



JOHN DEERE

THE CONSTRUCTION

REVIEW

OCTOBER 2005

Meet John Deere's new "Seven-Yard Stallion"

Cargill and the Odd-Duck Deere.....p/6 Northridge Rentals Rocks the Coast.....p/10
Tough Hoosier Loaders.....p/12





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INSIDETRACK

BY BOB BROCK

The Barnes & Noble of Online Manuals



John Deere's new Web Bookstore isn't stocked with the latest *New York Times* bestsellers. You can't enjoy a double latte while perusing the magazine rack. But you can simplify your life with online access to 8,000 parts and technical and operation manuals for Deere, Timberjack, and Hitachi equipment built in the last 20 years.

The Web Bookstore is another step in our quest to give you the information you need, as easily as possible. Just search by machine model number and choose how you want your manual — downloaded to your computer, printed in color or black and white, or burned to a CD or DVD.

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Sincerely,

Bob B. Brock
Senior Vice President, Sales and Marketing
Worldwide Construction & Forestry Division

Not all products sold at all locations.

COVER STORY

The new 844J gives productivity a big lift.

King of the Load



Quarries and other massive-scale construction sites demand serious production out of their big iron. Margins are razor thin, so anything less than maximum productivity and uptime is not enough.

The new John Deere 844J delivers on its promise, providing true seven-yard performance. Designed and built with state-of-the-art tools and techniques by a quality-conscious workforce at our world-class facility in Davenport, Iowa, the 844J combines the performance you'd expect out of a production-class loader with unsurpassed reliability and uptime. >>>

Bucket Options/True Seven-Yard Performance:
Choose from three bucket options: 6-cubic-yard spade nose, 7.25-cubic-yard general purpose, or 7.75-cubic-yard light material.

The smooth-shifting 844J has the fastest cycle times in its class.

In this first article of a two-part series on the 844J, we look at the 844J's productivity-boosting advantages including a high-torque, turbocharged Deere diesel; load-sensing, closed-center hydraulics; and a silky-smooth Smart Shift transmission. We also look at features that improve serviceability and help you reduce your daily operating costs.

The machine even comes Loadrite™-Weigh-System-ready, so you can quickly and easily install a system and immediately start loading each truck to its full legal payload. And when you are ready to "weigh in" on which company makes the best seven-yard production-class loader, we're confident you'll choose Deere.

Load hog

The 844J delivers the performance you'd expect out of a production-

class loader — and then some. Superior hydraulic and powertrain performance ensure quick ground speeds and boom lift, for faster cycle times. A wide stance provides the lateral stability needed for handling heavy loads and working on uneven terrain.

Faster cycle times start with the fuel-efficient Deere diesel. The 12.5-liter PowerTech™ engine delivers impressive acceleration and torque, along with the extra horsepower needed when the going gets tough. Net peak torque is best in class at 1,390 rpm, occurring at an extremely low 900 rpm. Net torque rise is an impressive 60 percent — the Cat 980H by comparison is only 28 percent.

Peak net horsepower is an industry-leading 380 hp. That's over 60 hp more than the Cat 980. The built-in Power-Bulge generates 15-

percent additional horsepower when rpm drops, helping to maintain good boom and bucket speed going into the pile.

Maximum productivity comes without a lot of extra effort. Low-effort levers command excavator-style hydraulics, for precise, predictable, and quick response. The load-sensing, closed-center hydraulic system senses the load and delivers the right amount of power for smooth boom and bucket functions — and fast cycles. The system delivers only the flow required, so horsepower and fuel aren't wasted. Ride control is fully adjustable — a feature unique to the 844J — for even smoother operation.

The whisper-quiet ZF transmission is built to last. Gear changes are silky smooth, whether the bucket is empty or full. Smart

Shift technology continuously evaluates speed and load conditions while adjusting the clutch pack. With the machine doing the shifting, the operator can concentrate on the work at hand.

Opening the door to lower daily costs

The 844J is packed with features designed to help you control daily operating costs. Large service doors open wide, and daily service points are grouped on the same side for quick and convenient ground-level access. Fueling also occurs at ground level, plus there's a fast-fill option.

Lube banks are centralized, making it easier to get to difficult-to-reach zerks. Hydraulic and transmission filters

are located conveniently behind covers mounted on the outside of the engine frame.

