

AT THE LIMIT

Companies that supply the building and construction industry are the UK's biggest operators of lorry loader cranes. They also face the hardest challenges operating them safely. Peter Shakespeare reports

Lorry loader cranes are fitted to a flexible commercial vehicle chassis mounted on a suspension system and pneumatic tyres. This intentionally flexible platform is required for the safe handling dynamics of the vehicle while being driven, but the vehicle does not provide a stable platform for safe lifting operation when using the crane; so, lorry loaders are fitted with stabilisers designed to aid the stability of the vehicle's chassis and prevent roll-overs while unloading.

A large proportion of deliveries made by builders' merchants are to residential addresses, and it will not come as a surprise to learn that building supply companies assess that up to 40% of these delivery locations prevent full deployment of stabilisers due to restricted access, other road users and surrounding infrastructure.

"Partial deployment of stabilisers as part of multi-drop deliveries is a real issue," says Martin Caddick, head of transport and outbound logistics for Yeovil-based Bradford's Building Supplies, an operator of some 120 lorry loader crane vehicles from branches around the southwest. "We believe it is about who you use as a crane manufacturer and the relationship you have with them. You need to understand how their equipment is best deployed and then it's about the training you give your drivers." He adds that the Atlas Cranes hydraulic pressure stability system automatically cuts out crane operation when stabiliser legs are not fully deployed.



Since 2010, all new lorry loader cranes had to have vehicle stability incorporated into the function of the loader's rated capacity limiter (RCL). RCLs warn (usually acoustically and visually) of an approach to overload at 90% of rated capacity, with a further (different) warning at 100%. The RCL system should either lock out or reduce the lifting capacity in areas where stabilisers have not been fully deployed or there is reduced stability.

Caddick continues: "Another issue is ground conditions. You need to be especially cautious at domestic properties, because often manholes are covered over on driveways. If you put a leg on one, and you lift a 1.4-tonne block pack, the manhole will give way and the truck is going over. We train our drivers to do a physical inspection of the ground before deploying stabiliser legs, and insist they use the load spreader mats."

INDUSTRY GUIDANCE

Bradford's uses Association of Lorry Loader Manufacturers & Importers (ALLMI) guidance documents to formulate its safe systems of working. This includes its generic lift plans for



multi-drop work. Caddick says that if a driver arrives at a delivery and there is no safe way to unload due to stability issues, the delivery can be aborted with no penalty to the driver.

ALLMI guidance states that partial deployment should only arise where there is insufficient room to fully deploy all stabilisers, points out Keith Silvester, technical manager at ALLMI. Where sufficient room is provided, all stabilisers should be fully deployed at all times to maximise stability of the vehicle. The ALLMI guidance says: "The default position is that all stabilisers must be fully deployed at all times. However, there [are] a limited number of occasions whereby lorry loaders can be operated without the need for full deployment of all stabiliser legs (short rigging), but only if the lorry loader has a stabiliser monitoring device fitted (check for a 2010 or later manufacturer plate on the lorry loader itself, as this is when the device became a legal requirement). Note that some older lorry loaders may have a similar system but, importantly, the manufacturer's handbook and/or report of thorough examination should clearly state what

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is fitted. The other occasion is if the partial deployment of the stabilisers

has been authorised by the Appointed Person who produced the safe system of work or lift plan document."

In the scenario where a driver gets to a delivery point that he or she has never visited before and finds that only short rigging stabiliser deployment is possible, must authority from the 'Appointed Person' be sought every time? Silvester replies: "Lift plans for multi-drop work such as builders' merchants, etc, will typically be a broadly scoped generic document for a 'basic' lift (as defined in BS 7121 Part 1). Site-specific lift plans should be provided for more complex lifts, where additional hazards have been identified in advance.

"Lorry loaders without stability monitoring systems should be fully rigged at all times, unless the Appointed Person has evidence that the theoretical stability of the machine has been calculated for that specific

scenario, and that adequate control measures have been incorporated into the safe system of work to prevent the radius or load weight being exceeded." Given the requirement for stability monitoring devices has been with us for over 12 years, fortunately much of the UK fleet is now fitted with such systems.

"As partial deployment for stability monitoring-fitted vehicles can be included in a generic lift plan for basic lifts, [it] wouldn't require contact with the Appointed Person unless there were some additional hazard identified on site that is not included in the scope of the lift plan. Of course, it is possible that a lack of space for stabiliser deployment could result in the lift becoming unachievable if the stability monitoring system reduces the available rated capacity to less than the weight of the load itself."

EVER-SMARTER

Another approach has been taken by Coomers Timber and Building Supplies, which operates a fleet of eight Hiab-equipped crane vehicles from



three branches and serves customers in East Hampshire and south Surrey. Managing director Grev Coomer says: "We run a mixed fleet of trucks in our business to partly overcome access issues in rural and built-up residential areas. Modern cranes are increasingly smarter and they only allow you to do certain operations. If we can't access a site, we have some larger cranes that can lift over hedges and walls with the vehicle outside the property where the stabilisers can be fully deployed. There are also other judgements the drivers must make, such as leaving the load outside the customer's property.

"If you are unloading just on one side of the vehicle, the leg on that side must be fully deployed, with the other one just down. So there are instances when we have to unload one side, then turn the truck around and do the other. Our drivers are all experienced and trained and we have risk-assessed all the possible elements of the delivery process, including how and when it's safe to unload, which covers all manner of things. The other thing we do is break loads down into smaller lighter lifts if we know there will be access issues, which means we can lift them further into a property. Ultimately, we want to achieve a safe and economic delivery for us and the customer, and we generally don't have many issues, but it requires good planning to achieve this." [TE](#)

BAN CONTROVERSY

In late June, construction contractor Skanska announced that it would ban lorry loaders fitted with hydraulic tilting and hydraulic deployment stabiliser legs which rotate across the position of the fixed controls from all UK sites from 1 August. In reply, Alan Johnson, chairman of ALLMI, has circulated a letter criticising the move. "It remains our view that an industry-wide 'one-speed' approach is much preferable to individual site bans, wholly encompassing the lorry loader sector with the comprehensive dissemination of control measure knowledge," he said. See the extended news article on p8 for more detail.