



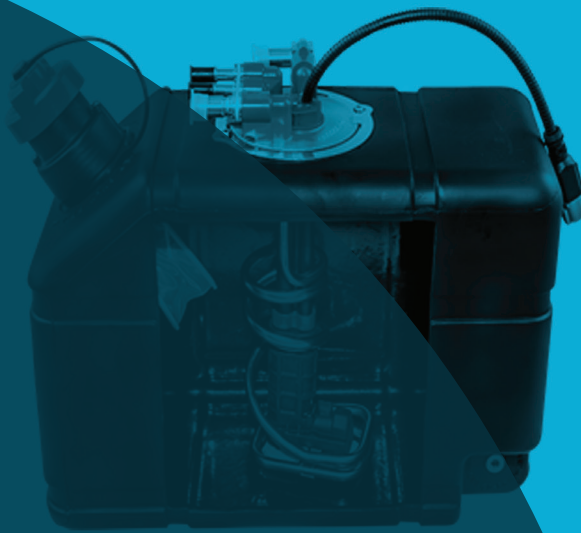
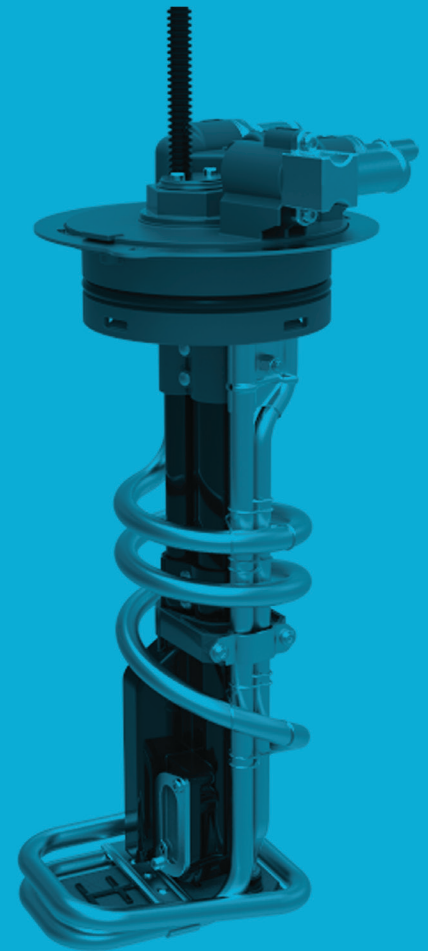
MONOMOY
CAPITAL PARTNERS

Monomoy Emissions Technology Outlook

Interview with Keith Luomala,
President & CEO of Shaw Development

SHAW  DEVELOPMENT

March 2021



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EMISSIONS TECHNOLOGY OUTLOOK

*Interview
with Keith Luomala
President & CEO of Shaw Development*

Shaw Development is the largest North American designer and manufacturer of fluid management systems and related industrial technology components primarily for diesel exhaust fluid (“DEF”) applications. DEF systems are utilized in diesel engines for OEM manufacturers to meet emission standards by governments of off-road vehicles, heavy duty trucks and on-road vehicles. Shaw manufactures and assembles three primary product categories: DEF Systems and Components, Caps & Adaptors, and Fast Fuel and Quick Disconnects. Shaw’s customer base consists primarily of OEMs for the construction, agricultural, heavy truck, E&P, specialty vehicle and bus end markets.

When you joined Shaw, what attracted you to the opportunity?

In Shaw, I saw a unique company with outstanding engineering and technology capabilities that provides critical solutions to its customers. Heavy Equipment OEMs and diesel engine manufacturers rely on Shaw's expertise and product portfolio to make their own products operate better, and more importantly, meet environmental regulations. This position in the industrial technology value chain has helped Shaw develop loyal relationships with both small and large blue-chip customers. So, I knew I was joining a company that had a very strong starting position. As I moved through the process, I also saw a tremendous opportunity to generate more growth. First, Shaw has a robust pipeline of fluid management solutions. One of the most exciting developments is their portfolio of new sensors to improve operating life in certain applications by up to 2-3x traditional sensors. This is a big differentiator, and one that will help the company win more business across their core markets. Second, Shaw is a clear market leader in North America and parts of Europe, but the opportunity to expand globally is tremendous. This expansion is supported by new environmental regulations rolling out across Asia and South America, as well as continued enhancements of regulations in the US and EU, that will drive further demand for Shaw solutions. Finally, and most importantly, I was able to meet the people and see the depth of talent that makes up the core of Shaw. The energy they have to work together, innovate, solve customer problems, and grow was apparent from the start, and I knew I wanted to be part of the team.