If something goes wrong, the multifunction monitor helps you quickly diagnose the problem. Easy-to-understand systems checks and detailed diagnostic messages keep you up and running.

Best of all, the 844J is supported by John Deere's extensive dealer network, with over 400 locations throughout North America. Our dealers are committed to supporting customers with well-equipped, certified technicians and outstanding off-the-shelf parts availability. A wide variety of preventive maintenance and support programs further help you control costs.

To learn more about how the 844J Loader can give your operation a big lift, see us today. ■

SMART SHIFT™ TECHNOLOGY: Smart Shift technology ensures smooth gear changes regardless of whether the bucket is empty or full.

The 12.5-L PowerTech™ engine meets all EPA emission requirements and is highly fuel efficient, for lower daily operating costs.

The Deere engine delivers best-in-class net peak torque (1,390 ft.-lb.) and peak net horsepower (380 hp), as well as impressive net torque rise, for excellent acceleration — and quick bucket fills.

LOADRITE WEIGH SYSTEM: The 844J is Loadrite-Weigh-Management-System ready, so you can load each truck to its full legal payload for maximum productivity. The loader is pre-wired and pre-plumbed for fast installation, and includes a standard mounting pad for the Loadrite monitor.



Cat Can't Compare...

	John Deere 844J	Cat 980H
Bucket (General Purpose)	6.0-7.75 cu. yd.*	5-8 cu. yd.
Net Peak Power	380 hp (283 kW)	315 hp
Tipping Load		
40-deg. Articulation	45,860 lb. (20 800 kg)	N/A
37-deg. Articulation	46,870 lb. (21 260 kg)	41,536 lb. (18 837 kg)
Breakout Force	49,320 lb. (22 370 kg)	47,828 lb. (21 716 kg)
Operating Weight	68,320 lb. (30 990 kg)	68,489 lb. (31 066 kg)
Net Peak Torque	1,390 lb.-ft. (1790 Nm)	1,191 lb.-ft.
Net Torque Rise	60%	28%

* Optional spill sheet brings capacity to 8.1 cu. yd. (6.2 m³)

Stay tuned!

In the next issue, we'll look at proven features that ensure the 844 delivers maximum uptime at minimum daily operating cost, including the durable solid-state electrical load center and the innovative Quad-Cool™ system. We'll also discuss features designed to help operators do their best, such as convenient controls, state-of-the-art multifunction monitor, sealed switch monitor, and unlimited visibility.

[Getting the most out of a 1,400-acre saltworks with the help of a seagoing John Deere excavator.]

Cargill earns its salt in San Francisco Bay



Cargill Maintenance Supervisor Brian Groff and the amphibious John Deere 330C LC. “Without this custom Deere, we’d probably have to dredge — a very expensive proposition.”

Redwood City is sitting pretty in an area Northern Californians call “The Peninsula.” Looking for relief from surrounding \$1-million housing, young Silicon Valley hotshots are snapping up the mere \$800,000 homes within this briny seaside utopia. It’s amazing to think the silicon-enhanced whiz-bang business culture of Redwood City is home to the last vestige of Gold-Rush-era commerce — making salt from the Pacific. >>>

“My preference changed from Cat to Deere after Cargill sent us to the John Deere Testing Grounds in Sacaton, Arizona. We tested John Deere 850, 950, and 1050C Crawlers. We ended up buying the 950C — it’s a great machine to work and maintain. And operating this Deere 330C LC is the icing on the cake.”

— Richard Salcido, plant foreman

Green giant

It’s a refreshing realization that one of the world’s largest privately owned corporations deals predominantly in 100-percent natural products. Brian Groff, one of the Cargill principals overseeing the project, is proud to represent a company every bit as green as Saint Paddy’s Day in Boston. “Nature is very efficient,” said Groff. “Using nature’s power — the sun and wind, Cargill Salt crystallizes natural sea salt from the bay, and Cargill produces products used in food, industry, and agriculture.”

Bittern is what is left over after most of the sodium chloride has been removed from seawater. These bitterns have been building up at the pools’ floors for several years. Since nothing in nature is wasted, Cargill decided to reclaim these and separate them into products such as sodium chloride and Epsom salts. And while creating these products from bitterns is fairly simple, pulling them up from several feet of standing water requires some clever thinking — and a very odd-looking machine.

