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Lean, Green & Grinding with Cresswood –
FCA Tackles Waste



The FCA Leadership Team, left to right:

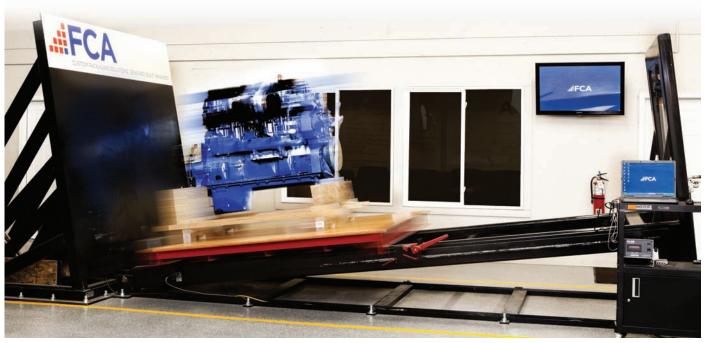
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FCA Sets High Standard for Customer-Centered Innovation In Packaging



An engine skid undergoes dynamic packaging testing using the incline impact sled at FCA's DTEC packaging lab.

MOLINE, Ill.–FCA LLC is not your typical packaging company. Founded in 1985, FCA has evolved from a small lumber sourcing firm to a full-service custom industrial packaging company with state-of-the-art design and manufacturing facilities, including an ISTA-certified packaging engineering lab. FCA carries the goal of developing customer-centered packaging solutions to the extreme, which has paid off for its clients with innovative packaging designs.

Jeff Campagna, one of the company founders and the "C" in FCA, is president and has created a culture focused on innovation and servicing customer needs. "FCA is a classic entrepreneurial company, and under Jeff Campagna's leadership, we take a team approach to everything – from problem-solving internally, to providing the highest quality service to our customers," said David Wilsted, vice president of sales and marketing for FCA.

Headquartered in Moline, Ill., FCA serves many of the world's leading original equipment manufacturers (OEMs) from its 18 facilities across the country

from Ventura, Calif. to Jamestown, N.Y. FCA is a model of what a true specialty packaging company can do, and it focuses on designing and producing packaging to fit large, heavy-duty loads, such as engine assemblies and industrial machine parts. Its Design, Testing & Engineering Center (DTEC) located in Coal Valley, Ill. assists customers in proving new packaging concepts before they are deployed into the supply chain. It is equipped with a testing table and an incline impact tester as well as high speed video, accelerometers, and full diagnostic hydraulic vibration and reporting capabilities. FCA offers to help clients reduce testing costs, lower rapid prototyping timelines and improve packaging performance.

Every year, FCA delivers nearly three million packaging units to customers. Its primary products and services include: wood, steel, corrugated, and hybrid packaging products; expendable, reusable and returnable packaging solutions; and comprehensive value-added service options. It produces a full range of customized skids for engines, industrial

equipment and mining equipment as well as customized crates and boxes. Industries served include: industrial construction, agriculture, aerospace, energy, specialty fabrics and engine manufacturing, among others.

FCA takes its corporate tagline seriously, which is, "Custom Packaging Solutions – Designed, Built, Managed."

Offering Complete Packaging Solutions – Location and Speed

More than just producing unique packaging, FCA will oversee the entire process offering customers complete solutions from start to finish.

Wilsted said, "With our 'complete solution' approach to custom industrial packaging, FCA is focused on serving large OEMs on an enterprise-wide basis. These manufacturers have expensive products to ship, with complex packaging requirements, and freight costs are a very big deal for companies that demand Just-In-Time (JIT) delivery for critical packaging."

He added, "OEM customers have unique requirements including JIT deliv-

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ery schedules and often low-volume, highly-customized packaging for their products. FCA has built our business to meet those needs."

Committed to long-lasting relationships with major OEMs, FCA has located facilities near customer locations to improve service. On average, FCA facilities are located less than 20 miles from customers. Most FCA facilities are situated within a few miles of key customers, and in some cases co-located with customers.

Wilsted commented, "We recognize that it is unique for FCA to say to a customer – It doesn't matter if we're not there yet – we will come! And we're prepared to follow-through when that makes sense for our customer."

As far as JIT delivery, some plants receive multiple truckloads per day, and order turnaround times are typically 15-24 hours with the capability of 2-hour emergency service when warranted.

