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Case Construction Equipment Launches Four New Backhoes

Case Construction Equipment Sept. 22 launched a complete update of its loader/backhoe product line, introducing four new N Series loader/backhoe models. The event took place at the company's Tomahawk Customer Center in Tomahawk, Wis.

The new Case 580N, 580 Super N, 580 Super N Wide Track and 590 Super N backhoes replace the company's M Series 3 product line. The new machines all feature 4.5-L, turbocharged engines, ranging from 79 hp (59 kW) in the 580N to 108 hp (80.5 kW) in the 590SN.

"The N Series was engineered from the ground up," said Rob Marringa, marketing manager, Case Construction Equipment. "We've taken the flagship product of the Case line up and delivered best-in-class performance from back to front. The new N Series really is 'stronger everywhere.' The N Series extends a legacy of loader/backhoe leadership that began when Case introduced the industry's first factory-integrated loader/backhoe in 1957."

Case Power Lift Boosts Backhoe Capacity

"One new feature that is a real game-changer on the N Series is Case-exclusive Power Lift," said Marringa. "Power Lift channels the hydraulic power directly to the boom with

the touch of a button. As a result, our backhoe lifting capabilities outperform competitive models by as much as 39 percent — while running at low engine RPMs."

The increased backhoe strength takes new N Series performance beyond the previous M Series models, according to the manufacturer. A new fabricated boom design increases strength while maintaining the over-center design. Backhoe bucket pins are larger and stronger to accommodate the improved lift capacities. Meanwhile, the N Series continues its maintainability with triple bushings and floating pins.

By providing lift capabilities comparable to a 5-ton (4.5 t) excavator, with enhanced dig depths, the N Series loader/backhoes may eliminate the need to trailer an excavator to the job site.

"During our extensive R&D process, we enlisted equipment operators throughout North America to test the N Series enhancements," explained Marringa. "Comments from Dennis Zentner, DRZ Contracting, in Delta, British Columbia, were typical. He told us, 'The 580SN WT backhoe performed well on grading, trenching, backfilling, heavy lifting, hole-patching and rock-breaking. Its heavy-lifting ability is fantastic. It will save me from using an excavator for lifting.'"

N Series Features Increased Loader Lift, Breakout, Reach

The Case N Series machines also deliver more power to the loader, for increased breakout and lift capabilities. The new loader arms are stronger and longer, providing greater loader reach. This lets operators dump material into the center of a truck for faster loading and increased payloads, according to the manufacturer.

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The Case N Series machines feature increased loader breakout and lift. The redesigned loader arms are stronger and longer, enabling the bucket to dump into the center of a truck for more efficient loading.



The four new N Series loader/backhoe models, including the 590 Super N, offer increases in backhoe breakout force and lift, along with increased loader breakout force, lift and reach.



Power Lift delivers backhoe lift capabilities equivalent to a 5.5 ton (5 t) excavator and the dig depth of an 8.2 ton (7.5 t) excavator.

Tomahawk Customer Center Provides Demonstrations, Training in North Woods Setting

The Tomahawk Customer Center, a 500-acre facility located in Wisconsin's north woods, provides hands-on product demonstrations and training for more than 2,000 visitors each year and has been serving Case customers, dealers and employees for more than 60 years. The facility stands on the site of the Drott Manufacturing proving grounds, which date back to the early 1900s.

The customer center features modern training, a fleet of more than 60 pieces of new equipment to operate and log cabin-style lodges for accommodations. Detailed presentations on Case innovations and technology are provided at the welcome

center and solution center.

A customer visit typically includes classroom presentations, machine walk-arounds, hands-on maintenance sessions, customized product demonstrations and equipment operation sessions.

A 3,000-sq.-ft. product review center provides a panoramic view to a product demonstration area where visitors can see the full line of Case construction equipment in operation. Presenters inside the product review center are able to communicate directly with Case operators who are running the equipment on the proving grounds. A camera inside the equipment provides a big-

screen display from the operator's point of view, showing how the operator engages each feature to perform various tasks.

