Proven track chain performance in Australia

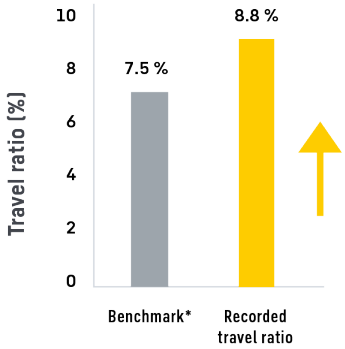
LIEBHERR

Mining



Situation

- **Location:** New South Wales, Australia
- **Application:** open-cut coal mining (thermal and semi-soft metallurgical)
- **Operating conditions:** extremely abrasive conditions, with sandy topsoil over predominantly blasted rock and coarse gravel
- **Equipment:** R 9800 excavator
- **Component:** Liebherr undercarriage track chain
- **Life at overhaul:** 33,594 hrs
- **Travel hours:** 2,972 hrs
- **Travel ratio:** 8.8 %



17.3 %
higher than benchmark*

**Standard travel ratio assumption used as an industry benchmark by our application engineers in their reports and studies.*

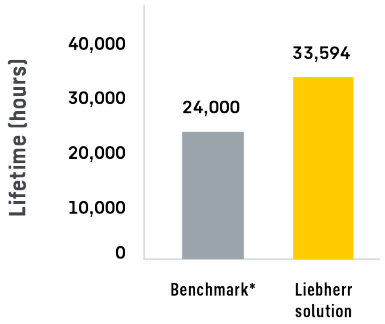
Challenge

When operating in highly abrasive conditions over extended duty cycles, the R 9800 undercarriage is exposed to significant ground stress, which can contribute to accelerated wear. The track chains are particularly vulnerable, and excessive wear can reduce machine availability, make maintenance planning more difficult and increase the likelihood of unexpected downtime and production interruptions.

As the track chain wears, the impact extends beyond the chain itself. The undercarriage system relies on the correct chain pitch and tension to operate effectively, meaning wear in one area can create a ripple effect that accelerates deterioration across sprockets, rollers, idlers, tensioning components and the frame.

Extended travel periods place continuous demand on multiple undercarriage wear interfaces, including track chain articulation and pins, sprocket and track pad drive lug engagement, chain and roller contact, and idler and chain contact. Turning manoeuvres further increase lateral loads on the undercarriage. Together, these operating conditions can accelerate wear and fatigue, reducing the expected service life of undercarriage components.

Field results



33,594
operational hours achieved

40 %
longer lifetime than benchmark*

**The benchmark used in this analysis represents the undercarriage life cycle expectation provided to customers by alternative suppliers, based on an internally conducted study.*

9,000
additional operating hours*

→

1.5 years
additional operating life before replacement

** Based on an assumed annual machine utilisation of 6,000 operating hours.*

The Liebherr advantage

The exceptional service life of this track chain is the result of Liebherr's integrated approach to undercarriage design and decades of experience working with a range of excavators in the field. Engineered specifically for each machine class, every component works together as a unified system to distribute loads evenly, reduce wear and ensure stable, reliable machine operation.

Customers benefit from a reduced life cycle cost and lower indirect maintenance costs over the excavator's lifetime.

When the track chain reaches the end of its service life, Liebherr works with the customer to schedule replacements during planned machine shutdowns, minimising maintenance downtime and maximising machine availability through proactive parts planning and support.

This combination of engineering expertise, high-quality materials and dedicated customer support sets Liebherr undercarriage solutions apart.

What this means for everyday operation

- **Reduced operational and maintenance risk**
- **Better control over shutdown planning**
- **Lower total cost of ownership**
- **More predictable component life**

Scan here to request a complimentary, site-specific undercarriage performance review.