



Case Study:

One Stop Machinery Shop

Industry:

Earth Moving

Problem:

Shock loads and pressure spikes reducing seal life

Outcome:

A high performance seal kit that out performs OEM kits, increasing production and reducing downtime

About One Stop

One Stop Machinery Shop is a reputable family owned and operated company serving the NSW Hunter Region for over 30 years, providing a comprehensive mobile maintenance and repair field service for earthmoving and construction equipment, to large-scale industrial plant and machinery.



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One Stop Machinery Shop

www.hsa.com.au





SECTOR CREDENTIALS

The construction and earth moving industry relies heavily on hydraulic equipment to provide reliable and efficient performance under long operating hours.

The harsh conditions of such a demanding environment rely on the highest quality seals and wipers to keep the hydraulic systems free of contamination from dirt, dust, mud, water and other pollutants. With temperature and pressure extremes, and heavy continual use leading to wear and tear, the high quality of our seals play a pivotal role in minimising downtime.

No matter the equipment, HSA has the experience and the technical know-how to service the earth moving and construction industry with a large range of quality, reliable hydraulic seals.

Problem

One Stop Machinery Shop repair and service a wide variety of plant equipment. One of the most common repairs they do is to excavators. They've seen every type of excavator you could imagine.

These machines are subject to thousands of hours of very hard and intense work and the shock loads and pressure spikes generated by driving a bucket into the earth can be enormous. It's not uncommon to see pressures exceeding 700 bar for a split second or two.

The demands placed on the sealing systems are quite unique. High performance hydraulic cylinders are critical in this industry and the need for leak-free seals goes hand in hand with that.

The OEM sealing systems are all quite similar. The piston seals are made from bronze-filled PTFE to ensure the maximum number of cycles before failure. PTFE is an acceptable option due to its ultra-low friction, but there's much more to the solution than just friction control.

Strategy

At HSA we constantly hear owners asking how they can get longer life from the cylinders to increase production and reduce downtime and, for many years, we've been replacing the bronze-filled PTFE piston seals with our unique high performance, hard, self-lubricating polyurethane that we call **XSL**.

Whilst its running friction is a little higher, its sealing performance totally controls the leakage and its abrasion resistance is exemplary. Unlike PTFE, its 60 Shore D hardness and high tensile strength make it very tough and it will tolerate twice the extrusion gap of bronze-filled PTFE.

Couple this major improvement to the piston seals with top quality German guide rings, strong and tough buffer seals with anti-extrusion rings, flexible and responsive rod seals, RT15 static seals and top of the line metal-cased rod wipers, and it's no wonder customers want seal kits for their earthmoving machinery from HSA.

Results

Indeed, XSL has outperformed the OEM seals in every instance and One Stop Machinery Shop now demands this seal.