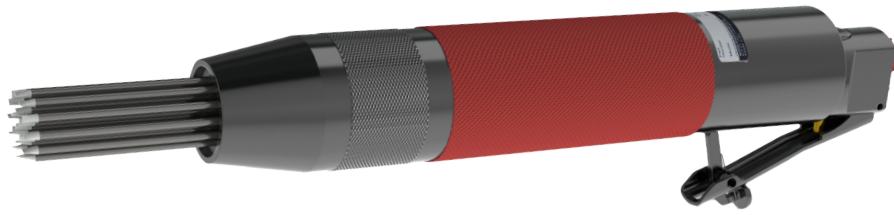


VL NEEDLE & CHISEL SCALERS

OPERATION & MAINTENANCE MANUAL



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INTRODUCTION

Thank you for choosing a product by Trelawny SPT Ltd, an innovative leading brand in the Surface Preparation sector.

This product has been manufactured under stringent quality standards to meet superior performance criteria. This manual contains the necessary maintenance information for you to ensure proper operation and care for this equipment.

In the unlikely event that you experience a problem please do not hesitate to contact your local Trelawny dealer or agent. We always welcome feedback and comments from our valued customers.



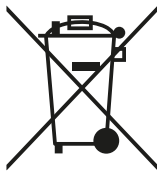
WARNING:

Carefully read through these original instructions before using your new TRELAWNY Equipment. Take special care to read warnings. TRELAWNY products have many features that will make your job faster and easier. Safety, performance, and dependability have been given top priority in the development of this product, making it easy to operate and maintain.



ENVIRONMENTAL PROTECTION:

The equipment, accessories and packaging should be sorted for environmentally friendly recycling. The plastic components are labelled for categorised recycling.



DISPOSAL:

Waste products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice.

GENERAL INFORMATION

Before operating any TRELAWNY equipment, this manual must be read and understood by the operator, if in any doubt ask your supervisor before using this equipment. Failure to follow these instructions could result in damage to the equipment and/or personal injury.

Trelawny SPT Ltd disclaims all responsibility for damage to persons or objects arising as a consequence of incorrect handling of the equipment, failure to inspect the equipment

prior to starting work for damage or other faults that may influence the operation of safe working of the equipment, or failure to follow the safety regulations listed or applicable to the job site.

Operators should be familiar with the data given in the specification section. Please keep these instructions in a safe and accessible place.

EU DECLARATION OF CONFORMITY



EU Declaration of Conformity

We, **Trelawny SPT Ltd of 13 Highdown Road, Sydenham Industrial Estate, Leamington Spa, Warwickshire, CV31 1XT, GB** declare that the DoC is issued under our sole responsibility and belongs to the following product:

PART NUMBER

DESCRIPTION

SERIAL NUMBER

YEAR OF CONSTRUCTION



The object of the declaration described above is in conformity with the relevant **Union Harmonisation Legislation:**

- **2006/42/EC** Machinery Directive

The following harmonised standards and technical specifications have been applied:

- **EN ISO 11148-4:2012** Hand-held non-electric power tools — Safety requirements
Part 4: Non-rotary percussive power tools

Technical files are held by Indutrade Benelux BV, Anton Philipsweg 1, 1422 AL Uithoorn, Netherlands

Notified Body:

Not Applicable. Machinery is not listed under ANNEX IV of the Machinery Directive.

Place of Declaration:

Trelawny SPT Ltd, 13 Highdown Road, Sydenham Industrial Estate, Leamington Spa, Warwickshire, CV31 1XT, GB

Date of Declaration:

December 2024

Signed by:

Daniel Rowledge
Managing Director

UKCA DECLARATION OF CONFORMITY



UKCA Declaration of Conformity

We, **Trelawny SPT Ltd of 13 Highdown Road, Sydenham Industrial Estate, Leamington Spa, Warwickshire, CV31 1XT, GB** declare that the DoC is issued under our sole responsibility and belongs to the following product:

PART NUMBER.....

DESCRIPTION

SERIAL NUMBER

YEAR OF CONSTRUCTION

The object of the declaration described above is in conformity with the relevant **Statutory Requirements:**

- **2008 No. 1597** Supply of Machinery (Safety) Regulations 2008

The following designated standards and technical specifications have been applied:

- **BS EN ISO 11148-4:2012** Hand-held non-electric power tools — Safety requirements
Part 4: Non-rotary percussive power tools

Technical files are held by **Daniel Rowledge** at the Trelawny address stated above.

