



## 1 SCOPE

This section of the Power Systems Live Working Manual lists those tools and items of equipment that are **Approved** for use in connection with **HV Rubber Glove Working** as defined in PSLWM 5.3 in order to achieve **Safety from the System** and compliance with ScottishPower Electrical & Mechanical Safety Rules 4th Edition Specialised Procedure SP4.

## 2 ISSUE RECORD

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## 3 ISSUE AUTHORITY

Author	Owner	Issue Authority
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## 5 DEFINITIONS

- 5.1 Terms printed in bold type are as defined in the ScottishPower Safety Rules Electrical and Mechanical 4th Edition.
- 5.2 For the purposes of this section of the PSLWM, the following additional definition applies:-

### ***HV Rubber Glove Working***

The carrying out of work including the application and removal of **Approved** protective equipment, on **Live High Voltage** overhead lines from an **Approved** Insulated Aerial Device (IAD) while wearing **Approved** protective rubber gloves and sleeves.

## 6 PROCEDURE FOR OBTAINING APPROVAL

- 6.1 Tools and items of equipment for use in connection with ***HV Rubber Glove Working*** shall be Approved by the Engineering Services Manager.
- 6.2 Those tools and items of equipment that are **Approved** shall be listed as an appendix to this section of the PSLWM.

## 7 APPENDICES

Appendix 1 – Approved Tools and Equipment



**LIVE WORKING MANUAL**  
**APPROVED EQUIPMENT FOR HV RUBBER GLOVE WORKING**

**APPENDIX 1 - APPROVED TOOLS AND EQUIPMENT**

Item of Equipment	Specification and Approved Use	Approved Manufacturer/Supplier	Pre-Job Checks/Actions	Routine Tests
1 Insulated Aerial Device	IAD T3036 to ANSI A92.2 and BSEN 61057. Used to gain access to work location for overhead lines up to 33kV. For access to apparatus	Simon Access, Gloucester Amador, Larbert Versalift, Wellingborough	<ul style="list-style-type: none"> <li>➤ Earth aerial device, wipe down boom</li> <li>➤ Test holding valves via ground controls</li> <li>➤ Test aerial device via bucket controls</li> </ul>	Every 12 months AC/DC dielectric tests to 46kV
2 IAD Bucket Liner	ANSI 92.2  Used to line bucket and provide additional protection	Simon Access, Gloucester Amador, Larbert Versalift, Wellingborough	<ul style="list-style-type: none"> <li>➤ Inspect for damage</li> <li>➤ Verify test label date not expired</li> </ul>	Every 12 months
3 Rubber Gloves	Conforms to ASTM/ANSI DI20 Type 1 Class 2. Used to provide linesmen with electrical protection from live lines up to 11kV	W H Salisbury & Co. Horizon Utility Supplies	<ul style="list-style-type: none"> <li>➤ Check:- correct ASTM marking; valid test date; correct class</li> <li>➤ Check visually for defects</li> <li>➤ Check for leaks, tears, by air testing</li> </ul>	Every 3 months AC dielectric test to 20kV



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Item of Equipment	Specification and Approved Use	Approved Manufacturer/Supplier	Pre-Job Checks/Actions	Routine Tests
4 Rubber Sleeves	Conforms to ASTM/ANSI D 1051 Curved Arm Type 1 Class 2 Used to provide linesmens arms and shoulders with electrical protection from live lines up to 11kV	W H Salisbury & Co.  Horizon Utility Supplies	<ul style="list-style-type: none"> <li>➤ Check:- correct ASTM marking, valid test date, correct class</li> <li>➤ Check visually for defects</li> </ul>	Every 3 months A.C. dielectric test to 20kV
5 Rubber Line Hose/Cover-Up	Conforms to ASTM D1050 Type III Class 2. Used to prevent contact between linesmen and live 11kV conductors	W H Salisbury & Co.  Horizon Utility Supplies	<ul style="list-style-type: none"> <li>➤ Check:- correct ASTM working, valid test date, correct class</li> <li>➤ Check visually for defects</li> </ul>	Every 12 months AC dielectric test to 20kV
6 Insulator Hoods	Conforms to ASTM D1049 Type II Class 3. Used to shroud pin insulators on lines up to 11kV	W H Salisbury & Co.  Horizon Utility Supplies	<ul style="list-style-type: none"> <li>➤ Check:- correct ASTM marking; valid test date; correct class</li> <li>➤ Check visually for defects</li> </ul>	Every 12 months AC dielectric test to 20kV
7 Rubber Insulating Blankets (Straight and Split)	Conform to ASTM D1049 Class 4. Used to shroud steelwork, stay wires, poles etc. on lines up to 33kV	W H Salisbury & Co.  Horizon Utility Supplies	<ul style="list-style-type: none"> <li>➤ Check:- ASTM marking; valid test date; correct class</li> <li>➤ Check visually for defects</li> </ul>	Every 12 months AC dielectric test to 20kV