But first, a word from Mister Wizard

Remember that 3rd grade science project where you hung a washer-weighted string in a glass full of sugar water? You set it in the window, the sun evaporated the water, and — presto — rock candy. Intrepid old salts in the Bay Area have been running this same experiment, but on a grander scale, since the 1850s, when panning for gold didn’t pan out.

While your experiment reaped sweet rewards in about a week, turning the sea into a box of table salt takes some five years, as the bay water moves through three types of salt pools called concentrator ponds, pickle ponds, and crystallizer beds. Okay, now we know how a saltworks works, but what is Cargill doing to make a saltworks work harder? Enter their custom John Deere 330C LC Excavator.

A floating, crawling, digging swamp thing

Cargill needed a long-reach excavator that could get around in shallow water and dig deep enough to remove concentrated chlorides and sulfates from the clay salt-pool floors. The solution came in the form of a proven performer — a John Deere 330C LC riding high upon a pair of 50-foot-long tracked pontoons. Marsh Buggies of Belle Chasse, Louisiana, performed the pontoon/track customization. “Sure, it’s a bit unwieldy at first,” said Groff, “but thanks to the easy and comfortable controls on the 330C LC, you get used to it in a hurry.”

So, why Deere, Brian?

“Over the past three years, John Deere has brought a lot to Cargill, and our operation — both in product and customer solutions — it’s just a great fit. A huge influence on our decision to go Deere is their recognition of the problems facing operations like ours that work with corrosive agents. In fact, we got the first John Deere 772CH-II Motor Grader with a Level 2 Anti-Corrosion Package (see sidebar). We use this grader at another Cargill facility, and the John Deere

Custom Works package is great — sealed alternator, custom wiring harness, and other electrical protections to keep corrosion and electrical problems from causing downtime.”

And as for the 772CH-II Motor Grader itself, “That thing is a worker — holy cow — it’s worked with salt all day for a little over a year, and it has over 3,500 hours on it already. It’s a very reliable machine.”

Meanwhile, the Putzmeister® is idling...

The saltworks recovery is efficient to both the environment and Cargill’s bottom line: 1) The amphibious 330C LC scoops up liquid brine and bittern solids from the floors of the salt ponds; 2) This

excavated material is dumped into a hopper mounted on another amphibious Marsh Buggies creation; 3) From the hopper, the raw materials are sucked up by a powerful concrete pump made by German manufacturer Putzmeister; and 4) The Putzmeister distributes the material to another machine that processes the raw materials into Cargill products that eventually become road deicer, Epsom salts, and table salt.

After hours of watching the spectacle of the odd-duck Deere feeding the mighty Putzmeister, we’re certain this particular 300-odd acres of bay-front property and its delicate environment are in good hands, thanks to Cargill, Deere, and Brian’s enthusiastic crew. ■

Papé Machinery services Cargill’s Redwood City facility.

Corrosion-Fighting Deere Machines

When you run a saltworks, or any facility that handles caustic materials, extra measures must be taken to prevent machine corrosion and downtime. John Deere now offers custom harsh-environment packages for motor graders, dozers, skid steers, and loaders. These packages keep downtime down through the use of anti-corrosives applied to electrical terminals and connections, sealed alternators, special batteries, and radiators, and through other preventive measures.

For complete information on John Deere harsh-environment packages, ask your dealer.

California dreamin'

with Northridge Rentals

The largest independently owned equipment rental company in California began with a dream. And a Deere. In 1951, Bob and Helen Groff had the imagination to foresee the push upward from Los Angeles and the tumble down the Hollywood Hills into the steamy lowlands of the San Fernando Valley. The Groffs launched a small rental operation with a few newfangled John Deere Model "M" Dozers. Such are the machines, after all, that dreams and \$14,000 bungalows were made of.



Builder Marshall Haraden with two of his passions: a John Deere 310G Backhoe and a big palm tree.

Flash-forward 54 years. Those little bungalows are fetching some \$700,000, and Northridge Equipment Rentals maintains its original headquarters, plus facilities in Palmdale, Lompoc, Bakersfield, and Fresno.

