

BARNHART

LIFTING LETTER

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**CIVIL
PROJECT PROFILE:**

Temporary Bridge
in Montana

VOL. 71

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**FEATURE
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Barnhart
Grows

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PG. **6** COMMERCIAL
PROJECT PROFILE:
Riverboat Launch

Barnhart launches a new 80-foot-long riverboat in New Town, ND.



In May, Barnhart acquired Taylor Crane of St. Louis, Missouri.

BARNHART GROWS

The past nine months have marked a pivotal period of growth and rapid expansion for Barnhart with the acquisition of five new branches. This strategic move not only broadens our geographical footprint, but also enhances the value we bring to our customers across the nation.

In May, Barnhart acquired Taylor Crane Rental of St. Louis, Missouri, a respected, family-owned business. Known for delivering customized lifting solutions for projects of all sizes, Taylor's expertise strengthens Barnhart's position as the premier lifting and logistics provider in the region, ensuring our customers receive unparalleled service.

In October, Bollmeier Crane of Madison, Illinois, became the second addition to our expanding presence in the St. Louis metro area. Renowned for its quality crane rental services throughout central Missouri and south-central Illinois, Bollmeier enriches our offerings, providing customers in Missouri, Illinois, Indiana, Iowa and Kentucky with enhanced service options.

November saw the acquisition of Armstrong Crane and Rigging, Inc. of New Brighton, Minnesota. With a focus on serving utility and heavy industry's transport, rigging and lift needs in the Minneapolis-St. Paul area, Armstrong brings decades of experience to the Barnhart family. This addition further strengthens our presence in the upper Midwest, complementing our existing branches in Iowa, Nebraska, North and South Dakota and Wisconsin.

At the beginning of 2024, Barnhart added to its southern presence with the purchase of White Crane Co., Inc., of

West Columbia, South Carolina. The family-owned company has a long history of providing quality crane rental service, knowledgeable and experienced operators, certified riggers and transport services. The acquisition gives Barnhart its second branch in South Carolina.

At the end of January, Barnhart acquired Baxter Crane and Rigging of Tupelo, Mississippi, which included Baxter's crane rental service, equipment and employees. It represents Barnhart's fourth field office in the state, complementing services from locations in Columbus, Jackson and Pascagoula.

The value and benefit of these acquisitions extend beyond mere geographical expansion. Barnhart's growing network means increased accessibility, better service and more options for our customers. Our commitment to providing top-notch, customized lifting solutions is bolstered by the collective expertise and equipment of our network. This strategic growth allows us to scale our capabilities up or down, ensuring adaptability to changing project requirements and providing customers with a comprehensive, turnkey solution for all heavy lift and transport needs.

As a U.S. owned and operated company, Barnhart's expanded capabilities and nationwide network uniquely position us to continue delivering world-class service to the biggest industries in the country. Our national range, inventory and flexibility remain unmatched, making us the go-to partner in the country for lifting and logistics solutions.



1 A 59,000-pound turbine needed to be installed in a lumber mill in Maine. The turbine was located on the second floor, accessible only through a floor hatch that was 16 ½' long and 11'8" wide. The turbine's dimensions were 13' long and 10' wide.



2 The hatch opening was 27 feet above the first floor. The turbine was transported into the building by the customer's OTR trailer. Barnhart set up gantries on the second floor with 16" deep slide header beams.



3 Rigging was attached to the turbine lifting points and hoisted using chain falls.



4 The turbine was lifted over the generator and lowered to its final set location using gantries and 15-ton air chain hoists. Barnhart's approach, which avoided using a large crane to go through the roof, was reasonable from a cost perspective and less disruptive to the plant's operations.



1 Barnhart was hired to transport three transformers, which were scheduled to arrive at separate times, from a rail station to an electric substation. The team was able to locate a nearby rail spur within seven miles of the substation. A 44A gantry system was set up to offload the transformers from the rail cars and two Eastrac trailers were mobilized.



2 There was an error with the rail delivery, and all three of the transformers arrived at the same time. But there were only two Eastrac trailers. The crew devised a plan to utilize a third-party crane to offload and set the units to pads at the substation.



