BARNHART

# LIFTING LETTER

VOL. 75



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# TABLE OF CONTENTS

When pipe rack modules had to be relocated, Barnhart deployed its custom-designed Lift Tables as seen in this animation.

FEATURE STORY

# BARNHART: STRATEGIC PARTNER IN COMPLEX PROJECTS

At Barnhart, we specialize in large construction projects that don't fit a cookie-cutter model. These jobs are often complex, fast-moving, and full of unknowns.

Aggressive schedules, supply chain challenges, and one-of-a-kind facility requirements create uncertainty, making a strategic problem-solving partner essential.

Barnhart thrives in these project environments. From the beginning, we engage as a partner focused on solving problems and anticipating challenges. When issues arise, we bring creative solutions that keep projects on schedule and minimize costly delays. Our role goes beyond equipment—we provide the planning, engineering, and execution expertise needed to keep owners confident and projects moving forward.

That approach was on full display in a recent pharmaceutical facility project that needed to come online as soon as possible. Barnhart's Fowler, Indiana, branch initially secured a contract to provide crane support for material handling. But as the project progressed, new needs surfaced that went beyond crane work.

"Sometimes a crane is the answer. But it's not always the answer. And that's when we really can offer value," says Eric Estes, Barnhart's Regional Business Development Director.

When pipe rack modules had to be relocated, Barnhart deployed its custom-designed Lift Tables. These specialized tools can handle up to 400,000 pounds and reach elevations of 26 feet in a single stroke—an ideal solution for this challenge. By rethinking the lift approach, Barnhart eliminated thousands of man-hours at height, keeping the schedule on track and the jobsite safer for everyone.

This kind of non-traditional thinking is possible because Barnhart relies on its deep engineering expertise, creative problem-solving, and extensive fleet of custom tools. Additionally, the Fowler team was able to leverage nearby branches for manpower, equipment, and specialized knowledge, creating a seamless extension of resources.

In the often-unpredictable world of site construction, Barnhart brings more than equipment—we bring the expertise, flexibility, and innovation to keep complex projects moving on schedule.

## NUCLEAR | GEORGIA

# ISOPHASE FAN MOTOR REMOVAL AND REPLACEMENT

### PROJECT SCOPE

Remove and replace three Isophase fan sections during a fall outage.

### CHALLENGES

- Confined work area
- Narrow wall opening for extraction and installation
- Fan sections had varying centers of gravity

### PROCESS

- Fan sections shifted to perimeter wall with multi lift jacks on light slide
- Sections lifted and removed through tight opening via 75-ton Mobilift rigged with MOCCS, swivel link, and mini tip stick

### RESULTS

Barnhart's lift-and-carry capability and specialized rigging earned the **SC&RA Rigging Job of the Year Award under $300K.**




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PR116563

## HAUL | OKLAHOMA

# TURBINE AND GENERATOR OFFLOAD AND HAUL

### PROJECT SCOPE AND ARRIVAL

Barnhart was hired to receive a turbine and generator from rail for transport.

### RIGGING AND TRANSPORT SETUP

**TURBINE:**
Hauled using a standard 24 dolly rig

**GENERATOR:**
Transported using a 24 dolly rig with GS-800 booster dollies

### COOL TOOL DEBUT

The exceptional weight of these components required the first-time use of **Barnhart's 900-ton gantries.**

**TURBINE:**
603,560 pounds
37 feet long

**GENERATOR:**
781,431 pounds
43 feet long

### FINAL HAUL TO SITE

The equipment was hauled 55 miles to the destination site, completing a successful heavy transport operation.

## PULP & PAPER | VIRGINIA

# KILN SECTION REMOVAL AND REPLACEMENT

### PROJECT SCOPE

Manpower and equipment to remove and replace a 93,550-pound kiln section at a paper mill in Virginia.

### CHALLENGES

The job required a very large crane to reach over adjacent equipment, greatly impacting plant operations and adding avoidable risk and expense.