Of course, all the aforementioned info can be found at www.northridgerentals.com, but we were ready to meet the folks behind the Southern California success story. Pulling into the rental giant's offices, we navigate Napa Street past Northridge semis hauling John Deere 310G Backhoes, 210LE Landscape Loaders, 544J Loaders, and 450J Dozers.

Small talk in the big valley

We enter Northridge's California-cool offices to meet our gracious host, Mike Groff. Mike has the typical laid-back California manner that belies the frantic business of handing over expensive equipment to an escalating base of area contractors and landscapers.

"Sure, we're involved with the big jobs, but we specialize in the one-on-one service contractors just can't get from the mega rental chains," said Groff. "These guys need more than a machine dropped at their site — they need a field rep that solves problems for them."

Mike seems to have a customer-driven passion for staying ahead of the technological curve.

"Topcon® laser-guidance systems bring productivity to our customers, so we have plenty available. It's my understanding that John Deere is starting to offer motor graders and other machines pre-wired for these systems — very good news for the equipment rental industry."

Mike is a John Deere Gold Key Customer

"Yes, Bill Groff and I flew out to Dubuque, Iowa, to drive our 310G Backhoe off the line — probably



Northridge President Mike Groff poses with one of the hottest machines in California, the "skip loader," aka the John Deere 210LE Landscape Loader. "We have over 75 of them and rent out more skip loaders than skid steers."

the 70th or so John Deere 'hoe we've purchased. We've appreciated these machines for years, so it was great to actually meet the people at the factory who build them. And the lowans on the line seemed genuinely happy to see us and very proud of their work. I'd recommend a Gold Key visit to a John Deere plant to anyone — it was a lot of fun."

A great yard by any measure

We asked Mike to show us around the rental yard hoping to see some of Northridge's 100-plus pieces of Deere iron. But with six semis and three six-ton stake beds feeding the

valley real estate boom, the yard is pretty sparse. "All five of our locations are hopping — looks like I'd better send you to one of our customer sites. We have a great customer in Agoura Hills you can speak with tomorrow."

Looks like another perfect day

The next morning we're up with the chickens as contractors, even in LA, are pumping iron at 7:00, getting 'er done before the sun can ratchet it up to "broil." Winding through the canyon, we approached the Northridge customer photo shoot. And what a picture it was: Freshly planted and mature olive

Continued on page 14



Founder Bob Groff posed with some Deere landscape loaders for the cover of this 1979 rental-industry magazine.