3 The crew also arranged with the California Highway Patrol to haul all three units back-to-back, an unusual request, but one granted in part because of Barnhart's reputation. The plan was to haul the first unit to the substation using prime movers and have the crane offload the unit. The empty trailer would then return to the rail spur and begin loading the third unit while part of the crew hauled the second unit to the substation.



4 All three units were offloaded and set to their foundation pad in one day. The round-robin hauling and crane offloading of the units was unheard of, but the plan worked without a hitch. It took a high level of coordination and an efficient and experienced crew to pull it off.



1 Barnhart's Mandan, North Dakota branch was hired to provide engineering, crane, and transport solutions to launch a new 80-foot-long riverboat in New Town, North Dakota. The riverboat was fully constructed on-site about a quarter of a mile from the lake. The boat's interior was not fully outfitted when the project took place. The center of gravity (CG) was estimated, but Barnhart decided to include hydraulically adjustable tension links in the rigging to have the ability to level the boat in case the actual CG was offset from the theoretical location.



2 The boat was transported down a 16.8% grade several hundred yards on a PST double-wide 12-line Goldhofer to reach the launch site. The crane with counterweight was walked down the same incline to the second crane pad. This road was constructed using only native materials, which presented significant challenges including scheduling conflicts and soft areas difficult for the Goldhofer to navigate.



3 To avoid damaging the thin plate of the hull, the transverse slings under the hull were positioned at predetermined locations at internal frames and bulkheads. Adjustable rigging and multiple spreader bars were engineered to accommodate the lift.



4 Barnhart used its CC 2800-1 SSL crane and 300-kip and 120-kip tension links to pick the boat from the Goldhofer and successfully set it in Lake Sakakawea. The project challenges included changing river elevations and river flow rate, heavy rain causing road and crane pad washouts and working over open water.



1 A local utility in Washington had to insert a 1,900-foot-long steel pipe into the ground as part of a new water line project. For the pipe to be installed, it had to be lifted to keep it from being damaged during the pullback. Because of its extensive fleet and proximity to the jobsite, the local Barnhart branch was easily able to cover the need for the five cranes.



2 The Barnhart crew attached slings to the 36" pipe at intervals per the engineered plan to spread the load on the pipe to keep it from buckling.



3 The pipe had to be elevated more than 65 feet to ensure the correct deflection in the pipe and angle of entry.



4 It was the first five-crane pick Barnhart's Mount Vernon branch had performed. Still, the job was completed on schedule, with a lift time of approximately six hours.



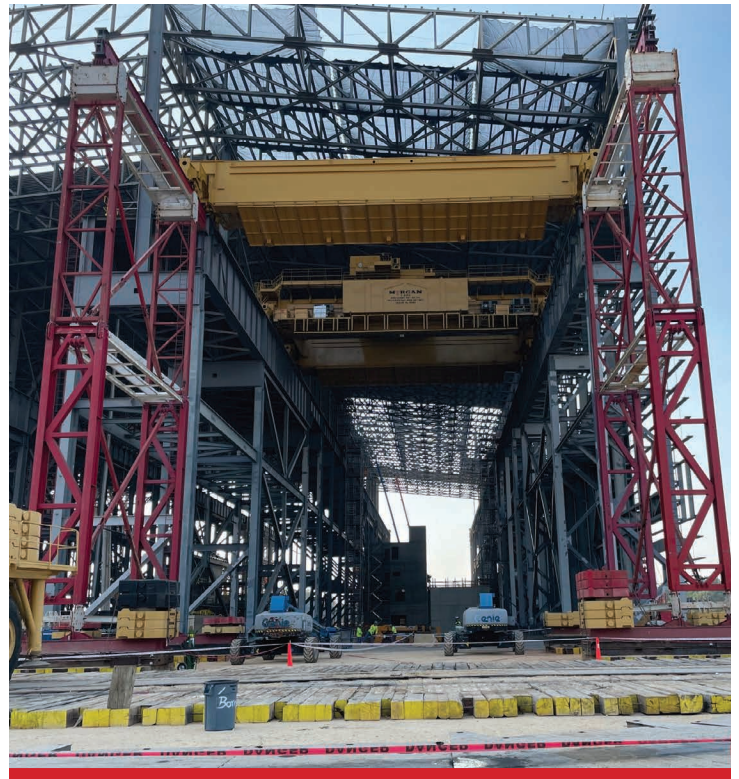
1 A steel plant in Alabama contacted Barnhart about installing five overhead cranes that each weighed 1 million pounds in its new melt shop. Installing them through the roof would put the project behind schedule, so Barnhart's engineering team proposed using a modular lift tower (MLT) as shoring to support the crane build at 100' elevation so the overhead cranes could slide in from the end of the building.