### PROCESS

Barnhart's alternate solution used Jack and slide systems to lift and move the kiln section in two directions, lift tables to receive and lower the section 26' to SPMT equipped with a bolster plate to rotate 90 degrees and haul out of unit. This eliminated the need for the large crane.

### RESULTS

Barnhart's unique equipment and small footprint minimized the impact on plant operations and saved the customer considerable time and money.

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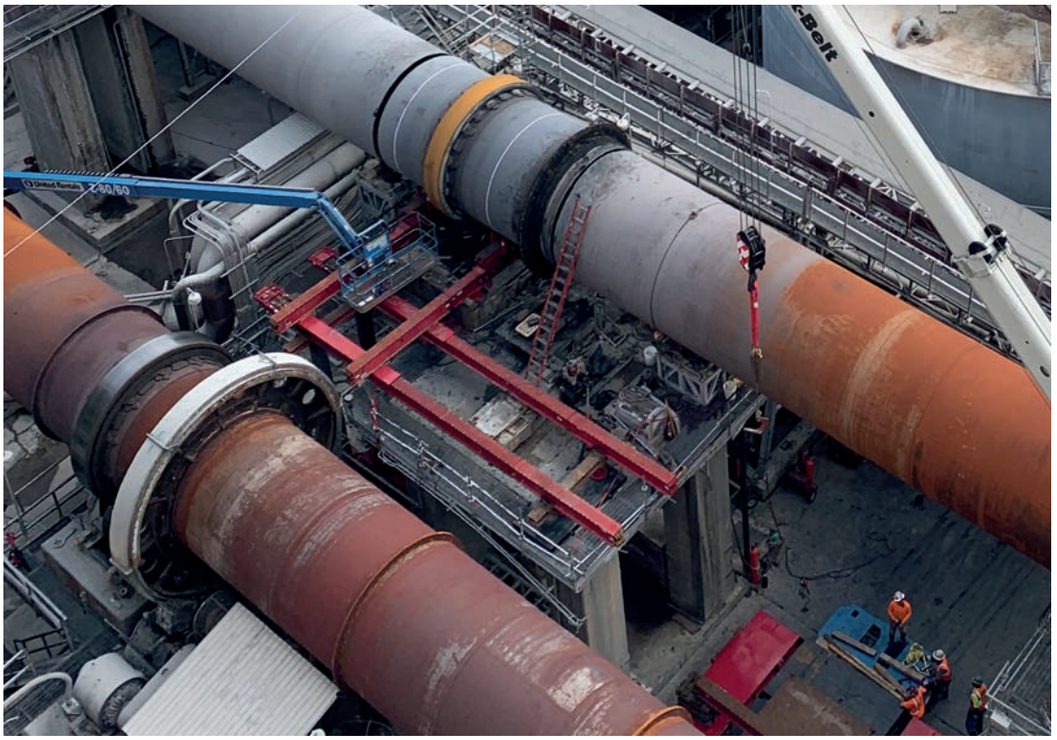
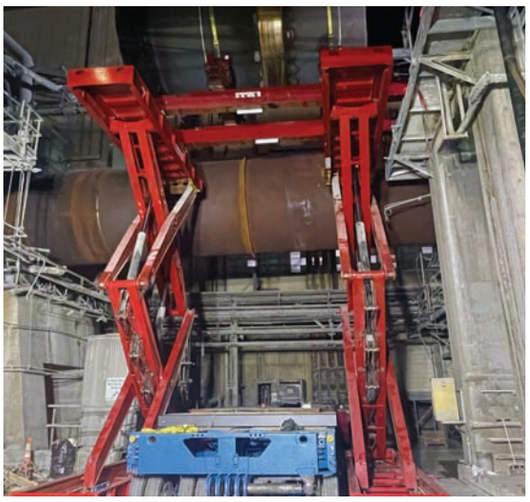
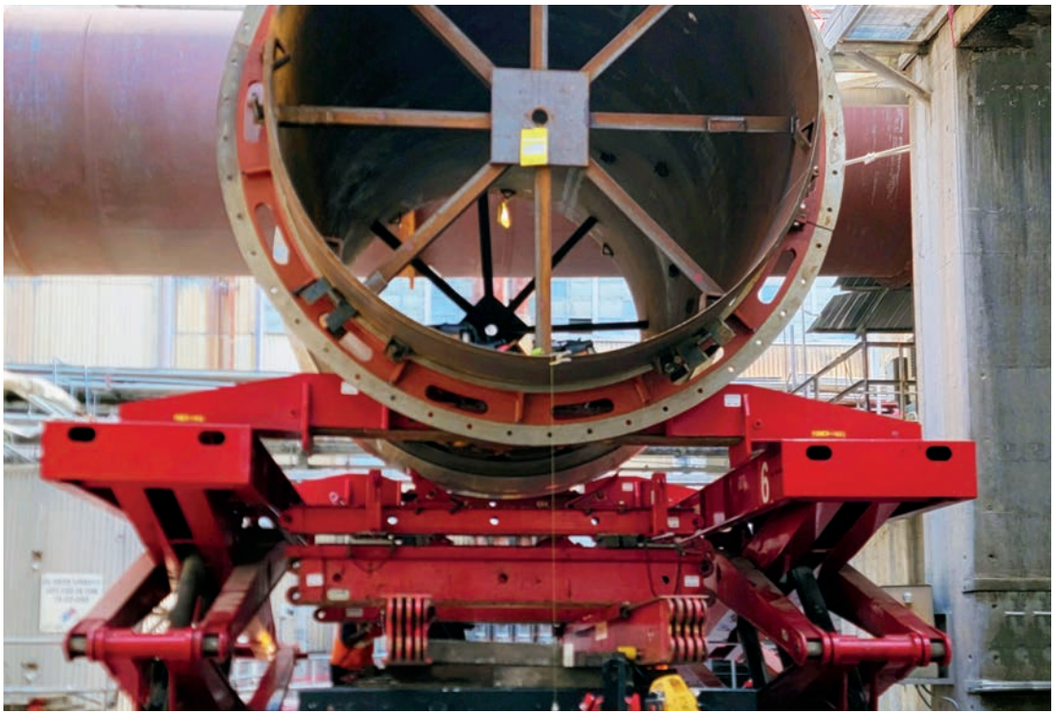






