

# Long Reach Scalers

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## Operation and Maintenance Manual



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## DECLARATION OF CONFORMITY

We,

Trelawny SPT Limited of  
Trelawny House, 13 Highdown Road, Sydenham Industrial Estate, Leamington Spa, Warwickshire, CV31  
1XT, United Kingdom,

Declare that under our sole responsibility for supply/manufacture of the product

Name of product \_\_\_\_\_

Model, Serial Number \_\_\_\_\_

Year of production \_\_\_\_\_

to which this document relates is in conformity with the provisions of the following Directive(s), Normative Documents and their relevant Standards:

<b>2006/42/EC</b>	<b>MACHINERY DIRECTIVE</b>
<b>2006/95/EC</b>	<b>LOW VOLTAGE DIRECTIVE</b> <b>(Applicable only to products using electric power)</b>
<b>EN ISO 11148-4:2012</b>	<b>HAND HELD NON-ELECTRIC</b> <b>(Non-Rotary Percussive Tools)</b>

Date and place of issue,  
24<sup>th</sup> June 2018  
Leamington Spa, England.

**CE**

A handwritten signature in blue ink, appearing to read "Rob Chapman".

Rob Chapman,  
Managing Director.

CZ	<p>Prohlášení o přizpůsobení  My, společnost Trelawny SPT Limited  podávame daňové příznání, že výrobek a dodávka výrobku  název výrobku  Model, výrobní číslo  Pro které se průkaz týká, je přizpůsobení s zásoby od následující příkazov  a jejich pohotovosti:  2006/42/EC Příkaz soustrojí  73/23/EC Příkaz nízkého napětí (upotřebitelné jedině do výrobku použití  elektrické energie)</p>	LT	<p>ATITIKTIES DEKLARACIJA  Mes, Trelawny SPT Limited  Prisiimdami visą atsakomybę, deklaruojame, kad tiekiamas / gaminamas produktas  Produktu pavadinimas  Modelis, serijos numeris  Kuriam taikoma ši deklaracija, atitinka šių direktyvų, norminių aktų ir su jais susijusių standartų  reikalavimus:  2006/42/EC [rangos direktyva  73/23/EC Žemos [tampas direktyva (taikoma tik elektriniams [rengimams)</p>
DE	<p>Übereinstimmungserklärung  Wir, Trelawny SPT Limited  erklären, dass unter unserer alleinigen Verantwortung für die Lieferung und  Herstellung des Produktes  Name des Produktes  Model, Seriennummer  auf welches sich dieses Dokument bezieht, stimmt mit den Vorgaben der  folgenden Direktive, normativen Dokumente und deren jeweiligen Masstabe  ein:  2006/42/EC Maschinenrichtlinie  73/23/EC Niederspannungsrichtlinie (nur zutreffend auf Produkte, die  Strom benutzen)</p>	MT	<p>DIKJARAZZJONI TA KONFORMITA  Aħna, Trelawny SPT Limited  Niddikjaraw li aħna responsabbli kompletament għal provista / manifattura tal-prodott hawn imsemmi :  Isem il-Prodott  Modell, Serial number  Dan id-dokument magħmul għal prodott imsemmi hawn fuq, li huwa skond il-provizjonijiet imsemmija  fid-dokumenti tal-klassi tax-xogħol :  2006/42/EC Machinery Directive  73/23/EC Low Voltage Directive (tapplika biss għal prodotti li jaħdmu bi-elettriku)</p>
DK	<p>Erklæring om overensstemmelse  Vi, Trelawny SPT Limited  Erklærer hermed at under vores ene forhandling ansvar for vores  forhandling/produktion af produktet  Produkt navn  Model, serie nummer  For hvilket dette dokument referer, at det er i overensstemmelse med  bestemmelser af følgende direktiver, normative dokumenter og deres  relevante standart:  2006/42/EC Machinery directive  73/23/EC Low voltage directive</p>	NL	<p>EENVORMIGHEIDSVERKLARING  Wij, Trelawny SPT Limited  Verklaren dat wij de volledige verantwoordelijkheid dragen voor het leveren/fabriceren van het  volgende product:  Naam van het product  Type, Serienummer  En verklaren dat het product waarnaar dit document verwijst eenvormig is met de voorzieningen van  de volgende Richtlijn(en), Normatieve Documenten en hun relevante Standaarden:  2006/37/CE MACHINE RICHTLIJN  73/23/CE LAAGSPANNINGSRICHTLIJN (uitsluitend van toepassing bij producten die  elektrische stroom gebruiken)</p>
EE	<p>TOOTE VASTAVUSE DEKLARATSIOON  Meie, Trelawny SPT Limited  Deklareerime, et vastutame järgmise varustuse/toote müügi eest  Toote nimetus  Mudel, Seeria number  Antud dokument tõendab toote vastavust järgmistele direktiividele,  normatiivaktidele ja nende samaväärsetele standarditele:  2006/42/EC MASINA DIREKTIIVID  73/23/EC MADALPINGE DIREKTIIVID (Kohandatakse vaid toodetele, mis  kasutavad elektrivoolu)</p>	PL	<p>Deklaracja Zgodności  My, Firma Trelawny SPT Limited,  oświadczamy w naszej odpowiedzialności, że produkcja i dostawa urządzenia  Nazwa produktu  Model, numer seryjny  do którego ten dokument należy, jest zgodne z klauzulami następujących zarządzeń i ich istotnych  standardów:  2006/42/EC Zarządzenie mechaniczne  73/23/EC Zarządzenie niskiego napięcia elektrycznego (Zastosowanie tylko przy urządzeniach  elektrycznych)</p>