2 Each overhead crane had three components, which weighed approximately 350,000 pounds apiece. The crane pieces were lifted by a CC2800 crane with a superlift buggy to the MLT platform and assembled at elevation prior to sliding into the building.

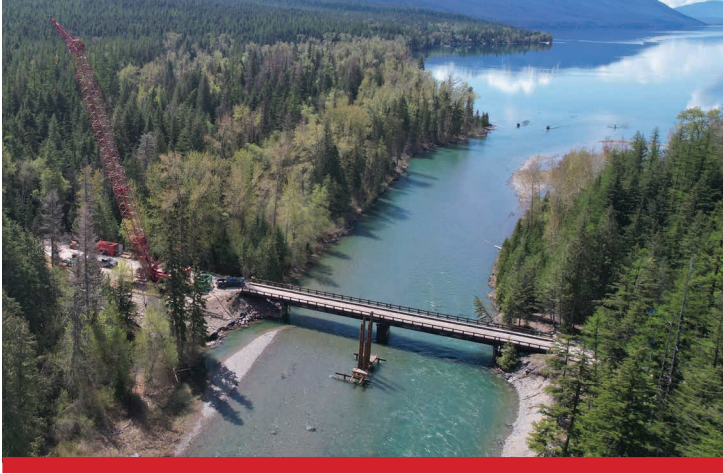


3 Barnhart designed and fabricated the connection between the shoring tower and the customer's structure. Counterweight was stacked up on the tower feet to maintain stability in high wind conditions due to hurricane season on the Gulf Coast. The shoring tower had to be relocated twice to install all five cranes in three different bays.



4 Barnhart's approach saved the customer on schedule because having to install through the roof would prevent other scopes from getting finished out on the new melt shop. Ultimately, Barnhart's unique solution was the deciding factor in being awarded the job.

ULTIMATELY, BARNHART'S UNIQUE SOLUTION WAS THE DECIDING FACTOR IN BEING AWARDED THE JOB.