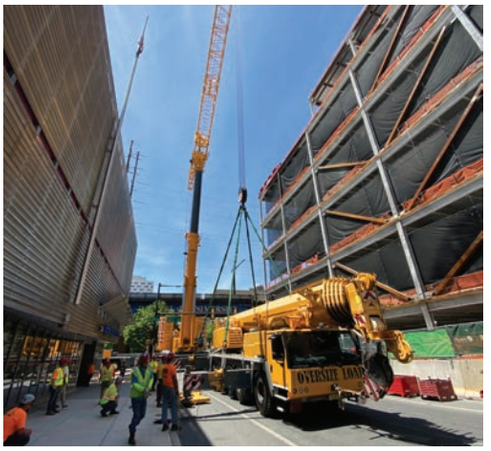
# PHARMACEUTICAL | PENNSYLVANIA
# HAUL AND INSTALL EQUIPMENT

## EQUIPMENT RECEIVING AND DELIVERY
Barnhart received and stored approximately 150 pieces of equipment, ranging from 500 to 50,000 pounds, at its Philadelphia branch warehouse. Each piece was hauled as needed to the construction site.

## SITE CHALLENGES
- Tight urban footprint between buildings
- Overhead obstacles including an elevated railway and high voltage power lines

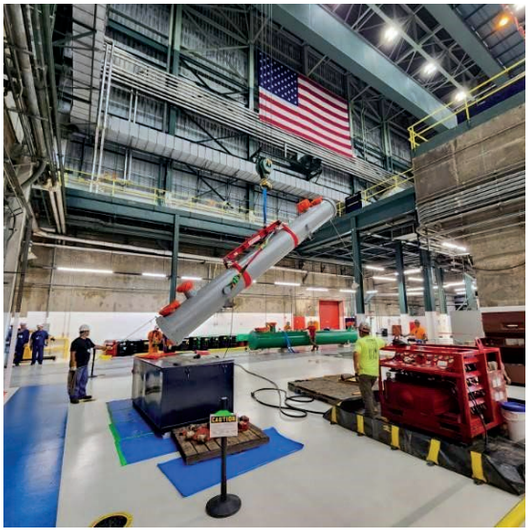
## EQUIPMENT UTILIZED
- 750-ton Liebherr Hydraulic Crane
- 180-ton Hydraulic Crane
- Gantries for precision handling and placement to final set