EL	<p>ΔΗΛΩΣΗ ΠΙΣΤΟΤΗΤΑΣ  Η εταιρεία Trelawny SPT Limited  Δηλώνει ότι υπο μοναδική ευθύνη ως κατασκευαστής / προμηθευτής του  παρακάτω προϊόντος  περιγραφή προϊόντος  μοντέλο, αριθμός σειράς  και στο οποίο αναφέρεται αυτή η δήλωση, είναι συμβατό με τις  προδιαγραφές που ορίζονται στις ακόλουθες Κοινοτικές Οδηγίες Ελεγκτικές  Διατάξεις κι άλλες σχετικές προδιαγραφές  2006/42/EC ΟΔΗΓΙΑ ΠΕΡΙ ΜΗΧΑΝΗΜΑΤΩΝ  73/23/EC ΟΔΗΓΙΑ ΠΕΡΙ ΧΑΜΗΛΗΣ ΤΑΣΗΣ (αφορά μόνον προϊόντα που  λειτουργούν με ηλεκτρικό ρεύμα)</p>	PT	<p>DECLARAÇÃO DE CONFORMIDADE CE  A empresa TRELAWNY SPT LIMITED  Declara, sob sua inteira responsabilidade, que o fornecimento/fabrico do seguinte produto:  Designação do produto  Modelo, Número de Série  a que esta declaração se refere, está em conformidade com o preceituado nas Directivas e Normas  Comunitárias abaixo indicadas:  2006/42/EC DIRECTIVA DE MÁQUINAS  73/23/EC DIRECTIVA DE BAIXA VOLTAGEM (Aplicável apenas a produtos que utilizam energia  eléctrica)</p>
ES	<p>Declaración de Conformidad  Nosotros, Trelawny SPT Limited  Declaramos que bajo nuestra completa responsabilidad de la  fabricación/suministro del producto  Nombre del Producto  Modelo, No de Serie  A quién este documento se refiere, está de acuerdo con lo relacionado en la  Directriz, Normativa Documentada y sus relevantes standards:  2006/42/EC Directorio de Maquinaria  73/23/EC Directorio de Bajo Voltaje (Aplicable solamente a productos que  funcionen con electricidad)</p>	RU	<p>СВИДЕТЕЛЬСТВО О СООТВЕТСТВИИ  Мы, Trelawny SPT Limited  Заявляем, что несем полную ответственность за поставку/производство нижеуказанной  продукции  Наименование изделия  Модель, серийный номер  на которую выдано настоящее Свидетельство, и которая соответствует положениям  следующей(их) Директив(ы), нормативным документам и относящимся к ним стандартам:  2006/42/EC ДИРЕКТИВА ПО МЕХАНИЗМАМ  73/23/EC ДИРЕКТИВА ПО НИЗКОВОЛЬТНОМУ ОБОРУДОВАНИЮ  (распространяется только на изделия с электропитанием)</p>
FI	<p>ILMOITUSVAHVISTUS  Me, Trelawny SPT Limited  Vahvistamme tuotteiden toimittamisesta/valmistamisesta  Tuotenimi  Malli, sarjanumero  Tällä todistuksella vahvistamme säädökset seuraviin ohje/ohjesiin, Yleisiin  papereihin ja niihin liittyvät vaatimukset:  2006/42/EC KONEISTON OHJEET  73/23/EC PIENJÄNNITTE OHJEET (tarvitaan ainoastaan tuotteille jotka  käyttävät sähkövoimaa)</p>	SE	<p>FÖRSÄKRAN OM ÖVERENSSTÄMMELSE  VI, TRELAWNY SPT LIMITED  FÖRKLARAR ATT VI MED ENSAMT ANSVAR ANSKAFFAT / TILLVERKAT PRODUKTEN  PRODUKTNAMN  MODELL och SERIE NUMMER  TILL VILKEN DETTA DOKUMENT HÄNVISAR, ÄR I ÖVERENSSTÄMMELSE MED FÖLJANDE  DIREKTIV, NORMATIVA DOKUMENT OCH DERAS RELEVANTA STANDARDER  2006/42/EC MASKINDIREKTIV  73/23/EC LÅGSTRÖMSDIREKTIV (TILLÄMPLIG PÅ ELEKTRISK DRIVNA PRODUKTER)</p>
FR	<p>DÉCLARATION DE CONFORMITÉ  Nous, soussignés Trelawny SPT Limited  déclarons que le produit sous-nommé  Nom du produit  Modèle et Numéro de Série  et pour lequel nous prenons entière responsabilité pour sa fourniture et  manufacture, est conforme aux clauses des directives suivantes, documents  normatifs et normes qui s'y appliquent:  2006/42/EC DIRECTIVE POUR LA MACHINERIE  73/23/EC DIRECTIVE POUR BAS VOLTAGE (n'est applicable qu'aux  produits utilisant l'énergie électrique)</p>	SI	<p>IZJAVA O SKLADNOSTI  Trelawny SPT Limited  pod polno odgovornostjo izjavljamo, da so spodaj navedeni proizvodi, ki jih dobavljamo/proizvajamo:  Ime proizvoda  Model, serijska številka  na katere se ta dokument nanaša, proizvedeni v skladu z določili naslednjih direktiv, normativnih  dokumentov in njihovih relevantnih standardov:  2006/42/EC DIREKTIVA O STROJIH  73/23/EC DIREKTIVA O STROJIH Z NIZKO VOLTAŽO (nanaša se samo na proizvode na  električni pogon)</p>
HU	<p>MEGFELÉLŐSÉGI NYILATKOZAT  Mi, A "Trelawny SPT Limited" cég  Felelősségünk tudatában kijelentjük, hogy mint a termék szállítója/ gyártója  Termék neve  Típus, Sorozatszám  amelyre jelen dokumentum vonatkozik, megfelel az alábbi Irányelv(ek),  Irányadó Dokumentumok előírásainak, és az azokat meghatározó  szabványoknak:  2006/42/EC GÉPÉSZETI IRÁNYELVEK  73/23/EC KISFESZÜLTSGŰ IRÁNYELVEK (Csak az elektromos  meghajtású gépeknél)</p>	TR	<p>UYGUNLUK BEYANI  Trelawny SPT Limited  Aşağıdaki, üretim ve tedarikinden tek babýna sorumlu olduđu ürünün  Ürün adı  Model/Seri no  na katere se ta dokument nanaša, norm belgelerinin ve ilgili standartlarının  kapsamýna uygun olduđu beyan eder:  2006/42/EC MAKÝNALAR YÖNETMELÝĐÝ  73/23/EC DÜPÜK GERÝLÝM YÖNETMELÝĐÝ (Yalnız elektrikli çalýþan ürünlerde geçerlidir)</p>
IT	<p>DICHIARAZIONE DI CONFORMITA  La Società Trelawny SPT Limited  Dichiara, sotto la propria responsabilità, che la fornitura / produzione del  prodotto  nome prodotto  modello, codice  a cui si riferisce tale documento è conforme alle seguenti Direttive, ai  documenti della Normativa ed ai relativi standard:  2006/42/EC DIRETTIVA SULLE APPARECCHIATURE  73/23/EC DIRETTIVA SUL BASSO VOLTAGGIO (applicabile  esclusivamente per i prodotti che utilizzano energia elettrica)</p>		

