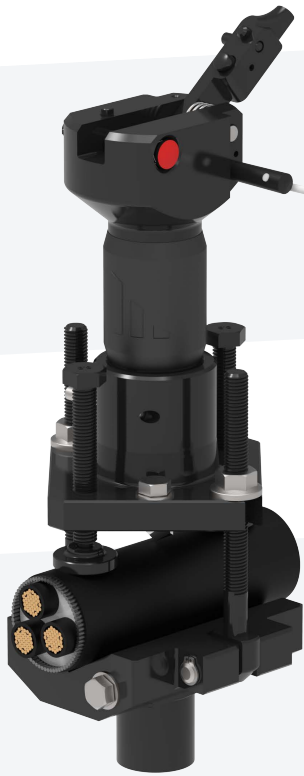


**ACVOKE®** Cable Spiker range

Use and Maintenance



**ACVOKE®** Mini Cable Spiker



**ACVOKE®** Standard Cable Spiker



**ACVOKE®** Heavy-Duty Cable Spiker  
with Trench Arm Attachment



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DO NOT ATTEMPT TO USE THIS TOOL  
UNTIL YOU HAVE READ AND UNDERSTOOD THESE INSTRUCTIONS

The **ACVOKE®** Heavy-Duty Cable Spiker - for use with steel wire armoured cable up to 150 mm/6 inch diameter.

The **ACVOKE®** Standard Cable Spiker - for use with steel wire armoured cable up to 110 mm/4½ inch diameter.

The **ACVOKE®** Mini Cable Spiker - for single and multicore polymeric cables up to 75mm/3 inch diameter.

The **ACVOKE®** Cable Spiker Conversion Kit - for use the standard cable spiker ONLY when aluminium sheathed 11KV cables are to be spiked.

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Accles & Shelvoke Ltd instruction manual - PART No. 2275 V4.0

The **ACVOKE®** Cable Spiker manufactured by Frontmatec Accles & Shelvoke Ltd is a high quality durable safety tool used worldwide. The tool was developed in 1952 in cooperation with the Central Electricity Generating Board. The cable spiker is a cartridge powered tool which when fired drives a steel spike through high voltage electricity cables short circuiting the power and making the cable dead and therefore safe to work on.

The **ACVOKE®** Cable Spiker is available as standard, heavy-duty and mini versions:

- The standard cable spiker can accommodate cables up to Ø110mm carrying voltages up to 275KV
- A heavy-duty version is also available for cables up to Ø150mm carrying voltages up to 400KV
- A mini version for single and multicore polymeric cables up to Ø75mm

### KEY FEATURES

- A high quality, durable safety tool suitable for all cable designs, penetrating every form of normally applied cable coverings
- Easy to assemble and simple to operate
- Safest tool available for assured cable de-energisation
- Employee safety achieved through positive remote operation
- Remote Firing - the tool uses a seven metre long lanyard and release pin which when operated completely separates from the tool at the moment of firing. This ensures total operator safety in the event of a *live* cable being spiked - See below
- Safety - the tool has a unique self setting safety system which requires the deliberate action of pressing the Safety Catch to its *fire* position. This eliminates the risk of operator inadvertently firing the tool when setting the firing mechanism
- Portability - needs no external power source, the use of a blank cartridge as the source of energy means the tool can be used anywhere
- Robust - the tools sturdy construction ensures years of trouble free use
- Versatile - the use of different cartridge strengths and various clamping arrangement allows the tool to be used on a wide range of cables



## SCOPE

When it is intended to work on any electrical power cable, either for the purpose of carrying out repairs or for tapping or arranging additional feeders, it is vital that special precautions be taken to secure the safety of the employees.

After the cable has been made *dead* and connected to earth at the point of supply, the cable is cut, usually by means of a hacksaw or cutters.

## CRITERIA

It often happens that the cable to be cut is distant from the circuit disconnect, grouped with other cables and sometimes buried in the ground. In order to avoid any possibility of a mistake and a live cable being cut, most authorities insist that a sequential rigid four step procedure be followed which requires the disconnection of power at both circuit ends, identification of cable markers, electronic instrumentation signal checks and finally cable mechanical spiking.

The authorities made the final step mandatory which requires that a wide iron spike be driven, either with a hammer or an extended stick into the cable intended to be cut before allowing further work to proceed. If by any mischance a *live* cable is spiked, the resulting high magnitude short circuit current should trip out the feeder circuit breaker.

## SAFETY CONSIDERATIONS

This method was somewhat crude and there is grave danger to the employee carrying out the spiking operation, owing to the sudden thrust of substantial electrical fault energy capable of exploding the cable and creating a high velocity deadly spray of conductor, shield and/or sheath metal fragments. Even the sight of a fault flashover could cause permanent blindness.

As the speed of penetration of the spiking punch is so rapid, it has been found in practice that even if a live cable is spiked usually no damage to the cable spiker results. If however, the fault current happens to be extremely high, it may be that the actual spiking punch itself may suffer, but yet be capable of tripping a normally operating breaker.

This punch, is of course, easily replaceable and a spare can be fitted in a matter of seconds. An added feature of the **ACVOKE®** Cable Spiker is that the wide punch shears the cable partially or totally, depending on the cable size, hence reducing additional cable cutting effort.

## APPLICATIONS

The **ACVOKE®** Cable Spiker is suitable for use with all types and voltages of power cable including single and multiple conductor laminated, polymeric, elastomeric, unshielded, concentric neutral, interlock armoured, steel wire armoured, leaded covered, etc., designs in either fixed or portable installations.

## PREVENTS ACCIDENTS

The **ACVOKE®** Cable Spiker is a quality durable tool designed to positively electrically ground out any required power cable for definite manpower accident prevention and life saving.

## SERVICING INFORMATION

Frontmatec Accles & Shelvoke provide a comprehensive service and repair facility where customer can have their **ACVOKE®** Cable Spiker serviced by our highly trained engineers:

- As the fitting of most parts often requires detailed instructions or expert knowledge it is generally advisable to return the **ACVOKE®** Cable Spiker to Accles & Shelvoke where a full inspection and test can be carried out
- Service and repair facility is generally open to UK customers; overseas customers are advised to contact their local distributor
- Customers are advised to contact Accles & Shelvoke direct on 0121 313 4567 to make arrangements to return the **ACVOKE®** Cable Spiker for service and repair
- Quotation will be provided on inspection of the tool, listing service charges and replacement parts required

If any doubt and you require further advice and information on the **ACVOKE®** Cable Spiker please contact Accles & Shelvoke direct or your local distributor.



- ALWAYS WEAR THE CORRECT PERSONAL PROTECTIVE EQUIPMENT (PPE) WHENEVER YOU ARE WORKING WITH, CLEANING OR MAINTAINING YOUR CABLE SPIKER
- ALWAYS WEAR PROTECTIVE GLASSES AND HEARING PROTECTION. THE CORRECT FOOT PROTECTION MUST BE WORN THERE IS A RISK THAT IF THE TOOL IS DROPPED, THE BOLT MAY PENETRATE THE FOOT OF THE TOOL USER



**DANGER** - If the tool is set in the cocked (ready to fire) position and is dropped, there is a potential risk to the operator and/or people within the immediate vicinity of the dropped tool. The hazards listed in this section pose a high level of risk, which if not avoided will result in serious injury

- IF IT DROPS AND LANDS ON THE TRIGGER, THE TOOL WILL FIRE AND THE BOLT WILL BE PROPELLED OUT OF THE TOOL AT A VERY HIGH VELOCITY. THE BOLT HAS THE POTENTIAL TO CAUSE SEVERE PENETRATIVE INJURY IF THEY ARE WITHIN 150 MM OF THE BOLT WHEN IT FIRES OUT OF THE TOOL

### Our advise to minimise the risk

- IF THE TOOL IS DROPPED, LET IT FALL, DO NOT TRY TO CATCH IT
- STEP AS FAR AWAY (AS IT IS SAFE TO) FROM THE TOOL AS IT FALLS, BUT WATCH IT HIT THE FLOOR
- TAKE APPROPRIATE AVOIDABLE ACTION IF TOOL REBOUNDS
- DO NOT APPROACH THE TOOL UNTIL IT IS STATIONARY
- AFTER BEING DROPPED, CHECK THAT THE HEAD OF THE BOLT IS NOT DAMAGED
- ENSURE THE TOOL IS WORKING CORRECTLY BEFORE RECOMMENCING ANY CABLE SPIKING
- IF IN DOUBT, THE TOOL SHOULD BE CHECKED AND REPAIRED AS NECESSARY



**WARNING** - The hazards listed in this section pose a medium level of risk which, if not avoided may result in recoverable injury

- DO NOT FIRE THE BOLT INTO HARD, BRITTLE OR IMPENETRABLE MATERIALS - AS THE BOLT MAY FRAGMENT AND POSE A DANGER OF FLYING PARTICLES
- NEVER USE A MORE POWERFUL CARTRIDGE THAN THE MAXIMUM PERMITTED CARTRIDGE AS STAMPED ON YOUR TOOL - TO PREVENT CARTRIDGE BURST AND EXCESSIVE NOISE IN OPERATION
- KEEP THE TOOL DRY AND CLEAN - TO ENSURE YOU HAVE AN ADEQUATE CLAMP ON THE TOOL AND CABLE DURING USE TO MINIMISE THE RISK



**CAUTION** - The hazards listed in this section pose a low level of risk which, if not avoided may result in minor or moderate injury

- KEEP FINGERS AWAY FROM BENEATH THE FIRING HANDLE PULL WHEN THE TOOL IS COCKED AND READY TO FIRE TO PREVENT TRAPPING
- ALWAYS USE THE LANYARD PROVIDED (IF BROKEN OR SHORTER THAN ORIGINAL LENGTH DO NOT USE)



- ALWAYS WEAR THE CORRECT PERSONAL PROTECTIVE EQUIPMENT (PPE) WHENEVER YOU ARE WORKING WITH, CLEANING OR MAINTAINING YOUR CABLE SPIKER
- ALWAYS WEAR PROTECTIVE GLASSES AND HEARING PROTECTION. THE CORRECT FOOT PROTECTION MUST BE WORN THERE IS A RISK THAT IF THE TOOL IS DROPPED, THE BOLT MAY PENETRATE THE FOOT OF THE TOOL USER



NEVER HANDLE OR OPERATE ANY CABLE SPIKER EQUIPMENT WHILST UNDER THE INFLUENCE OF ALCOHOL OR DRUGS. IF TAKING PRESCRIBED MEDICATION, SEEK THE ADVICE OF YOUR DOCTOR PRIOR TO HANDLING OR OPERATING THE EQUIPMENT.

