





TITLE	Cable Spiking Gun		
DEVELOPED BY		DATE	
APPROVED BY		DATE	
			SOP Risk Rating After Controls
			M
SOP DESCRIPTION	To provide safe instruction on the use of the Acvoke Cable Spiker for underground cables.		
SPECIAL NOTES	<p>HV cables (other than pressurized cables) shall be spiked, using industry procedure, before the cable is cut or opened. Operation & Maintenance video found here - https://youtu.be/eYurvoauPBQ</p> <p>Where there is doubt as to whether the cable is HV or LV, the cable shall be spiked (unless pressurized).</p>		

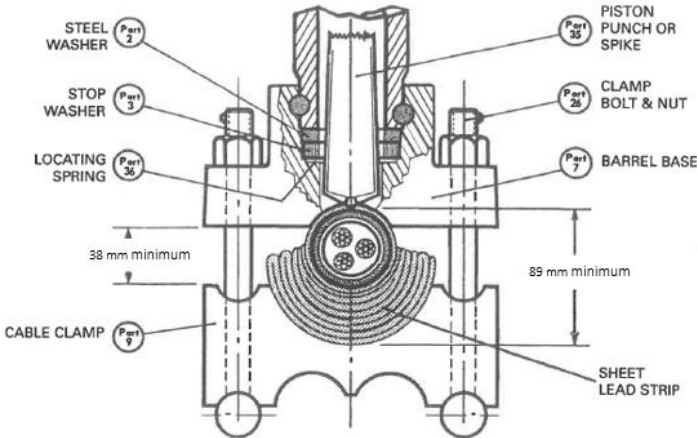
TASK SPECIFIC PPE REQUIRED

Gloves	Hearing		
 HAND PROTECTION MUST BE WORN	 HEARING PROTECTION MUST BE WORN		

MANDATORY PPE REQUIRED

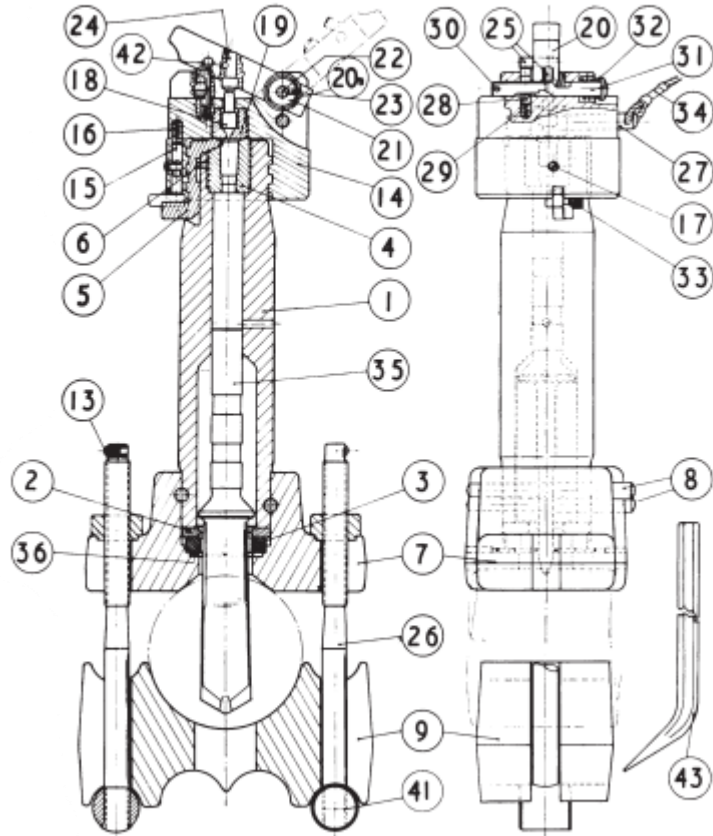
Clothing	Glasses	Boots	Hard Hat
 PROTECTIVE CLOTHING MUST BE WORN	 EYE PROTECTION MUST BE WORN	 FOOT PROTECTION MUST BE WORN	 HEAD PROTECTION MUST BE WORN

SPECIAL TOOLS & EQUIPMENT - Ensure that persons are competent to use the special tools or equipment – ensure pre-start checks are carried out

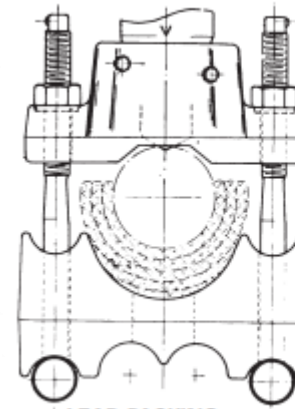
	Sequence of Job Steps (What to do in the right order)	Potential Hazards / Risks	Controls	Standard Operating Procedure (How to do it)	Risk Rating After Controls
PRE-OPERATIONAL SAFETY CHECKS	1. Prepare for task.	People Interaction Arc Flash Damaged Equipment	Barricading / Exclusion Zone Signage Fire Extinguisher PPE Remove defective equipment from service and replace.	<ul style="list-style-type: none"> Carry out a Risk Assessment of task to be undertaken. Undertake any isolation switching prior to setting up Cable Spiker. Log onto Work Authority or Access Permit. Check over Cable Spiker for damage. Identify cable to be spiked as per EEA guides and SM-EI publications. 	M
	2. Check Equipment	Damaged Equipment	Remove defective equipment from service and replace.	<ul style="list-style-type: none"> Check all components of the spiking tool. Make sure tool is clean. Inspect breech cap, hammer, hammer spring and safety catch operation. Inspect barrel, cable clamp and clamp bolts. 	L
	3. Attach Cable Spiker to cable.	Damaged Equipment Release of energy	Remove defective equipment from service and replace.	<ul style="list-style-type: none"> Clamp tool securely to cable.  <ul style="list-style-type: none"> Pack cable clamp (9) with lead sheets on smaller cables to ensure the minimum distances as shown above are met. 	L