# OPERATION

## General Information

Before operating, performing maintenance or repairing the Long Reach Scaler this manual must be read and understood by the operator, if in any doubt, ask your supervisor before using this equipment.

Local safety regulations must be followed at all times. Failure to follow these instructions could result in damage to the Scaler and/or personal injury.

Trelawny SPT Limited disclaims all responsibility for damage to persons or objects arising as a consequence of incorrect handling of the tool, failure to inspect the tool for damage or other faults that may influence the operation prior to starting work, or failure to follow the safety regulations listed or applicable to the job site.

The tool is primarily designed for the removal of workshop soiling, solidified paint spills, carpet and ceramic tile removal, heavy rust, and scale, concrete splashes and ; it can also be used for the removal of laitance from concrete.

This tool must not be used in a fixture.

This tool can be purchased in either Needle Scaler or Chisel Scaler versions, with an adaptor available for converting from one version to another. It can be used both indoors and out.

## Air Supply

The compressed air must be free from water and dirt. The installation of a filter/regulator/lubricator air preparation set (with moisture trap) adjacent to the tool is **strongly recommended**.

Always clear the air hose before connecting to the tool. Ensure that no moisture (condensation) is present in the air hose.

Ensure that a minimum 10mm (3/8") bore air hose is used and that all couplings are secure, leak free and in good condition.

Limit the length of air hose to 10M (33ft). Where extra length is necessary, for each additional 15M (50ft) of air hose used, the pressure drop is approximately 0.21bar (3psi).

**For safe and efficient operation the correct operating pressure is 6.2bar (90 psi).**

Do not let the operating pressure fall below 5.5bar (80p.s.i.) or rise above 6.9bar (100 psi) absolute maximum.

Preferably, the compressor should be able to supply a minimum of 2.8 L/s (6 cfm).

In particularly cold temperatures it is recommended that a proprietary anti-freeze lubricating oil is used.

## Lubrication

Oil the tool daily before use. Put a few drops of one of the following zinc free air tool lubricants through the air inlet.

SHELL S22 or R10  
CASTROL Hyspin ZZ32

See also the section on AIR SUPPLY for further information and recommendations.

## Safety

Always, read through these instructions first before use.

### Do-

Be aware that this tool is not electrically insulated.

Wear Personal Protective Equipment including safety goggles, footwear, ear defenders and gloves. In some environments it will be necessary to wear facemasks or breathing apparatus.

Be aware that this tool can create dust and flying debris.

Keep hands and clothing away from moving parts.

Store this tool in a secure and dry environment.

Be aware of others working around you.

Ensure that this tool is lubricated daily.

**Always observe safe-working practices at all times.**

### Do not-

Allow the tool to run unattended.

Modify this tool in any way, as this will invalidate the warranty and could lead to serious injury.

Allow the tool to run continuously whilst not in contact with the surface being prepared.

Use the tool if you become tired, this can lead to physical strain or injuries.

Hold the exposed chisel or needles whilst the tool is in use, this could cause vibration damage to the hands.