## GENERAL PRECAUTIONS AND GOOD PRACTICE

### Improper use

- ONLY EVER USE THIS TOOL FOR CABLE SPIKING
- ONLY EVER USE **ACVOKE®** SUPPLIED CARTRIDGES AND SPARES
- DO NOT FIRE "AIR SHOTS" (FIRING OF THE BOLT INTO AIR) AS THIS WILL REDUCE THE WORKING LIFE OF THE TOOL AND ITS COMPONENTS

### Workplace precautions

- THE TOOL SHOULD BE USED IN WELL ILLUMINATED AND WELL VENTILATED WORKPLACE ENVIRONMENTS
- KEEP THE WORKAREA CLEAR OF UNNECESSARY OBSTACLES OR TRIP HAZARDS
- ENSURE THE AREA SURROUNDING THE CABLE SPIKER IS FREE OF SLIPPERY SUBSTANCES. THESE ARE POTENTIAL SLIP HAZARDS TO THE OPERATOR WHICH COULD LEAD TO SERIOUS INJURY OR FATALITY OF THE OPERATOR SLIPS WHILST HOLDING A LOADED TOOL

### Operational precautions

- ONLY LOAD CARTRIDGES WHEN THEY ARE READY TO BE USED
- IF A CARTRIDGE STICKS IN THE BREECH AND WILL NOT EJECT, DO NOT USE A SHARP INSTRUMENT TO REMOVE IT. THE TOOL SHOULD BE REMOVED IN ACCORDANCE WITH INSTRUCTIONS

### Good practice

- THE CLEANING AND MAINTENANCE SCHEDULE DETAILED IN THIS MANUAL SHOULD BE ADHERED TO, TO ENSURE THE TOOL OPERATES SAFELY AND CORRECTLY TO PROVIDE EFFECTIVE CABLE SPIKING
- AT THE END OF A WORKING SHIFT, OR IF THE TOOL IS NOT GOING TO BE USED FOR PROLONGED PERIODS, THE UNCOCKED AND UNLOADED TOOL SHOULD BE STORED IN COOL DRY CONDITIONS AND LOCKED SECURELY IN A WAY THAT NO UNAUTHORISED ACCESS TO THE TOOL IS POSSIBLE
- CARTRIDGES SHOULD BE LOCKED AWAY SEPARATELY FROM THE CABLE SPIKER TOOL IN COOL, DRY CONDITIONS
- EXPOSURE TO EXCESSIVE AMOUNTS OF MOISTURE MAY AFFECT CARTRIDGE PERFORMANCE WHICH IN TURN WILL AFFECT TOOL PERFORMANCE, WITH THE POTENTIAL TO CREATE AN INEFFECTIVE CABLE SPIKING. WET CARTRIDGES WILL NOT FIRE AND SHOULD NOT BE USED

1. Clamp tool securely to cable. Tighten clamp bolt nuts (26) evenly so that cable clamp (9, 46 or 9S depending on type) remains parallel to barrel base (7). Cable clamps are reversible to accommodate varying types of cable
2. Press up breech cap latch (15), unscrew (right-hand thread) and remove breech cap (14)
3. Select correct strength of cartridge and insert in breech block (4) (see under cartridge selection page 7)
4. Screw breech cap (14) back into place seeing breech cap latch (15) trips past the extractor (5) and drops alongside stop screw (33)
5. Layout lanyard (34) to its full length of 7 m to give straight pull on hammer release pin (27). In confined spaces a crowbar or other corner around which lanyard is pulled, may be desirable
6. Pull back hammer (20), insert hammer release pin (27) sufficiently far to retain hammer in cocked position
7. Ascertain that all personnel are out of the danger area
8. Operator may then press safety catch (31) button painted *RED* as far as it will go. Tool is then ready for firing. When fired safety catch automatically returns to safe position
9. Operator fires tool by sharp pull on lanyard
10. After observance of any safety regulations in regard to spiking procedure, operator may then unscrew breech cap (14), lift extractor (5) and remove spent cartridge. It is desirable to lift extractor after unscrewing breech cap (14) one turn only thus releasing any trapped gases (which might otherwise forcibly eject the cartridge case into operator's face)
11. Remove cable clamp (9)
12. Remove barrel, barrel base and piston punch (35) as one unit using lever between barrel base and cable to lift if necessary
13. After day's use strip down for thorough cleaning in readiness for next spiking operations

**ACVOKE® Cable Spiker**  
PARTS LIST

Part no.	Description
2233	Standard <b>ACVOKE®</b> Cable Spiker for use with steel wire armoured cable up to 110 mm
2235	<b>ACVOKE®</b> Cable Spiker as above complete with <b>ACVOKE®</b> Jack assembly
2234	<b>ACVOKE®</b> Heavy-Duty Cable Spiker for use with steel wire armoured cable up to 150 mm

NOTE - Above come complete with lanyard and release pin, cleaning tool, cranked lever and instructions manual

Part no.	Description	
2260	Jack assembly (fits the standard tool only)	
2191	Conversion clamp for 11KV aluminium sheathed cables	PT. 1430/9S
2238	Clamp for polymetric cable	PT. 1430/9 EPR
2241	Clamp for triplex cable	PT. 1430/9T

Spare parts

NOTE - when ordered spare parts please state model and serial number of the tool

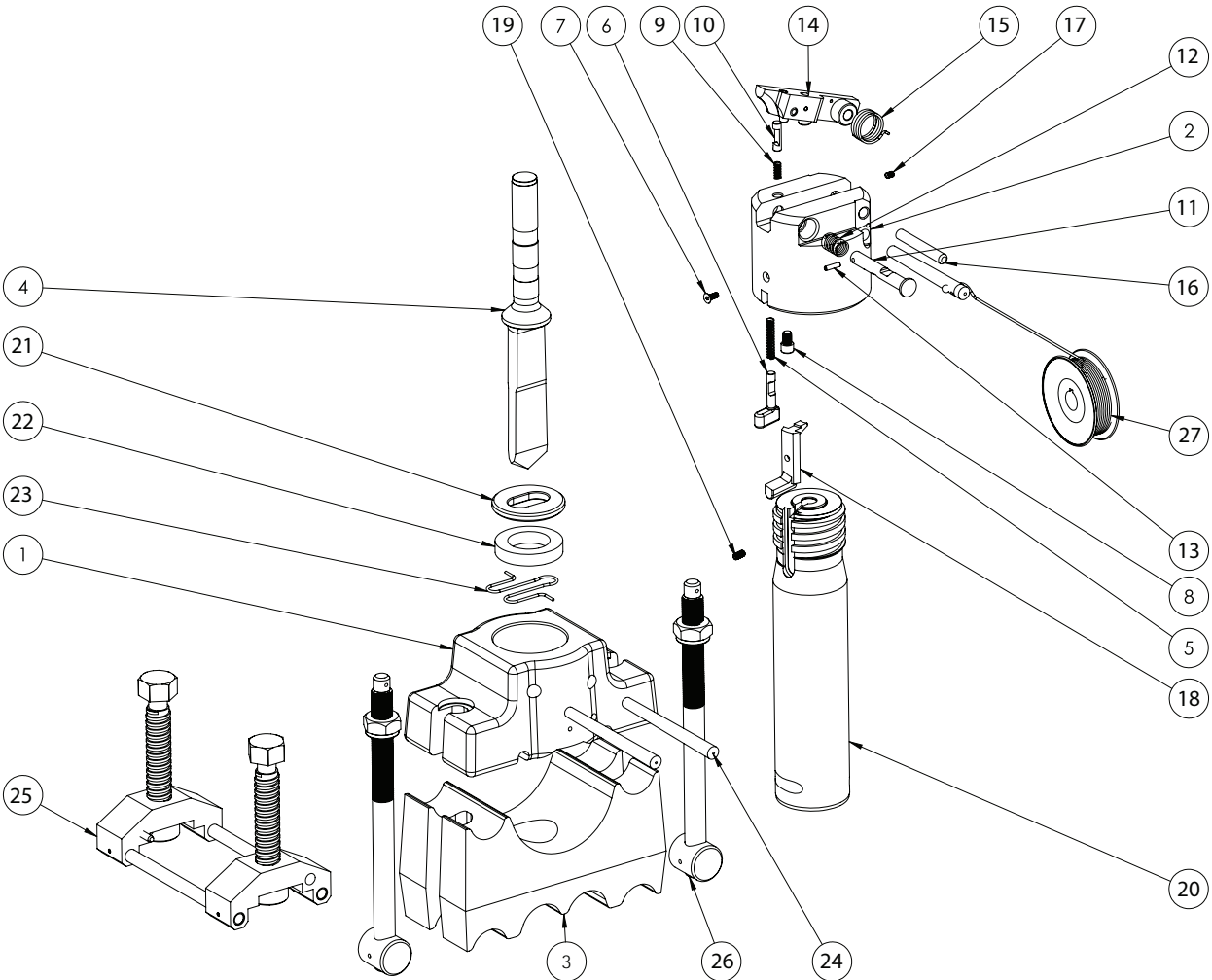
Item no.	Part no.	Description	No. per set
1*	2188	Standard barrel base machined	1
2*	2101	Breech cap	1
3	2190	Standard cable clamp	1
4	2216	Piston punch	1
5	2196	Breech cap latch spring	1
6	2195	Breech cap latch	1
7	2197	Breech cap latch retaining screw	1
8	2214	Breech cap stop screw	1
9	2210	Hammer safety cross pin spring	1
10	2209	Hammer safety cross pin	1
11	2212	Safety catch	1
12	2213	Safety catch spring	1
13	4168	Firing pin dowel	1
14*	2200	Hammer assembly	1
15	2202	Hammer spring	1
16	2203	Hammer spring pivot	1
17	2204	Hammer pivot retaining screw	1
18	2186	Cable spiker extractor	1
19	2187	Extractor retaining screw	1
20*	2182	Barrel assembly	1
21	2183	Barrel base steel washer	1
22	2184	Barrel base stop washer	1
23	2218	Piston punch locating spring	1
24	2189	Barrel base taper pin	2
25	2260	Jack assembly (standard)	1
26	2207	Clamp bolt	2
27	2215	Hammer release lanyard assembly	1
28	2225	Lever	1
29	2222	Cleaner	1

