



GOLDEN STATE LUMBER

THE CHALLENGE

Golden State Lumber has been in business since 1954, serving the growing needs of the building materials and construction industry in California. Its operation includes six lumberyards from Santa Rosa to Newark. In 2017, Golden State Lumber opened a new facility in Concord, California, combining a 44,400-square-foot indoor, drive-through lumberyard with 7,000 square feet of retail space.

Outdoor lumberyards, including Golden State's up to this point, historically relied on internal combustion engine (ICE) forklifts, but advancing electric motive power options has been changing that. Because the Concord yard would be indoors, the team decided it would be a good opportunity to put electric forklifts to the test.

Golden State Lumber wanted a reliable fleet that would be easy to operate and maintain in a busy retail and lumberyard environment that sells over 1 million board feet of lumber per month. The fleet would also need to reach the facility's unusually tall racking, so residual load capacity at height and consistent rack performance were important selection criteria.

"In the confined space we're in, we've had to spread up, per se, rather than spread out," said Levi Culverhouse, assistant dispatcher for Golden State Lumber. "And that has led to some unique requirements for the fleet of machines we use."

CHALLENGE: Pilot forklift fleet electrification while maintaining high-lifting capability required by indoor lumberyard's tall racking

SOLUTION: A phased approach culminating in a fleet of Hyster lithium-ion forklifts with specialized high-lift masts, purchased through LMC buying cooperative and supported by trusted local dealer Papé Material Handling

RESULTS: Clean and efficient materials handling operations with no tailpipe emissions, zero battery upkeep and maximized equipment availability

CASE STUDY: GOLDEN STATE LUMBER

THE SOLUTION

With concrete floor surfaces and electrical utilities sufficient to support charging, the new facility was a strong fit for electric forklifts. Golden State leased a fleet of cushion tire lead acid battery-powered electric forklifts with specialized high-lift masts from its Hyster® dealer, Papé Material Handling.

Golden State Lumber had a long relationship with Papé – at that point, nearly two decades of equipment supply across their locations. They worked with Steve Gould, major account manager at Papé, and Don Nelson, the Hyster major account manager for customers purchasing through Lumbermens Merchandising Corporation, or LMC, the cooperative buying group for the lumber industry.

The equipment was placed during the construction of the building and delivered smooth, customer-friendly operation. The forklifts were quiet and did not produce tailpipe emissions that make for harsh smells or fumes in the air or could result in soot getting on the lumber. Golden State was very happy with its electric trucks, and when the lease term for this equipment expired in 2024, the company engaged Papé and Hyster once again.

“I love the Hyster product, they’re very reliable. The machines they make are top-notch, and I can’t imagine Golden State without Hyster involved,” said Brandon Deering, fleet manager, Golden State Lumber.

Papé recommended that Golden State Lumber take its operational productivity and electrification efforts another step forward by replacing its lead acid lift trucks with ones powered by lithium-ion batteries. Papé recommended lithium-ion forklifts for this application due to their advantages in terms of performance, operator efficiency and emissions. Lithium-ion batteries retain full power output as the battery charge depletes, do not require time-consuming maintenance or equalization and have faster recharging capability than lead acid batteries. Neither battery type produces tailpipe emissions but lead acid batteries do emit fumes that require ventilation during charging.

“When we put the new equipment in when the building was new, it was very successful and worked well. There was no question that they would stay with Hyster equipment and just switch to lithium-ion batteries.”

Steve Gould, major account manager at Papé

EQUIPMENT SUMMARY

Original fleet - leased

- Six E120XN forklifts with lead acid batteries
- Four E80XN forklifts with lead acid batteries

Refreshed fleet - purchased

- Nine new E120XN forklifts with lithium-ion batteries
- One E80XN forklift coming off of lease, with lead acid battery

Papé designed another fleet to best fit Golden State’s current needs, replacing Golden State Lumber’s outgoing lead acid fleet with lithium-ion powered trucks in a revised composition of load capacities. Like Golden State Lumber’s current fleet, the replacement lift trucks would also need to reach the facility’s unusually tall racking.

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The decision to favor the E120XN model, with its 12,000-pound load capacity, reflects the yard's tall racking and the need for high residual load capacity when storing and retrieving loads at height. The E120XN forklifts cover all the work that the 8,000-pound load capacity of the E80XN forklifts handled while providing higher residual capacity for picks from higher rack locations, so Golden State Lumber moved toward a mostly uniform E120XN fleet for flexibility and value. The trucks were equipped with optional three-stage masts with lift heights up to 255 inches.