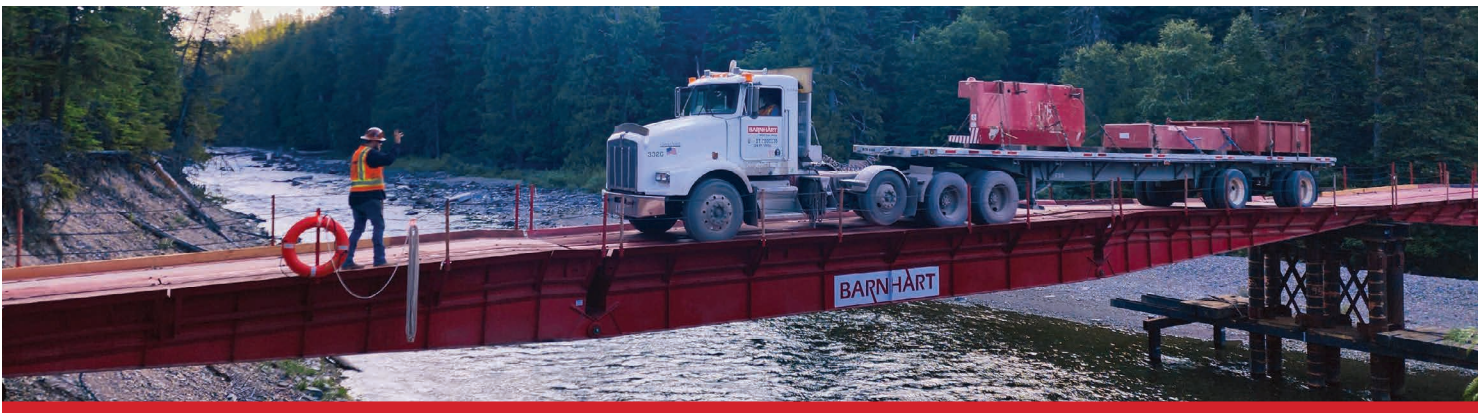


1 A 1930s wooden bridge in Glacier National Park in Montana had deteriorated and needed to be replaced. But its structural rating was so low that heavy construction equipment or girders needed to build a new bridge could not be transported on it. Barnhart proposed erecting a temporary bridge to move equipment and structural elements to the far side.

2 Barnhart set up a 440-ton crawler crane on the approach side. The crew disassembled a small rough terrain (RT) crane and took it across the existing bridge to handle a tandem lift of the bridge structure. Temporary shoring was driven in on the bank and as center support. A 113' temporary bridge span was placed from the bank to the center support. The RT crane, in tandem with the crawler crane, then set the 113' far side span.



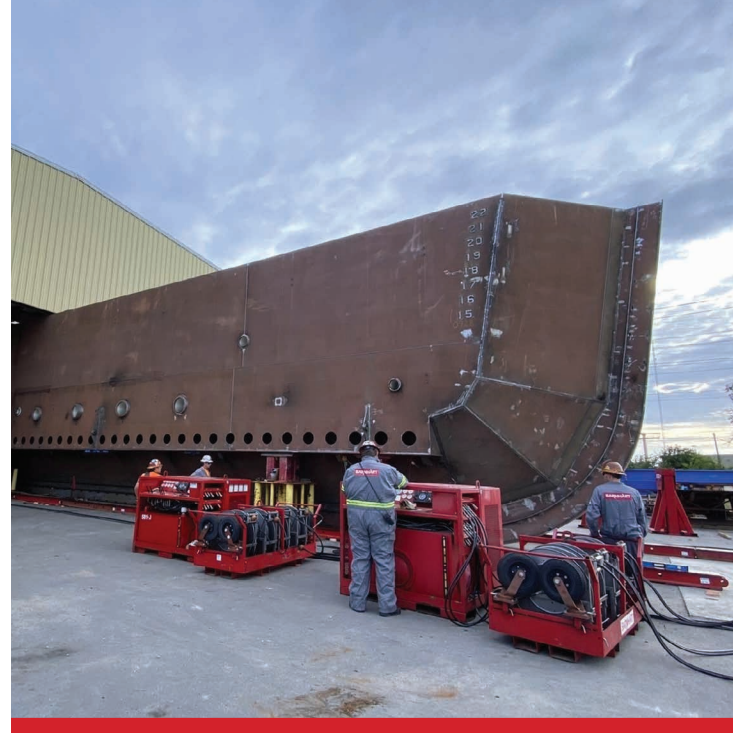
3 Barnhart's bridge system had an unusually high capacity and required less shoring than traditional temporary bridge systems. This was necessary due to park service requirements to reduce environmental impact in the park and waterway. With the temporary bridge in place, heavy equipment, plus 220' single span girders weighing about 70 tons each, could be transported across the bridge.



4 Due to the harsh winters normally experienced in the area, the crew mobilized out last fall, shut down over the winter and will return in the spring to complete the project. Once the new structure is open for traffic, the temporary bridge will be disassembled and the old bridge will be demolished.



