

Job Report

Wheeled Excavator

A 922 Rail

Litronic®

The Railroader
A 922 Rail Litronic
in operation at the
STRABAG Rail GmbH



LIEBHERR



Situation

STRABAG Rail GmbH is an international rail company and part of the STRABAG SE Group. Having now accrued more than 90 years of experience, STRABAG Rail is giving valuable impetus in rail construction project planning and setting quality benchmarks in building work execution. The company's range of rail construction projects comprises all turnkey railway traffic systems, overhead line construction, bridge building, station platforms, system and civil engineering. Quick change, conversion of points as well as repairs are also among the activities of STRABAG Rail.

In order to continue realising complex construction projects on time and at a high standard of quality thanks to perfect processes, the company decided to invest in a further construction machine - or a railroader to be more precise. The new railroader is designed to support the expertise and commitment of the employees through flexibility, high performance and reliability.

Task

Due to the great time pressure with track construction - while trains are still passing by on occasion - working tools must be changed quickly and easily. With the diversity of working tools, the Liebherr railroader is slowly but surely turning into the equipment carrier. In conjunction with LIKUFIX, it was important with the Liebherr SW33 quick coupling system to minimise retooling times and increase the machine availability. As a result, the main emphasis in terms of the new investment in a railroader was placed on the compatibility of all existing

working tools, such as shell grabber, ditch cleaning bucket and various backhoe buckets, with the new machine that is to be equipped with the fully hydraulic Liebherr LIKUFIX quick coupling system. In this way, the machine can be deployed with greater efficiency and flexibility. Furthermore, the new construction machine is to combine performance and cost effectiveness and feature a range of safety equipment. All daily service points are to be easily accessible at the same time in order to minimise machine downtimes.

Solution

Liebherr-Hydraulikbagger GmbH embraced the customer's needs and was able to offer a machine that indeed fulfils all requirements. The solution that was presented is the powerful A 922 Rail Litronic railroader.

The A 922 Rail Litronic is fitted with a Liebherr diesel engine that returns 110 kW/150 HP (ISO 9249) of power. This complies with emissions standard stage IIIB and is equipped with a maintenance-free exhaust gas aftertreatment system. Thanks to the intelligent machine management with Liebherr Power Efficiency (LPE), the interplay of the drive components is optimised in terms of efficiency, which facilitates machine operation in the area of the lowest specific fuel consumption. The average fuel consumption was 7.3 litres/hour during the replacement of sleepers in ECO mode. ECO mode is distinguished by particularly economic and environmentally-compatible work. Furthermore there are additional modes available, such as Sensitive and Power. Thanks to the two-piece boom, measuring 3.40 m in length, and a stick with a length of 2.05 m, the machine can also easily perform its duties in close range and is therefore well suited to different deployment scenarios. The A 922 Rail has also been equipped with the Liebherr LIKUFIX quick coupling system. The fully automatic quick coupling system allows the operator to change all working tools from the cab in a matter of seconds and prepare the construction site without third party assistance. New solutions were developed to enable this, particularly in terms of the compatibility of the working tools. The LIKUFIX quick coupling system can be converted in a very short space of time so that existing working tools can be employed with the mechanical quick coupling adapter. This enhances flexibility enormously.

To assure safety to the side and above, a swivel and height restriction must always be installed on railroaders, which can be activated easily by the operator. The standard camera for monitoring the area to the rear is integrated in the ballast weight with a protective guard. With the standard side view camera, the complete working area can be monitored on the separate colour display in the cab. The operator can therefore concentrate on his work and has an overview of the area surrounding the machine at all times.

The integrated operator recognition system makes it possible to save machine control parameters for up to five operators. When the machine is restarted, the stored settings can be called up directly by the operator, which makes the machine ready for operation immediately and further enhances productivity and effectiveness.

Many of the jobs are carried out on the weekend, especially with track construction. A fast spare parts service within 24 hours and spare parts availability of 97 % are therefore very important at Liebherr and give the customer the assurance that his machine as well as any spare parts are available at all times. The service-friendly machine design ensures that daily servicing measures can be performed quickly and easily from the ground. Machine downtimes are minimised in this way and work can be taken up again immediately.





Technical Data

Operating weight	approx. 20 tons
Engine type	Liebherr D 834
Engine output	110 kW (150 HP) at 1,800 RPM
Emission control	re-installation particle filter with silencer module
Emissions stage	IIIB

Equipment

Two-piece boom	3.40 m
Stick	2.05 m
Quick coupler	SW33 with LIKUFIX
Max. reach	7.75 m

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