Jenny Dormire, vice president of Customer Service for FCA, said, "Our flexibility and devotion to customer service is reflected in the two locations where FCA has taken on container management and cleaning for OEM customers." The company established new facilities to sort, repair, wash and help to manage reverse logistics for this container fleet. This required the purchase of capital equipment, but FCA views these investments as opportunities to deepen our relationships with customers, according to Dormire.

FCA provides complete packaging management and reverse logistics services. This includes container and skid management, washing, tracking, recycling, repair and refurbishment. It will also develop kitting and repacking services to enable efficient transport.

FCA considers "Sustainability" as a vital part of its management expertise. (This focus is covered in the FCA – Lean & Green Sidebar)

The fact that FCA has elevated "Customer Service" to a vice president level position demonstrates its unique level of commitment to top-flight service.

Dormire added, "One of our initiatives at FCA is to get as close as possible to our customers – building a collaborative relationship allows you to grow with them. The future of our organization lies in our ability to uncover new products



In the DTEC lab, an FCA packaging technician runs a vibration testing sequence on a custom box.

and services that will respond to our customers unmet needs."

Wood Is Good for Business and the Environment

FCA provides custom packaging that is designed for specific products and applications. It works primarily with wood and will use other material types as needed. Wilsted explained, "We have specialized in wood-based packaging for very practical reasons – wood is economical, durable and sustainable."

Softwood, hardwood and engineered wood make up 85% of the material FCA uses in its packaging products. It will also design and manufacture hybrid products with steel or plastic brackets for structural reinforcement and for collapsibility.

In addition to traditional lumber materials FCA utilizes an engineered wood product for heavy-duty and international product applications that is manufactured from fast-growing native trees which are sustainably harvested. FCA has partnerships with several suppliers of engineered wood in North America.

FCA stated that engineered wood "adds to customer value" through enhanced durability and product protec-

tion, reuse and multiple-trip life, and the sustainability profile of the material.

In-house Design and Testing Expertise

FCA's in-house design & engineering team creates precise packaging specifications that enable custom production at the plant-level.

"Our ability to model the transportation environment, analyze material data, and perform package testing on specific products is a huge benefit for our OEM customers," said Wilsted.

FCA essentially becomes the packaging design department for the OEM, eliminating the need for third party lab testing, or expensive engineering consulting. FCA's DTEC lab can generate an ISTA-certified report on each test conducted, providing the data to validate each unique packaging design.

Engineers are able to target stress and failure points, and to create more customization for superior product protection when they have this foundational data. Wilsted added, "The OEM is able to focus on their own product with the confidence that FCA has the right packaging for their application."

The DTEC is led by Mike Thompson,

Lean, Green & Grinding with Cresswood -

FCA Tackles Waste

"FCA supports green and sustainable packaging practices whenever possible," states David Wilsted, vice president of sales & marketing. "Essentially, we've found that the best way to lower procurement and disposal costs for our customers, help the environment, and create a sustainable business model for FCA is to adopt lean, green and cost-efficient practices within our operations," he explained. "At FCA, our sustainability goals are focused on two main areas of action – limiting waste, and fostering more sustainable choices for our customers, and across our company."

FCA reports that its large original equipment manufacturer (OEM) customers are targeting sustainability issues with packaging suppliers. The level of intensity varies according to the customer – from mandates, to sustainability initiatives with supplier-based criteria.

Key components include sourcing SFI-certified lumber, utilizing high-performance engineered wood, and optimizing customer packaging design.

"With our capacity to engineer and test packaging for real-world applications, FCA eliminates both waste and cost for our customers," said Wilsted.

FCA also demonstrates material conservation with its manufacturing techniques, reusing scrap where feasible, and then grinding wood waste for tertiary markets, the company claims.

Plant-Level Solutions

Returnable packaging systems capable of withstanding multiple trips are a key component of FCA's sustainable packaging range according to the company. Supported by FCA's robust returnable management programs, responsibility for implementing these FCA programs is rooted at the individual plant level, said Jim Eddy, plant manager of the FCA Coal Valley, Ill. facility.

Eddy explained, "For FCA program customers, we receive their skids, pallets, and boxes, inspect them, refurbish them, replace damaged components, recycle the hardware, and then reissue the packaging." Eddy said that his team is challenged to salvage sound material whenever possible in the repair process, part of FCA's



A Cresswood EF-60 "Destroyer" wood grinder processes whole pallets and scrap material into high-value uniform wood chips at the FCA Coal Valley facility.

lean initiative to "conserve first."