Some Deere will be wired for GPS

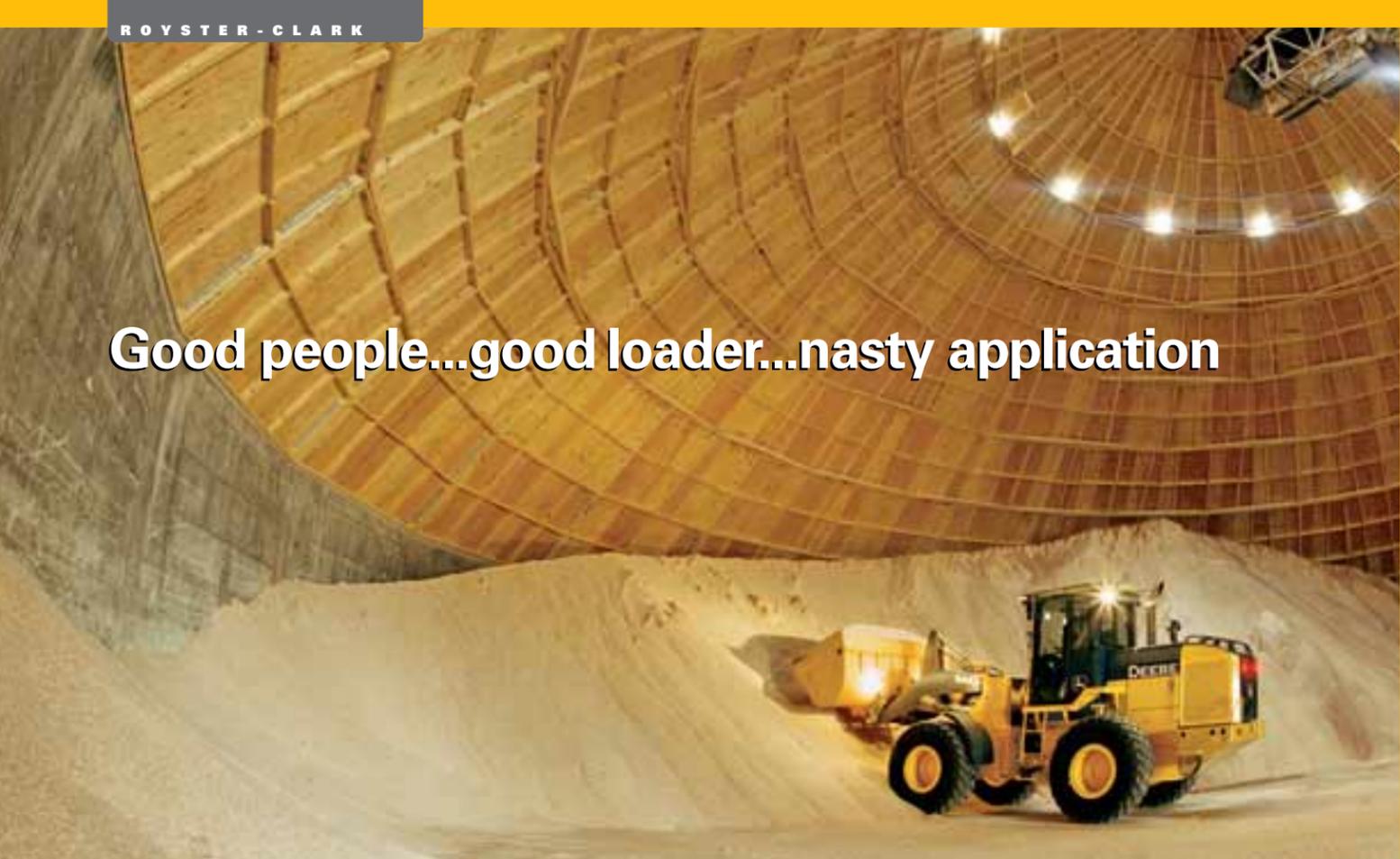
Our California friend Mike Groff was right on the money — John Deere will offer machines with integrated hardware, software, and wiring to support the use of laser-guidance or global positioning systems (GPS).

Deere and two leading suppliers of these systems are working to develop this technology for crawlers, graders, and other machines.

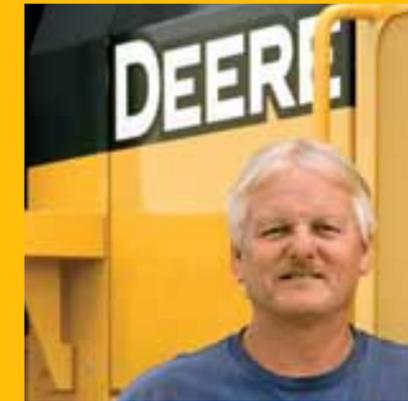
"As a result, installations will be cleaner, highly reliable, and cost less," said Brett Errthum, Deere product marketing manager. "The John Deere approach to automatic grade control provides the machine owner with the greatest flexibility. Regardless of what brand they use for site mapping and position sensing, John Deere machines will come ready for plug-n-play installations."

"Plug-n-play"? Well, he is a marketing guy. But this is great news for the industry.

Good people...good loader...nasty application



Royster-Clark Manager Roger Drake poses with a new 544J Loader with a Level One Electrical Protection Package and a no-worse-for-wear 1997 544H Loader.



Keith Fuelling points out the custom wiring, sealed alternator, and other features of the loaders from John Deere Custom Works. "The Quad-Cool™ system is brilliant and could save a company hauling fertilizer or salt an \$1,000 radiator every three months."

If four-wheel drive loaders had nightmares, they'd take place in an otherwise-idyllic hamlet in deep-down Indiana. Consider: On an average day, 150 semis are loaded by John Deere machines carrying up to 1,500 daily cycles, each involving 2.5 to 5 tons per bucket of voracious machine eaters such as potash, urea, Dap, and Map. Welcome to Royster-Clark's fertilizer and salt facility in Mount Vernon, Indiana.