Approved Body:

Not Applicable. Machinery is not listed under ANNEX IV of the Machinery Directive.

Place of Declaration:

Trelawny SPT Ltd, 13 Highdown Road, Sydenham Industrial Estate, Leamington Spa, Warwickshire, CV31 1XT, GB

Date of Declaration:

December 2024

Signed by:

Daniel Rowledge
Managing Director

DECLARATION OF CONFORMITY

<p>CZ Prohlášení o přizpůsobení My, společnost Trelawny SPT Limited podávamej daňové přiznání, že výrobek a dodávka výrobku název výrobku Model, výrobní číslo Rok výroby Pro které se průkaz týkající, je přizpůsobení s zásobou od následující příkazov a jejich pohotovosti: 2006/42/EC Příkaz soustrojí 2014/35/EC Příkaz nízkého napětí (upotřebitelné jedině do výrobku použít elektrické energie)</p>	<p>LT ATITIKTIES DEKLARACIJA Mes, Trelawny SPT Limited Prisiidami visą atsakomybę deklaruojame, kad tiekiamas / gaminamas produktas Produkto pavadinimas Modelis, serijos numeris Pagaminimo Kuriam laikoma ši deklaracija, atitinka šių direktyvų, norminių aktų ir su jais susijusių, standartų reikalavimus: 2006/42/EC Įrangos direktyva 2014/35/EC Žemos įtampos direktyva (laikoma tik elektriniams įrengimams)</p>
<p>DE Übereinstimmungserklärung Wir, Trelawny SPT Limited erklären, dass unter unserer alleinigen Verantwortung für die Lieferung und Herstellung des Produktes Name des Produktes Model, Seriennummer Jahr der Herstellung auf welches sich dieses Dokument bezieht, stimmt mit den Vorgaben der folgenden Direktive, normativen Dokumente und deren jeweiligen Maßstäbe ein: 2006/42/EC Maschinieriedirektive 2014/35/EC Niederspannungsrichtlinie (nur zutreffend auf Produkte, die Strom benutzen)</p>	<p>MT DIKJARAZZJONI TA KONFORMITA Ahna, Trelawny SPT Limited Niddikjaraw li ahna responsabbli kompletament għal provista / manifattura tal-prodott hawn 1msemmi: Isem il-Prodott Mudell, Serial number Sena li 'produzzjoni 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 2014/35/EC Low Voltage Directive (tapplika biss għal prodotti li jahdmu bi-elekttriku)</p>
<p>DK 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 Produktionsår For hvilket dette dokument referer, at deler i overensstemmelse med bestemmelser af følgende direktiver, normative dokumenter og deres relevante standard: 2006/42/EC Machinery directive 2014/35/EC Low voltage directive</p>	<p>NL EENVORMIGHEIDSVERKLARING Wij, Trelawny SPT Limited Verklaaren dat wij de volledige verantwoordelijkheid dragen voor het leveren/fabriceren van het volgende product: Naam van het product Type, Serienummer Productiejaar En verklaaren dat het product waarnaar dit document verwijst eenvoudig is met de voorzieningen van de volgende Richtlijn(en), Normatieve Documenten en hun relevante Standaarden: 2006/42/EC MACHINERIECHTLIJN 2014/35/EC LAAGSPANNINGSRICHTLIJN (uitsluitend van toepassing bij producten die elektrische stroom gebruiken)</p>
<p>EE TOOTE VASTAVUSE DEKLARATSIOON Meie, Trelawny SPT Limited Deklareerime, et vastutame järgmise varustuse/toote müügi eest Toote nimetus Mudel, Seeria number Aegsita loodärgu Arstul dokument lüendab toote vastavust järgmistele direktiivide/lele, normatiividele ja nendega samaväärsetele standarditele: 2006/42/EC MASINA DIREKTIIVID 2014/35/EC MADALPINGE DIREKTIIVID (Kohandatakse vaid tootele, mis kasutavad elektrivoolu)</p>	<p>PL Deklaracja Zgodności My, Firma Trelawny SPT Limited. oświadczamy w naszej odpowiedzialności, że produkcja i dostawa urzadzzenia Nazwa produktu Model, numer seryjny Rok produkcji do którego ten dokument należy, jest zgodne z klauzulami następujących zarządzeń i ich istotnych standardów: 2006/42/EC Zarządzenie mechaniczne 2014/35/EC Zarządzenie niskiego napięcia elektrycznego (Zastosowanie tylko przy urządzeniach elektrycznych)</p>
