Construction Equipment

Used Construction Equipment Alaska - Most heavy-duty construction equipment includes vehicles build to complete specific construction tasks. Heavy hydraulics, engineered vehicles and large trucks often accompany earthmoving operations. 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 Specifically designed tractors offer extreme tractive capabilities at slower speeds to facilitate hauling equipment including construction items, trailers and items for agriculture. Tractors are commonly used to describe farm equipment that offers traction and power to mechanize farming tasks. 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 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. 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. 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 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. To help prevent operator fatigue, there is a swiveling seat to allow the operator to face whichever direction is needed. 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. 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. 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. 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. The tiltrotator attachment works well for carrying tools. Quick coupler mounting systems are commonly found on numerous backhoes. The quick coupler offers better attachment efficiency for switching different equipment out on the machine. Backhoes often work alongside bulldozers and loaders. In the industrial equipment industry, backhoe loaders are very popular. Some types of specialized equipment such as front-end loaders and excavators are displacing backhoes. The advent of the mini-excavator has proven useful in a variety of industries. A mini-excavator and a skid steer can work together to complete work that was formally reserved for a backhoe. A backhoe bucket can be reversed and utilized in a power shovel application. 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 The skidder is a type of heavy equipment utilized in the forestry industry and logging for taking freshly cut trees out of the forest. 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 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. Bottom sediments can be sucked up and relocated elsewhere. Dredging can be utilized to recover items at times. 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. 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 transmission system delivers extensive tractive force and allows the machine to make the most 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. There are 4WD models on the market of wheeled bulldozers that utilize a hydraulic, articulated 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. The majority of graders drive with the rear axles in tandem; however, certain models add front wheel drive to offer better grading maneuverability. Optional rear attachments include the compactor, scarifier, ripper and blade. Snowplowing and dirt grading operations often use a side blade that can be mounted. Some grader models that can employ numerous 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. Graders achieve accuracy while building gravel and dirt roads. Graders are used to achieving the proper base for construction and road paving. Graders are employed to set gravel or native soil foundation pads to finish grade before large-scale building construction. These impressive machines can create inclined surfaces in order to generate side slopes for roads or drainage ditches along sides of the highways. A joystick or steering wheel is used to control the front wheel angle of the grader. Numerous models can complete a smaller turning radius thanks to frame articulation between the front and rear axles. Materials can be moved more efficiently thanks to this design allowing operators to change the articulation angle. Additional functions may be completed with hydraulics that are controlled directly by levers, joystick input or electronic switches that deliver power to electro-hydraulic servo valves.