

## Appendix C - VESI HV Live Work Crane Operator – Instructed Persons Checklist

This checklist is to enable the Person in Charge of the HV Live work to instruct a Crane Operator in the requirements of operating plant in conjunction with a HV live work team. The Crane Operator shall be under the direct and immediate supervision of a nominated HV Live Worker at all times.

If the Requirements are not met then work shall not proceed until the appropriate requirement/s is in place.

The instructed Crane Operator shall work to clearances (Exclusion Zone) as described in Table 1 which meets the requirements in the *Minimum Rules for carrying out High Voltage Live Work Section 10.4 HV Live Work Minimum Approach Distances*.

This checklist does not apply to a trained HV Live Worker who operates a Pole Erection Recovery Unit (PERU), however it may be used as a reference, as it provides key safety information for the Crane Operator and the HV Live Work Team.

### COMPANY DETAILS

Crane Company	
Operator Name / Phone No.	
Company Contact Phone No.	

Item	Requirement	Yes, No
Crane Service provider details	Crane has current inspection records/certificates	
	Crane operator has applicable High Risk Licence	
	Crane has load measuring device (with alarm preferred).	
Communication	Nominated HV Live Worker, Safety Observer and Rigger/Dogman are identified to the crane operator.	
	Reliable and effective means of communication is established between the crane operator, nominated HV Live Worker and the Safety Observer.	
Operational information	Voltage level and exclusion zone distances in Table 1 explained to crane operator.	
	Confirm that all lifting equipment including <b>all insulated</b> equipment is tested and within test date.	
	Explain the effects on clearances from possible conductor movements such as conductor swing from wind loading, increase or decrease of sag from electrical loading or temperature changes.	
	Discuss how when lifting conductors, small movements can cause large increases in loadings on the conductor and adjacent structures. It is to be emphasised that conductors should only be moved to gain sufficient safe working clearances. Avoid the increase in conductor tension and vertical loading to avoid placing undue strain on conductors and support points.	
	Explain that the conductor height and loading (weight) has been determined and the conductor weights are to be monitored by the crane operator so determined loads are not exceeded (set alarm if available, operator to stop the lift if load is reached).	
	Has the crane been earthed or bonded to a permanent earth or temporary driven earth electrode as per section 8.17 VESI Minimum rules. Note: Lowering of an earth chain is not an adequate means of earthing when undertaking HV Live Work.	
Emergency preparedness.	Explain the hazards of step and touch potential to Crane Operator. Crane Operator is to be made aware that in the event of the crane coming inside the exclusion zone or making contact with conductors that they are <b>not</b> to exit the crane unless instructed or in an emergency. If it is necessary to leave the crane, turn off vehicle where it is safe to do so, assess the site and jump well clear keeping legs together at all times and avoid making simultaneous contact with the crane and ground. <b>DO NOT STEP OFF</b> , Hop away keeping both legs together or shuffle away for a distance of 10 metres from crane. <b>DO NOT WALK</b> .	
	Keep at least 10 metres clear of any grounded power lines and from the vehicle.	
Crane Operation	When operating near the exclusion zone, crane movements are to be kept to a minimum. The crane is to be operated in a slow and controlled manner.	
Risk Assessment	Crane Operator is to be inducted into and signed on to the Job Safety Assessment (JSA)	

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## Exclusion Zones for a Crane Operator under the Instruction of a HV Live Work Glove and Barrier / Stick Worker.

**TABLE 1**

Voltage Level	Clearances		
	A Non-insulated Mobile Plant to an Uncovered Conductor	B Non-insulated Mobile Plant to a Covered Conductor	C Minimum Insulation Distance
22kV	700mm	400mm	700mm
66kV	900mm	600mm	900mm

The clearances in table 1 are from the crane and must be maintained at all times.

### Insulation Requirements

The insulation medium can be singular or multiple to create the minimum distance.

**Diagram 1** - An insulating medium with a Minimum Insulation Distance

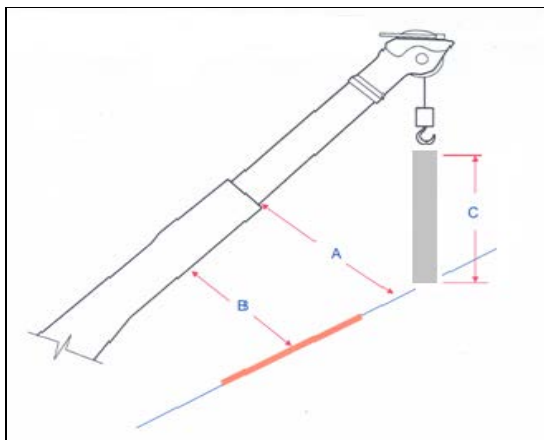
Table 1 (Clearance "C") shall be placed between the crane hook and the live conductors.

**Diagram 2** - An insulation medium with a Minimum Insulation Distance

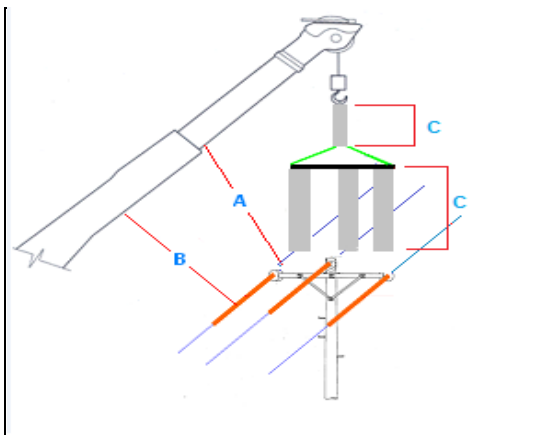
Table 1 (Clearance "C") shall be placed between;

1. the crane hook and the lifting beam, and
2. the lifting beam and the live conductors

### Exclusion Zone Diagrams



**Diagram 1**



**Diagram 2**

<b>Work Location</b>			
	<b>Print Name</b>	<b>Sign</b>	
<b>Person in Charge</b>			
<b>Crane Operator</b>			
<b>Nominated Person</b>			
<b>Date</b>	<b>Issue Time</b>	<b>Cancellation Time</b>	<b>Application Number</b>