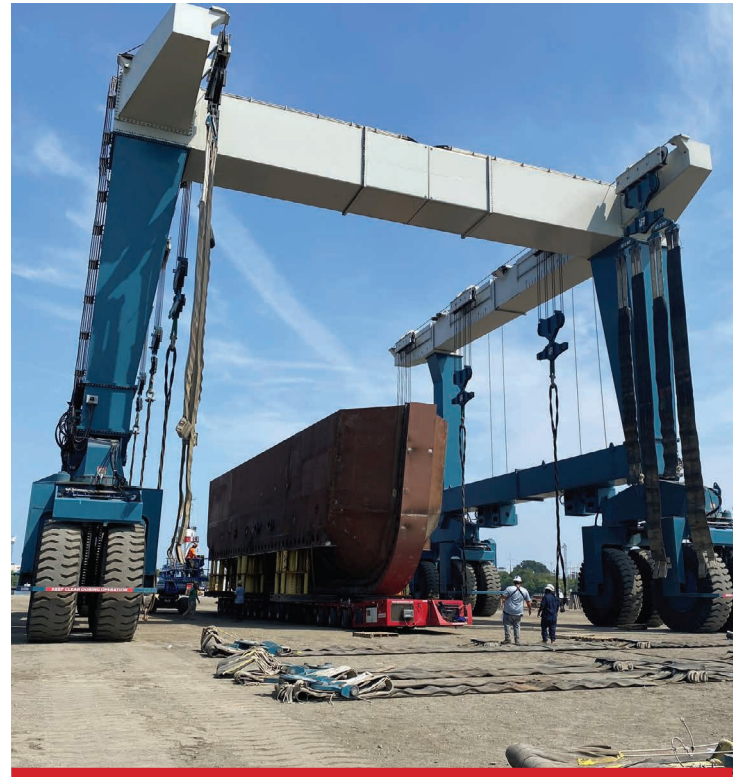
1 A shipyard in Virginia fabricated a caisson weighing 341,000 pounds inside its newly constructed shop. It needed to be transported to a nearby dock, but to do so, the 23' 5"-tall piece had to clear a doorway that was barely 24' in height. Barnhart's competition proposed cutting the customer's brand-new doorway taller to accommodate the caisson on a self-propelled modular transporter.



2 Barnhart's solution involved jacking and sliding the caisson out of the building less than an inch off the ground on stands and slide shoes. The team leapfrogged slide track for the approximately 200-foot-long slide distance. The caisson was brought out of the building with just six inches to spare.



3 The team used pull-up gantries (PUGs) to lift the caisson onto a Goldhofer trailer. Steel mats and stands were used on the trailer to provide stability. The caisson was then hauled to the dock on the trailer, at one point crossing over a culvert that was jumped with barge ramps.



4 After a journey of approximately a mile, the caisson was successfully delivered to the customer's dockside gantry. Barnhart's solution helped the customer avoid cutting their doorway, saving them money and time. Also, utilizing PUGs and jack houses versus traditional jacks eliminated the need for crib stacks, which saved even more time.



1 Barnhart's Los Angeles branch was hired to offload, transload and haul 10 pieces of cargo from Yuma, Arizona, to Gonzalez Ortega in Mexicali, Mexico and San Luis Rio Colorado, Mexico. The components were received in Yuma and offloaded using 600-ton J&R gantries.



2 The cargo consisted of six 710,000-pound generators and four 478,000-pound gas turbines, which were each loaded onto a 16-line Goldhofer SPMT system. The longest convoy was 320 feet long, including trucks and trailers, making it one of the biggest trailer configurations the Arizona DOT has ever permitted.



3 Customs on both sides of the border came together to assist Barnhart with the coordination of the massive trailer through a commercial border crossing. En route to one project site, the crew encountered a bridge that couldn't handle the million-pound cargo and had to be jumped with 60' bridge jumpers.



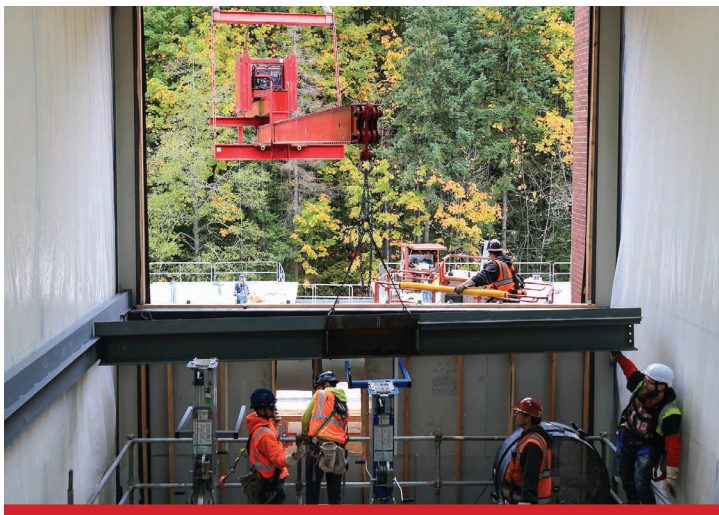
4 Once the cargo reached its destinations, the components were offloaded using a 700-ton crane. This was Barnhart's first haul into Mexico.