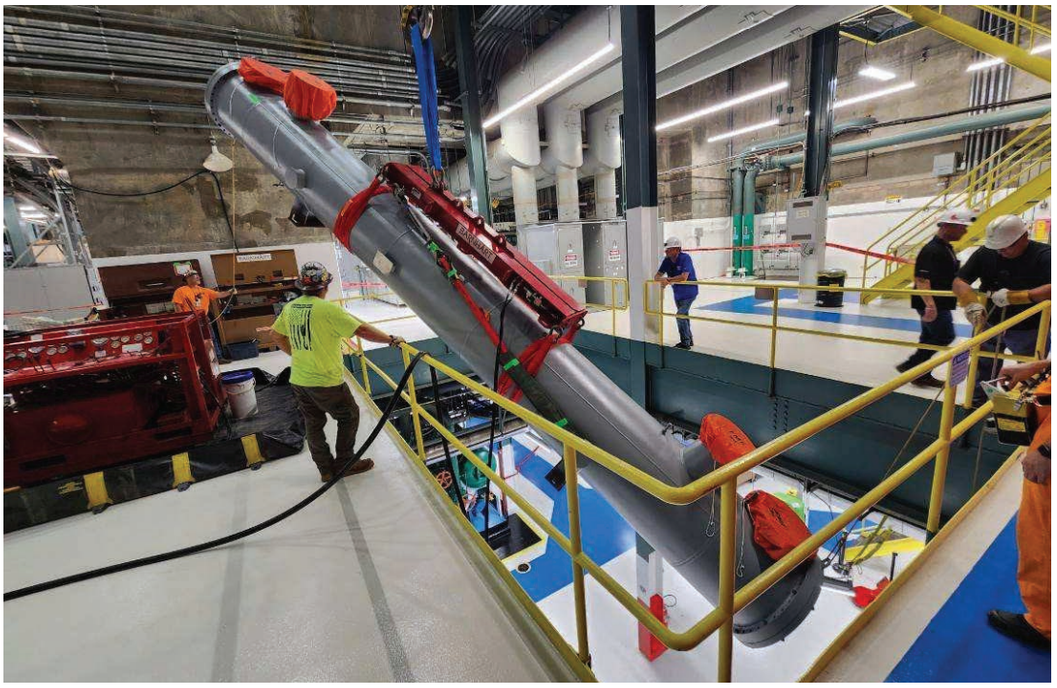
## COMPLEX LIFT AND INSTALLATION SEQUENCE
The 750-ton crane set a custom-engineered rooftop pad onto the building's corner structural columns and lifted the 180-ton onto it. That crane then installed 150 equipment pieces across all elevated site locations.