Use this tool in potentially explosive environments.

Drag this tool by the air hose.

Use petrol (gasoline), thinners or any other high flash point solvent to clean the tool.

Care must be taken to avoid damaging or tripping over the trailing air hose.

**Please note:** Unrestrained hoses can whip dangerously if they become detached.

## Risk of Hand-arm Vibration injury

These tools may cause Hand-arm Vibration Syndrome injury if their use is not adequately managed.

We advise you to carry out a risk assessment and to implement measures such as:

Limiting exposure time [i.e. actual trigger time, not total time at work], job rotation, ensuring the tools are used correctly, ensuring the tools are maintained according to our recommendations, and ensuring that the operators wear personal protective equipment [PPE] particularly gloves and clothing to keep them warm and dry.

Employers should consider setting up a programme of health surveillance to establish a benchmark for each operator and to detect early symptoms of vibration injury.

We are not aware of any PPE that provides protection against vibration injury by attenuating vibration emissions.

**See 'Specifications' section for vibration emission data.**

Further advice is available from our Technical Department.

We strongly advise you to visit the Health & Safety Executive website <http://www.hse.gov.uk/vibration> This site provides excellent advice and information on HAV and it includes a Hand-arm Vibration Exposure Calculator that is easy to use to work out the daily vibration exposure for each of your operators.

## Starting work

### Please note:

The carbon steel chisels or needles provided with these tools are not intended for use in a potentially explosive atmosphere.

### Prior to operating the tool check: -

That all fittings are secure, free from leaks and air hoses are in good condition.

**That the air pressure is correct for this tool 6.2 bar (90 p.s.i.).**

Put a few drops of a recommended lubricant into the air inlet of the tool.

To operate the tool, which is dependant on the type of lever fitted, for those fitted with a safety lever, first push thumb button forwards and then for both styles of lever, pull the lever towards the hand grip to start the tool, then apply the Chisel or Needles to the surface being prepared.

**Note:** Several types of Chisel are available for the Long Reach Chisel Scaler to suit the job in hand, including Aluminium Bronze spark resistant Chisels; a Needle Scaler Attachment is also available. See parts list for details.

**Warning!** This tool will continue to run for a few seconds after releasing the throttle lever; it is recommended that the tool remains in contact with the work surface until the air is exhausted. Gloves and personal protective equipment must be worn when using this tool. (See previous section on Risk of Vibration Injury). Care must be taken to avoid damaging or tripping over the air hose. Maintain contact with the work surface with sufficient pressure to keep the tool from bouncing off the surface. Handled correctly the Long Reach Scaler will work quickly and efficiently.

**To switch off, simply release the throttle lever.**

Safe use of this tool requires a solid stance and secure foothold, the tool may be used in other postures but care must be taken to ensure the operator adopts a firm and stable position. Excessive operator pressure will not improve the tools efficiency but could cause premature tool failure and increase operator fatigue. It could also increase the vibration emission level.

**Never allow the tool to run continuously whilst not in contact with the surface being prepared.**

Do not use the Scaler as a lever, if the Chisel becomes embedded in the material, withdraw and try again. Never allow the tool to run continuously whilst not in contact with the surface being prepared.

# MAINTENANCE

## Chisels

Various sizes and types of Chisel are available.

See parts list for details.

### Fitting of Chisel Holder

Before fitting the Chisel Holder (31), disconnect the tool from the air supply.

To fit the Chisel Holder (31) ensure that the pinch bolt (30) on the Chisel Holder is loose, screw the Chisel Holder fully on to the Cylinder (10).

Turn the knurled collar on the Chisel Holder (31) until the retaining ball is fully visible.

Insert the Chisel (32) into the Chisel Holder (31) and select the nearest position to align the blade with the Throttle Lever (7).

Turn the collar half a turn to lock the Chisel (32) in place.

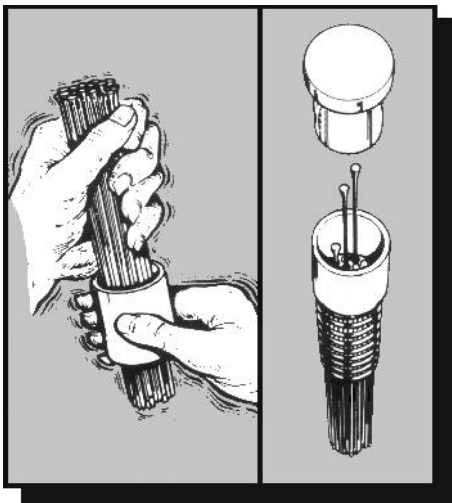
If the Chisel (32) does not line up, it may require the Chisel Holder (31) to be unscrewed slightly.

Tighten the pinch bolt (30) using a 6mm AF Allen key. To release the Chisel (32), rotate the knurled collar until the retaining ball is fully visible and remove the Chisel (32).

### Needle Holder Attachment

Before fitting the Needle Scaler Attachment, disconnect the air supply to the tool.

Assemble the component parts of the Needle Scaler attachment in the following order; insert the Needles (26) into the Needle Holder (25), place the Spring (27) over the Needles,



insert the Anvil (24) into the Needle Holder (25), then place the assembly into the Intermediate Tube (28). Check the service layout for clarification. Screw the assembly fully onto the Cylinder (10) and tighten the pinch bolt (30) using a 6mm AF Allen key.