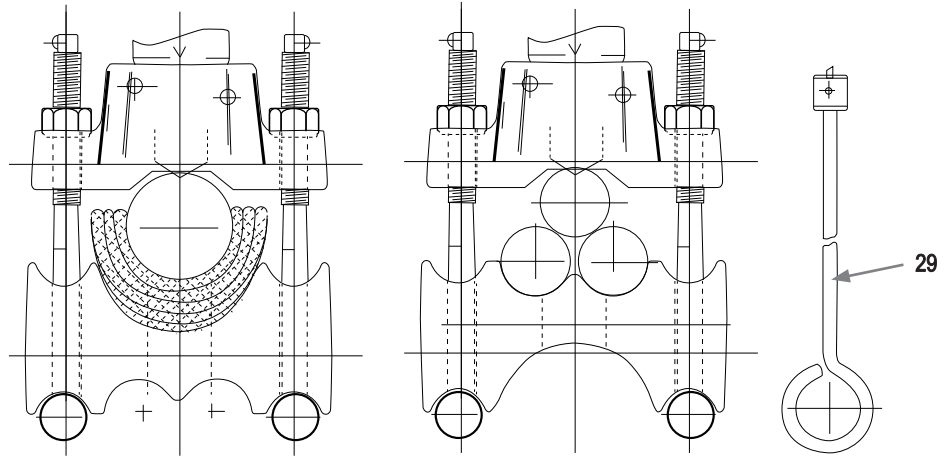
NOTE - Parts marked \* are not available as spares, Accles & Shelvoke provide a service repair facility for the replacement of these parts.

Cartridges - .44" calibre supplied in boxes of 25

Part no.	Description
7925	<i>Yellow mark</i> Extra light charge for small polymeric type cables having no outer metallised sheath
7920	<i>Silver mark</i> Light charge for all aluminium sheathed cables up to 300 mm square
7900	<i>Green mark</i> Medium charge for plain covered cables and for armoured cables up to 85 mm
7900	<i>Red mark</i> Heavy charge for armoured cables over 85 mm with standard <b>ACVOKE®</b> Cable Spiker and up to 150 mm with <b>ACVOKE®</b> Heavy-Duty Spiker