Repair, recycling, and manufacturing operations can create wood scrap, however, and FCA Coal Valley grinds this waste for markets in the area. "We produce a mix of trims and blocks, and the aim is to keep our scrap out of the landfill. But in an interesting twist, one of our best customers is the local landfill – they use our chips for road beds," Eddy explained.

To process scrap material including whole pallets at the Coal Valley facility, FCA purchased a single-shaft, low-RPM Cresswood EF-60 "Destroyer" wood grinder. "Our Cresswood horizontal grinder is designed with a 48" flat-surface bed and a 6" throat opening so it can efficiently handle an assembled pallet. Cresswood also supplied the conveyor system with magnets on the outfeed for nail removal," Eddy said.

This clean post-industrial ground product helped FCA develop a market for bio-fuel. "In one pass, our Cresswood grinds very uniform chips, and that's what these biomass energy accounts are looking for," Eddy commented. "We are able to recover and condense scrap with the Cresswood, and our customer uses it to heat & cool its facility, which is an impressive win-win for everyone."

Grinding for 'Better Earth'

At the FCA facility in Princeville, Ill., plant manager, Joe Cave oversees a custom packaging manufacturing operation

that runs three shifts per day, five days a week. "We cut panel products for boxes, and we purchased our first Cresswood Grinder eight years ago to grind the wood scrap that we generate," Cave said. "About 75% of our ground material goes into biomass energy markets for fuel, with an additional 25% going to a new project, Better Earth Compost, located in Kickapoo, Ill."

After teaming up with Better Earth in 2012, Cave said that FCA decided to purchase a new Cresswood hopper-fed HF-40 wood grinder to accommodate more 'dump & go' volume and changing output requirements. FCA Princeville currently produces 80,000 pounds of wood chips, 2-3 times per week. "The Cresswood is constantly operating – it's a core piece of equipment at the plant," Cave explained. "It has to be durable because we can't afford to have it down, and the Cresswood Grinder gets the job done with only minor maintenance required."

Cave has a unique perspective as a repeat buyer. "I've seen the evolution of Cresswood technology, and this new machine is so much more advanced, the efficiency improvements are like night & day," he said. "Cresswood is continuing to move forward with design innovations, and that makes them a good fit for FCA," Cave concluded, "We've got a fresh 'green' story to tell with Better Earth, and the lean technology to deliver on our sustainability pledge to FCA customers."

vice president of engineering for FCA. This facility offers a wide variety of tests, such as, vibration tests, incline tests, compression tests, finite element analysis and other tests designed to meet specific ASTM packaging standards.

These experts are more than just packaging experts, the team includes Six-Sigma Black Belts and plant managers trained in the art of lean management principles. These lean principles enable FCA to achieve greater efficiencies, reduce waste, improve quality and response time, and lower costs to customers.

Wilsted said, "With custom production, efficiency is essential. Jeff, our president, has said on occasion that no one can drill or manufacture an engine skid more efficiently than the FCA team. Our business model relies on superior manufacturing of complex custom packaging, and we are constantly upgrading our facilities to execute at the highest level of consistency for our customers."

Looking toward the Future

Through its growth, FCA has demonstrated a focus on looking toward the future and developing organic business. There are three major business development threads for FCA going forward.



FCA's innovative new C.U.B. – Collapsible Utility Box is ready for one-person set up and immediate use with no tools, fasteners or clips required.

For starters, the company will continue to pursue long-standing relationships with industrial OEMs, emphasizing its packaging design talent, according to Wilsted. This means the company will continue to invest in testing machinery and packaging lab equipment.

Secondly, the company plans to continue to locate facilities near its customers while expanding its footprint.

Finally, Wilsted explained that FCA developed a new line of innovative packaging products. The first is the Collapsible Utility Box (C.U.B.), a patent-pending container constructed of OSB or plywood and paired with an engineered wood or softwood pallet. It is the first

collapsible packaging that requires no tools, fasteners or clips to set up or take down. It can be quickly set-up by one person in less than five seconds, and is ready to use immediately.

Wilsted commented, "One of our customers, typically not easily impressed, has called the C.U.B. a game-changer – and clearly we agree. With its versatility and savings advantages, the C.U.B. expands our capacity to serve more markets, and that's where FCA as a packaging solutions provider wants to be."

For more information on FCA, visit www.fcapackaging.com and for more info on C.U.B., visit www.collapsiblepackaging.com

Our custom designed and validated packaging protects **BILLIONS** of dollars of valuable customer product each year.







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