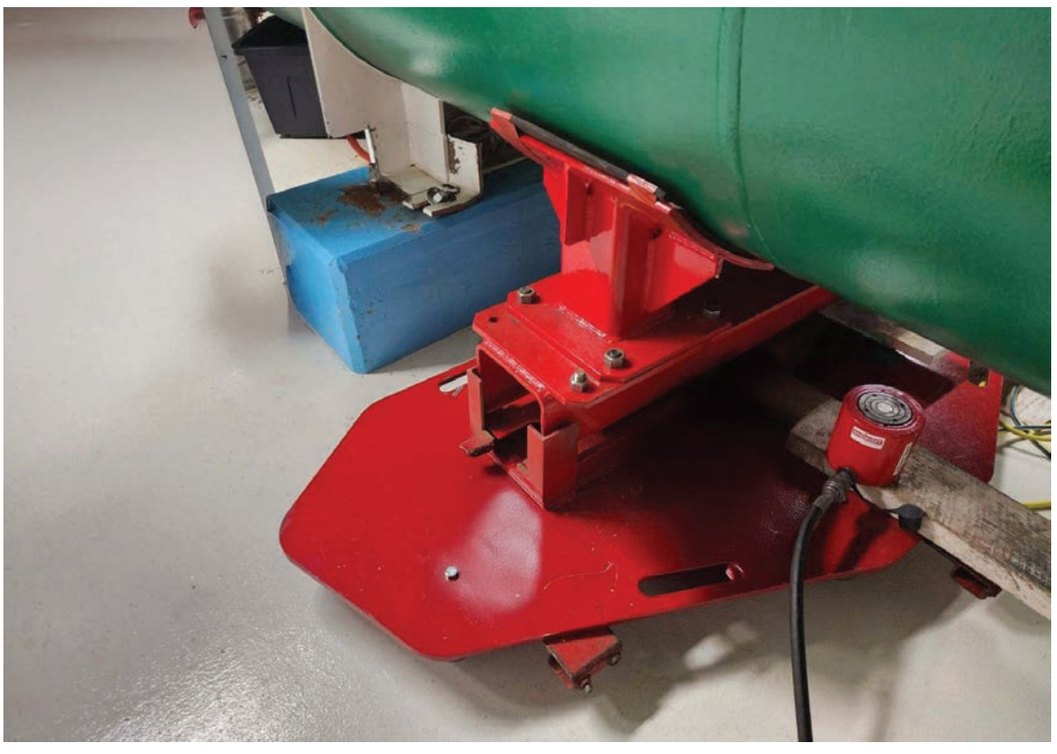



NUCLEAR | NEW YORK

# NUCLEAR MAINTENANCE REMOVAL AND REPLACEMENT







**PROJECT SCOPE**
Remove and replace a 19,000-pound heat exchanger at a New York nuclear plant.

**CHALLENGES**
Old and new exchangers needed to be positioned below the truck bay hatch for access to the plant's overhead crane, but the hatch was smaller than the length of the exchangers.

**PROCESS**
Barnhart's 27k capacity Mini Tip Stick carried the exchangers at approximately 45 degrees through the opening and Skate Plates handled transport to and from it.

**RESULTS**
Barnhart's tool selection enabled the scope to be completed safely with minimal equipment and no structural modifications to the plant, saving two shifts on the overall schedule.

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## CRANE OPERATIONS | MISSOURI

# ENGINE LOAD OUT AND BARGE LOADING

### PROJECT SCOPE

Remove two 245,000-pound engines through the roof at customer's location; load and haul to dock facility for offload and loading barge.

### CHALLENGES

Mobilizing cranes and operators, performing complex lifts through structural steel, and working safely near high-voltage lines.

### EQUIPMENT

- 900T AT Crane
- 550T AT Crane
- 350T AT Crane
- 10-Line SPMT Trailer

### SUCCESSFUL TEAMWORK

The crew, which came from multiple Midwest Barnhart branches, earned a perfect score from the customer for skill and professionalism.

MINING | ARIZONA

# BALL MILL REMOVAL AND REPLACEMENT




## PROJECT SCOPE

Remove and replace a 555,000-pound Ball Mill at a copper mining facility in Arizona.

## CHALLENGES

To avoid the need for a massive crane and significant modifications to the surrounding structure, Barnhart would need a system capable of a 100’ girder span and a complicated load path above and across existing equipment.

## PROCESS

The Barnhart Push Up System (BPU) provided vertical movement, while a girder and slide system enabled horizontal travel in two directions. The Ball Mill was lowered to SPMT for removal of the old and delivery of the new.

## RESULTS

The project was completed safely with minimal structural changes, eliminating the need for a massive crawler crane while delivering significant time and cost savings.

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# POWER | PENNSYLVANIA
# TEMPORARY OVERHEAD CRANE INSTALLATION

## EXTRA HOOK SUPPORT
A Pennsylvania combined-cycle power plant sought to optimize its outage schedule. Barnhart installed and load tested a Temporary Overhead Crane (TOC) before the outage to provide additional lifting support throughout all activities.