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Item of Equipment	Specification and Approved Use	Approved Manufacturer/Supplier	Pre-Job Checks/Actions	Routine Tests
8 Rubber Glove Protectors	Conforms to ASTM Standard. Used to protect rubber gloves against mechanical damage	W H Salisbury & Co. Horizon Utility Supplies	<ul style="list-style-type: none"> <li>➤ Check for presence of wood or metal splinters</li> <li>➤ Check for defects</li> </ul>	Replace as required
9 Temporary Conductor Supports		A. B. Chance	<ul style="list-style-type: none"> <li>➤ Check visually for damage</li> </ul>	Every 6 months as PSLWM 5.2
9.1 Crossarm Mounted	Used to support unbound conductors during work	A. B. Chance	<ul style="list-style-type: none"> <li>➤ Check visually for damage</li> </ul>	Every 6 months as PSLWM 5.2
9.2 Pole-mounted	Used to support unbound conductors when crossarm is removed	A. B. Chance	<ul style="list-style-type: none"> <li>➤ Check visually for damage</li> </ul>	Every 6 months as PSLWM 5.2
10 Auxiliary Cross-arm	Used to support conductors during insulator, crossarm or pole change	A. B. Chance	<ul style="list-style-type: none"> <li>➤ Check visually for damage</li> </ul>	Every 6 months as PSLWM 5.2
11 Insulated Pole Platform (I.P.P.)	Used when work location is inaccessible to IAD vehicle	A. B. Chance	<ul style="list-style-type: none"> <li>➤ Check visually for damage</li> </ul>	Every 6 months as PSLWM 5.2



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Item of Equipment	Specification and Approved Use	Approved Manufacturer/Supplier	Pre-Job Checks/Actions	Routine Tests
12 Bypass Jumpers	ASTMB189 or B33 – Used to bridge gaps in conductors during making/breaking procedures	A.B. Chance		
13 “Break Safe” Make and break switch	Permits fast switching to avoid ferroresonance	Utility Solutions Inc. Horizon Utility Supplies	➤ Visual check for damage to tool and burning of contacts. Check tool is locked in open position prior to use.	Examine closely every 6 months or 500 operations
14 Hot Stick Tools	ASTM F711 Hot Sticks and tools <b>Approved</b> for use from Insulated Aerial Device	A.B. Chance	➤ Wipe down before use	Every 6 months as PSLWM 5.2
14.1 4ft Grip-All Sticks (Shotguns)		A.B. Chance	➤ Wipe down before use	6 months
14.2 6ft Cutters		A.B. Chance	➤ Wipe down before use	6 months
14.3 3ft Hand Cutter		A.B. Chance	➤ Wipe down before use	6 months
14.4 6ft Holding Sticks		A.B. Chance	➤ Wipe down before use	6 months



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Item of Equipment	Specification and Approved Use	Approved Manufacturer/Supplier	Pre-Job Checks/Actions	Routine Tests
14.5 21" Link Sticks		A.B. Chance	➤ Wipe down before use	6 months
14.6 5ft Aux Mast		A.B. Chance	➤ Wipe down before use	6 months
14.7 8ft Aux Mast		A.B. Chance	➤ Wipe down before use	6 months
14.8 18" Parking Bars		A.B. Chance	➤ Wipe down before use	6 months
14.9 Live Line Clamps (Duckbill Type)		A.B. Chance	➤ Wipe down before use	6 months
14.10 Nylon Strap Hoist (Liveline Pull-Lifts)		A.B. Chance	➤ Wipe down before use	6 months
14.11 2.5" Extension Saddles		A.B. Chance	➤ Wipe down before use	6 months
14.12 Load Make/Break Tool		A.B. Chance	➤ Wipe down before use	6 months



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Item of Equipment	Specification and Approved Use	Approved Manufacturer/Supplier	Pre-Job Checks/Actions	Routine Tests
14.13 4ft Roller Link Sticks		A.B. Chance	➤ Wipe down before use	6 months
14.14 6 x Chicago Grips (Cum-a-Longs)		A.B. Chance	➤ Wipe down before use	6 months
15 Hydraulic Tools				
15.1 CSOS Hydraulic Chainsaw 2000 PSI	EN292 1 & 2 Design EN1050 Risk Assessment 79/113/EEC Noise Emissions of Construction Plant and Equipment 89/392/EEC 91/368/EEC Used to fell and limb overhead wooden poles and adjacent trees	Stanley Sunderland	➤ Check visually for damage	
15.2 CT10 Hydraulic Crimping Tool 2000 PSI	As Above. Used to compress fittings on electrical conductors`	Stanley Sunderland	➤ Check visually for damage	
15.3 RV06 Rocker Valve 10000 PSI	Adaptor fitting at 10000 PSI intensifier which changes from feed and return hoses to feed only	Stanley Sunderland	➤ Check visually for damage	





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Item of Equipment	Specification and Approved Use	Approved Manufacturer/Supplier	Pre-Job Checks/Actions	Routine Tests
15.4 IW09 Hydraulic Impact Wrench	Gun used to remove and tighten bolts and to drill wood	Stanley Sunderland	➤ Check visually for damage	
15.5 Socket Sets for Impact Wrench	Accessories for impact wrench to remove and tighten bolts	Stanley Sunderland	➤ Check visually for damage	
15.6 Wood Drill Bits for Impact Wrench	Accessories for impact wrench to drill wood	Stanley Sunderland	➤ Check visually for damage	
15.7 RH50 Crimping Tool with Male Screw Fitting 10000 PSI	Compression tool for use with the rocker valve with feed only fitting	Cembre	➤ Check visually for damage	
15.8 Hydraulic Tree Pruner with Insulated Handle 2000 PSI	8ft insulated handle with pruner for tree limbing	Stanley Sunderland	➤ Check visually for damage	
16 15m Rescue Kit LECSAFE	Used to enable escape from IAD bucket if lowering mechanism fails	LECSAFE	➤ Check visually for damage	
17 Capstan Hoist	Used for lifting equipment	A.B.Chance CBS	➤ Check visually for damage	6 months
18 Clip-on ammeter	Sensor Link / Ampstik model 8-006. Used for measuring load current prior to breaking connections.	SLC Corporation. Horizon Utility Supplies.	➤ Check visually for damage	