

**INCIDENT TYPE:**

RIDDOR MAJOR INJURY WHEN “BUCKET” FROM A TRACKED 360° EXCAVATOR BECAME DETACHED FROM ITS “HITCH”



**What happened**

An operative under the employ of GMJV suffered serious crushing injuries to his leg as a result of a “bucket” from a tracked 360 degree excavator becoming detached from its “hitch” and falling into the excavation in which the operative was working.

**What was the cause**

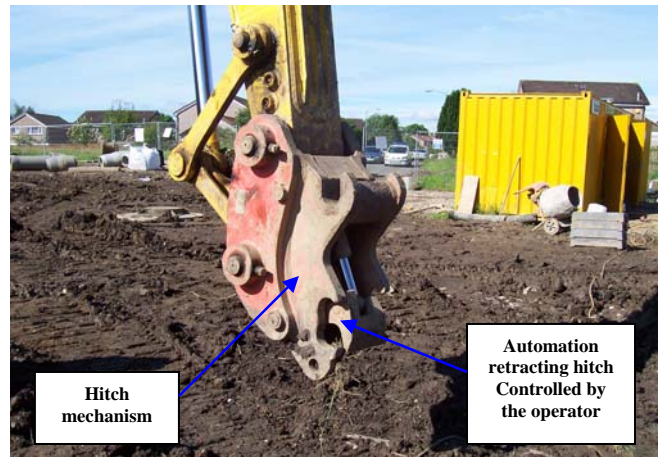
At the time of the accident, the IP had been working within the excavation intending to set up a submersible pump.

The operator of the “360 excavator” having been requested to form a sump hole, required to swap the attached “ditching” bucket for a smaller sized bucket attachment.

The swapping over of these buckets was a straight forward process and one which had been undertaken by the operator many times previous. In this instance the operator disengaged the toothed bucket by activating the automatic hitch. This opened up the locking mechanism and released the bucket. To pick up the other bucket the driver placed the end of the hitch onto the bucket and retracted the hitch. This process is normally followed up by a visual check by the operator to ensure that the automatic hitch has locked onto the bucket. The visual check requires the operator to tilt the bucket towards his cabin from where he can see whether the hitch has successfully engaged or not.

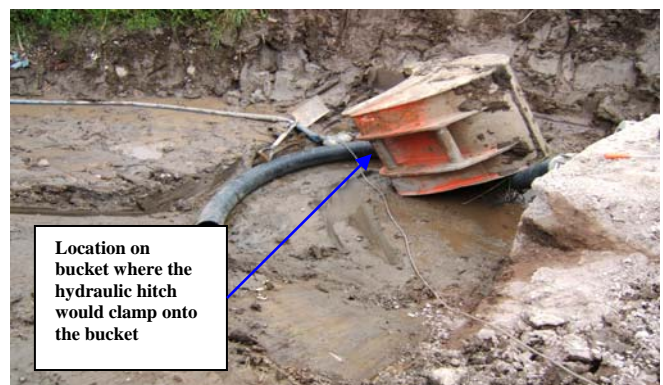
Unfortunately, the operator failed to undertake this visual check and consequently failed to notice that, in this instance, the “bucket” had not been locked in position by the hitch. At this point the bucket remained firm under its own weight and therefore did not give any visual indication that it was not secured. Similarly, when the operator rotated his machine through 180 degrees (causing the bucket to hang over the excavation) it did not give any indication that the bucket was loose.

It wasn't until the operator extended the arm of the excavator that the bucket began to swing and eventually fall off its hitching point. As it did so, the bucket slid down into the excavation striking the IP on the leg.



Hitch mechanism

Automation retracting hitch Controlled by the operator



Location on bucket where the hydraulic hitch would clamp onto the bucket

The route cause of this accident was operator error. By undertaking the visual check the operator could have easily noticed that the “bucket” had not been engaged properly and consequently the accident avoided. The operator was subsequently subject to internal disciplinary procedures.

Magnor Plant (owners of the excavator) and Komatsu (excavator manufacturer) both inspected the excavator and confirmed that it was fit for purpose.

**All plant operators throughout the USCO have been briefed on the incident and re-briefed on the precautions to take when replacing “buckets”.**