Slide the Front Tube (29) on to the Intermediate Tube (28) until approximately 25mm (1") of Needle protrudes from the Front Tube (29). Tighten the pinch bolt (30) using a 6mm AF Allen key.

As the Needles wear, adjust the Front Tube by loosening the Allen Screw and adjusting the Front Tube so that approximately 1" (25mm) of Needle protrudes from the Front Tube (29) and then retighten the Allen Screw.

### Pointed tip needles

Sharpened to a nail point, these are most effective in breaking through very hard scale on surfaces where some surface indentation is permissible - or where keying (i.e. profile) of the surface is desirable.

Pointed tip needles are available in 3mm and 4mm only.

### Chisel tip needles

These are general purpose needles, flattened to a chisel like blade and are most effective in the removal of thicker material, while leaving a less pitted surface than the Pointed tip needles but still giving some surface indentation (i.e. profile).

Chisel tip needles are available in 3mm only.

### Flat tip needles

Machined to a flat tip, these needles will leave slight marking (i.e. profile) on the surface; the 2mm needles can have a burnishing effect. 2mm Needles are recommended for use on thin gauge metals and any surface where light treatment is desired.

Flat tip needles are available in three sizes - 2mm, 3mm and 4mm.

## Maintenance

Only a competent person, in a suitably equipped workshop, must carry out maintenance.

**Disconnect the tool from the air supply before carrying out any maintenance or any of the operations in the next sections.**

Clean all debris from the exterior of the tool.

### Cleaning

At intervals of no more than 40 hours or if operation becomes unproductive and the Piston shows signs of sticking, dismantle and clean with a highly refined paraffin.

Replace worn components as necessary.

Immediately after cleaning, thoroughly oil the tool with one of the recommended lubricants.

### Piston and Cylinder Removal

Remove the Chisel Holder (31) or Needle Attachment as previously described. Clamp the Cylinder (10) firmly in a vice using the flats provided. Using a suitable wrench and the spanner flats provided, unscrew the Cover (14) from the Cylinder (10). This may initially need some extra effort to break the bond. With the Cylinder (10) free of the Cover, push the Piston (9) out of the Cylinder (10).

Remove the Cylinder (10) from the vice and inspect all parts for wear, particularly the Piston (9) and the Cylinder's bores. Remove the two O' Rings (11)(12) from the Cylinder (10).

### Valve Body Servicing

Clamp the Valve Body Assembly firmly in a vice at the Valve Body (6) using the flats provided, with the Throttle Lever (7) uppermost. Using a 3mm diameter pin punch and small hammer, remove the Throttle Lever Roll Pin (8), and remove the Throttle Lever (7). Rotate the Valve Body (6) 180 degrees in the vice to gain access the Valve Cap (1). Unscrew the Valve Cap (1) using a screwdriver, check the Valve Cap 'O' Ring (2) for signs of deterioration, remove the Spring (3), push out the Valve Stem (4) and remove the valve seat 'O' Ring (5). Check the Valve Stem (4) and 'O' Ring (5) for wear.

## Assembly

Before any assembly takes place, ensure all parts are clean and are coated in a thin film of recommended air tool lubricant.

It is strongly recommended that all the O'Rings and any other worn parts be replaced using only genuine Trelawny spares.

### Valve Body Assembly

Clamp the Valve Body firmly in a vice, using the flats provided, and with the threaded hole uppermost.

Insert the valve seat 'O' Ring (5) into Valve Body (6), followed by the Valve Stem (4), Spring (3), then the Valve Cap (1) complete with its 'O' Ring (2), tighten the Valve Cap (1) with a screwdriver.

Rotate assembly 180 degrees in the vice. Using a 3mm diameter pin punch locate and align the Throttle Lever (7) in position, then drive in the Throttle Lever Roll Pin (8) into the pin location.

### Piston and Cylinder Assembly

Fit new O'Rings (11)(12) to the Cylinder (10), Lubricate the Piston (9) and Cylinder bore, insert the Piston (9) into the Cylinder bore. Ensure that the threads on the Cylinder (10) and in the Cover are clean and dry.

Clamp the Cylinder (10) in a vice using the flats provided.

Then using a suitable wrench on the spanner flats provided, tighten the Cover onto the Cylinder (10) and torque to 135Nm (100lbs/ft). Refit the Chisel Holder/Needle Scaling Attachment as described previously.

## Recommended Lubricants

Oil the tool daily before use. Put a few drops of one of the following zinc free air tool lubricants through the air inlet.

SHELL	S22 or R10
CASTROL	Hyspin ZZ32

## Disposal

When the tool and its accessories are taken out of service for disposal, it is recommended that: -

They are rendered unusable to prevent improper re-use.

They are dismantled into component form, segregated according to material composition and disposed of using waste recycling processes specified by local regulations.