Overall, how did 2020 play out for Shaw?

There were significant challenges in 2020. Shaw was purchased on Feb 28th and immediately began the process of realignment, integration, as well as the implementation of value creation processes. Two weeks later, the pandemic brought a rapid decline in market demand and the subsequent slowing and stopping of the supply chain. Not unlike the rest of the world, March through July was a highly stressful and uncertain time. For Shaw, we focused on the controllable variables such as costs and cash management and did our best to connect with customers to try and understand the future. This period was followed by a V-shaped recovery in demand where we needed to pivot quickly to bring suppliers back online to fill the orders. While the net effect of the dip caused Shaw's overall revenue to drop by 25% YoY, the actions taken to improve processes allowed Shaw to maintain EBITDA margins and positioned the company to come out of 2020 as a much stronger organization. We ended the year with a strong backlog, several new customer wins, and strong momentum heading into 2021.

How did Shaw manage the cost structure and profitability of the business during the height of COVID-19?

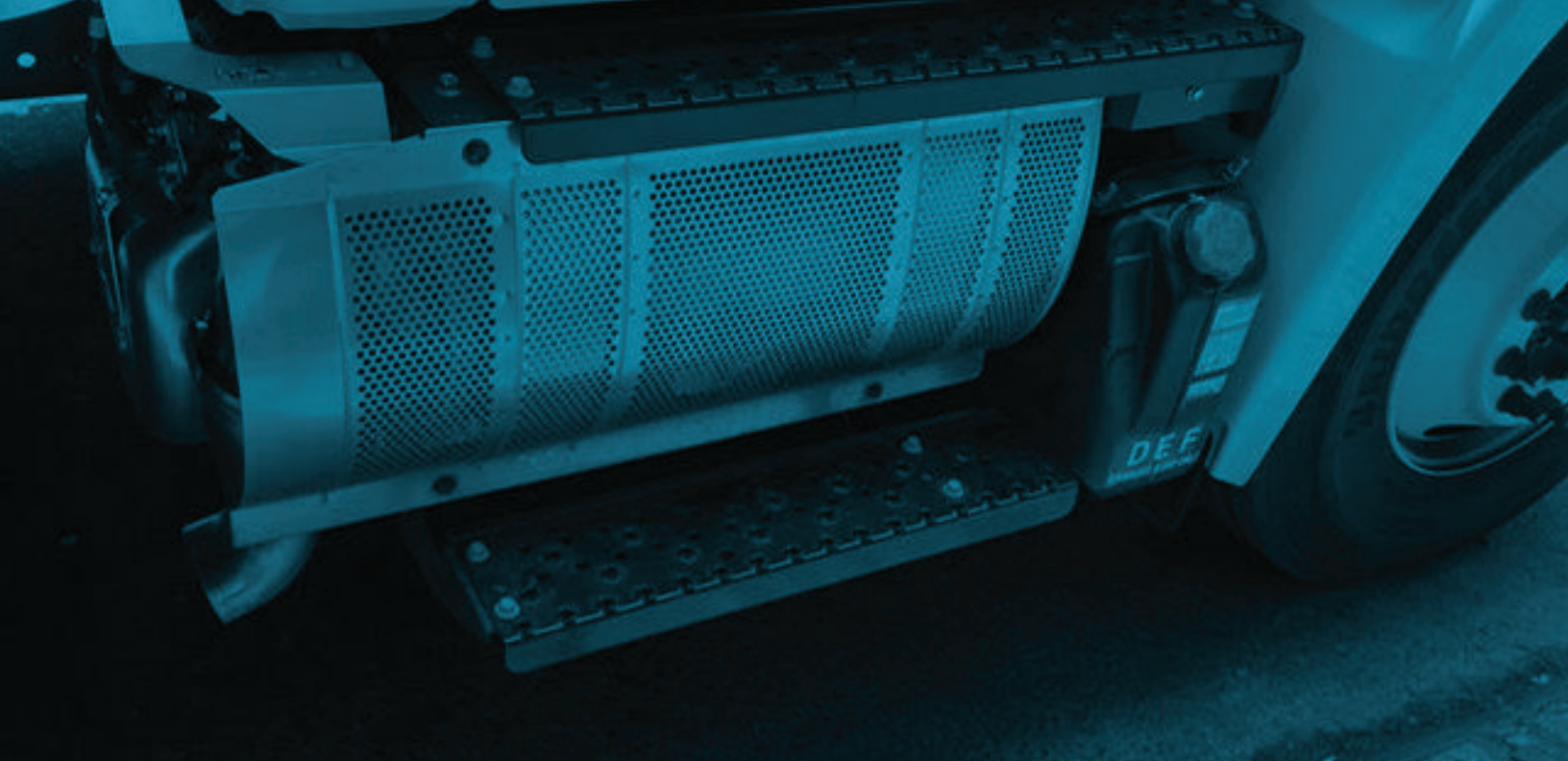
Shaw was able to react quickly and manage the labor force in real time. We traditionally carried 20-30% temporary labor, so that was the first wave of reductions. Further cuts beyond the initial labor actions were executed with our long-term vision and strategic plan of the organization in mind. Additional efforts to optimize our operations, supply chain, net working capital, and product portfolio were accelerated to provide incremental cost savings and efficiencies.

