

Construction Equipment

Used Construction Equipment Simi Valley - Most heavy-duty construction equipment includes vehicles build to complete specific construction tasks. Earthmoving operations are often accompanied by heavy trucks, engineering machines, heavy hydraulics and more. There are five equipment systems including traction, information and control, structure, implement and powertrain. There is a variety of industrial equipment that is classified under the heavy equipment umbrella. Tractors Tractors are meticulously designed to provide high tractive responses at slow speeds to facilitate hauling equipment, trailers or items required for construction or agricultural applications. Tractors are often utilized as farm equipment to mechanize farming tasks that require power and traction. Numerous agricultural additions can be mounted behind or onto the tractor to make certain jobs easier. The tractor can provide power to the mechanized attachment to facilitate heavy lifting or digging etc. Excavators Heavy construction equipment such as excavators have a stick, a boom and a cab situated on a rotating platform. Excavators may feature wheels or tracks depending on their application. The house is typically found on top of the undercarriage that houses the travel system. Hydraulic cylinders, motors and hydraulic fluid all help the excavator complete its movement and job capacity. A different operation mode is achieved with excavators that rely on the linear actuation of the hydraulic cylinders as opposed to models that use cables, steel ropes and winches. Backhoe Loaders Similar to a tractor, a backhoe loader is essentially a machine that has a front loader on one end and a backhoe on the other end. A swiveling seat design enables the operator to face either direction as needed, preventing operator fatigue. Backhoe loaders can be built by pairing a front-end loader with a rear backhoe or the machines can be purchased ready to go. These machines are very durable and have been manufactured to be strong enough to complete farm work however, they are not suitable for heavy construction jobs. The farm model requires the operator to change seats from sitting in the tractor seat to sitting in front of the backhoe controls. This constant movement to reposition the machine during digging often slows down the process. Thanks to the invention of hydraulically powered attachments including an auger, tiltrotator, a grappler, breaker, etc., the backhoe can be outfitted to use in a variety of applications including construction, engineering and agricultural sectors. The tiltrotator attachment works well for carrying tools. Quick coupler mounting systems are commonly found on numerous backhoes. This enables easier attachment mounting and can dramatically increase the capabilities of the equipment on the machine. Backhoes often work alongside bulldozers and loaders. In the industrial equipment industry, backhoe loaders are very popular. Certain types of special equipment including excavators and front-end loaders are replacing backhoes. The advent of the mini-excavator has proven useful in a variety of industries. Jobs that would have relied on a backhoe can now combine a skid steer and a mini-excavator. A backhoe bucket can be reversed and utilized in a power shovel application. This can be useful for working around pipes and other obstacles, to increase overall reach capability, for loading from a stockpile or for filling material or picking up items next to buildings. Skidder A type of forestry equipment for transporting freshly cut trees is the skidder. This hauling practice is referred to as skidding. Newly cut logs are dragged out of the forest and taken from the cutting area to a landing where they can be safely loaded and taken to the sawmill on logging trucks. Dredging Dredging refers to underwater excavation. Dredging can be completed in shallow or deep waters. This excavation method is used to keep waterways and ports navigable for ships and free of debris. Dredging is often done to improve the coastline, for coastal development purposes and land reclamation. This process allows sediments to be suctioned up and relocated. On occasion, dredging can be done to recover things lost in the water. Minerals or high-value sediments can be collected from certain construction applications during dredging. Four specific components comprise the dredging process including loosening items, transporting the materials to the surface, transporting materials and disposing of them. Dredging materials can be transported by barge, removed as a liquid suspension through pipelines or locally disposed of. Bulldozers A popular type of heavy

equipment is the bulldozer. It relies on large tracks to manage mobility on rough surfaces and tricky terrain. Their design features excellent ability to distribute the extensive weight over a large area to prevent the machine from sinking into muddy or sandy environments. The extra-wide tracks are called swamp tracks and these work well in difficult terrain. The bulldozers' transmission system is built to deliver powerful tractive force by enabling the machine to take advantage of its' unique tracks. Mobile and powerful, bulldozers are commonly used in developing infrastructure, road building, construction, mining, land clearing and other projects that require earth-moving equipment. Wheeled bulldozers have four wheels and are operated with a 4WD with an articulated, hydraulic system. The hydraulically actuated blade is mounted in front of the articulation joint. The ripper and the blade are the primary tools with this model. Grader A grader is a type of construction machine that features a long blade. It creates a flat surface during the grading operation. Many models have an engine and cab located above the rear axles at one end of the machine, three axles with the third axle situated at the front end and the blade balanced in between. Most graders drive while their rear axles are in a tandem position. Some models feature front-wheel drive to provide better grading maneuverability. Extra attachments may be used on the rear of the machine such as a blade, ripper, compactor or scarifier. Snowplowing and dirt grading operations often use a side blade that can be mounted. Certain grader models can use many attachments. The underground mining industry can use some specially engineered graders. Civil engineering relies on graders to complete a precise grade that is a specific pitch, height and blade angle. Rough grading processes are completed with bulldozers or scrapers. Maintaining and constructing dirt and gravel roads requires work by graders to ensure accuracy. They are also used to prepare the base for the construction of paved roads. These machines are used to set native soil foundation pads or gravel to complete the grade prior to large-scale construction commences. These impressive machines can create inclined surfaces in order to generate side slopes for roads or drainage ditches along sides of the highways. Grader steering can be completed via a steering wheel or a joystick to control the front wheels' angle. Numerous models can complete a smaller turning radius thanks to frame articulation between the front and rear axles. This design allows operators to change the angle of articulation to move material more efficiently. Electro-hydraulic servo valves rely on electronic switches, joystick input or direct lever control to complete additional functions via hydraulics.