

# Ljungby Maskin offers exceptional comfort with a sealing solution from SKF

SKF customer case: Ljungby Maskin

Ljungby Maskin's loaders are not only the best in the world, but they are also the most comfortable. Nevertheless, the company's founder and driving force, Rune Andersson, was not completely satisfied with the comfort system in place. He wanted a real spring system in the cab instead of foam seat cushions, which used to be the only option. Thanks to the company's designers and SKF's sealing experts, he was able to develop his own cab suspension cylinders which are now manufactured at the firm's plant in Ljungby.

"Hearses had sprung seats way back in the nineteenth century - so why on earth shouldn't there be springs in the cab of a loader, where you sit bumping about all day."

So says Rune Andersson, who founded Ljungby Maskin in 1983. As he puts it, the company is now: "the world's smallest, but best manufacturer of loaders."

## Flexible loaders

Each year, just shy of 200 vehicles roll off the line at the company's plant in Ljungby. Most manufacturing processes take place on-site in the town. Everything from sheet metal working and bending to paintwork and assembly. Those components that are bought in come from well-known subcontractors.

This has not only meant that their loaders are now considered to be some of the best ones available on the market. It has also resulted in a unique degree of flexibility that enables the company to design and equip each individual vehicle according to the customer's wishes.

One example of this is the exclusive comfort system that Ljungby Maskin introduced in 2013 - it remains the only manufacturer to offer this option to its customers. The technology is based on a hydraulic system that allows the cab to float freely thanks to four so-called cab suspension cylinders, which are enabled as soon as the parking brake is released.



*Together with SKF, Ljungby Maskin developed its own cab suspension system in just four months.*



"Spring systems have been around forever, so of course we think that loaders - which run on everything from rough terrain to smooth asphalt - should have sprung suspension," says Rune Andersson.

The cab suspension cylinders were bought in from a component manufacturer, but Rune was not happy. The positioning was sub-optimal, and there was leakage from the cylinders that it was impossible to remedy. In 2018, Ljungby Maskin decided to produce their own cab suspension cylinders.

"If we can make loaders, we can make our own cab suspension cylinders," says Rune. The challenges they faced included dealing with frequent short, rapid movements and relatively low operating pressure and high pressure peaks. It was also necessary to



*Rune Andersson is the founder and CEO of Ljungby Maskin, who produce the world's comfiest loaders.*

adapt it to work with the existing fittings and to suit the entire after market.

At the same time, there was also a requirement for the sealing solution to be able to withstand environmentally-friendly oils that are more aggressive when they come into contact with many types of sealing materials.

Daniel Wikman, a designer at Ljungby Maskin, began to draw up plans for a new system and got in touch with SKF in Landskrona at an early stage in order to seek assistance with the seals.

"SKF were already the supplier of the majority of our seals, which was why it was entirely natural that we turn to them," says Daniel Wikman.

Andreas Krantz, a sealing specialist at SKF in Landskrona, joined the team and was assigned the task of developing a great sealing solution.

"Since we were granted full access to all application data by the customer, we were quickly able to ascertain what the seals needed to be able to cope with, which meant

we could propose a solution that would meet the customer's requirements," says Andreas.

The sealing solution included both standard seals and seals adapted to the application, which also took into account previous experience of leaks. Following a few minor adjustments, the cylinder was ready in the space of just four months.

We always pick the best suppliers, and the more closely you work together with your component manufacturers, the better the results you achieve. They know their own



Daniel Wikman believes in the partnership with SKF.



Andreas Krantz, Anders Bengtsson in conversation with Rune Andersson.



Each year, around 200 loaders roll off the line at the company's plant in Ljungby.

fields better than anyone else out there,' says Rune Andersson.

Today, the design works optimally and the cab suspension cylinders are completely interchangeable with old cylinders.

Before the work started, there was some anxiety that the partnership would become stiff and bureaucratic when little and large joined forces together, in the shape of Ljungby Maskin and SKF respectively.

"Actually, it worked out exactly the opposite way around. It's been great - we've enjoyed open discussions and rapid decision-making, with everyone aiming for the same goal," Daniel Wikman says.

## SKF Landskrona facts:

SKF has brought together much of its sealing expertise in Landskrona in order to support Swedish industry to become even more competitive. The following is provided from Landskrona:

- Application support.
- Large stock of standard seals for both the Swedish and European markets.
- Machining of seals with the ability to deliver customised solutions.
- Colleagues with extensive experience and knowledge in the field of seals who are ready to serve Swedish industry.

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