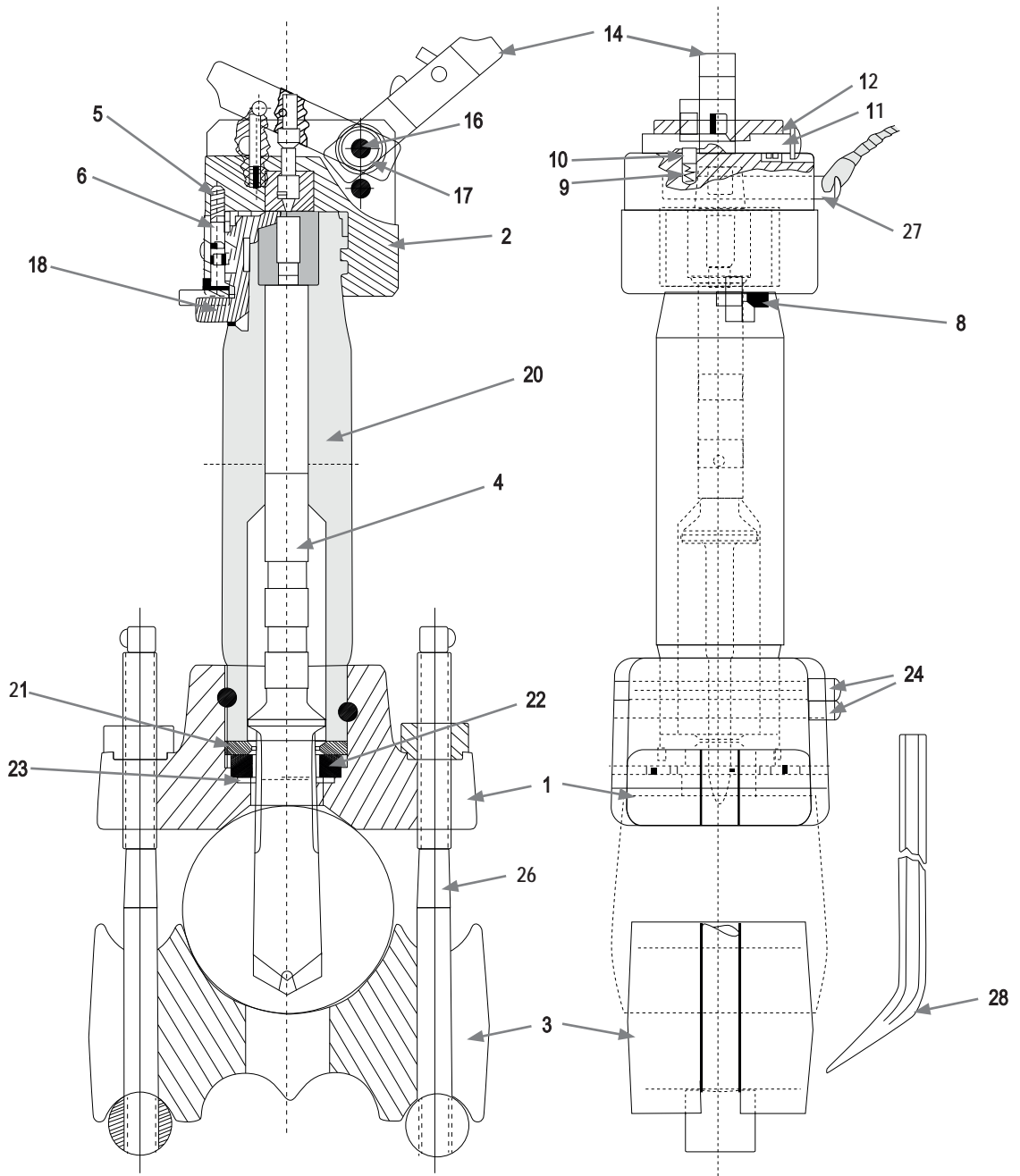


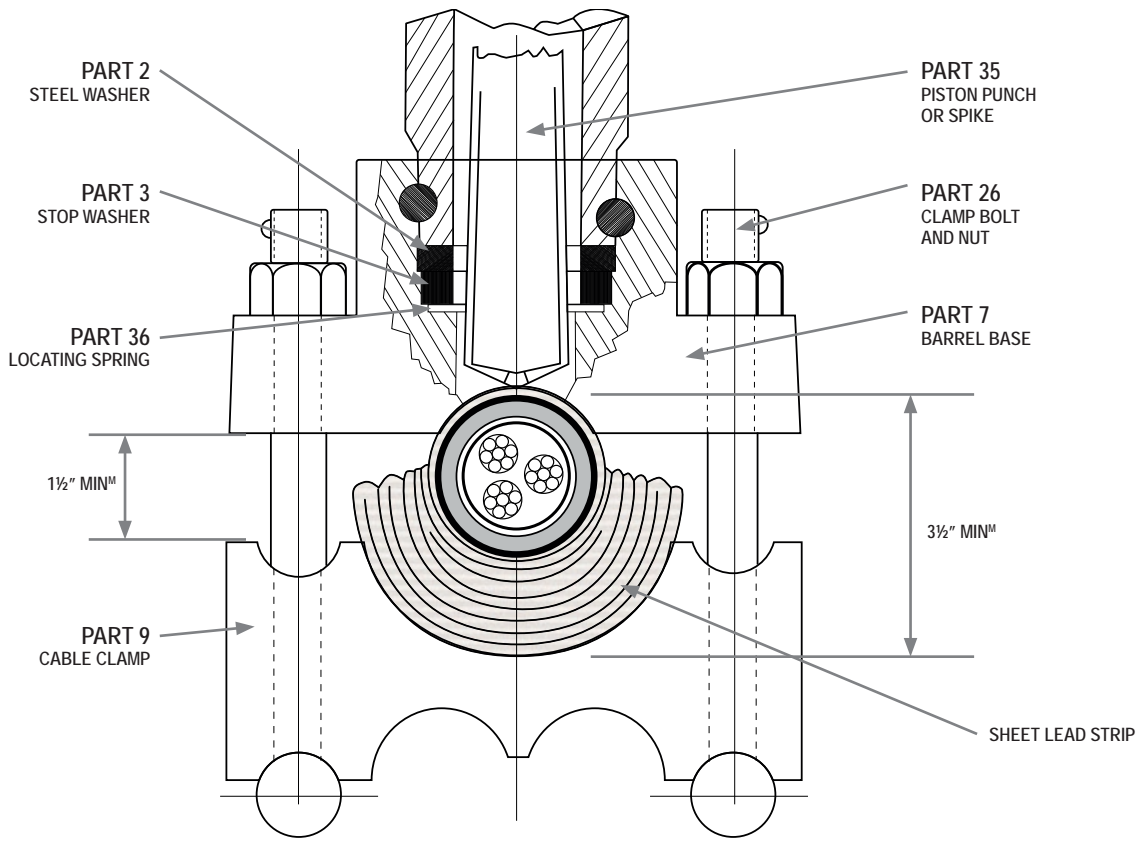




LEAD PACKING FOR  
SMALL DIA. CABLES

CLAMP POSITION FOR  
H.S.L. CABLES

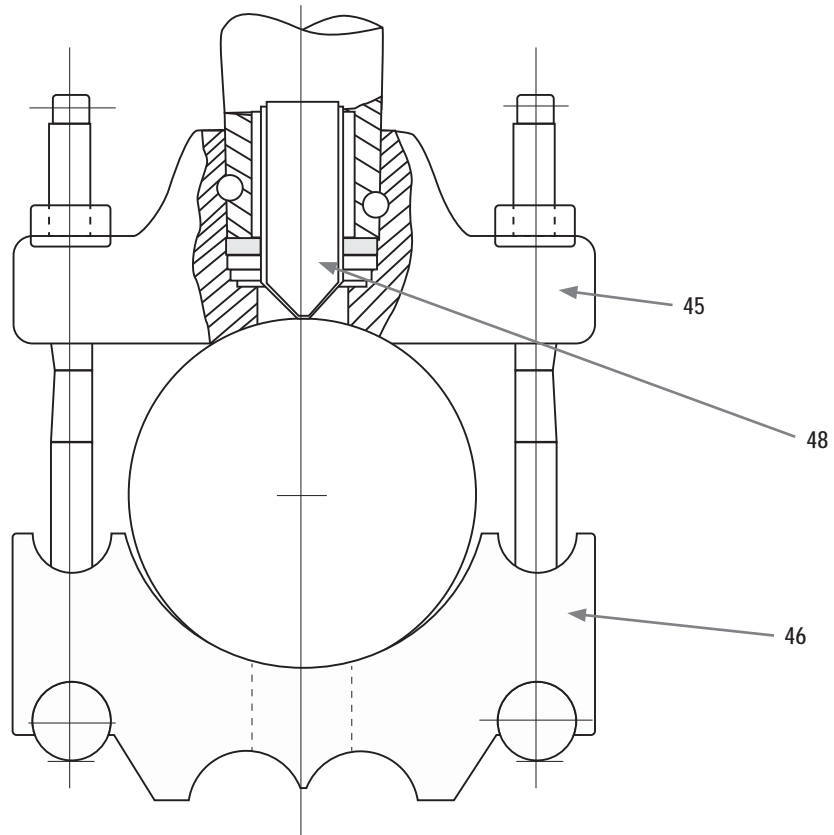




USE ONLY GREEN OR SILVER CARTRIDGES WHEN SPIKING SMALL DIAMETER CABLES

Adequate and correct lead-packing is essential for trouble-free spiking of small diameter cables.

First wrap a single layer of sheet lead completely round the cable and then pack further lead strips underneath and at sides to give at least 88.9 mm/3 1/2 inches of solid resistance essential to absorb the full thrust of the piston punch or spike. Equal tightening of the two clamp bolt nuts in conjunction with proper lead-packing will ensure that the barrel base is satisfactorily aligned with and spaced at least a safe 38.1 mm/1 1/2 inches from the cable clamp.

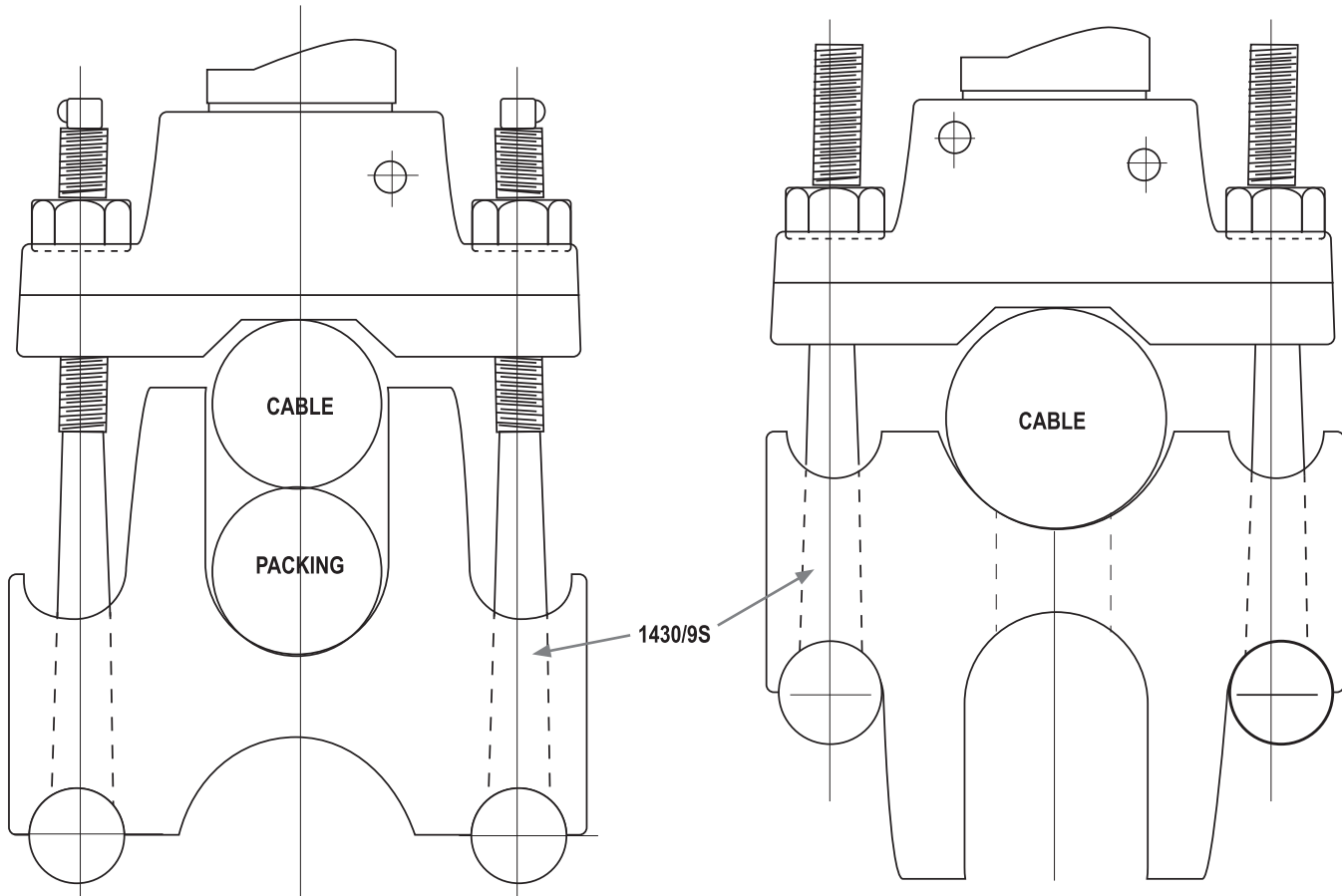


USE RED MARK (HEAVY CHARGE) CARTRIDGES  
45 BARREL BASE  
46 CABLE CLAMP  
48 PISTON PUNCH

The **ACVOKE®** Heavy-Duty Cable Spiker has the capacity to spike steel wire armoured cable up to 152.4 mm/6 inches diameter. Except for the special *large capacity* barrel base (45), cable clamp (46) and modified punch (48) the **ACVOKE®** Heavy-Duty Cable Spiker is the same as the standard tool.

**NOTE** - The special barrel base can only be fitted at Frontmatec Accles & Shelvoke Ltd., and standard tools therefore cannot be modified to heavy-duty by users.

FOR USE WITH 11KV ALUMINIUM SHEATHED CABLES  
300 MM<sup>2</sup>, 185 MM<sup>2</sup>, 95 MM<sup>2</sup> CONDUCTOR AREAS



SPECIAL CLAMP 1430/9S  
SHOWN IN POSITION FOR 95 MM<sup>2</sup>  
ALUMINIUM SHEATHED 11KV CABLE  
WITH SCRAP 95 MM<sup>2</sup> CABLE AS PACKING

SPECIAL CLAMP SHOWN IN POSITION  
FOR 185 MM<sup>2</sup> AND 300 MM<sup>2</sup> CABLE  
NO PACKING REQUIRED

The **ACVOKE**® Cable Spiker Conversion Kit consists of a special cable clamp part no. 2191 (1430/95) which must only be used with the **ACVOKE**® Standard Cable Spiker replacing the standard cable clamp part no. 2238 (1430/9). See diagram above.

The clamp is designed so that one side marked 300 and 185 takes both the 300 mm<sup>2</sup> and 185 mm<sup>2</sup> conductor area cables. Providing only the super light cartridges are used (see under cartridge selection), no packing of this size of cable is required. The clamp is reversible to take the 95 mm<sup>2</sup> conductor area cable. It will be seen, from the diagram above, that packing is necessary when spiking this size of cable.

