

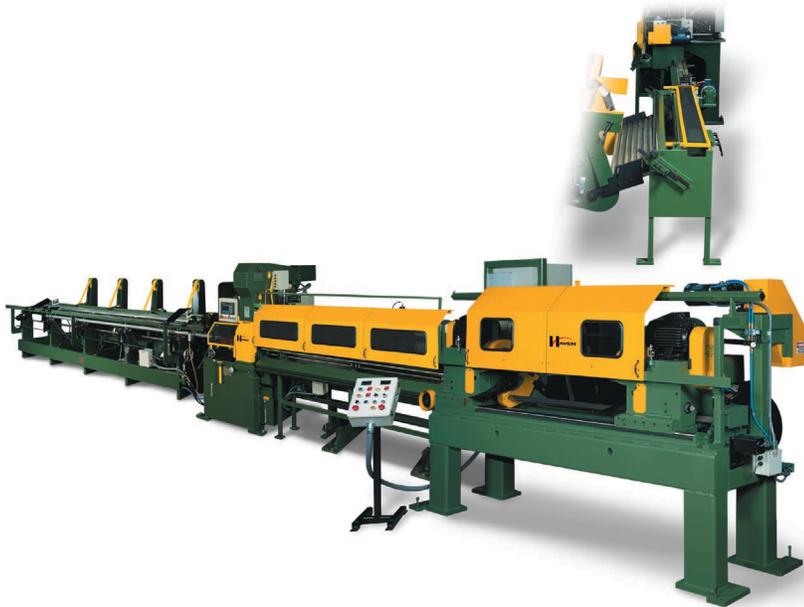
Haven Manufacturing Customer Success Story



“Haven is all about the customer – from design of the machines to service, they are always thinking how to keep the customer happy long term.”

Russell Dennis, Jr., Vice President and CIO/CTO

Leading Edge Hydraulics relies on an integrated Haven tube processing system to achieve aggressive efficiency targets



Background

Leading Edge Hydraulics, a premier manufacturer of Hydraulic Tube Assemblies and Fittings for the off-highway & mobile hydraulics industry, has experienced consistent growth through innovation, excellence in customer service, and support of industry standardization. Their high pressure NexusForm ORFS (O-Ring Face Seal) Connection has revolutionized the hydraulics industry. As business grew, and they saw increased demand for quality and on-time performance

from an increasingly diverse roster of customers, LEH realized that they needed to improve the efficiency of their operations. And, they recognized that becoming more flexible meant they could profitably produce the same high quality products in smaller batches – something demanded more frequently by their larger customers who were being driven to provide more diverse products to their own customers. And, this greater flexibility would also enable LEH to further expand their customer base by serving smaller customers.

INDUSTRY

Off-highway Automotive Industry Supplier
Tube fabrication

HAVEN APPLICATIONS

Dual-Blade Shear Tube Recut
Loader and Tube Stop
Sort Table
End Finishing

SUMMARY

Faced with increasing business and demands by its off-highway automotive industry customers for a wider range of products, Leading Edge Hydraulics recognized that they had to significantly improve efficiency in order to satisfy their customers' requirements and maintain profitability. Working with Haven engineers, LEH customized a few of its machines to accommodate specialized requirements unique to their off-highway automotive applications. Building on Haven's very fast dual-blade shear recut machine, LEH's 100% integrated Haven system provides a significant increase in output across all departments.

About Leading Edge Hydraulics

Headquarters
Rockford, IL

Line of Business

Produces hydraulic tube assemblies and fittings for the off-highway automotive industry

Target Markets

Off-highway Automotive

Haven Customer Since 2005

Haven Products in Use

- 873 Dual-blade Shear Cutter
- 912 End Finisher (customized)
- Sort table
- Loader, bundler, unscrambler
- Transfer System

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“Haven listens to the customer – everyone at Haven worked with us to get us up and running. That’s what matters to Haven.”