Industrial manufacturing took a pretty big hit last year. What events caused your production to slow down and how did that impact sales?

Most of our sales are OEM-based and driven by larger capital purchase decisions as Shaw's core DEF sensor product attaches to engine systems. Shaw also supplies aftermarket products for systems that are already in use. The sheer unknown at the beginning of the crisis caused certain customers to slow production or, in certain instances, temporarily pause production due to COVID safety issues. Additionally, customers decided to reduce inventory to maximize liquidity during the uncertain times. Ultimately, demand rapidly rebounded. Due to lead time and supply chain restart challenges, the recovery built a strong backlog that was not fully executable within 2020 and will carry into 2021.

When did sales bottom out for Shaw? What was the YoY % drop?

July 2020 was the bottom. Shaw's revenue was down 30-40% vs. July 2019. Given the order cycle in Shaw's business, the demand drop did not happen immediately in March/April and was a bit more delayed. We quickly re-pegged our expectations for the year to be 30-35% down over 2019. Ultimately, the recovery in the market limited the full year drop to 25% and the order run-rate entering 2021 is exceeding 2019 levels.



Can you discuss the end markets you supply into and how COVID-19 has impacted your customers?

Shaw's core business helps heavy duty vehicles meet EPA and global emissions regulations through highly reliable technologies. Our customers make school and city busses, tractors, forklifts, construction, and military equipment. All end markets suffered steep declines in 2020. The only exceptions for Shaw were mining and military, in which volume declines were offset by a few key projects. Construction was hardest hit, down almost 50% YoY, followed by industrial, agriculture, and on-road vehicles.

What does the recovery look like for your end markets?

As we look across the full business, all markets are green for 2021, and many surpassing 2019 levels of demand. We see the Construction and Agriculture markets bouncing back most quickly, driven by infrastructure projects and pent-up demand in North American farming after years of struggles with weather and geopolitical issues. These have historically been two of our largest segments and are driving demand at record levels in H1 of 2021. Our industrial segment is dominated by forklifts, which show a solid long-term growth trajectory supported by e-commerce sales driving larger warehouse and distribution center investments. Our bus business has a slower recovery planned as demand for public transportation is still suppressed.

What type of disruption did you see to your supply chain last year and how did that have an impact on Shaw's lead time with its customers?