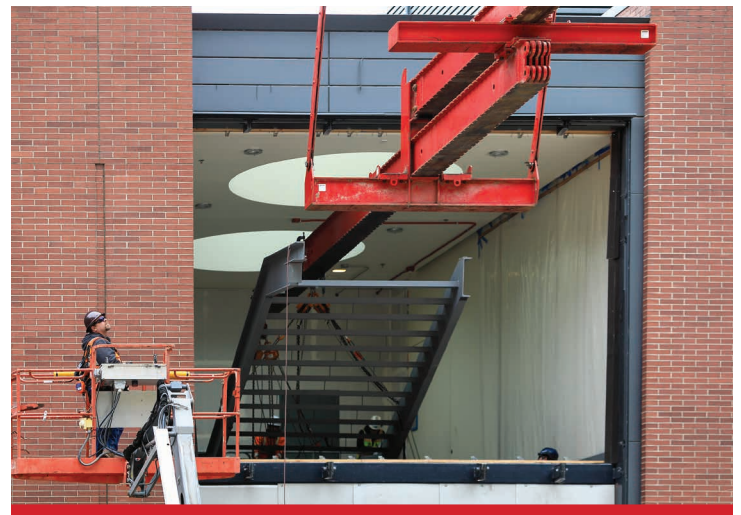
1 While on a project at a university with its CC2800, the Barnhart team was tasked with the challenge of retrofitting a stairway beneath an existing roof. The job required that the first and second levels of the stairwell remain intact. Barnhart proposed using its Movable Counterweight Cantilever System (MOCCs) due to limited access and clearance.



2 A custom staircase was assembled and rigged across from the access point. The MOCCs had to be configured in a single beam using three-ton chain falls that would be used to adjust the load once inside the building.



3 The contractor's crew set up inside on scaffolding. The stairs were installed through a 17' x 19'5" opening in the side of an existing building. The landings were constructed and then the stairs were installed through the outer walls horizontally and adjusted using the chain falls.



4 The 42,000-pound load had just 9" of clearance at the top and bottom and was carefully guided with the assistance of a signalman in a man basket. The CC2800 crawler was configured with 98' of main boom and 236' of luffing jib. The narrow alley and tight access called for a working radius of 135'.



5 Beyond the cost savings of having a large crawler on site, the MOCCs eliminated the need for an engineering study of overhead rafter structural viability, plus costs related to engineering and construction of a work platform. The install was completed in half the time than was originally projected, saving labor costs and allowing the customer to maintain their schedule.

LIFT TABLE

Barnhart often creates a new tool because of a customer need with no solution. That's how the LT-50 Lift Table, the latest entry in the cool tool arsenal, came about.

A customer needed to lift a large MEP module approximately 26 feet in the air and enable the installer to work safely to connect it to the ceiling in a utility building. The solution needed to be stable and have a high lift capacity.

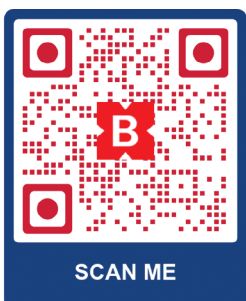
Engineers and Barnhart's fab shop came up with the LT-50. With its impressive lifting capacity and long range of motion, each unit can lift a 50,000-pound load from only 40 inches above the ground and push it up to a final height of 26 feet in a continuous movement.

Multiple lift tables can be used together in a modular fashion, including being stacked and connected to create a stable assembly with over 50 feet of total height. Various configurations offer total system lifting capacities of 400,000 pounds or more.

