

The Vital Link

Ainsley Fraser gets 'hooked up' on some of the important technical and safety issues around chains

Skip loader operations would be pretty difficult, if not impossible without them – and yet the four lengths of chain essential for lifting and handling are, for the most part, almost taken for granted. Actually, that they are used specifically in a 'lifting application' means that there is a range of operating requirements and safety regulations with which they need to comply – and some fairly chunky obligations for the manufacturer, the supplier, the operator ... and drivers too.

Let's start with the chain assembly itself. It is made up of a number of individual components, starting with a suspension plate or transmission fork at the top. Then comes a length of standard chain – typically 10 or 13mm Grade 8, depending on the type, weight and application. The lower end of the chain is usually mechanically joined onto a 'hammerlock' component... then another length of chain and finally, a single, double or dual keep plate, to attach over the lugs on the side of the skip. There are a number of variations on the theme of course, including end plates with safety bars and even lockable versions.

All these components will (certainly should) be supplied with a Certificate of Examination and Conformity, generally all under BS EN818-4 1997. During the assembly process, an identification plate should be attached to the chain, which will normally give a serial number, other key specification data – and the all important CE mark. All components are supposed to have a four in one safety factor.

Importantly, once made up and completed, the whole assembly should be tested and certified accordingly – it is a lifting chain after all. However, in these days of Whole Vehicle Type Approval (WVTA), manufacturers will argue that their quality assurance and sign-off procedures inspect and test 'the whole' equipment in a holistic way – and therefore the new vehicle complete is fully tested and certified as 'compliant'. A potential grey area? We shall see ... but what is clear is that after the first year in service, testing the chains in-line with the LOLER (Lifting Operations and Lifting Equipment Regulations 1998)



requirements is a given anyway.

Although it might seem obvious, it is a requirement that all four chains are matched – and if a replacement is installed, then that must be identical (and tested) to the same compliance standard as the other chains. Test procedures vary, but the most typical is a strong ground anchor to which one end is attached – and then a hydraulic device, say a boom fitted with a clock or gauge, will be used to lift and test the assembly to meet its required specification and performance. Once completed, a test certificate should be issued and kept as a record throughout the life of the assembly.

Visual inspection of the chains in situ on >

Chains are made up with a range of components and end fitting options



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