Construction Equipment

Used Construction Equipment Spokane - Most heavy-duty construction equipment includes vehicles build to complete specific construction tasks. Common earthmoving operations rely on engineering equipment, oversized trucks and heavy hydraulics among other things. Five main types of construction equipment systems include powertrain, implement, structure, control and information and traction. 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. Many agricultural attachments can be added to the tractor to simplify tasks. The tractor is a useful farming machine used to mechanize loading, heavy lifting and digging among other things. 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. The house sits on top of an undercarriage outfitted with wheels or tracks depending on the model. Excavators rely on hydraulic motors, hydraulic fluid and hydraulic cylinders to facilitate all movements and functions. The hydraulic cylinders provide linear actuation to provide a different operation mode in comparison to other excavator models that use winches, steel ropes and cables. Backhoe Loaders A backhoe loader is similar to a tractor with a backhoe situated at one end and a front loader on the other. A swiveling seat design enables the operator to face either direction as needed, preventing operator fatigue. 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 grappler, tiltrotator, auger, breaker and other items. The backhoe can be used in a variety of industries including agricultural, engineering and construction. A great attachment for carrying tools is the tiltrotator. 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. It is common to find backhoes working beside bulldozers and loaders. Backhoe loaders are popular within the industrial equipment industry. 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. It is possible to reverse a backhoe bucket and use it as a power shovel. 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. 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 Excavating partially or completely underwater is a process called dredging. Dredging can be completed in shallow or deep waters. Dredging helps to keep waterways and ports easy to navigate and open. Dredging is often done to improve the coastline, for coastal development purposes and land reclamation. Bottom sediments can be sucked up and relocated elsewhere. 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. There are four parts to the dredging process including loosening items, bringing the material topside to the surface, transporting and disposing of the material. 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 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. 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. In front of the articulation joint, the hydraulically actuated blade is mounted. The ripper and the blade are the primary tools with this model. Grader Graders are a kind of construction equipment that uses a long blade. Graders make surfaces flat during grading. Many models have an engine and a cab situated at one end of the machine above the rear axles. There are three axles and the third one is found at the front endo the machine. The blade is 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. Extra attachments may be used on the rear of the machine such as a blade, ripper, compactor or scarifier. 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 used in the civil engineering industry to finish grade with precision with the proper height, pitch and blade angle. Scrapers and bulldozers complete rough grading processes. Dirt and gravel roads rely on graders to provide accuracy. 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 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 tinier 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. Electro-hydraulic servo valves rely on electronic switches, joystick input or direct lever control to complete additional functions via hydraulics.