

Anti-Sway Cranes Aid New Avensis Programme at Toyota

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ANTI-SWAY CRANES AID NEW AVENSIS PROGRAMME

Press and plastic shop facilities at Toyota's Burnaston plant have been upgraded with five new high specification overhead cranes from Street Crane Company. The work was carried out in readiness for producing the new generation Avensis. Cranes have been installed to give more flexibility and greater speed in die changing. This has allowed Toyota to reduce die change cycle times on presses and injection moulding machines by as much as 30 percent.

Toyota's current investment in the UK, at Burnaston and Deeside, totals more than £1.7 billion. Around 220,000 Avensis and Corolla models are produced for the UK and European markets, using lean manufacturing technologies. This demands intensive use of capital plant such as presses and moulding machines to produce a large number of components in small batches in synchronisation with assembly. A process that requires frequent die swaps.

The new cranes are highly specified. Four are installed in the press shop and one in the plastics shop. All are double girder design, spanning wide bays of 18.7 metres and having 11.6 metre height of lift. Street heavy duty open barrel VX hoists are used in all cranes for true vertical lift and placement. Hoists have a 35 tonne safe working load capacity. The crane in the plastics shop also has a second hoist of 16 tonnes for die splitting and turning.

Safety and precise movement were key Toyota requirements so the cranes are fitted with Street's XY- Zero load system for safety and maximum sway-free stability. Some dies weigh up to 28 tonnes. The XY-Zero load system ensures these are transported down the workshop without sway and can be placed immediately without any need for the operator to make movements to stabilise the load. This is essential when placing the complex high value dies onto the auto loaders for the presses. Control of the cranes is by radio remote so that operators can stand where they have best visibility and safety.

There are up to 15 die swaps per shift. Cranes bring the dies up from the workshop holding area and place them on the press loading table. The press then automatically changes over the die with minimal downtime and the cranes then take the used die back to the workshop to be inspected, cleaned and prepared for the next cycle.

Street's cranes are used extensively in UK automotive, engineering, metalworking, stockholding, glass, logistics and aerospace industries. Toyota UK have been using them since 1991. "Toyota is a company renowned for quality and reliability. The successful long term performance of the first cranes, and high service level provided by Street, was a vital factor in selecting our cranes for the Burnaston upgrade project," commented Street managing director Andrew Pimblett.

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