

Overhead protection

As you will see from our review of Intermat, the number of new access products were scarce. However one area in which the major self-propelled manufacturers were focusing their attention was overhead protection systems or anti-crush devices. This is surprising in that no manufacturer believes that there is a pressing need for such systems on what is, after all, the safest method of working at height. However the pressure from a couple of UK based contractors and the resulting development work of the UK's largest rental companies has made this an issue which cannot be ignored. The fact is that fatalities and injuries caused by inadvertent contact with overhead obstacles such as beams etc do occur, no matter how infrequently.

As a result the three largest manufacturers exhibited protective systems on their stands and it is likely that you will see further developments at Vertical Days in June.

The existing products developed by Lavendon and AFI - the Sky Siren and Sanctuary Zone - were both on display and both took pride of place on the Genie stand. The company is currently reviewing both systems, having approved their installation on its boom lifts. Alongside these two systems Genie exhibited a prototype of its own solution, a mechanical guard system over the



The Genie OPS guard can be easily retrofitted and removed when it is in the way

Genie's OPS guard is connected in four places with U-Bolts



operator's station. The Genie OPS or Operators Protective Structure weighs 17kg and can be bolted to a standard platform so no modifications to the machine are required. It can also be easily removed when necessary and should be relatively inexpensive. The structure, which runs from the top guardrail on either side of the controls to the mid-rail, does protrude into the platform, but actually only consumes a small volume of overall space.



Lavendon's SkySiren system is neat and said to fit most boom lifts



AFI's Sanctuary Zone

Scott Krieger, senior product manager for booms and telehandlers said: "We are aware of incidents where operators made contact with overhead obstacles while operating aerials. Ultimately, the operator in conjunction with the worksite supervisor is responsible for identifying and avoiding overhead obstacles. But as a secondary measure, we are working both independently and with various partners to provide protective solutions for a variety of worksite conditions."

JLG goes further

JLG has taken the concept the SkySiren concept a step further, with its Sky Guard which is likely to be an option on all of its booms and could be available for retrofit to booms dating back to 2009. The heart of the Sky Guard concept is a pressure switch roughly 500 to 600 mm long, mounted to a short bar above the control panel, the switch's rubberised moulding is

U-shaped and can be activated by any substantial contact - no matter the direction - with a pressure of around 23kg.

AFI's Sanctuary Zone on the Genie stand at Intermat



JLG's Sky Guard incorporates an emergency function reversal



If struck suddenly, say by a blow with a tool or bar the machine simply stops immediately, the unit is reset by the operator simply lifting his foot from the dead-man pedal. However if the pressure is sustained for a second or more, the function that caused the pressure is immediately and quickly reversed while a loud alarm sounds. A flashing blue light is also available. Once again the machine can be reset by the operator simply removing his foot from the foot switch. A manual override of this and the control lock-out is also fitted to allow the operator to rescue himself, while the lower controls will still override all upper control functions, allowing a ground crew to effect a rescue.

The switch is mounted on special plastic shear mountings and in the case of a severe shock load, such as when the platform is moved rapidly upwards due to the wheels at one end of the chassis dropping into a depression, the switch bar will both activate and collapse along the same lines as a crumple zone of a car - in order to provide more space for the operator and hopefully avoid serious injury.

Vertical publisher Leigh Sparrow gave the unit a thorough testing at the show and gave the following review: "I was very impressed. Clearly much of what it does is similar to Niftylift's SiOPs system which is neatly built into its larger machines however the immediate reverse function adds a new dimension. JLG was keen to stress, that this was a prototype that it is seeking feedback on and that it sees this as an additional aid for

The rubber switch can be activated by pressure from any direction



contractors who feel that a specific job it is working on requires additional measures. The system does project a little into the platform area and its height might be an issue for shorter operators like myself although that is subject to change. The system is also more elaborate and likely to be more costly and does need to be wired into the machines electrics."

Haulotte exhibited its version of the AFI Sanctuary Zone on its stand. It has given the subject some in-depth consideration and is likely to approve both the SkySiren and Sanctuary Zone for its machines, while observing how the market develops. Skyjack is also likely to follow this strategy which is not a bad policy at this time.



Niftylift's SiOPs system is built into its larger boom lifts



Haulotte's version of AFI's Sanctuary Zone

So which is the best?

As you may have guessed you will not get a definitive answer to this from us. The fact is they all work - to greater or lesser degrees and they are not an essential piece of equipment. So you 'pays your money and you makes your choice...' The most sophisticated is unquestionably JLG's SkyGuard, the least intrusive - Niftylifts SiOPs and to a slightly lesser extent the SkySiren. Genie's OPS or AFI's Sanctuary Zone are the simplest and also likely to work with the additional benefit of providing some protection against whiplash-type sudden contact with an overhead obstacle.

The next challenge for rental companies is when to offer or fit them? Imagine appearing in front of an inquest and being asked "was there something that could have avoided this man's death?" and "So why wasn't this machine equipped with that system?" Obviously if you buy a larger Niftylift boom it comes as standard, but this is unlikely to be the case with any other manufacturer, at least at this stage. So the decision of when to fit is likely to rest with the rental company.

A final word

We believe that this development has been driven from the wrong

direction. It has come about from one or two safety officers employed by large contractors, dwelling on two specific, but different fatal overhead crushing incidents. They were tragic, of that there is no question, but then so are most fatal road accidents. If any time an operator/driver made an error that resulted in a fatality we changed the machine, no matter how infrequently such incidents occurred we are likely to end up with products that are impractical and drive users back to less safe methods of access.

Having said this, devices that many might initially consider unnecessary can become something we depend on. Clearly car seat belts are an extreme case of this, but what about reversing alarms on cars? They are gradually becoming a standard feature. A good driver shouldn't need them, and they are not essential for all types of driving. However when parking or manoeuvring in tight spaces they are quite helpful. Perhaps rather than all these impact switches and roll-bars we need something similar for platforms that warns operators as they approach an obstacle rather than using the operator as medium between the obstacle and a safety switch?

In an online poll on www.Vertikal.Net in April we asked if anti-crush devices on boom lifts should be standard, optional or are not required. As we go to press a total of 296 people have voted, with 39.5 percent in favour of making them available as an option, 31.4 percent want them as standard and 29.1 percent feel that they are unnecessary. The poll is open for another week or two.



Height may be an issue - although this looks high for our publisher, it worked perfectly