## SITE LIMITATIONS
The narrow assist crane setup and work area afforded only inches of headroom above the boom tip. Crews worked over plant equipment at a 90' height with limited clearance to rotate and install the 95' long TOC.

## ENGINEERING
Barnhart's design engineering, fabrication, and load testing ensured the successful delivery, installation, and operation of the TOC. Eliminating the need for a mobile crane for ancillary hook support also freed up valuable floor space.

## COOL TOOL
Barnhart's TOC and turnkey capabilities earned praise from the customer.

**"Having the 15-ton temporary overhead crane made us twice as efficient and took days off the overall outage."**



## PULP & PAPER | WASHINGTON

# KILN TIRE REMOVAL AND REPLACEMENT

### PROJECT SCOPE

Remove and replace a kiln tire section at a paper plant in Washington state.

### CHALLENGES

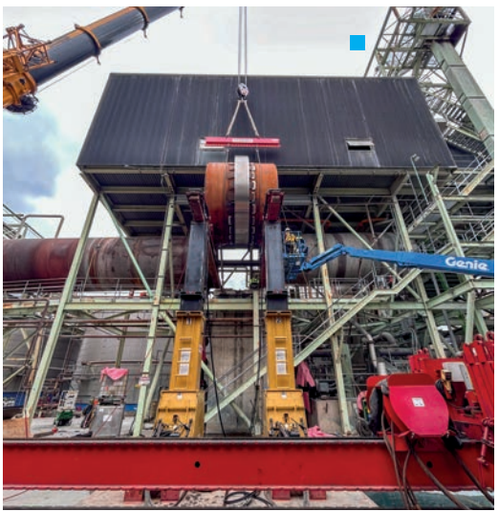
Setting up in a busy, congested area and working at height without modifying the surrounding structure were significant concerns. Additionally, removing the trunnion rollers beneath the tire section required considerable precision.

### PROCESS

Barnhart set up an elevated slide system with slide shoe-mounted saddles to capture the tire section. The crane swung its Moving Counterweight Cantilever System (MOCCS) into place and surgically removed the rollers, then the old tire was slid out for removal by the crane.

### RESULTS

The rollers and new tire section were successfully re-installed in reverse order two days ahead of schedule.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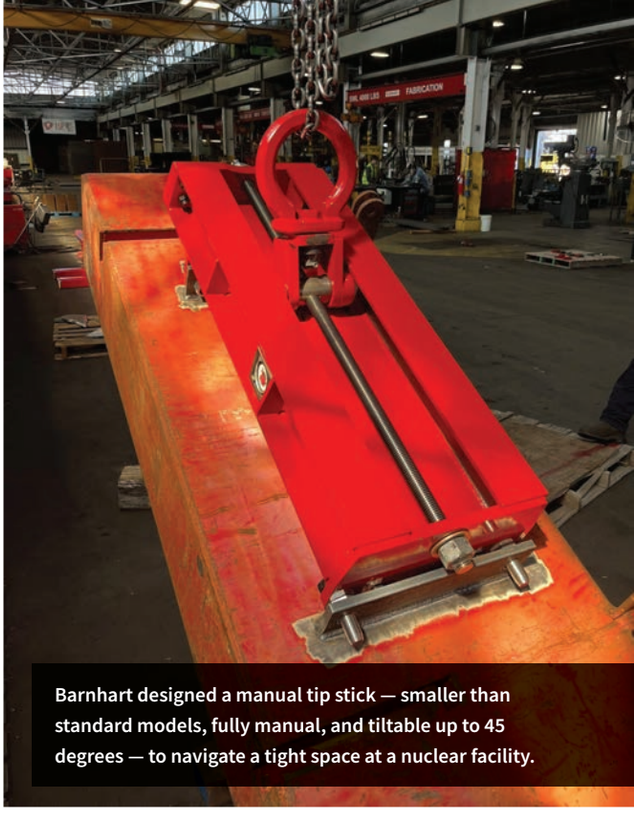
Barnhart's John "Red" Wilkerson working in the Memphis fabrication shop.



