Construction Equipment

Used Construction Equipment Tennessee - 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. Numerous types of industrial machines fall under the classification of heavy equipment. 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. One of the most popular farming machines is tractors that mechanize heavy lifting and loading tasks that need traction and power. Numerous agricultural additions can be mounted behind or onto the tractor to make certain jobs easier. The tractor is a useful farming machine used to mechanize loading, heavy lifting and digging among other things. Excavators Heavy construction equipment such as excavators have a stick, a boom and a cab situated on a rotating platform. The house sits on top of an undercarriage outfitted with wheels or tracks depending on the model. 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 Backhoe loaders resemble a tractor and these machines feature a backhoe found at one end of the equipment and a front loader found at the opposite end. A swiveling seat design enables the operator to face either direction as needed, preventing operator fatigue. These machines can be purchased as is or may be constructed from a farm tractor pairing with a rear backhoe and a front-end loader. Manufactured backhoe loaders are specific for farm applications and are not suitable for heavy work. The farm model requires the operator to change seats from sitting in the tractor seat to sitting in front of the backhoe controls. Constantly changing positions to move the machine into place for digging slows everything down. The hydraulically powered attachments include the grappler, tiltrotator, auger, breaker and other items. The backhoe can be used in a variety of industries including agricultural, engineering and construction. A popular attachment for transporting tools is the tiltrotator. Many backhoes provide different quick coupler mounting systems. 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. Previous job sites that would have employed a backhoe may now feature a mini excavator and skid steer used in conjunction. A power shovel can be created when the backhoe bucket is used in reverse. This flexible design is excellent for completing tasks around obstacles such as pipes, for increasing reach potential and for filling items or loading stockpiled materials. Skidder A type of forestry equipment for transporting freshly cut trees is the skidder. This hauling practice is referred to as skidding. The logs are dragged out and transported from the cutting location to a landing where they can be loaded onto logging trucks and taken to the sawmill. Dredging Excavating partially or completely underwater is a process called dredging. Dredging can be completed in shallow or deep waters. This process is used to keep ports and waterways open and navigable. It is commonly done for land reclamation, coastal development and coastline protection. This process allows sediments to be suctioned up and relocated. Sometimes, dredging is completed to recover materials. The construction industry may collect high-value sediments and minerals via dredging. Four specific components comprise the dredging process including loosening items, transporting the materials to the surface, transporting materials and disposing of them. Extracted items may be locally disposed of, removed in pipelines via a liquid suspension or moved by barge. Bulldozers Bulldozers are powerful heavy equipment with great tracks to provide superior mobility on rough 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. Transmission systems within bulldozers are designed to offer excellent tractive force by taking advantage of the 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 bulldozer models with 4WD are available. They feature an articulated hydraulic system to complete difficult tasks. In front of the articulation joint, the hydraulically actuated blade is mounted. The two primary tools on a bulldozer are the blade and the ripper. Grader Graders are a kind of construction equipment that uses a long blade. A grading operation creates a flat surface. 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. Many graders ride with their rear axles in tandem. Some models offer front-wheel drive to provide more maneuverability for grading purposes. Optional rear attachments include the compactor, scarifier, ripper and blade. Dirt grading and snowplowing jobs commonly use a mounted side blade. Certain grader models can use many attachments. Other graders have been designed for specific industries including underground mining. Graders are used in the civil engineering industry to finish grade with precision with the proper height, pitch and blade angle. Bulldozers and scrapers are used to accommodate difficult grading procedures. Dirt and gravel roads rely on graders to provide accuracy. These machines prepare the base for paved roads and construction. Graders are employed to set gravel or native soil foundation pads to finish grade before large-scale building construction. These large machines can designate inclined surfaces to establish slopes for drainage ditches or roads beside the highways. Grader steering can be completed via a joystick or steering wheel to control the angle of the front wheels. A smaller turning radius is possible by many models due to the frame articulation design between the rear and front axles. This enables the operator to change the articulation angle to be more efficient moving material. Electro-hydraulic servo valves rely on electronic switches, joystick input or direct lever control to complete additional functions via hydraulics.