Royster-Clark lauds J-Loader's anti-corrosion package

In the southernmost reaches of the Midwest, gentlemen refer to fellow gentlemen as "good people," as in "Roger Drake of Royster-Clark is good people." Roger manages one of the company's many Midwest facilities that distribute fertilizers to farmers throughout North America. We met Manager Roger Drake, Dealer Dick Christ, and Maintenance Supervisor Keith Fuelling over breakfast at Lucky Linda's on Mt. Vernon's picturesque main drag.

"You boys eatin' or drinkin' this morning?"

So asked Lucky Linda's waitress, possibly Lucky Linda herself, in

perhaps the funniest 7:30 a.m. breakfast meeting question we've ever heard. "Eating," said Mr. Drake with a laugh before giving us the big-picture overview of the Royster-Clark Ohio River facility he manages. According to Roger, raw materials arrive via barge or railcar from points around the world, and are unloaded, stored, then loaded again on hopper trucks and sent on their way to corn, wheat, bean, and what-have-you fields throughout the Farm Belt. Think of it — yellow Deere equipment moving fertilizers to be distributed by green Deere equipment. The cycle is complete.

Nothing is rougher on a machine than corrosive salt and

fertilizer products. And it takes a special loader to dish up this caustic stew. Some materials are acidic, others alkaline — all live to chew up the steel, aluminum, brass, and alloys that make up a loader. "We load up over 150 twenty-five-ton semis a day during our busy season. We unload barges with a crane and, for everything else, we rely on our John Deere loaders," said Drake. "We have a lot of respect for the productivity and uptime these machines bring to our operation, but, frankly, in our line of work, we must take exceptional care of them." And with that, Roger turned the conversation over to Royster-Clark's loader caretaker, Keith Fuelling. It was clearly time

to leave Lucky Linda's and head to the Royster-Clark facility on the banks of the Ohio.

Keith knows necessity, mother of invention

"When I started here in '97, we were under different management," reported Fuelling, "and they pretty much beat the machines and didn't do nearly enough to protect them. The Cats we ran were disintegrating, and we were throwing \$1,000 alternators and radiators into them constantly. Operators kept them idling ten hours a day, wasting fuel, because they were afraid if they shut them down, they'd be down the rest of the day. When we bought our first John Deere 544H Loader, I vowed it wouldn't meet the same fate as

the old unprotected Cat machines. Since 1997, I've learned how to outfit a Deere loader to keep these chemicals from tearing up the mechanical, electrical, cooling, and body components."

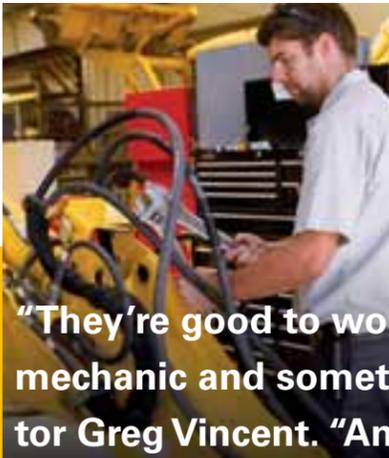
In fact, we learned Keith was renowned as an expert in protecting machines from caustic materials. He's had John Deere engineers fly in from Dubuque, Iowa, to learn a few things from the master. "Even Cat called me for advice once, and I thought those boys knew everything," he said with a sardonic smile. The master mechanic walked us around the 1997 544H and pointed out all the protection schemes he's invented over the years — tight rubber boots wrap and seal the axles, and rubberized undercoating keeps caustic grit

from destroying articulating joints, to name a few innovations. But the pride and joy of the fleet is the brand-new 544J with the special factory-built anti-corrosion electrical package.

Operators cite comfort, control, power, and ease of operation

Keith Fuelling and Roger Drake are quite enthusiastic about the application-specific package and the new J-Series in general. "Beside the obvious advantages of having a machine custom-built for our application, the new J Loader is an innovative machine in its own right," said Drake. "The operators love the power — only Deere has an inter-cooled six cylinder — and the

Continued on page 14



"They're good to work on," says mechanic and sometime operator Greg Vincent. "And a dream to operate — not many excavators have a slick feature like Deere's extendable dipperstick."

Continued from page 11

trees framing a huge under-construction villa. A quick sprint to the top floor of the über estate revealed a staggering view of hills — Agoura Hills, that is — swimming pools, movie stars. The most curious sight on the site, however, was the gargantuan Leibherr crane lowering a 12,500-pound palm tree into a hole freshly dug by a John Deere 310G Backhoe rented from Northridge.