## Machinery Directive Information

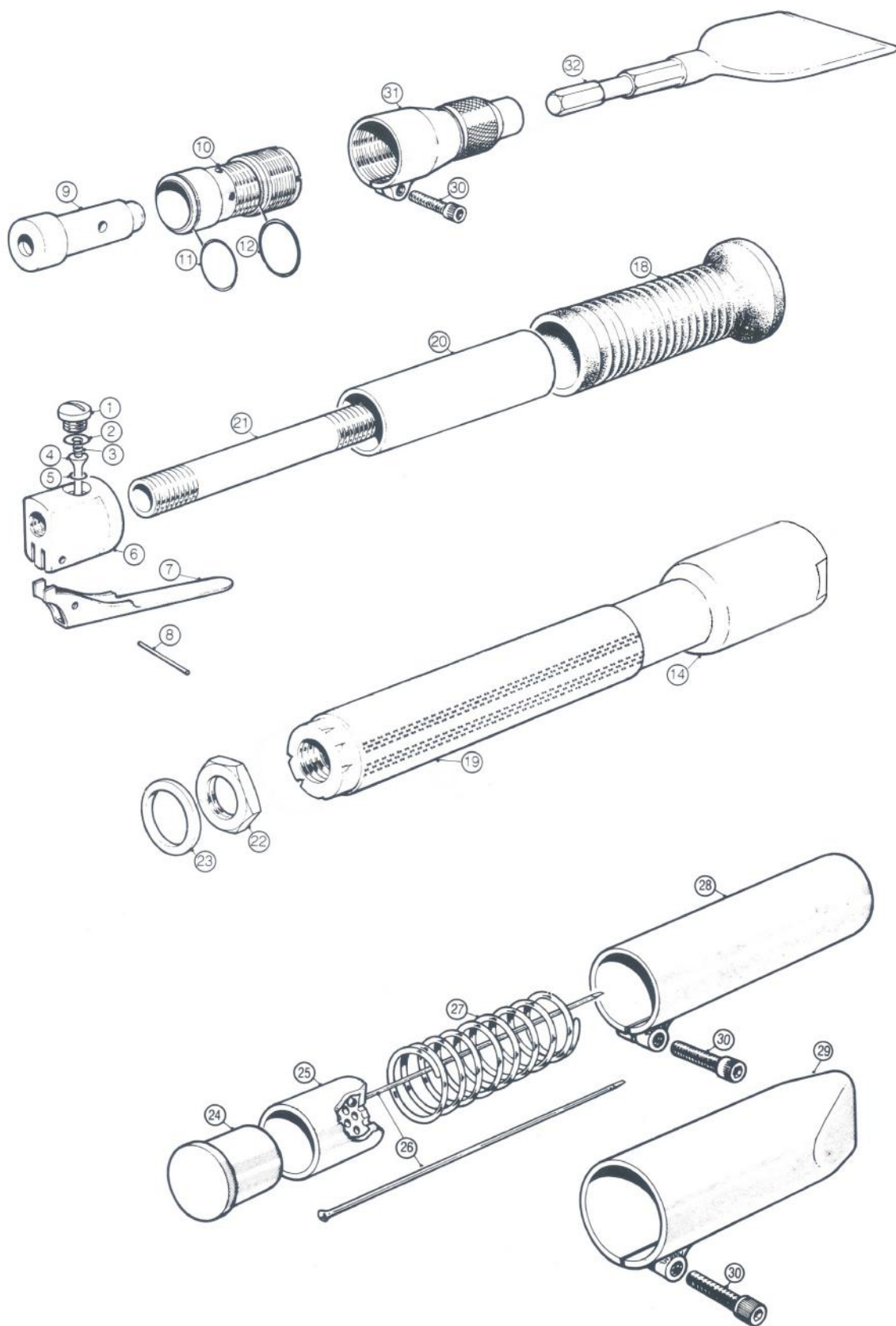
This tool has been designed and produced in accordance with the following directive:

2006/42/EC Machinery Directive

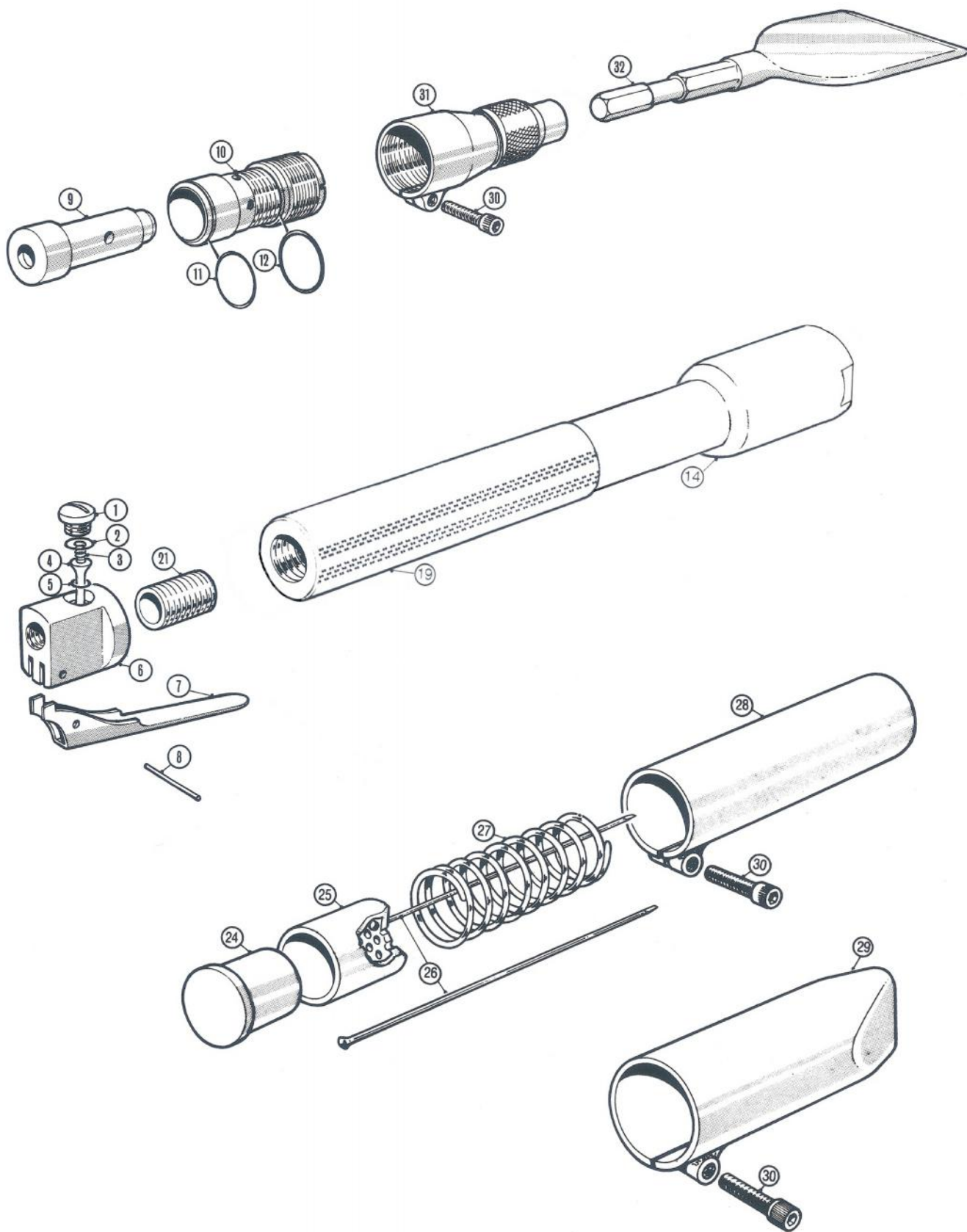
and applicable harmonised standard:  
EN ISO 1 1148-4:2010



# SERVICE LAYOUT - Standard Scaler



# SERVICE LAYOUT - Lite Scaler



# PARTS LIST

ITEM	PART No	DESCRIPTION	ITEM	PART No	DESCRIPTION
<b>Common components</b>			<b>Common components</b>		
1	615.3021	Valve Cap	29	417.3032	Front Tube (Straight)
2	809.0139	O'Ring (Valve Cap)		418.3032	Front tube (Round)
3	712.3022	Valve Spring		415.3532	Needle Scaler Assembly (Items 24 to 28)
4	618.3022	Valve Stem	30	806.0830	Cap Head Screw
5	809.0089	O'Ring - (Valve Seat)	31	419.3541	Chisel Holder Assembly 5/8" Hex
6	616.3021	Valve Body	32	705.1102	Chisel 5/8" Hex 8" Long x 4" Blade
	423.3021	Valve Body Assembly BSP Thread (inc items 1-8)		431.3504	Scraper Holder - includes 4" Replaceable Blade
	423.3521	Valve Body Assembly NPT Thread (Inc items 1-8)		431.3508	Scraper Holder - inc 8" Replaceable Blade
				431.3512	Scraper Holder - inc 12" Replaceable Blade
7	716.3000	Throttle Lever		431.3904	Scraper Holder - inc Bevelled 4" Replaceable Blade
8	813.0108	Roll Pin		431.3908	Scraper Holder - inc Bevelled 8" Replaceable Blade
9	612.3001	Piston		431.3912	Scraper Holder - inc Bevelled 12" Replaceable Blade
10	613.3101	Cylinder		439.3504	Pack of 5 Scraper blades 4"
11	809.0289	O'Ring (Cylinder -small diameter)		439.3508	Pack of 5 Scraper blades 8"
12	809.0299	O'Ring (Cylinder -large diameter)		439.3512	Pack of 4 Scraper blades 12"
24	610.3001	Anvil		439.3524	Pack of 5 Bevelled Scraper blades 4"
25	601.3003	3mm Needle Holder		439.3528	Pack of 5 Bevelled Scraper blades 8"
	601.3002	2mm Needle Holder		439.3522	Pack of 5 Bevelled Scraper blades 12"
	601.3004	4mm Needle Holder		705.1100	Chisel 5/8" Hex 9" Long x 2" Blade
26	412.1165	6 x 2mm Needle Sets (Flat Tip)		705.1106	Chisel 5/8" Hex 9" Long x 2" Blade
	413.2128	6 x 3mm Needle Sets (Chisel Tip - standard fitment)		705.1112	Chisel 5/8" Hex 8" Long Spark Resistant 4" Blade
	413.1128	6 x 3mm Needle Sets (Flat Tip)		708.1100	Comb Holder 5/8" Hex for 1 1/2" Steel Comb
	413.3128	6 x 3mm Needle Sets (Pointed Tip)		708.1101	Comb 1 1/2" Wide
	403.1328	1 x 3mm Needle Sets (Beryllium Copper)		641.3512	Yoke for Scraper Blades (no blade)
	414.2119	6 x 4mm Needle Sets (Chisel Tip)		806.0816	Button Head Screw for Yoke/Scraper Blade
	414.1119	6 x 4mm Needle Sets (Flat Tip)		824.0800	Nyloc Nut for Yoke/Scraper Blade
	414.3119	6 x 4mm Needle Sets (Pointed Tip)			
	442.1107	Pack of 2000 2mm Needles (Flat Tip)	<b>Long Reach components (Standard tool)</b>		
	452.1110	Pack of 100 2mm Needles (Flat Tip)	14	425.3225	2' Cover std
	443.2107	Pack of 1000 3mm Needles (Chisel Tip)		425.3425	4' Cover std
	443.1107	Pack of 1000 3mm Needles (Flat Tip)		425.3525	5' Cover std
	443.3107	Pack of 1000 3mm Needles (Pointed Tip)		425.3625	6' Cover std
	443.1307	Pack of 500 3mm Needles (Beryllium Copper)	18	717.3055	Rubber Handle Grip
	453.2110	Pack of 100 3mm Needles (Chisel Tip)	19	717.3501	Cover Grip
	453.1110	Pack of 100 3mm Needles (Flat Tip)	20	624.3001	Handle Tube
	453.3110	Pack of 100 3mm Needles (Pointed Tip)	21	623.3001	Centre Tube
	453.1310	Pack of 100 3mm Needles (Beryllium Copper)	22	625.3001	Locknut
	444.2107	Pack of 500 4mm Needles (Chisel Tip)	23	810.9000	Sealing Washer
	444.1107	Pack of 500 4mm Needles (Flat Tip)			
	444.3107	Pack of 500 4mm Needles (Pointed Tip)	<b>Long Reach components (Lite tool)</b>		
	454.2105	Pack of 50 4mm Needles (Chisel Tip)	14	425.3498	4' Lite Cover
	454.1105	Pack of 50 4mm Needles (Flat Tip)		425.3598	5' Lite Cover
	454.3105	Pack of 50 4mm Needles (Pointed Tip)		425.3698	6' Lite Cover
27	712.3001	Compression Spring	19	717.3501	Cover Grip
28	416.3132	Intermediate Tube	21	627.3598	Threaded Adapter