Barnhart designed a manual tip stick — smaller than standard models, fully manual, and tiltable up to 45 degrees — to navigate a tight space at a nuclear facility.

EQUIPMENT PROFILE

# ENGINEERING INGENUITY MEETS FABRICATION POWER

At Barnhart, custom equipment has long been central to solving complex lifting and transport challenges. The company's ability to design and build tools in-house gives its engineering team flexibility when a standard approach just isn't enough. With more than 60 engineers on staff, Barnhart combines design expertise with fabrication capability to address projects in industries ranging from power generation to refining.

"Barnhart has a deep toolbox of equipment that is tailor-made to serve our clients," says Director of Engineering Sales Support Van Thompson. "When a solution requires a tool that doesn't exist, we have the in-house ability to make the cool tool a reality. Our team of skilled field leaders, fabricators, and engineers can turn a great idea into an innovative tool that serves our clients lift after lift."

That toolbox begins in the 40,000-square-foot Fabrication Services Shop in Memphis, Tennessee. Outfitted with a 400-amp CNC plasma machine, vertical band saws, brake presses, and precision welding systems, the shop handles everything from cutting and forming to machining, welding, and painting. Paired with Fab North in Forest City, Iowa, nearly 30 fabrication specialists bring Barnhart's designs to life.

These shops have produced some of Barnhart's most recognizable innovations: High-Capacity Box Girders, Slide Beams, 500 & 200 Ton Hoists, Tip Sticks, Blade Bars, Moving Counterweight Cantilever Systems (MOCCS), and even One-Shot Gantry Systems rated at 500 tons. Signature projects like the GS800 Dreamliner highlight our versatility, while the LT-50 Lift Tables fabricated in 2023 stand as some of the most technically challenging builds to date.

One recent project underscores this ingenuity. At one nuclear facility, actuators were packed so tightly that no existing tool could safely maneuver them. The Barnhart team designed a manual tip stick—smaller than standard models, fully manual, and tiltable up to 45 degrees, with front-and-back connections. The solution not only saved the customer time and money but proved how Barnhart's engineering and fabrication teams work seamlessly to solve problems with precision and safety.

For Barnhart, building one-of-a-kind tools isn't an exception—it's a promise. From concept to completion, we turn ideas into equipment that drives projects forward, reduces downtime and delivers results. That's engineering ingenuity paired with fabrication power.

BRANCH PROFILE

# OKLAHOMA CITY, OKLAHOMA

Barnhart's Oklahoma City branch (OKC) may be one of the smaller crane and rigging outfits in the region, but its impact stretches far beyond its size. Serving customers from the Southern Plains up into Kansas and all the way to the Gulf, the Oklahoma City branch has built a reputation for precision service, innovative solutions, and an unmatched commitment to doing the job right.

"Years ago, we had a choice—compete directly with the larger local players or refine our services and find a niche," says Sales Manager Andrew Kline. "We chose to invest in the right equipment and leverage Barnhart's unrivaled toolbox to serve our customers better."