Visitors have the opportunity to operate the full range of Case equipment, including excavators, wheel loaders, loader/backhoes, crawler dozers, skid steer loaders, compact track loaders, motor-graders, compaction equipment, articulated trucks, rough-terrain forklifts and loader/tool carriers.

The Tomahawk Customer Center is located near the town of Tomahawk, approximately 45 miles north of Wausau, Wis.

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N Series Introduces All-New Transmission Technologies



Ion Warner, senior director of marketing, North America Case Construction, welcomes the media to Tomahawk, Wis.



Rob Marringa, marketing manager of Case Construction, explains the road course on which the Case N Series backhoe will perform with a full bucket to the media.



George MacIntyre, Case Construction, goes over the improvements that have been made to the boom of the N Series backhoe.

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Transmission, Hydraulic System Improvements

The Case N Series introduces a new transmission family, the Powershift S-Type, Powershift H-Type and Powershuttle options. All transmission choices are available on the 580SN, 580SN WT and 590SN. The 580N offers the Powershift S-Type and Powershuttle transmissions.

The two Powershift transmissions include four forward and three reverse gears, and the Powershuttle transmission offers four forward and four reverse gears. The Powershift transmission provides a standard kick-down feature and introduces SmartClutch modulation. The SmartClutch feature lets operators customize the transition from forward to reverse to meet the demands of their specific application.

The N Series machines deliver improved cycle times and efficiencies through the new Variable Volume Hydraulic (VVH) System. The VVH System operates at a lower temperature than competitive hydraulic systems. The 580N continues to offer a single gear pump open hydraulic system.

A new auxiliary hydraulic system for powering attachments includes flow control as a standard feature, automatically matching hydraulic flow to the needs of the attachments. Additionally, hoses are routed inside of the boom structure to provide greater protection for applications such as demolition. These improvements in hydraulics also help achieve greater fuel efficiency, according to the manufacturer.

Marringa added that Case backhoes have always given contractors a solution for excavating, digging, carrying and loading.

"A loader/backhoe's ver-
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Case N Series Extends Backhoe Legacy

The introduction of the Case N Series loader/backhoe product line writes the most recent chapter in a 50-plus-year history that began in 1957 with the industry's first factory-integrated tractor loader/backhoe, the Case 320.

While success may have a thousand fathers, the birth of the loader/backhoe can be reasonably credited to one man, Elton Long, a mechanical engineer who joined Case in 1956 as part of the company's acquisition of American Tractor Corp (ATC). During his 28 years with Case, Long received 46 patents for his work in designing and improving construction equipment. His biggest impact on the company and the industry came soon after the Case-ATC merger, when Long led the team that developed the first fully factory-integrated loader/backhoe.

At the 1956 Road Show expo, ATC included in its exhibit a Case 300 crawler loader that featured a backhoe attachment. This one-of-a-kind hybrid attracted enough attention that Case decided to produce a combined loader/backhoe model.

The task fell to Elton Long and his team, whose creation was launched as the Case 320 loader/backhoe, with Case shipping the first factory-built unit on Feb. 26, 1957.

A new product category was born.

Industry Contribution

The original Case loader/backhoe provided many advantages over the retrofit approaches of other manufacturers. The integrated loader/backhoe was compact and easy to handle in a variety of applications, including jobs previously done by hand.

Its integral design took into account the different types of loading, digging and carrying requirements that the machine would experience, and resulted in a manufactured product tough enough to withstand the combined stresses of these various applications.

Prior to the Case loader/backhoe introduction, typical loaders and backhoes of that era were not used in heavy construction. Loaders were mostly used in agriculture, rarely lifting anything heavier than manure or hay bales. Neither loaders nor backhoes had much digging capacity. The integrated loader/backhoe helped contractors reduce costs, increase productivity and handle more work with less equipment.

In addition to being the first machine of its kind, the loader/backhoe featured components that were all Case products, enabling quick design changes and testing, as well as a single warranty to cover the entire machine.

Generations of Leadership

The Case loader/backhoe history has included a number of important "firsts" — such as the Extendahoe extendible dipper stick, return-to-dig and return-to-travel functionality, ride control, side lighting and the Case trademark over-center boom design.