A short length (say 101.6 mm/4 inch long) of scrap 95 mm<sup>2</sup> cable should be used as packing by placing it under the cable to be spiked as shown in the diagram. It will be found that the scrap length cable can be used as packing more than once by moving it to a new position. If preferred, packing can be in the form of a rolled or cast billet of lead of similar diameter.



DO NOT ATTEMPT TO SPIKE THE 95 MM<sup>2</sup> CABLE WITHOUT PACKING OF THE TYPE DESCRIBED ABOVE AS SERIOUS DAMAGE WILL RESULT TO THE TOOL

In all other respects use the cable spiker in the manner described under *Instructions for use all cable spikers*, page 5.

Cartridge	Description
RED STRENGTH (heavy)	For use with the older types of steel wire armoured cables over 85.725 mm/3 <sup>3</sup> / <sub>8</sub> inches outside diameter, in the A Standard Cable Spiker and up to 6 inches outside diameter in the A Heavy-Duty Cable Spiker.
GREEN STRENGTH (medium)	For lead covered and all armoured cables up to 85.725 mm/3 <sup>3</sup> / <sub>8</sub> inches outside diameter
SILVER STRENGTH (light)	For aluminium sheathed cables up to 300 mm <sup>2</sup> and the modern small diameter plastic covered cables
YELLOW STRENGTH (extra light)	For small polymeric type cables having no outer metallised sheath

**IMPORTANT NOTE** - Cartridge selection is of vital importance and Frontmatec Accles & Shelvoke Ltd. will not be held responsible for damage to personnel or equipment as a result of incorrect selection.

### MISFIRE PROCEDURE

If the cartridge fails to fire instantaneously when struck by the firing pin, it is unlikely that a delayed explosion will occur.

However, if the tool does not fire:

1. Do not touch anything
2. Wait three minutes
3. Ensure that the safety catch is in safe position
4. Ease breech cap one full turn only and then lift extractor to free cartridge rim from chamber
5. Completely remove breech cap and lift out cartridge by hand

The probable cause of the failure will be:

- a) Weak hammer spring
- b) Hammer tight on bush
- c) Firing pin eroded

The cartridge can safely be used or fired again once the firing mechanism of the tool has been checked. If cartridge still does not fire, then return to Accles & Shelvoke for testing and report.

1. Barrel (1) is removed from barrel base (7) by tapping out the two barrel base taper pins (8)
2. Piston punch (35) may then be withdrawn
3. The cleaning tool (40) is then carefully inserted in the barrel bore and pushed right home and then rotated with firm forward pressure to remove powder deposit at breech
4. Carefully wipe out barrel bore with clean but oily rag, smear light clean grease sparingly over the piston portion of the piston punch (35) and reassemble it to the barrel (1)
5. See that the barrel base stop washer (3) is in good condition - replace it if damaged - and assemble it on top of the locating spring (36) and then place the barrel base steel washer (2) on top with its slot in line with that of the locating spring
6. Assemble barrel (1) with care seeing piston punch is correctly positioned and that the marks V on the barrel (1) and barrel base (7) are adjacent
7. Push in barrel base taper pins (8) and tap them home securely
8. Carefully wipe all other components with a clean but oily rag and reassemble complete and return all equipment and cartridges to safe keeping ready for immediate future use

It is recommended that the Cable Spiker is cleaned, and lightly oiled each day after use.

ONLY EVER USE GENUINE ACCLES & SHELVOKE REPLACEMENT PARTS. NOT USING GENUINE PARTS MAY LEAD TO PREMATURE COMPONENT AND TOOL FAILURE, WHICH COULD ENDANGER THE OPERATOR AND THOSE IN THE IMMEDIATE VICINITY. IT WILL ALSO INVALIDATE OUR ORIGINAL EQUIPMENT WARRANTY.

ACCLES & SHELVOKE WILL ACCEPT NO LIABILITY IF ANY COMPONENTS OTHER THAN THOSE SUPPLIED BY ACCLES & SHELVOKE ARE USED WITH OUR ORIGINAL EQUIPMENT. THE RESULTANT LIABILITY WILL BE WITH THE END USER OR THE DISTRIBUTOR WHO SUPPLIED THE UNAPPROVED REPLACEMENT PARTS.



ALWAYS STORE THE **ACVOKE®** CABLE SPIKER WITH FIRING CAP FITTED



The **ACVOKE**® Mini Cable Spiker provides a lightweight alternative to the Standard and Heavy Duty Cable Spikers when working with lower rated power cables. The **ACVOKE**® Mini Cable Spiker is rated for cables up to Ø75mm and operates using .25" cartridges.



1. Clamp tool securely to cable. Tighten Cable Clamp Swing Bolt Nuts (30) evenly so that Cable Clamp (28) remains parallel to barrel base (7). Lower Jack Screws (24) evenly to provide additional clamping and support of the cable. Attach any necessary earthing straps to the Barrel Base (23) and/or Cable Clamp (28) via the Earth Lead Adapter Screws (27).
2. Unscrew and remove the Breech Cap (6)
3. Select correct strength of cartridge and insert into the chamber in the top of the Breech (1) (see under cartridge selection page 20)
4. Screw Breech Cap (6) back onto the Breech (1)
5. Layout lanyard (35) to its full length of 7m to give straight pull on Hammer Release Pin (16). In confined spaces, use a crowbar or other object to corner around, against which the lanyard is pulled.
6. Pull back Hammer (17), insert Hammer Release Pin (16) to retain Hammer in cocked position.
7. Ascertain that all personnel are out of the danger area
8. Operator may then press Safety Catch (13) button painted *RED* as far as it will go. Tool is then ready for firing. When fired safety catch automatically returns to safe position. When retreating to firing location, please ensure you do not become tangled in, or tread on, the lanyard cord. This may result in unsafe, premature firing of the Cable Spiker.
9. Operator fires tool by sharp pull on the lanyard.
10. After observance of any safety regulations in regard to spiking procedure, operator may then unscrew the Breech Cap (6), lift Extractor (2) and remove the spent cartridge.
11. Remove any earthing straps from the Cable Spiker. Retract the Jack Screws (24), and loosen the Cable Clamp Swing Bolt Nuts (30) allowing the removal of the Cable Clamp (28).
12. Remove Breech (1) and Barrel Base (23) as one unit. If the Piston Punch (19) is stuck in the cable after spiking, you may want to use a lever to remove the cable from the spiker, or screw the Jack Screws (24), or a combination of both, to prise the cable off the Piston Punch (19).
13. After day's use, strip down for thorough cleaning in readiness for next spiking operations.

**ACVOKE® Cable Spiker**  
PARTS LIST

Part no.	Description
2233	<b>ACVOKE®</b> Mini Cable Spiker

NOTE - Above comes complete with lanyard and release pin, cleaning tool and instructions manual

**Spare parts**

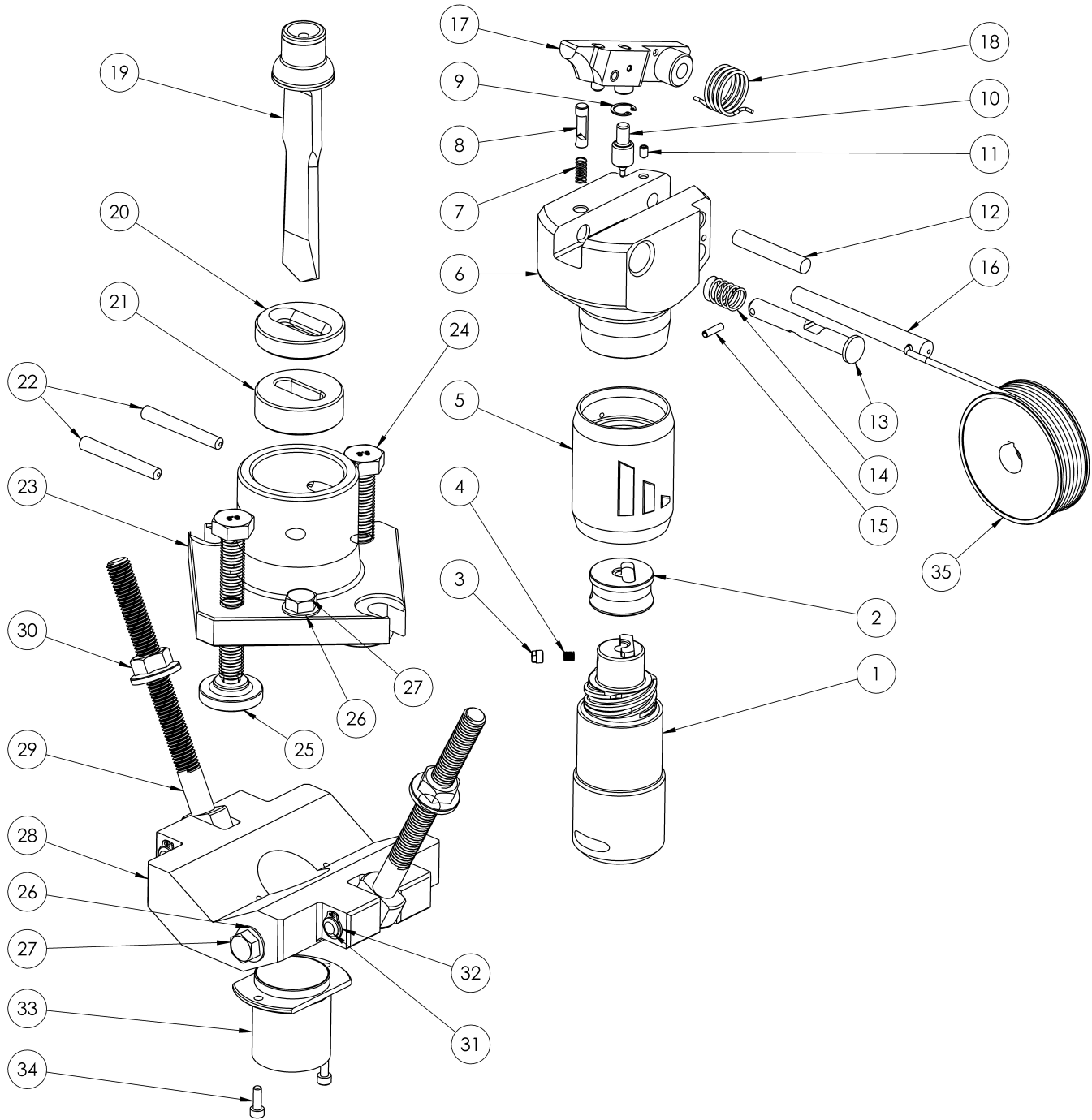
NOTE - when ordered spare parts please state model and serial number of the tool