PROJECT APPLICATIONS INCLUDE:

- Equipment that hangs or connects to the underside of a structure with no available headroom — MEP modules, conveyors, boilers, big piping, HVAC units, some heat exchangers and more.
- Landing/work platform outside a wall opening — Loads could be set on the platform with a crane or self-off-loaded with a Goldhofer trailer, then moved into the building with forklifts, slide system, SofTrac, or skates.
- Temporary Elevator — Raise/lower loads onto an upper floor or mezzanine.
- Overhead crane installation and removal — A crane can be assembled on top of a turntable, then supported and lifted by the tables.
- Emergency Shoring — Temporary support of a roof or structure.

By working with the customer and leveraging Barnhart's expert engineering, we were able to maximize safety, improve schedule and bring this new tool to market.



**SCAN THE QR CODE TO
WATCH OUR LIFT TABLE
VIDEO**



Barnhart can engineer and fabricate new tools to meet customer demands. Above, the lifting table is moved from the fabrication shop for further testing.



A new piece of equipment goes through rigorous testing before being put into service.



Each lifting table can lift a 50,000-pound load from just 40 inches above the ground and push it up to a final height of 26 feet in a continuous movement.



The branch was formerly part of Hite Crane, a leader in the lifting industry since 1937.

SPOKANE, WASHINGTON

Barnhart's Spokane branch is a full-service facility that provides crane and transport services in Spokane, the western part of the state and the greater Inland Northwest.

The branch was formerly part of Hite Crane, a leader in the lifting industry in the Pacific Northwest since 1937. As one of four Barnhart branches in the state, and more than 50 nationwide, Spokane has access to an extensive network of equipment, resources and engineering expertise across the United States.

“Our value, which includes innovative rigging and engineered solutions, coupled with a humble, professional and hardworking approach has been key to developing and maintaining delighted customers,” says Branch Manager Jeremy Shawver. “The strong One Team approach across the entire Pacific Northwest branch network gives customers access to even more crane and rigging resources, and we take tremendous pleasure in being part of it.”

Industries that Barnhart serves include nuclear, pulp and paper, and power. In addition, Spokane's services include:

SPOKANE CRANE SERVICE

The supply of cranes to heavy industry is more than providing the right equipment to make the lift; it's our certified and trained operators that make the difference. Whether you require a lift to set equipment on a roof or need a crane to set a reactor in tight quarters of a refinery, Barnhart stands ready to safely and efficiently meet all of your crane needs. We have AT cranes up to 450T.

INDUSTRIAL MACHINERY MOVING

With an experienced crew and a complete line of rigging equipment, the Barnhart team is equipped and ready to customize machinery moving solutions for your company. From a single piece of equipment to your entire facility, we will provide efficient and cost-effective answers to all your machinery moving challenges.

TRANSPORTATION SOLUTIONS

Bridge crossing systems, dolly combinations and state-of-the-art transport equipment in Spokane allow our award-winning team of engineers to develop a transportation solution that will save your project time and money.

Let Barnhart's Spokane team solve your difficult rigging, lifting and transportation problems.

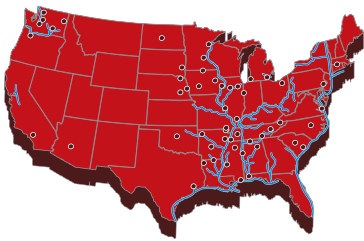


Spokane's team in the North Idaho National Forest on a project to recover a concrete mixing truck that rolled off the mountain road. The team utilized its 265-ton all-terrain Liebherr crane to turn over and hoist the fully loaded concrete truck out of the woods.



The Spokane crew helps construct a temporary bridge outside Glacier National Park (see project profile on page 9).