Once Shaw saw the trends of declining backlog during Q2 and into Q3, we made full efforts to slow, or in some cases, temporarily stop parts of our supply chain. Many of our customers paused production, sent employees home for remote work, and were focused on destocking inventory vs. planning future purchases. Not only did this drive sharp changes in demand, but communications were a major challenge. So, when the spigot turned from "off" to "on", we had to move quickly to engage our suppliers and get the full system moving to meet the demand. Beyond the traditional sales & operations planning challenges in this environment, global constraints on PC boards, resin materials, and trans-pacific shipping containers caused further constraints. These challenges resulted in longer lead times for our products, which we believe will normalize at some point in 2021. We are fortunately on a path to exceed historical demand levels in 2021, and we expect 100% return by late Q2 this year.

US and European markets, from an emission standards perspective, are ahead of other markets; how are you thinking about growth outside of those markets?

The on-road emissions regulations have been adopted across most major markets over the past few years. China, Brazil, and particularly India will soon be adopting new off-road regulations that will lead to significant expansion of off-road DEF solutions. Shaw has a tremendous leadership position in North America as well as some key European countries. While we continue to focus on expanding our solutions and presence in these core markets, we have recently made a strategic investment in India by signing a joint venture agreement with India Pistons Limited to locally manufacture and serve both on-road and off-road customers in India. We are excited about our partnership, the growth potential, and ultimately the opportunity to help India in its mission for better air quality.

When do you anticipate getting back to pre-COVID performance?

From a demand perspective, we're already there. The investments we're making this year to enhance our supply chain, implement a new ERP system, and establish global operations will help us finish 2021 at a much higher performance than Shaw has seen pre-COVID.

What channel/end market do you see the most growth in this year?

From an end market perspective, construction will be our growth leader in 2021, with a quick rebound from 2020, along with some new business wins ramping up in the second half. Agriculture will follow per earlier commentary. Geographically, we see the rebound already in both North America and Europe, while India will come on as new business expansion. We are also working on new product introductions with our customer base to align on the next generation of our existing product set and ultimately, expand our share of wallet.

What are some of the tailwinds you see coming in the industry?

Regulatory changes in emerging regions like India and China will drive a significant increase in volume globally. Geopolitical trends are pointing favorably for environmental infrastructure investments, which support our current portfolio. From a technology perspective, DEF continues to be a challenging application that can be a frustration for engine manufacturers, OEMs, and operators. Shaw's investment in innovative sensing technologies to enhance reliability and extend the life of our custom DEF systems is proving to build loyalty and support long-term partnerships with our customers that will help us all create more value in an ever-evolving industry.

What are some of the headwinds you see coming in the industry?

You can't talk about headwinds in the diesel engine market without covering electrification. Electric vehicles are well on their way to consumer vehicles. With that said, we believe the off-road segments are still a long way off from electrification as the power requirements are so well beyond what battery power can offer. On-road is another story as governments and corporations are setting goals in the next couple of decades for transitioning commercial vehicles. Fortunately, for Shaw Development, our history and core business is in developing custom fluid management sensors and solutions for heavy duty vehicles, and we are constantly evaluating new applications and partnering with industry leaders to co-develop the technologies needed for the future industry – whatever that may look like. Lastly, there are substantial avenues for Shaw to grow internationally in regions that have trailed behind the United States and Europe in terms of emissions regulation. We believe the market for Shaw's products globally will grow significantly. As countries continue to adopt these regulations and use DEF systems on vehicles, the aftermarket/maintenance business for Shaw's products will become a much larger portion of the business.

What are you most focused on for the upcoming year?

Well, saying "everything" wouldn't be too much of a stretch, but there are a few specific areas that we will be concentrating on in 2021. A top priority is enhancing the resiliency of our supply chain. Combined with a new ERP system, these investments will help us deliver a best-in-class customer experience. Successfully executing our joint venture in India will be another major effort. Finally, we're working with our current customer base to help formalize their preventative maintenance programs for their DEF systems – something that's been lacking in the industry today. Avoiding disruption to an operator's job or driving experience is key to everyone's success. These are a few keys to our long-term strategic plan that we will be implementing across the organization to achieve a new level of performance for Shaw Development.

What are you most excited about for the upcoming year?

2020 was a challenging year for everyone. The most exciting thing for me, personally, is seeing the enthusiasm and excitement from our team as we embark on our new strategic plan. After engaging the extended team in the process from start to finish, everyone is looking forward to working together to execute on a well-planned path to success.





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