<p>ES 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 Año de producción A quien 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 2014/35/EC Directorio de Bajo Voltaje (Aplicable solamente a productos que funcionen con electricidad)</p>	<p>PT 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 Ano de produção 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 2014/35/EC DIRECTIVA DE BAIXA VOLTAGEM (Aplicável apenas a produtos que utilizam energia eléctrica)</p>
<p>FI ILMOITUSVAHVISTUS Me, Trelawny SPT Limited Valvistanime tuotteen toimittamisesta/valmistamisesta Tuotteen nimi Malli, sarjanumero Valmistusvuosi Täällä todistuksella vahvistamme säädökset seuravien ohje/ohjesien, Yleisin papereihin ja niihin liittyvät vaatimukset: 2006/42/EC KONEISTON OHJEET 2014/35/EC PIENJÄNNITTE OHJEET (tarvitaan ainoastaan tuotteille jotka käyttävät sähkövoimaa)</p>	<p>RU СВИДЕТЕЛЬСТВО О СООТВЕТСТВИИ Мы, Trelawny SPT Limited Заявляем, что несем полную ответственность за поставку/производство нижеуказанной продукцией наименование изделия Модель, серийный номер Год выпуска 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 2014/35/EC ДИРЕКТИВА ПО НИЗКОВОЛЬТНОМУ ОБОРУДОВАНИЮ (распространяется только на изделия с электропитанием)</p>
<p>FR DÉCLARATION DE CONFORMITÉ Nous, soussignés Trelawny SPT Limited déclarons que le produit sous-nommé Nom du produit Modèle et Numéro de Série Année de production 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 2014/35/EC DIRECTIVE POUR BAS VOLTAGE (n'est applicable qu'aux produits utilisant l'énergie électrique)</p>	<p>SE FÖRSÄKRAN OM ÖVERENSSTÄMMELSE VI, TRELAWNY SPT LIMITED FÖRKLARAR ATT VI MED ENSAMT ANSVAR ANSKAFFAT / TILLVERKAT PRODUKTEN PRODUKTNAMN MODELL och SERIE NUMMER Tillverkningsår TILL VILKEN DETTA DOKUMENT HÄNVISAR ÄR I ÖVERENSSTÄMMELSE MED FÖLJANDE DIREKTIV, NORMATIVA DOKUMENT OCH DERAS RELEVANTA STANDARDER 2006/42/EC MASKINDIREKTIV 2014/35/EC LÅGSTRÖMSDIREKTIV (TILLÄMPLIG PÅ ELEKTRISK DRIVNA PRODUKTER)</p>
<p>GR ΔΗΛΩΣΗ ΠΙΣΤΟΤΗΤΑΣ Η εταιρεία Trelawny Spt Limited Δηλώνει ότι έχει τη μοναδική ευθύνη ως κατασκευαστρια / προμηθευτρια του παρακάτω προϊόντος περιγραφη προϊόντος μοντέλο, αριθμός σειράς έτος παραγωγής 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 2014/35/EC ΟΔΗΓΙΑ ΠΕΡΙ ΧΑΜΗΛΗΣ ΤΑΣΗΣ (αφορά μόνον προϊόντα που λειτουργούν με ηλεκτρικό ρεύμα)</p>	<p>SI IZJAVA O SKLADNOSTI Trelawny SPT Limited pod polno odgovornostjo izjavljamo, da so spodaj navedeni proizvodi, ki jih dobavljamo/produčujemo: Ime proizvoda Model, serijska številka Leto proizvodnje na katere se ta dokument nanaša, proizvedeni v skladu z določili naslednjih direktiv, normativnih dokumentov in njihovih relevant- nih standardov: 2006/42/EC DIREKTIVA O STROJIH 2014/35/EC DIREKTIVA O STROJIH Z NIZKO VOLTAŽO (nanaša se samo na proizvode na električni pogon)</p>
<p>HU MEGFELELŐSÉGI NYILATKOZAT Mi, A "Trelawny SPT Limited" cég Felelősségünk tudatában kijelentjük, hogy mint a termék szállítója/gyártója Termék neve Típus, Sorozatszám Gyártási év amelyre jelen dokumentum vonatkozik, megfelel az alábbi Irányelv(ek), Irányadó Dokumentumok előírásainak, és az azokat meghatározó szabványoknak: 2006/42/EC GÉPÉSZETI IRÁNYELVEK 2014/35/EC KISFESZÜLTÉSŰ IRÁNYELVEK (Csak az elektromos meghajtású gépeknél)</p>	<p>TR UYGUNLUK BEYANI Trelawny SPT Limited Aşağıdaki, üretim ve tedarikinden tek başına sorumlu olduđu ürünün Ürün adı Model/Seri no Üretim yılı bu belgeğin ilgili olduđu apaşğıdaki yönetmeliklerin, norm belgelerinin ve ilgili standartları'nın koşullarına uygun olduđunu beyan eder: 2006/42/EC MAKÝNALAR YÖNETMELÝĐÝ 2014/35/EC DÜĐUK GERÝLÝM YÖNETMELÝĐÝ (Yalnızca elektrikle çalıřan ürünlerde geçerlidir)</p>
<p>IT DICHIARAZIONE DI CONFORMITA La Società Trelawny SPT Limited Dichiaro, sotto la propria responsabilità, che la fornitura / produzione del prodotto Nome prodotto Modello, codice Anno di produzione 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 2014/35/EC DIRETTIVA SUL BASSO VOLTAGGIO (applicabile esclusivamente per i prodotti che utilizzano energia elettrica)</p>	