Decades of continuous product development have led to the Case N Series introduction. The Case loader/backhoe evolution includes many milestones:

- The Case Construction King backhoes of the mid-1960s added hydrostatic steering, heavy-duty axles and steering cylinders and innovations such as automatic self-leveling and semi-automatic return-to-dig. Also new was the reverse-linkage loader bucket design that greatly enhanced digging power and grading efficiency.

- The Case 580CK, launched in 1969, featured a number of advancements, including the hydraulic Extendahoe extendible dipper stick. Also making its first appearance on the 580CK was the "side-shift" backhoe design, still offered on European models, which allowed the backhoe to slide from side to side on the back of the chassis, enabling easier use in close quarters.

- The Case B Series loader/backhoes of the early 1970s introduced the "over-center" backhoe design, patented by Case and Elton Long in 1968. This allowed the boom and cylinders to rest forward of the upright position, moving the center of gravity to the front for better stability during roading and trailering.

- Also in the early 1970s, Case introduced the 780CK, the first loader/backhoe with a unitized frame. This machine was capable of withstanding higher stress, load and break-out levels.

- In the early 1980s, as part of a joint venture, Case began using an advanced generation of diesel engines for its loader/backhoes. The Case Family I engines offered higher fuel

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Cab Upgrades Enhance Operator Efficiency, Comfort



Case offers a range of attachments for the N Series loader/backhoes, including hydraulic hammers, augers and other devices.



The Case 580 Super N backhoe demonstrates its lifting capabilities at the product review center in Tomabawk, Wis.

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satility includes the ability to drive to a job site. The Case machines can travel at up to 24 miles per hour — and the over-center backhoe design makes travel smoother."

New Cab Improves Visibility, Airflow, Comfort

Several new comfort and safety features in the N Series loader/backhoes boost operator productivity. Floor-to-ceiling windows provide enhanced visibility. New rear-quarter windows provide easy communication to the back of the machine and improve cross-ventilation comfort.

A new side lighting package helps illuminate the entire perimeter of the N Series machine, greatly enhancing operator and job site safety, and boosting productivity.

The new lighting package improves performance by 28 percent, providing enhanced visibility and overlapping field coverage, according to the manufacturer. The new, "easy flex" side lights offer 45 degree rotation to deliver extra lighting where it's needed most.

"The new N Series machines light up the entire perimeter of the machine," said Marringa. "This means the entire side-to-side range of backhoe movement — and beyond — is illuminated. This not only gives the operator a better sense of control; it also boosts productivity at any time of day or night."

As in previous models, the N Series backhoes include comfortable, adjustable operator seats and ergonomically placed controls along with all-season heating and air conditioning systems for increased operator comfort. The N Series cabs also are quiet — at 72 decibels — providing an environment in which the operator can concentrate on the task at hand.

Attachments Add Value

Case also offers a range of attachments for the N Series backhoes, including hydraulic hammers, brooms, forks, augers and rakes. Case leads the industry in providing the only cab-activated hydraulic backhoe quick-coupler, hand-held hydraulics and loader quick-coupler options.

For more information, visit www.casece.com.



Side lighting on the new N Series loader/backhoes boosts safety and productivity in low-light conditions. Exterior lighting on the N Series machines includes two 55W halogen front driving lights, along with three sets of two adjustable 55W halogen work lights on the left side, right side and backhoe side of the cab canopy.

Case N Series Extends Backhoe Legacy

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economy, lower emissions, simpler design and advances such as automatic belt-tensioning.

• Case L Series 2 loader/backhoes introduced in the late 1990s included such improvements as ride control for vastly improved load retention and roading of the machines, and a hydraulic quick coupler for the loader bucket that enabled the operator to engage and disengage attachments

without leaving the seat.

• Case M Series loader/backhoes, introduced in the past decade, featured a completely redesigned cab for enhanced operator comfort, safety and efficiency. Another M Series advancement was the backhoe pro control system, which combined anti-rebound swing with improvements in boom and dipper control. This translated into faster, more accurate trenching with greater operator comfort.