NATIONWIDE OFFICE LOCATIONS & FACILITIES



- DECATUR, AL | FULL SERVICE
- GADSDEN, AL | FULL SERVICE
- MOBILE, AL | FULL SERVICE
- BLYTHEVILLE, AR | FULL SERVICE
- EL DORADO, AR | FULL SERVICE
- LITTLE ROCK, AR | FULL SERVICE
- SPRINGDALE, AR | FULL SERVICE

- PHOENIX, AZ | RIGGING & TRANSPORT
- LOS ANGELES, CA | RIGGING & TRANSPORT
- MIDDLETOWN, CT | FULL SERVICE
- CEDAR RAPIDS, IA | FULL SERVICE
- DES MOINES, IA | FULL SERVICE
- MASON CITY, IA | FULL SERVICE
- CHICAGO, IL | RIGGING & TRANSPORT
- EAST MOLINE, IL | FULL SERVICE
- LADD, IL | FULL SERVICE
- MADISON, IL | FULL SERVICE
- ELKHART, IN | FULL SERVICE
- FOWLER, IN | FULL SERVICE
- OWENSBORO, KY | RIGGING & TRANSPORT
- SHREVEPORT, LA | FULL SERVICE
- WEST MONROE, LA | FULL SERVICE
- MONROE, MI | RIGGING & TRANSPORT

- MINNEAPOLIS, MN | FULL SERVICE
- ST. LOUIS, MO | FULL SERVICE
- COLUMBUS, MS | FULL SERVICE
- JACKSON, MS | FULL SERVICE
- PASCAGOULA, MS | FULL SERVICE
- TUPELO, MS | FULL SERVICE
- MANDAN, ND | FULL SERVICE
- LINCOLN, NE | FULL SERVICE
- OMAHA, NE | FULL SERVICE
- SOUTH SIOUX CITY, NE | FULL SERVICE
- CANTON, OH | FULL SERVICE
- COLUMBUS, OH | FULL SERVICE
- OKLAHOMA CITY, OK | FULL SERVICE
- PORTLAND, OR | FULL SERVICE
- PHILADELPHIA, PA | RIGGING & TRANSPORT
- CHARLESTON, SC | RIGGING & TRANSPORT

- COLUMBIA, SC | FULL SERVICE
- SIOUX FALLS, SD | FULL SERVICE
- CHATTANOOGA, TN | FULL SERVICE
- JACKSON, TN | FULL SERVICE
- KINGSPOINT, TN | FULL SERVICE
- KNOXVILLE, TN | FULL SERVICE
- MEMPHIS, TN | FULL SERVICE, SERVICE CENTER, HEAVY LIFT TERMINAL
- HOUSTON, TX | RIGGING & TRANSPORT
- CHESAPEAKE, VA | FULL SERVICE
- KENT, WA | FULL SERVICE
- MT. VERNON, WA | FULL SERVICE
- RICHLAND, WA | RIGGING & TRANSPORT
- SPOKANE, WA | FULL SERVICE
- WOODINVILLE, WA | FULL SERVICE
- SUPERIOR, WI | FULL SERVICE

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BARNHART EQUIPMENT

ALTERNATIVE HEAVY LIFT

- MODULAR LIFTING TOWER
- PULL-UP GANTRY
- HYDRAULIC SLIDE SYSTEM
- JACKS & RAMS
- 4-POINT GANTRY SYSTEM
- STRAND JACKS
- MODULAR HOISTS

TRANSPORTATION SYSTEMS

- DUAL LANE TRANSPORTERS
- GOLDHOFER PSTE
- HYDRAULIC DOLLY SYSTEMS
- BARGING
- RAMPS AND TEMPORARY BRIDGES

MARINE HEAVY LIFT

- DERRICK CRANE – MISSISSIPPI RIVER
- HEAVY LIFT TERMINAL – GREAT LAKES
- HEAVY LIFT CRANE – HOUSTON

TELESCOPIC BOOM CRANES

- FROM 7 TONS TO 650 TONS

LATTICE BOOM CRANES

- CRAWLERS FROM 100 TO 1,800 TONS
- TRUCK CRANES FROM 115 TO 800 TONS
- RINGER CRANES FROM 360 TO 1,800 TONS

OPERATED CRANE SERVICE

- OVER 450 CRANES
- LATTICE BOOM TO 1,760 TONS
- TELESCOPIC BOOM TO 600 TONS
- FULL TURNAROUND SERVICES
- NATIONWIDE NETWORK OF CRANE BRANCHES