	Sequence of Job Steps (What to do in the right order)	Potential Hazards / Risks	Controls	Standard Operating Procedure (How to do it)	Risk Rating After Controls
				<ul style="list-style-type: none"> Tighten clamp bolt nuts (26) evenly so that cable clamp (9 and 46) remains parallel to barrel base (7). Cable clamps are reversible to accommodate varying types of cables. 	
WHEN OPERATING	1. Prepare the tool for firing.	Public Interaction	Barricading / Exclusion Zone Signage	<ul style="list-style-type: none"> Press up the breech cap latch (15), unscrew and remove breech cap (14). Select cartridge and insert into breech block (4). Screw breech cap (14) back into place seeing breech cap latch (15) trips past the extractor (5) and drops alongside stop screw (33). Lay out lanyard (34) to its full length of approx. 10m to give a straight pull on hammer release pin (27). In confined spaces, a crowbar or other 'corner' around which lanyard is pulled, may be desirable. Pull hammer back (20), insert hammer release pin (27) sufficiently far enough to retain hammer in cocked position. Ascertain that all personal are out of the danger area. Operator may then press safety catch (31) button painted RED so that it locks into position. 	L
	2. Firing Tool			<ul style="list-style-type: none"> Operator to give out a warning to warn others about to fire. Operator fires tool by sharp pull on lanyard. <p>NOTE: <i>If Cable Spiker fails to fire, then follow misfire procedure in step 3.</i></p> <ul style="list-style-type: none"> Unscrew breech cap (14), lift extractor (5) and remove spent cartridge. It is advisable to lift extractor after unscrewing breech cap (14) one turn only to release any trapped gases (which may forcibly eject the cartridge case into operator) Remove cable clamp (9). 	M

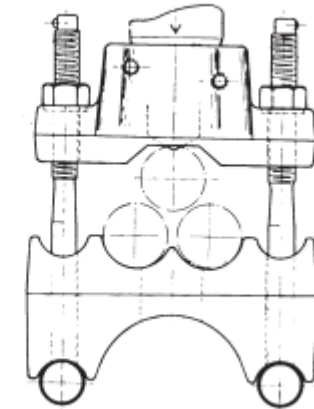
	Sequence of Job Steps (What to do in the right order)	Potential Hazards / Risks	Controls	Standard Operating Procedure (How to do it)	Risk Rating After Controls
				<ul style="list-style-type: none"> Remove barrel, barrel base and piston punch (35) as one unit using lever between barrel base and cable to lift as necessary. 	
	3. Tool Misfires	Weak hammer spring Hammer tight on bush. Eroded firing pin	Remove from service and return to agent for repairs and replacement of parts.	<p>If the cartridge fails to fire instantaneously when struck by the firing pin, it is unlikely that a delayed explosion will occur.</p> <p>However, if tool does not fire:</p> <ul style="list-style-type: none"> Do not touch anything, Wait 3 minutes, Ensure that safety catch is in the 'safe' position, Ease breech cap one full turn only and lift extractor to free cartridge rim from camber, Completely remove breech cap and lift out cartridge by hand. <p>Check the firing mechanism of the Cable Spiker.</p> <p>Repeat the 'Prepare the tool for firing' & 'Firing tool' steps and if tool fails to fire again, remove from service and return to agent for repairs.</p>	M



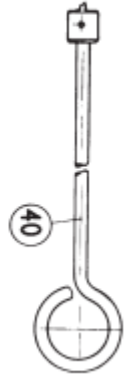
Part No.	DESCRIPTION	Off
1	Barrel	1
2	Barrel Base Steel Washer	1
3	Barrel Base Stop Washer	1
4	Breech Block	1
5	Extractor	1
6	Extractor Retaining Screw	1
7	Barrel Base	1
8	Barrel Base Taper Pin	2
9	Cable Clamp	1
14	Breech Cap	1
15	Breech Cap Latch	1
16	Breech Cap Latch Spring	1
17	Breech Cap Latch Retaining Screw	1
18	Firing Pin	1
19	Firing Pin Bush	1
20	Hammer and 20B Hammer Bush	1
21	Hammer Spring	1
22	Hammer Spring Pivot	1
24	Hammer Button	1
25	Stop Pin	2
26	Clamp Bolt Complete	2
27	Hammer Release Pin	1
28	Hammer Safety Cross Pin	1
29	Hammer Safety Cross Pin Spring	1
30	Hammer Safety Cross Pin Dowel	1
31	Safety Catch	1
32	Safety Catch Spring	1
33	Breech Cap Stop Screw	1
34	Lanyard	1
35	Piston Punch	1
36	Piston Punch Locating Spring	1
40	Cleaner Complete	1
41	Trunnion	2
42	Hammer Button Cross Pin	1
43	Lever	1



LEAD PACKING FOR SMALL DIA.CABLES



CLAMP POSITION FOR H.S.L. CABLES



REFERENCES

ADD RISK MATRIX