

REMOVING CFA AUGER SECTIONS



Overview

A recent incident occurred on a BSL site which resulted in the Kelly bar of a CFA auger string becoming disengaged from the rotary. The rotary and string of augers were high up the mast at the time of the incident.

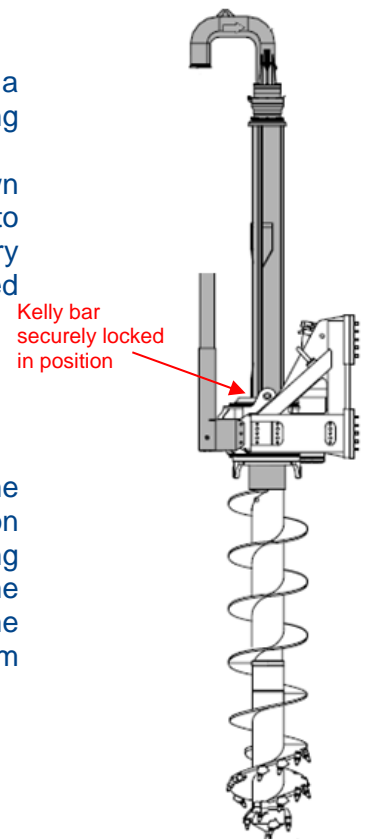
As a result of the disengagement, the auger string and Kelly bar came down and hit the top of the rotary. This caused the end flange of the Kelly bar to shear off. The Kelly bar then continued to travel through and out of the rotary until the bottom section of auger came into contact with the ground and buried itself a short distance, leaving the Kelly bar and auger string unsupported.

Pre Incident Actions

Prior to the incident a 6 metre section of auger had been disconnected and the remaining string lifted clear by raising the rotary so the disconnected section could be lifted away by the service crane. It is evident that at some point during the disconnection exercise the Kelly bar had become disengaged from the rotary drive locks. Shortly after the 6 metre section had been lifted away, the Kelly bar and the remaining attached auger string began to fall. The bottom section of auger buried itself into the ground preventing it from falling over.

What Happened Next

The rotary was brought down to rest on top of the Kelly bar to secure the auger string until the service crane could be attached to remove it safely. The drilling rig was inspected for any damage, which included the mast head and rope sheaves. A new rope was ordered due to the shock load that had been applied to it. The rotary was returned to the workshops for a thorough internal inspection. The damaged Kelly bar and flange were also returned to the workshops for inspection and assessment for repair.



Auger Removal Guidelines

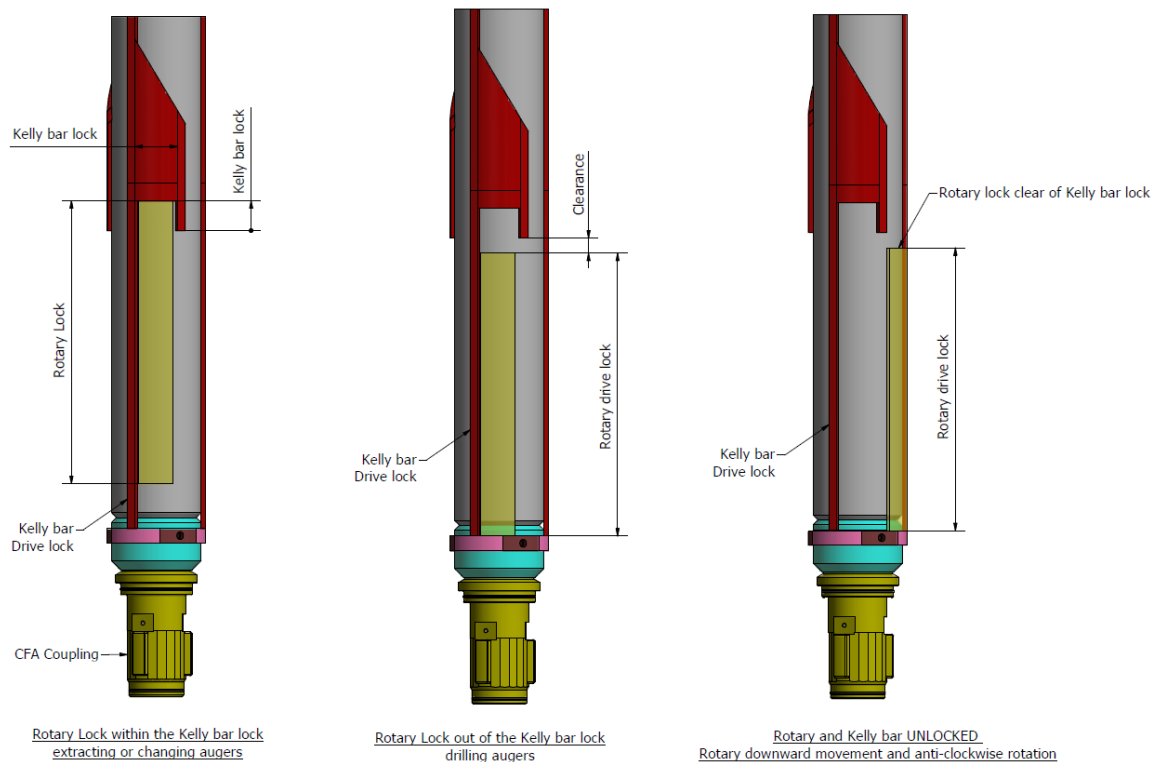
! **IMPORTANT** follow the correct procedure to prevent any future similar incidents from happening.

The rotary locks must be securely positioned within the Kelly bar locks before any auger sections are disconnected or removed (refer to schematic).

There are currently two types of CFA coupling fitted to augers used by BSL in the UK, Btype and Hex. Btype couplings are connected together with three blocks and retaining bolts, all of which need to be removed before the couplings can be separated.

Hex couplings are connected together with two securing pins (smaller hex couplings securing pins have securing clips to hold them in position).

To access the blocks or securing pins the rotary is to be rotated clockwise to ensure engagement of the rotary locks within the Kelly bar locks is maintained.



! **WARNING** if the banksman signals to the rig operator to rotate the rotary anticlockwise while removing the augers, the rig operator must be satisfied that the rotary locks are within the Kelly bar locks (refer to schematic). Failure to avoid this hazard could result in damage to equipment, serious injury or death.

! **IMPORTANT** The condition of both the CFA Kelly bar (Drive bars, locks, coupling and top flange) and the rotary locks should be inspected for signs of wear or damage on a weekly basis (see PL65 cover sheet) as a minimum or more frequently dependent on use and site conditions etc. Any wear or damage must be reported and recorded as any other piece of equipment. Where any advice or clarification is needed, the Plant Department **MUST** be consulted. Under no circumstances should this assembly be repaired or modified without instruction from the Plant Department.