Construction Equipment

Used Construction Equipment New Jersey - Industrial equipment including heavy-duty vehicles designed for specific construction tasks make up the majority of construction equipment. Common earthmoving operations rely on engineering equipment, oversized trucks and heavy hydraulics among other things. There are five equipment systems including traction, information and control, structure, implement and powertrain. Many kinds of industrial machines are categorized under the heavy equipment category. Tractors Tractors are specially designed to deliver high tractive movements at slower speeds to accommodate hauling items such as trailers or construction equipment commonly for agricultural purposes. 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. Tractors can mechanize attachments to enable digging, heavy lifting and loading, etc. Excavators Excavators are one of the most popular types of heavy construction equipment. They often feature a cab located on a rotating platform, a boom and a stick. Depending on the particular model, the house is located on top of an undercarriage that has either tracks or wheels. 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. There is a swiveling seat option to position the operator facing whichever direction is required at the time. Backhoe loaders can be built by pairing a front-end loader with a rear backhoe or the machines can be purchased ready to go. Manufactured backhoe loaders are specific for farm applications and are not suitable for heavy work. However, the farm unit requires the operator to change seats from sitting in front of the backhoe controls to then sitting in the tractor seat and vice versa. Constantly changing positions to move the machine into place for digging slows everything down. 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. A great attachment for carrying 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. One of the most common types of industrial equipment is the backhoe loader. Backhoes are commonly being replaced by different front-end loaders and excavators. The mini-excavator has become popular for many applications. A mini-excavator and a skid steer can work together to complete work that was formally reserved for a backhoe. It is possible to reverse a backhoe bucket and use it as a power shovel. 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 skidder is a kind of heavy equipment that is used in logging for hauling freshly cut trees from the forest in a forestry practice known as skidding. Freshly cut logs are dragged out of the forest and transported from where they were cut to a landing where they are loaded onto logging trucks and transported to the sawmill. Dredging Dredging refers to a type of underwater excavation or partially underwater. 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. Sediments can be sucked up and redistributed. Sometimes, dredging is completed to recover materials. Minerals or high-value sediments can be collected from certain construction applications during dredging. Dredging is considered to be a four-step process: loosening material, carrying material to the surface, transportation and disposal. Extracted items may be locally disposed of, removed in pipelines via a liquid suspension or moved by barge. 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. Swamp tracks, as the extra wide tracks are known, are useful in poor terrain. The transmission system delivers extensive tractive force and allows the machine to make the most 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. There are 4WD models on the market of wheeled bulldozers that utilize a hydraulic, articulated system. 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 A long bladed construction machine is the grader. It creates a flat surface during the grading operation. 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. There are optional attachments for the rear including the scarifier, compactor, ripper or blade. Snowplowing maneuvers and dirt grading jobs rely on a mounted side blade. Certain grader models can use many attachments. Other graders have been designed for specific industries including 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. 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 giant machines create inclined surfaces to facilitates side slopes needed for drainage and road building beside highways. Grader steering can be completed via a steering wheel or a joystick to control the front wheels’ angle. A smaller turning radius is possible by many models due to the frame articulation design between the rear and front axles. Materials can be moved more efficiently thanks to this design allowing operators to change the articulation angle. Other functions are usually powered with hydraulics and can be directly controlled by joystick inputs, levers or electronic switches powering electro-hydraulic servo valves.