When Northridge Field Rep Dave Bogacz told us that the 310G was being operated by Marshall Haraden, owner of The Marshall Group, a large construction company in the area, we hotfooted down the hill to ask him why he operates his own equipment.

"Oh, that's easy," said Haraden, "this is my property. Usually Marshall Group builds restaurants like B.B. King's or Olive Garden in Southern California and Vegas, but this is my new house, so I'm working a lot of equipment. Besides, I used to collect sports

memorabilia, and now I collect palms. Whenever I can dig a hole and put a tree in it, I do. I enjoy running these Deere, and I always request them from Northridge. There's something about these four-wheel-drive models — lots of speed and power. Hey, Dave," he suddenly shouts up the hill to the Northridge rep, "this is the sweetest backhoe you've rented to me yet...I want to buy it!"

Figuring we'd never get a better testimonial than that, we said our goodbyes to Dave and that lucky new homeowner Marshall, and hit the 405 Freeway towards LAX and all points east.

Hollywood ending

On the trek to the airport, we called Mike Groff to thank him and his crew for their hospitality. "No problem, it was our pleasure. My grandfather started Northridge with a few Deere machines over 50 years ago, and today we have well over 100 pieces — we trust them over any other manufacturer for our rental machines. It's great to see the changing of the guard from Cat to Deere in Southern California. John Deere is always welcome at Northridge — maybe sometime we can talk about our movie studio division."

Northridge Studio Division? We're there, Mike. Hopefully on the set of *Die Hard with a Motor Grader*. ■

Coastline Equipment services Northridge Rentals.



Continued from page 13

controls, especially the return-to-dig feature that keeps the cycles moving quickly. Our 544J is a marvelous machine...."

"...Most marvelous of all is the J Loader's Quad-Cool™ system," says Fuelling, finishing Drake's praise. "Let me show you how this works." Keith swings open the rear grille and fan assembly to reveal the revolutionary cooling design. "Right here, in one chamber, you have a system that cools all machine fluids — antifreeze; inter-cooler; and hydraulic, transmission, and engine oil."

But it's the reversing fan Keith likes best. "Every 30 minutes the fan automatically reverses and blows out chemicals that have gathered on the sensitive fins of each radiator or cooler. I used to crawl all over a loader daily to blow out its radiators with compressed air. Now about once a week I open this single cooling chamber and blow out what little residue the reversing fan didn't expel. Take it from a company that used to buy \$1,000 Cat radiators several times a year — in terms of uptime, the Quad-Cool system makes buying Deere wheel loaders an absolute no-brainer."

"You boys eatin' or drinkin' this afternoon?"

"Eating," we told the waitress reluctantly as we settled back into a Lucky Linda's booth for a quick bite. As we compared our notes from the Royster-Clark visit, we could hear the unmistakable drone of a hopper truck, no doubt filled with the wicked fertilizers we just saw tamed by Roger, Keith, and their fleet of smart Deere loaders. ■

K&W Equipment services Royster-Clark's Mount Vernon facility.

"Tattletale"



It's eleven o'clock — do you know what your equipment is doing? You will if it's a John Deere C-Series Excavator. Equipped with an available onboard data-acquisition system, it captures and reports performance info such as engine speeds, pump pressures, hours of operation, and more. Lets you know how and when it's working, so you can manage utilization, minimize operating costs, and maximize productivity. See us today about the C-Series Excavators.





EVERYBODY TALKS ABOUT UPTIME.

WE'RE DOING SOMETHING ABOUT IT.

We hate downtime as much as you do. So we've implemented a multi-million-dollar effort to extend service intervals, improve component reliability, and make every machine easier to maintain. On our highly reliable G-Series Backhoes that includes features such as ground-level same-side daily servicing, heavy-duty wet-sleeve diesels, and planetary final drives that distribute loads over three gears and are sealed in oil for long life. Call us today about a demo and to learn more about how we can improve your operation's productivity.

Mainframes and digging structures are so durable they're backed by a three-year unlimited-hour warranty.

Axles provide full-time, full-axle lubrication on any terrain or angle.

Industrial-strength mechanical front-wheel-drive axles are totally sealed to keep out contaminants.