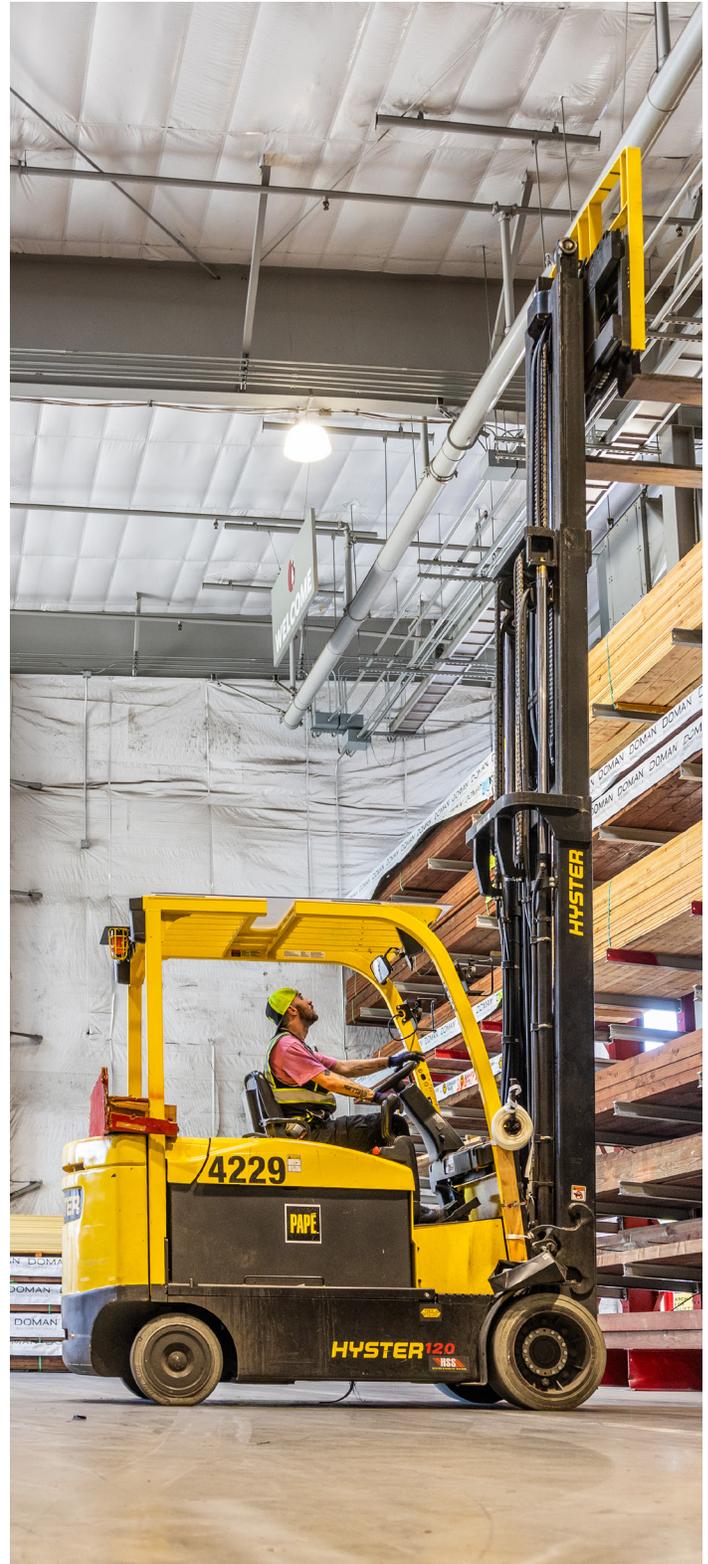
Papé's in-house battery experts analyzed duty cycles and machine run hours to right size batteries and recommend charging strategies. The dealer provided chargers compatible with both lithium-ion and lead acid battery chemistries and recommended leveraging overnight charging and opportunity charging during operator breaks to minimize energy costs and maximize truck availability during business hours.

With the confidence that Golden State had built through their initial lead acid fleet and the proven reliability and performance of the Hyster forklifts, they chose to purchase rather than lease. For ongoing support, Golden State Lumber opted for a planned maintenance program on a time-and-material basis with parts coordinated through Papé.

THE RESULTS

The higher-capacity E120XNs delivered the reach and residual capacity needed for tall cantilever racking and improved fleet versatility and cost effectiveness while continuing to provide the low noise and zero tailpipe emissions that benefit Golden State Lumber's indoor lumberyard in Concord.

"By switching to electric fleets, there's not as many moving parts, forklifts are up and running more, maintenance costs are down. It's safer, you can hear what's going on in the lumberyard, you're not smelling the diesel engines."



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The transition from lead acid batteries to lithium-ion batteries eliminated the need for watering the batteries, streamlined shift changeovers and reduced routine battery upkeep. It also allowed Golden State Lumber to test fleet electrification before scaling.

“I hope to see all of our locations looking similar to how it does here with electrification and making things easier,” said Culverhouse. “We’re the big boy of the lumberyards, so new things come here first and then we get the kinks worked out. When it runs smoothly, we’re able to implement it in other yards.”

Following the success of the electric forklifts at the Concord location, Golden State Lumber has expanded its forklift fleet electrification, transitioning some of its diesel forklifts at its Newark, California, location to J110XN electric pneumatic tire forklifts.

“The relationship between Papé and Golden State Lumber is very strong,” said Gould. “We really look after them, and I have been invited to their holiday parties and am treated almost like an employee and part of the family. I believe they feel the same way about us. Golden State is a top employer here in the Bay Area, and I’m really happy to have them as a longtime customer.”