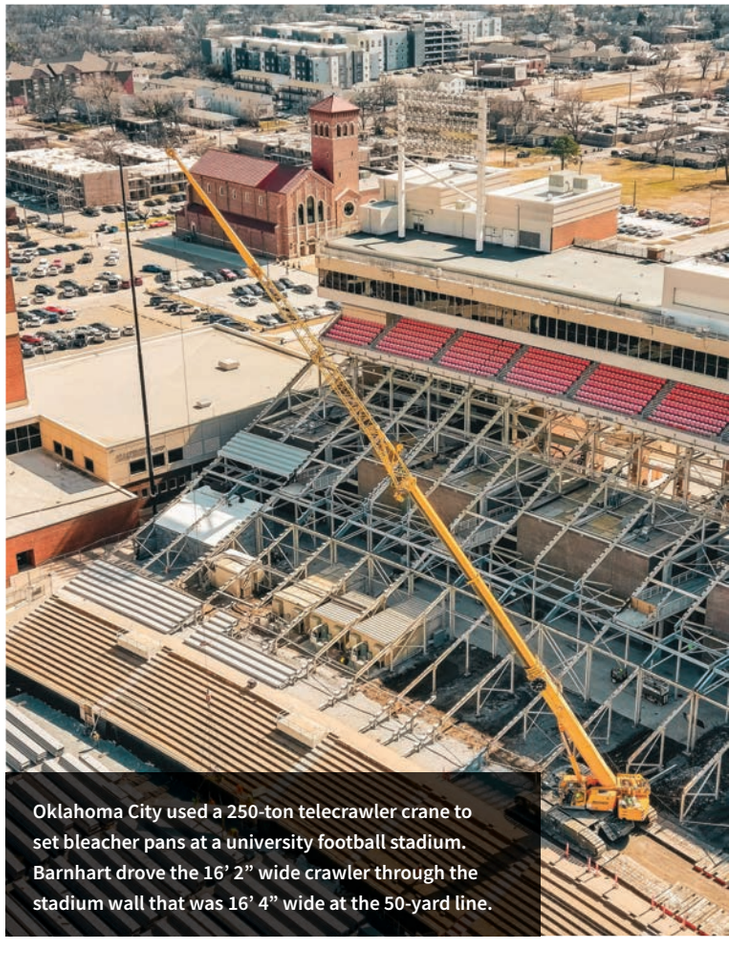
That toolbox includes engineering lifting and rigging gear like the MOCCS and the Quad-Block, alongside custom equipment developed in-house. Over the past five years, OKC has modernized its fleet, moving away from large crawlers and instead investing in cranes tailored to specific applications. Paired with deck-less counterweight trailers that streamline travel, these changes allow the branch to deliver more competitive service across its wide territory.

The refinery industry remains a key focus, with the team supporting outage seasons using small Rough-Terrain cranes, mid-sized All-Terrains, and project management expertise that consistently lowers costs for customers. The agriculture fertilizer market is another important sector, as is day-trade taxi crane service and machinery moving in the Oklahoma City and Tulsa metro areas.

Recent projects showcase the branch's versatility. Highlights include providing 40 cranes for a capital project turnaround at a Kansas refinery, managing the disassembly and relocation of an automotive production line in northeast Oklahoma, and setting generator units weighing up to 1,000,000 pounds. From rooftop air handlers to heavy industrial components, the OKC team thrives on challenges.

None of this would be possible without the people. "Our field leaders average 20 years in the industry," Kline notes. "From operators and oilers to drivers and ironworkers, everyone here shares the same vision: doing what it takes to get the job done right."

Oklahoma City provided turnkey decommissioning services for a wind customer following a turbine catastrophic event.



Oklahoma City used a 250-ton telecrawler crane to set bleacher pans at a university football stadium. Barnhart drove the 16' 2" wide crawler through the stadium wall that was 16' 4" wide at the 50-yard line.


The Oklahoma City branch used a 600-ton All-Terrain crane for a cement company, removing and replacing a 42,000-pound gearbox with the MOCCS in half the time as a previous method, which used jack-and-slide.

The Oklahoma City branch used a 900-ton AT crane and Universal Blade Bar single-crane system to remove and replace a 50,400-pound wind turbine blade for a customer.

## Wind Expertise in Oklahoma City

Oklahoma is synonymous with wind, and Barnhart's Oklahoma City branch has emerged as a leader in wind energy maintenance and recovery. The team has earned two Areas of Excellence: Single-Crane Blade service and Wind Catastrophic Event service.

In 2024 alone, they replaced more than 100 blades across Missouri, Kansas, Oklahoma, and Texas using Barnhart's Universal Blade Bar, proving a single-crane solution can rival traditional two-crane methods. The branch has also become an industry go-to for catastrophic event response, engineering solutions to recover turbines damaged by fire, lightning, or tornados.

By pairing innovation with deep field experience, the Oklahoma City branch is helping wind operators reduce costs, improve safety, and get turbines back online faster.

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