Item no.	Part no.	Description	No. per set
1*	2304	Breech	1
2	5638	Extractor	1
3	5636	Extractor Plunger	1
4	5637	Plunger Spring	1
5	5664	Breech Locking Cover	1
6	2314	Breech Cap	1
7	2210	Hammer Safety Cross Pin Spring	1
8	2209	Hammer Safety Cross Pin	1
9	2319	Firing Pin Retaining Clip	1
10	2198	Firing Pin	1
11	2204	Hammer Pivot Retaining Screw	1
12	2203	Hammer Spring Pivot	1
13	2212	Safety Catch	1
14	2213	Safety Catch Spring	1
15	2211	Hammer Safety Cross Pin Dowel	1
16	2208	Hammer Release Pin	1
17*	2200	Hammer Assembly	1
18	2202	Hammer Spring	1
19	2335	Piston Punch	1
20	2302	Steel Washer	1
21	2303	Polyurethane Washer	1
22	2308	Barrel Base Taper Pin	2
23*	2307	Barrel Base	1
24	2315	Jack Screw	2
25	2316	Jack Screw Pad	2
26	2231	Earth Lead Adapter Washer	2
27	2230	Earth Lead Adapter Screw	2
28	2309	Cable Clamp	1
29	2310	Cable Clamp Swing Bolt	2
30	2311	Cable Clamp Swing Bolt Nut	2
31	2312	Swivel Pins	2
32	2313	Swivel Pin Circlips	4
33	2320	Safety Pot	1
34	2321	Safety Pot Retaining Screws	2
35	2215	Hammer Release Lanyard Assembly	1
36	2339	Mini Spiker Box (not shown)	1
37	2340	Box Spanner (not shown)	1
38	2342	Safety Pot Screw Allen Key (not shown)	1
39	5646	Cleaning Brush Head (not shown)	1
40	5647	Cleaning Brush Handle (not shown)	1

Cartridges - .25" calibre supplied in boxes of 50

Part no.	Description
7860	Yellow Extra light charge
7865	Black Light charge
7870	Green Medium charge
7875	Red Heavy charge

NOTE - Parts marked \* are not available as spares, Accles & Shelvoke provide a service repair facility for the replacement of these parts.



Cartridge	Description
RED STRENGTH (heavy)	6 grain cartridge with a high power for use with single and multicore polymeric cables up to Ø75mm.
GREEN STRENGTH (medium)	4.5 grain cartridge with a medium power
BLACK STRENGTH (light)	4 grain cartridge with a light power
YELLOW STRENGTH (extra light)	2 grain cartridge with a very light power for small cables having no outer metallised sheath

**IMPORTANT NOTE** - Cartridge selection is of vital importance and Frontmatec Accles & Shelvoke Ltd. will not be held responsible for damage to personnel or equipment as a result of incorrect selection.

### MISFIRE PROCEDURE

If the cartridge fails to fire instantaneously when struck by the firing pin, it is unlikely that a delayed explosion will occur.

However, if the tool does not fire:

1. Do not touch anything
2. Wait three minutes
3. Ensure that the safety catch is in safe position
4. Ease breech cap one full turn only and then lift extractor to free cartridge rim from chamber
5. Completely remove breech cap and lift out cartridge by hand

The probable cause of the failure will be:

- a) Weak hammer spring
- b) Hammer tight on bush
- c) Firing pin eroded

The cartridge can safely be used or fired again once the firing mechanism of the tool has been checked. If cartridge still does not fire, then return to Accles & Shelvoke for testing and report.

1. Breech (1) is removed from Barrel Base (23) by tapping out the two Barrel Base Taper Pins (22)
2. Piston punch (19) may then be withdrawn
3. The cleaning brush (39 & 40) is then carefully inserted in the Breech bore and pushed right home and then rotated with firm forward pressure to remove powder deposit at the top of the Breech
4. Carefully wipe out Breech (1) with clean but oily rag, smear light clean grease sparingly over the piston portion of the piston punch (19) and reassemble it to the Breech (1)
5. See that the Polyurethane Washer (21) is in good condition - replace it if damaged - and assemble it on top of the Steel washer (20).
6. Assemble Breech (1) with care seeing Piston Punch (19) is correctly positioned inside the Steel Washer (20), and that the V-marks on the Breech (1) and Barrel Base (23) are aligned
7. Push in Barrel Base Taper Pins (22) and tap them home securely
8. Carefully wipe all other components with a clean but oily rag and reassemble complete and return all equipment and cartridges to safe keeping ready for immediate future use

It is recommended that the Cable Spiker is cleaned, and lightly oiled each day after use.

ONLY EVER USE GENUINE ACCLES & SHELVOKE REPLACEMENT PARTS. NOT USING GENUINE PARTS MAY LEAD TO PREMATURE COMPONENT AND TOOL FAILURE, WHICH COULD ENDANGER THE OPERATOR AND THOSE IN THE IMMEDIATE VICINITY. IT WILL ALSO INVALIDATE OUR ORIGINAL EQUIPMENT WARRANTY.

ACCLES & SHELVOKE WILL ACCEPT NO LIABILITY IF ANY COMPONENTS OTHER THAN THOSE SUPPLIED BY ACCLES & SHELVOKE ARE USED WITH OUR ORIGINAL EQUIPMENT. THE RESULTANT LIABILITY WILL BE WITH THE END USER OR THE DISTRIBUTOR WHO SUPPLIED THE UNAPPROVED REPLACEMENT PARTS.



ALWAYS STORE THE **ACVOKE®** MINI CABLE SPIKER WITH FIRING CAP FITTED

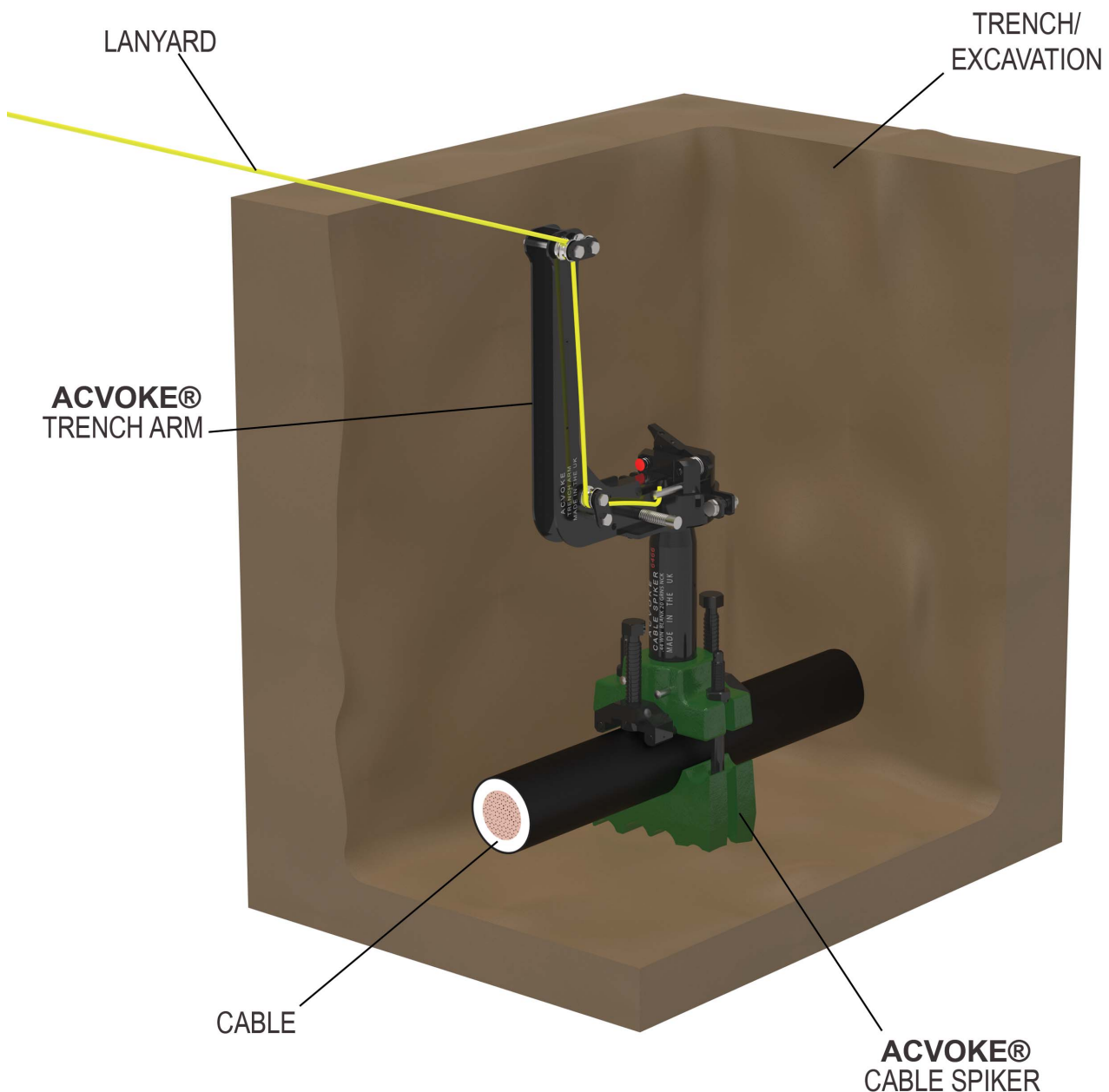


The **ACVOKE®** Cable Spiker Trench Arm Attachment provides a pulley system to ensure the lanyard pin is pulled out perpendicular from the **ACVOKE®** Cable Spiker when operating in trenches and excavation holes.

