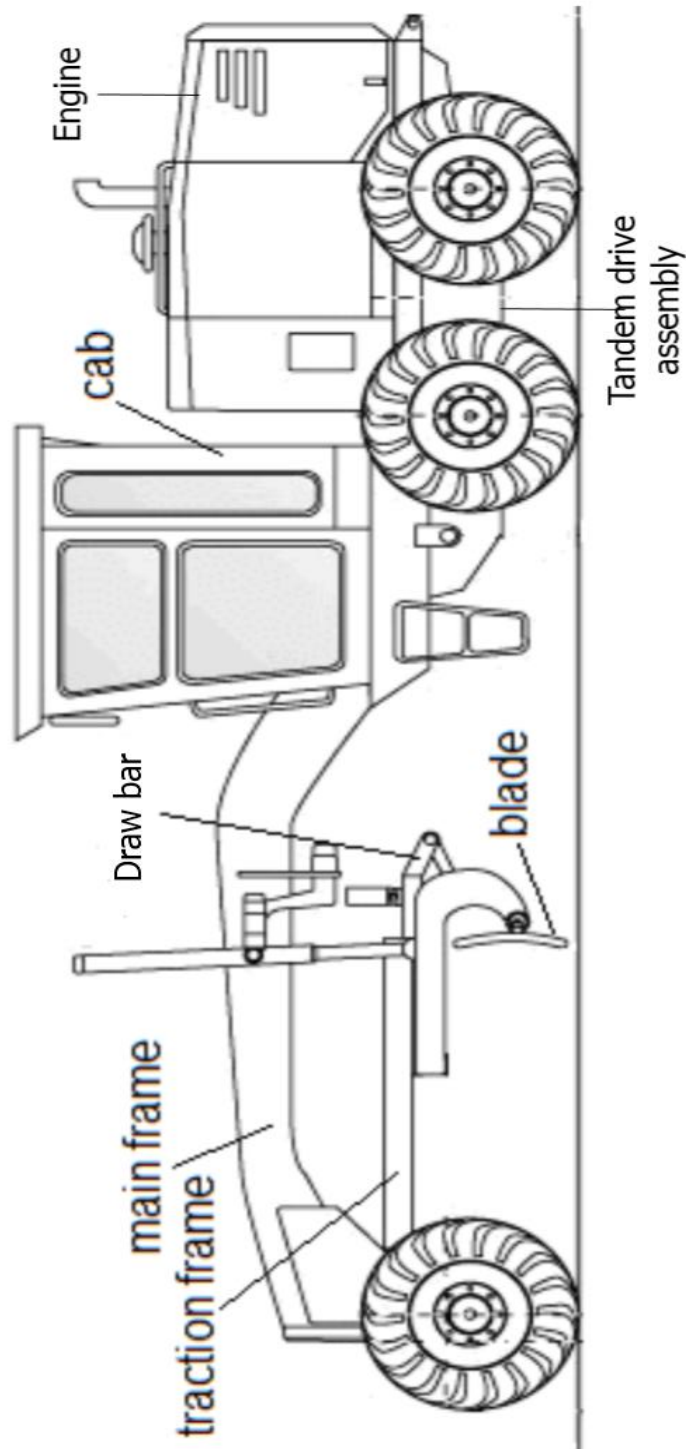
CONSTRUCTIONAL DETAILS

Typical models of Motor graders have three axles, with the engine and cab situated above the rear axles at one end of the vehicle and a third axle at the front end of the vehicle, with the blade in between. Most motor graders drive the rear axles in tandem, but some also add front wheel drive to improve grading capability. Many graders also have optional attachments for the rear of the machine which can be ripper, blade, or compactor. Steering for a motor grader is typically accomplished via a steering wheel or joystick controlling the angle of the front wheels, but many models also allow frame articulation between the front and rear



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axles, which allows a smaller turning radius in addition to allowing the operator to adjust articulation angle to aid in the efficiency of moving material.





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Other implement functions are typically hydraulically powered, and can be directly controlled by levers, or by joystick inputs or electronic switches controlling Electro hydraulic servo valves. The blade can be adjusted at the required angle for spreading the sand on the surface for levelling and the same blade is used for levelling the surface.

APPLICATION

- Used in the construction and maintenance of dirt roads and gravel roads.
- Used in the construction of paved roads
- Used to prepare the base course to create a wide flat surface upon which to place the road surface.
- Used to set native soil or gravel foundation pads to finish grade prior to the construction of large buildings.
- Graders can produce inclined surfaces, to give cant (camber or side slope) to roads.
- In some countries they are used to produce drainage ditches with shallow V-shaped cross-sections on either side of highways.