- Russell Dennis, Jr., Vice President and CIO/CTO



Challenge

Leading Edge Hydraulics very early recognized that their unique product, along with their focus on the customer and high quality, offered the potential to significantly grow their business. But they had to find ways to improve efficiency in order to meet their demanding off-road automotive customers’ requirements for on-time delivery without sacrificing quality and profitability. An analysis of their operations convinced them that they had to minimize the physical movements of tubes within their plant and to reduce cycle times for all operations. Further analysis revealed that overhead activities such as changeover times also had to be decreased.

LEH identified and targeted several key operations, as well as those with a high number of physical moves – these operations became their focus for improving efficiency. Because several departments were involved, LEH realized they had to develop a plant-wide solution that included not only tube cutting, but also downstream functions such as end-finishing and chamfering, as well as loading and other upstream support activities. Basically, the only viable solution that could achieve their bold objectives was a plant-wide, totally integrated tube processing system. In addition, tool life was a consideration for both cutting machines and end finishers.

To further complicate the task, Leading Edge realized that the complexity of the jobs was also increasing as customers demanded smaller batches, with a wider variety of tube materials, dimensions, and cut lengths. Satisfying these new requirements meant shorter production runs and frequent tooling changeover with significant downtime adding to costs. And, because tool changeovers had traditionally been very complicated, often a higher cost technical specialist had to be available just to change out the cutting tool and reprogram the machine. However, Russell Dennis, jr., VP and CIO at Leading Edge, said they

viewed these demands as a strategic opportunity and knew that a completely integrated system, tying in all departments, was the only viable way to achieve the efficiency they would have to have in order to satisfy their objectives.

Haven Solution

Dennis was aware that Haven had a reputation for fast, accurate and reliable cutting systems and so he knew he could get part of the solution with just a Haven dual-blade cutter. However, he wanted a complete system that was optimized for his unique requirements, such as loading up to 50 ft long tubes. Starting at the downstream side, LEH originally bought a standard 912 End-finisher, and then worked with Haven’s engineers to customize it so they could process cut tubes up to 4 meters in length for their specialized off-highway vehicle applications.

Leading Edge Hydraulics eventually added a dual-blade shear recut machine and sort tables, loaders, and a complete transfer system and now has all of its tube processing machines tied into a coherent, integrated system. As a result, according to Dennis, LEH has seen a “big upswing in output”. Specifically he reported that, when compared to their older manual system, they now process as many tubes

in 1 week, with just 1 shift per day, as they used to process in 1 month at 2 shifts per day. Changeover of tooling also now requires much less time - using Haven’s digital targeting system for fast changeover, a lower skilled technician can now reconfigure a machine for a completely new set of requirements (tube materials, tube diameter, wall thickness and cut length) in about 1/3 the time it used to require: a 65% reduction in changeover time. And, because Haven dual-blade shear cuts require very little end-finishing (Dennis says that they have seen a 95% decrease in chamfering work required with the Haven cutting machine), LEH is reporting a significant increase in tool life – an extra bonus that boosts productivity (fewer changeovers of this tool) and lowers total cost.

Benefits and Future

Because Leading Edge Hydraulics’ 100% integrated tube processing system is now more efficient, they can be more flexible and accept smaller batch jobs that previously were unprofitable. This increased flexibility now opens up their high-speed tube processing to smaller jobs which means they can now serve more customers. LEH’s original quest to respond to the demands generated by increased business has resulted in a larger customer base, which means still more business for this innovative tube fabricator. In large measure, Russell Dennis attributes this success to Haven manufacturing’s support and commitment to the success of LEH as well as to Haven’s superior products and technology. Perhaps Russ Dennis put it best when he said “Haven is a credit to US manufacturing”.

HIGHLIGHTS

- **Changeover time was reduced by 65% with Haven’s dual-blade tube cutter. 1 worker can now do the work that used to require 2 skilled technicians.**
- **Haven’s integrated system can process tubes 8 times as fast as LEH’s previous system with no loss of accuracy or quality.**



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Integrated Tube Processing Systems