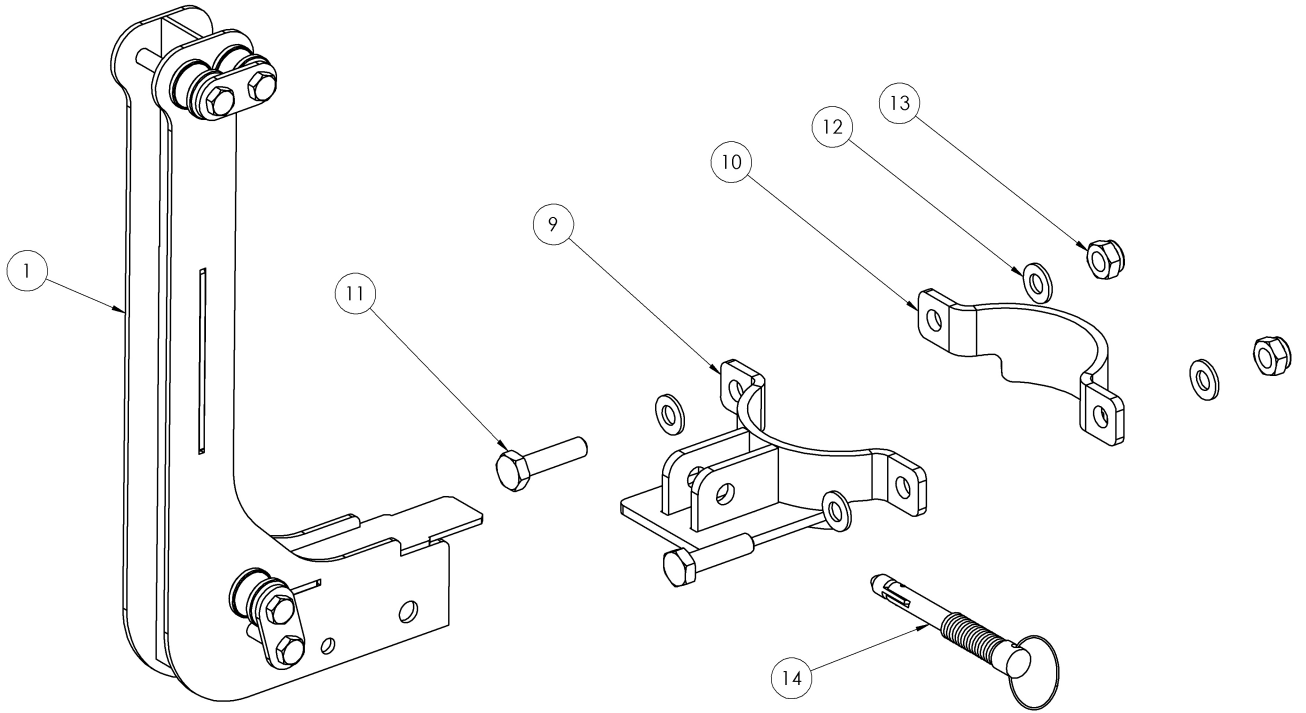
The Trench Arm Attachment is designed so the arm fixture can be removed with a simple sword pin, leaving the clamped on bracket attached to the **ACVOKE®** Cable Spiker. This allows the quick assembly and set up of the Trench Arm when working and operating the Cable Spiker below ground level. The clamp and bracket can remain on the Cable Spiker even when the Trench arm is not in use.

The illustration below shows how the Trench Arm Attachment would be typically configured for use with the **ACVOKE®** Cable Spiker Trench when operating in trenches and excavation holes.

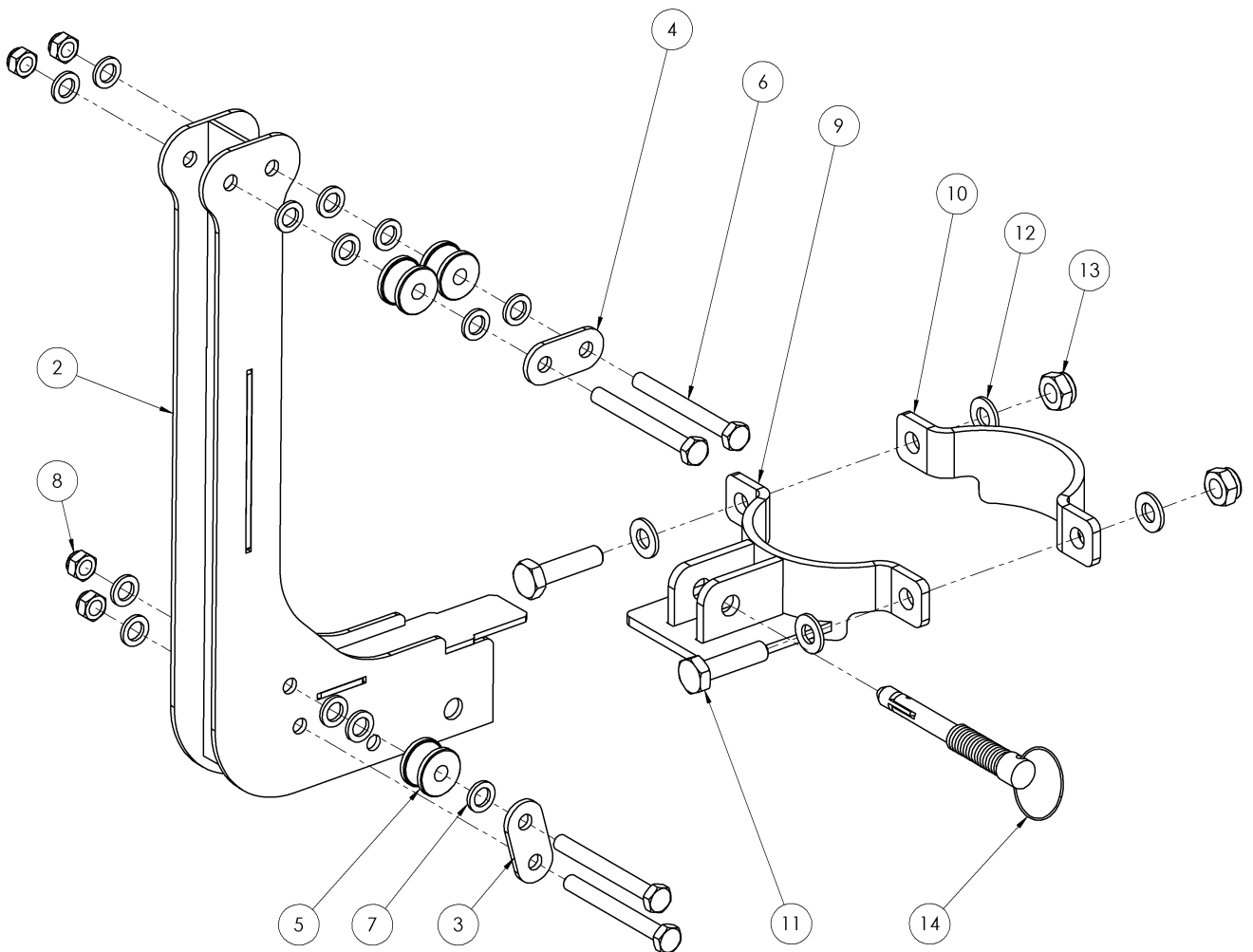
The Trench Arm Attachment is designed with two sheaves (pulley wheels) on the arm top to allow for firing of the Cable Spiker from multiple angles. To ensure optimum operation, we recommend the lanyard is pulled in-line with the sheaves from either in front of the Cable Spiker, or from behind. Operation from the side may not provide the correct line pull resulting in a 'no fire' situation.



PRIMARY PARTS ILLUSTRATION



SPARE PARTS ILLUSTRATION





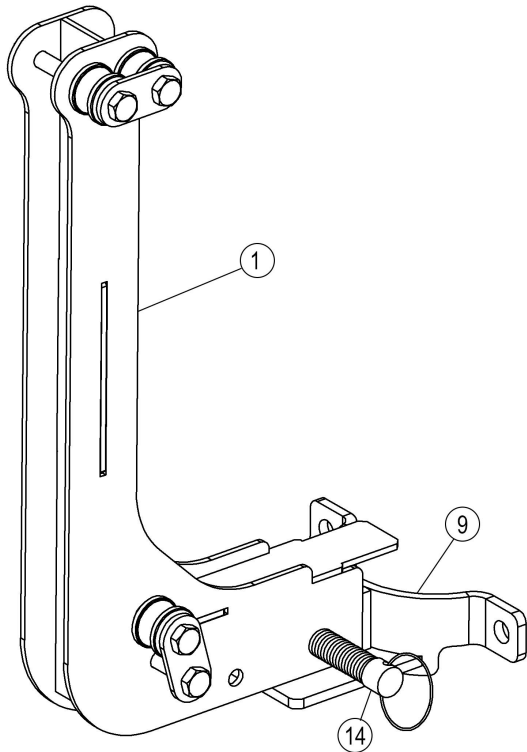
## SPARE PARTS LIST

**Spare parts**

NOTE - when ordered spare parts please state model and serial number of the tool

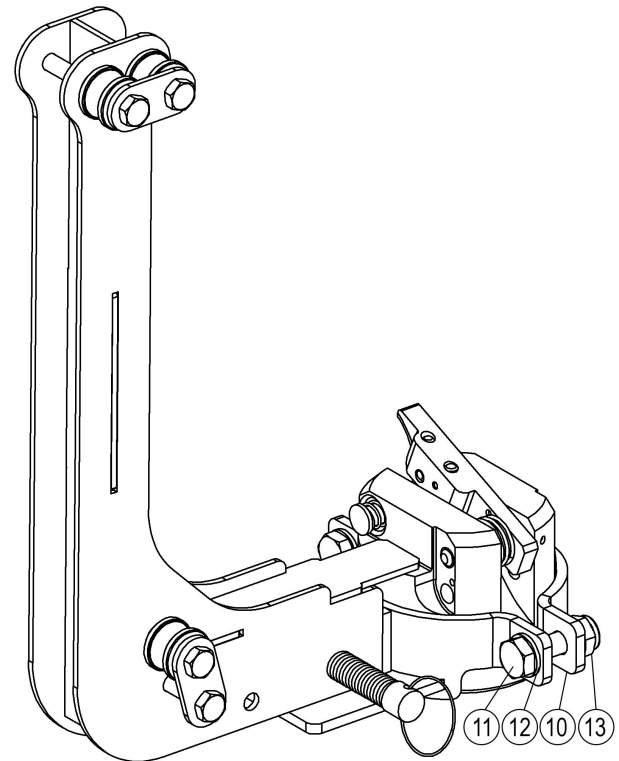
Item no.	Part no.	Description	No. per set
1	2401	Trench Arm Assembly	1
2	2402	Trench Arm Fabrication	1
3	2413	Lanyard Keeper Plate	1
4	2409	Sheave Cover	1
5	2415	25mm Sheave	3
6	2414	M8 Bolt	4
7	2417	M8 Washer	13
8	2416	M8 Nyloc Nut	4
9	2403	Mounting Bracket	1
10	2404	Clamp Half	1
11	2406	M10 Bolt	2
12	2407	M10 Washer	4
13	2408	M10 Nyloc Nut	2
14	2405	Sword Pin	1

TRENCH ARM ASSEMBLY PROCEDURE



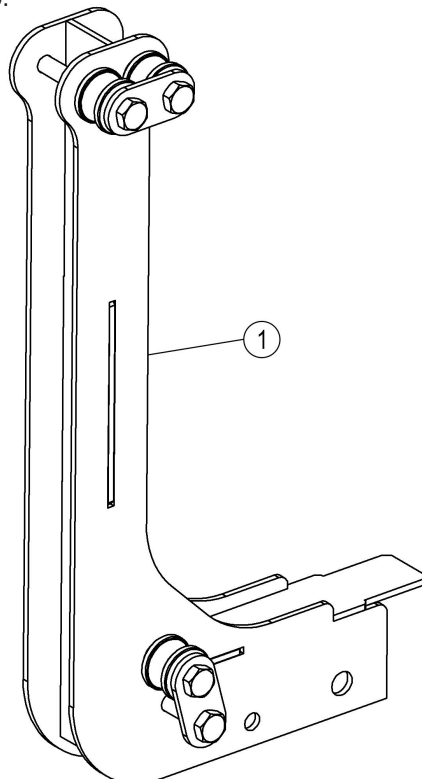
**STEP 1**

Attach Trench Arm Assembly (Item 1) to the Mounting Bracket (Item 9) by aligning the mounting holes and inserting the Sword Pin (Item 14). To lock the Sword Pin in position, turn the pin end by 90° to form a 'T' stop.



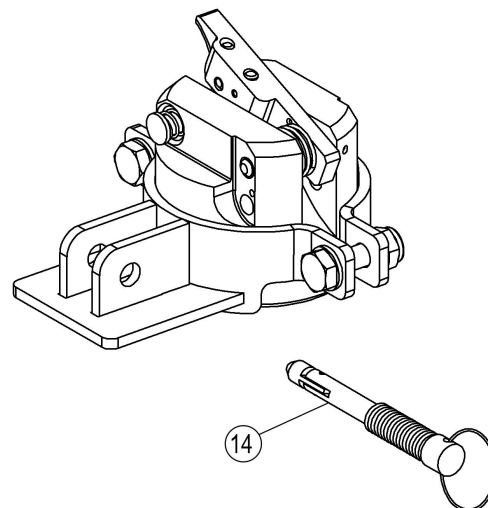
**STEP 2**

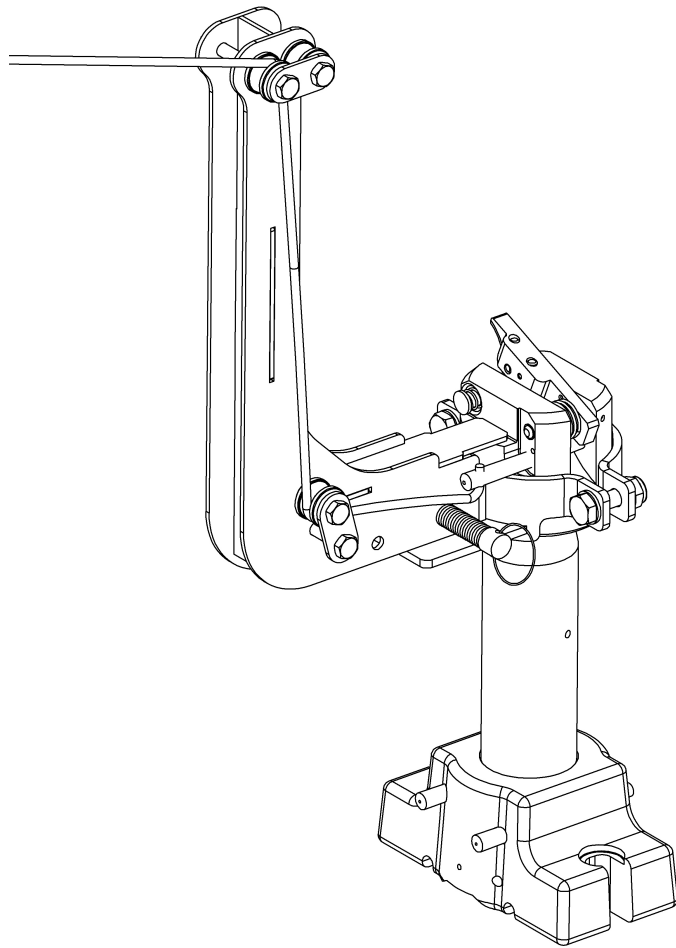
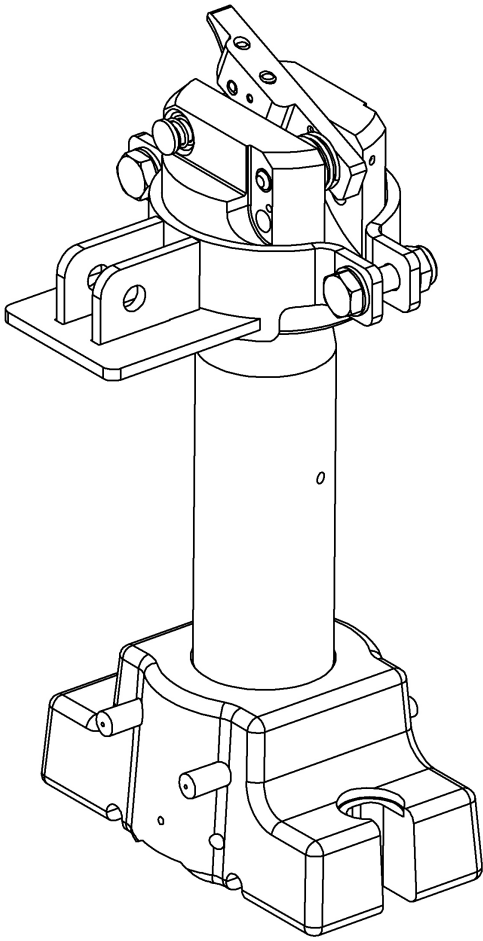
Connect the Trench Arm Assembly and Mounting Bracket to the Cable Spiker Cap, along with the Clamp Half (Item 10). Use M10 Bolts (Item 11, qty 2), M10 Washers (Item 12, qty 4) & M10 Nyloc Nuts (Item 13, qty 2) to fix the Trench Arm Assembly to the Clamp Half. Please note, the protruding plate on the Trench Arm must sit on top of the shoulder of the Cable Spiker Cap. Please ensure the Trench Arm is assembled on the Safety Button side of the Cable Spiker Cap as shown above.



**STEP 3**

Once the M10 Nuts have been sufficiently tightened, remove the Sword Pin (Item 14) and remove the Trench Arm Assembly (Item 1) from the bracket.





**STEP 4**

Assemble the Cable Spiker Cap to the Barrel, completing the Cable Spiker Assembly.

**STEP 5**

Reattach the Trench Arm Assembly to the Mounting Bracket to complete the Trench Arm Kit. Finally, feed the lanyard cord through the sheaves (pulleys) as shown above. The Trench Arm Kit is now ready for use.



**NEVER ATTACH TRENCH ARM TO CABLE SPIKER WITH LIVE BLANK IN THE CHAMBER. ALWAYS LOAD THE BLANK ONCE FULLY ASSEMBLED**

# FRONTMATEC

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