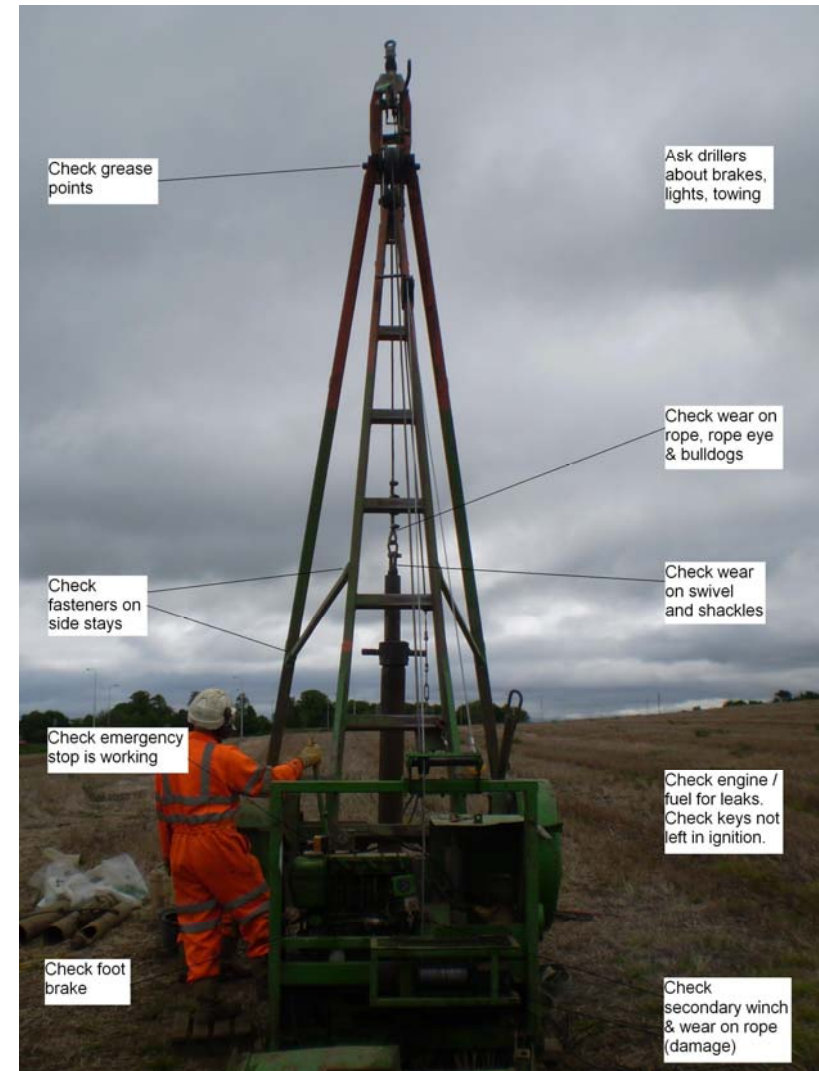


# Cable Percussion Rig Set-up Checklist

**The items below should be checked by the Site Supervisor and discussed with drillers before work starts.**

Check LOLER certificates for rig and rope	
Check for overhead obstructions before moving onto location.	
Specify what (if any) protection is required to exclude third parties from the work site.	
Issue permission to dig. The borehole location should be checked for buried services using a CAT & Genny in conjunction with utility drawings and visual signs for covers etc.	
Confirm need for an inspection pit dug with care with hand tools.	
Remind drillers of the need for:	
<ul style="list-style-type: none"> <li>• rig to be level and stable. Timber chocks must be robust. Care taken to avoid cross sloping ground</li> <li>• side stays to be secured with locking pins</li> <li>• front leg lower cross bar to be in place</li> <li>• guards to be in place to the winch drum, clutch &amp; brake assembly. Rope jump bar to crown sheave.</li> <li>• The winch rope to be in good condition – free from kinks and loose strands.</li> <li>• Driller to seek permission before climbing the rig</li> </ul>	
Mandatory PPE - hard hat, gloves, coverall, safety footwear, ear defenders, (eye protection to be readily available). Harness (for climbing rig).	
Re-fuelling – is a spill kit readily available?	
Trip Hammer (SPT) – check both pawls in working order.	
Manual Handling – minimise the need. Two-man lifts wherever possible	
Engine fumes – ensure being deflected away from personnel.	



# GUIDANCE

## RIG GUARDING

Rotating parts of the rig must be guarded to prevent entanglement. Particular areas of concern on a CP rig are the winch drum, chain and sprocket, clutch assembly, crank spindle (in the case of hand cranked rigs) and capstan wheel (for SPT hammer operation). The photographs below show an unprotected winch and one which is correctly guarded.



## ERECTING AND LOWERING THE RIG

At no time should anybody stand on the rear of the rig to act as a counterbalance. Casing or similar heavy components securely placed at the rear of the engine frame is best practice.

Keep area clear of other persons when the rig is being erected or lowered. Many modern rigs are fitted with a separate battery operated winch which enables better control when being raised and lowered and more accurate location over the borehole position.



When erecting and lowering the rig using the main winch wire rope, the cable must go through the 'A' frame to the Samson post and not around the side. This prevents twisting of the rig which could cause overturning. The photo on the left shows the winch wire threaded incorrectly.

A rig is most at danger of toppling when in the process of being raised and lowered. It is essential therefore that the whole operation is carried out on a sound level base. Beware setting up on side slopes. If this is inevitable a combination of digging out and timber packing should be made.

On soft ground the feet and the frame of the rig must be set on timber to spread the load and prevent collapse. **Photo 1** shows a rig that has overturned as a result of setting up on soft ground with inadequate timbering. This could have resulted in serious injury.

**Photo 2** shows acceptable packing. However makeshift securing pins should not be allowed.

**Photo 3** shows the front legs set too vertical placing the rig in danger of toppling forwards.

Side stays and a lower cross bar must always be used.

**Photo 4** shows a rig with no lower cross bar fitted placing the legs at risk of spreading sideways under load especially when withdrawing casing.

## SLIPS, TRIPS AND STRAINED MUSCLES

The drilling area should be tidy with special attention paid to eliminating trip hazards.

The work area should be cleared of debris, brambles and the like before work commences. During drilling the casing, SPT hammers, rods etc. should be kept clear to avoid trips. Do not store casing on end as this is prone to toppling over.

SPT hammers are notorious for causing injuries especially trapped fingers if the pawls are allowed to seize. Equally this is the heaviest of all drilling accessories and is a careful two man lift whenever the winch cannot be used.

Whilst it is tempting to use plastic sheeting around the borehole to aid clean up, this creates a severe slip hazard. Alternative non-slip coverings such as "Mayo mats" should be used.

The work area should be kept clear of arisings and drilling equipment to prevent slips and trips.

Finally, on completion of work, protect an installation from damage.

1



2



3



4