# SPECIFICATION

Model Type	LR2	LR4	LR4 Lite	LR5	LR5 Lite	LR6	LR6 Lite
Piston Diameter	28.6mm	28.6mm	28.6mm	28.6mm	28.6mm	28.6mm	28.6mm
Piston Stroke	39mm	39mm	39mm	39mm	39mm	39mm	39mm
Blows per Minute	2200	2200	2200	2200	2200	2200	2200
Air Consumption	2.1lps (4.5cfm)	2.1lps (4.5cfm)	2.1lps (4.5cfm)	2.1lps (4.5cfm)	2.1lps (4.5cfm)	2.1lps (4.5cfm)	2.1lps (4.5cfm)
Air Inlet	1/4" BSP (c/w 1/4"BSP to 3/8" hose tail)						
Overall Length	29" (740mm)	43" (1100mm)	43" (1100mm)	55" (1400mm)	55" (1400mm)	67" (1710mm)	67" (1710mm)
Nett Weight	4.8kg (10.6bs)	5.7kg (12.6lbs)	3.7kg (8.2lbs)	6.25kg (13.8lbs)	4.05kg (8.9lbs)	6.9kg (15.2lbs)	4.55kg (10lbs)
Noise Level Lpa db(A) - Chisel Scaler	81.3	80.5	85.8	82.4	81.2	84.3	84.2
Noise Level Lpa db(A) - Needle Scaler	103.1	103.5	104.7	103	104.5	103.5	104.5
Noise Level Lwa db(A) - Chisel Scaler	94.3	93.5	98.8	95.9	-	-	-
Noise Level Lwa db(A) - Needle Scaler	116.1	117.7	116.5	116	117.5	116.5	117.5
Vibration Level AEQ - Needle Scaler H1* (k) **	15.3	11.7	25.1	12.3	19.3	12.5	16.2
Vibration Level AEQ - Needle Scaler H2* (k) **	12.9	12.2	19.2	11.8	18.7	12.2	18.8
Vibration Level AEQ - Chisel Scaler H1* (k)**	4.1	8.9	13.0	11.4	10.3	7.7	10.4
Vibration Level AEQ - Chisel Scaler H2* (k)**	5.4	9.5	13.2	10.1	10.8	9.8	11.6

H1\* Indicates that the test was taken at the primary handgrip location, next to the throttle lever.  
H2\* Indicates that the test was taken at the secondary handgrip position.

Noise level measured in accordance with: EN ISO 15744: 2008

## Risk of Hand Arm Injury

(k) \*\* Equals the factor of uncertainty, which allows for variations in measurement and production. Vibration Data figures are tri-axial, which gives the total vibration emission.

Because of various factors, the range of vibration emission during intended use can vary. The vibration is dependent on the task, the operators grip, and feed force employed etc.

NOTE: The above vibration levels were obtained from tri-axial measurements to comply with the requirements of "The Control of Vibration at Work Regulations 2005\*\*" and the revisions to the (8662) now EN ISO 28927:2012 and EN ISO 20643:2005 series of standards. These values are at least 1.4 times larger than the values obtained from single axis measurements.

\*Based on European Union Council Directive 2002/44/EC (Physical Agents (Vibration) Directive)

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