SAFETY

DO:

- 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 equipment can create dust and flying debris.
- Keep hands, feet and clothing away from moving parts.
- Follow the prestart checks detailed in this manual.
- Ensure that the workplace is well ventilated.
- Be aware of others working around you.
- Always follow safe-working practices.
- Inspect the equipment prior to using.
- Store this equipment in a secure and dry environment.

DO NOT:

- Modify this equipment in any way. This will invalidate the warranty and could lead to serious injury.
- Allow the equipment to run unattended.
- Use petrol (gasoline), thinners or any other high flash point solvent to clean the equipment.
- Disassemble or repair unless Trelawny trained.
- Permanently fix the operating lever or button in the on/run position.

HAND ARM VIBRATION

Trelawny Equipment 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 currently, includes a Hand-Arm Vibration Exposure Calculator that is easy to use to work out the daily vibration exposure for each of your operators.

WARRANTY

When you choose TRELAWNY, you're investing in a product engineered for strength, durability, and unwavering reliability. Our equipment is built to endure the toughest challenges, showcasing nearly 80 years of craftsmanship in Surface Preparation Technology. We take pride in being the industry benchmark, offering not just a tool but a lasting companion for tough jobs, backed by a 12-month warranty for peace of mind.

Register your TRELAWNY product within 30 days of purchase by scanning the QR code to activate your warranty and enjoy the full support from our team.

PLEASE RETAIN YOUR PROOF OF PURCHASE, AS IT WILL BE REQUIRED TO PROCESS ANY WARRANTY CLAIMS.

The following are not covered under the Trelawny warranty:

- Damage caused by abuse, misuse, dropping or other similar damage caused by or as a result of failure to follow assembly, operation or user maintenance instructions.
- Alterations, additions or repairs carried out by persons other than Trelawny or their recognised agents.

- Transportation costs to and from Trelawny or their recognised agents, for repair or assessment against a warranty claim, on any equipment.
- Materials and/or labour costs to renew, repair or replace components due to fair wear and tear.

In no case whatsoever shall the Customer be entitled to claim damages, in particular but not be limited, loss of profit and other direct or indirect or consequential damage. This exclusion of liability, however, does not apply to unlawful intent or gross negligence on our part, but does apply to unlawful intent or gross negligence of persons employed or appointed by us to perform any of his obligations.



All warranty claims should firstly be directed to Trelawny SPT Ltd. Please provide, part number, serial number and proof of purchase, either by telephone or E-mail.

Tel: +44 (0)1926 883781

Email : warranty@trelawny.com

PRE START CHECKS (DAILY)

- The compressed air must be free from water and dirt. Always clear the air hose before connecting to the tool.
- Ensure that no moisture (condensation) is present in the air hose.
- Ensure a minimum of 10mm (3/8") bore air hose is used and all couplings are secure, leak free and in good condition.
- Limit the length of air hose to 30M. