

Construction Equipment

Used Construction Equipment Indiana - 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 Specifically designed tractors offer extreme tractive capabilities at slower speeds to facilitate hauling equipment including construction items, trailers and items for agriculture. Tractors are often utilized as farm equipment to mechanize farming tasks that require power and traction. A variety of agricultural attachments may be mounted on or behind the tractor to make certain tasks more efficient. Tractors can mechanize attachments to enable digging, heavy lifting and loading, etc. Excavators Heavy construction equipment includes excavators that feature a bucket, stick, boom and cab situated on a rotating platform. Depending on the particular model, the house is located on top of an undercarriage that has either tracks or wheels. The hydraulic excavators complete all functions and movement with the help of hydraulic fluid, hydraulic motors and hydraulic cylinders. 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. To help prevent operator fatigue, there is a swiveling seat to allow the operator to face whichever direction is needed. Backhoe loaders are for sale as is or they can be created by combining a rear backhoe loader with a front-end loader. Manufactured backhoe loaders are specific for farm applications and are not suitable for heavy work. Operators using the farm model will have to change seats from the tractor seat to the front of the backhoe controls. Obviously, switching seats repeatedly to reposition the machine for digging applications slows productivity down. The hydraulically powered attachments include the grapppler, tiltrotator, auger, breaker and other items. The backhoe can be used in a variety of industries including agricultural, engineering and construction. The tiltrotator attachment works well for carrying tools. Numerous backhoes offer quick coupler mounting systems. This enables easier attachment mounting and can dramatically increase the capabilities of the equipment on the machine. It is common to find backhoes working beside bulldozers and loaders. In the industrial equipment industry, backhoe loaders are very popular. Backhoes are commonly being replaced by different front-end loaders and excavators. 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. It is possible to reverse a backhoe bucket and use it as a power shovel. This design is helpful for extended-reach applications, working around pipes, loading and filling stockpiled materials, etc. Skidder The skidder is a type of heavy equipment utilized in the forestry industry and logging for taking freshly cut trees out of the forest. 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 occur in shallow lakes or the deep ocean. This process is used to keep ports and waterways open and navigable. It is commonly done for land reclamation, coastal development and coastline protection. Bottom sediments can be sucked up and relocated elsewhere. Sometimes, dredging is completed to recover materials. High-value sediments or minerals may be collected via dredging and utilized by the construction industry. 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 Bulldozers are powerful heavy equipment with great tracks to provide superior mobility on rough terrain. Their superior design prevents this heavy equipment from sinking on soft terrain or muddy areas as their weight is evenly

distributed. 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. Bulldozers are commonly utilized in mining, road building, forestry, developing infrastructure, construction, land clearing and projects that need earth-moving machinery that is extremely powerful and mobile. 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 blade and the ripper are the main tools associated with this bulldozer. Grader Graders are a kind of construction equipment that uses a long blade. A grading operation creates a flat surface. Numerous models feature a cab and engine found above the rear axles located at one end of the equipment with three axles. The third axle is found at the front portion of the machine and the blade balances nicely in between. Many graders ride with their rear axles in tandem. Some models offer front-wheel drive to provide more maneuverability for grading purposes. Extra attachments may be used on the rear of the machine such as a blade, ripper, compactor or scarifier. Dirt grading and snowplowing jobs commonly use a mounted side blade. Some grader models that can employ numerous attachments. Some graders have been specifically designed for use in underground mining. Graders are employed by civil engineering to finish precision grades of a certain blade angle, pitch and height. Scrapers and bulldozers complete rough grading processes. Graders achieve accuracy while building gravel and dirt roads. 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. Many models can conduct a tighter turning radius due to the way the frame is articulated between the rear and front axles. This enables the operator to change the articulation angle to be more efficient moving material. Other functions are usually powered with hydraulics and can be directly controlled by joystick inputs, levers or electronic switches powering electro-hydraulic servo valves.