

Crawler Tractor

PR 754
Litronic®

Job Report

Creating four reservoirs
with the 3D GPS control system
in the Lérida region / Spain



LIEBHERR

Situation

The company Desmontes del Cinca, S.L. headquartered in Binéfar (Huesca, Spain) specialises in surveying work and the creation of topographic models of terrain, and today is an important regional provider of earthmoving and general construction services. Founded in 1976, the company has grown considerably and enjoyed a truly prosperous time, since the assumption of management responsibility by Ramón Fernández, the current Managing Director, in 1997. Today, the company is active primarily in Aragon and Catalonia in the north-eastern part of the Iberian peninsula. The region around the city of Lérida, which is known for its orchards, is one of the most important agricultural regions in Spain.



Task

To ensure a sustainable improvement of the water supply in the north-eastern part of Spain, plans call for construction of an irrigation canal from the Segarra plateau to the Garrigues region. The 3,500 km of pipe, 43 retention ponds and 17 pumping stations will supply over 17,000 irrigated plots of land in 70 communities. In construction stage 13, the contract for creating four reservoirs was awarded to the company Desmontes del Cinca, S.L. Construction, this work is anticipated to take 3 years. The construction work will require the use of dumpers, wheel loaders, motorgraders, excavators and crawler tractors, including one each of the excavators R 954 and A 904, as well as a PR 754 crawler tractor from Liebherr.



The Lérida region in north-eastern Spain.



Maximum precision thanks to the latest satellite technology.



Solution

Most of the material at the construction site is limestone in various sizes that must be moved and profiled to create the reservoirs. Since a motorgrader could not be considered for material transport and grading because of the hard subsurface layers, Desmontes del Cinca decided to employ a Liebherr PR 754 crawler tractor.

To move the rock precisely and simultaneously maximise productivity, the PR 754 was equipped with a 3-D control system based on GPS technology. This way, a tractor in the 40 t class can be used for fine levelling with an accuracy of 1.5 cm. A day's work in a 10 to 11 hour shift is an exceptional 4,500 to 5,000 m³ of material that is removed by 4 dumpers, each with a capacity of 40 tonnes, and all of this with the certainty that the required profile for the terrain is being provided with the greatest accuracy.

Thanks to its electronically controlled hydrostatic drive, the Liebherr PR 754 Litronic crawler tractor delivers maximum grading and ripping capability, even in the harshest operating conditions. The cooling system operates independently of the diesel engine and provides cooling as needed to guarantee maximum availability, even at high ambient temperatures, low noise levels and especially low fuel consumption. Compared to the conventional approach with a motorgrader, it was possible to nearly triple the daily output.

Furthermore, the PR 754 can be used also for clearing, ripping and grading with its capacity of 1,200 m³ (ripping and grading) to 2,000 m³ (clearing and grading). Today, the Desmontes del Cinca employees responsible for this project appreciate that, thanks to the Liebherr machinery being used and the very innovative procedures employed on-site, construction will be completed one year earlier, that is, in 2 years.

Technical Data

PR 754 Litronic

Engine _____ Liebherr D946 L A6
Engine output (ISO 9249) _____ 250 kW / 340 HP
Operating weight _____ 38,620 kg

Attachment

PR 754 Litronic

Semi-U blade with HD edges _____ 8.9 m³
1-shank ripper with pin puller
Air conditioning
Dust guard package, incl. automatic reversing fan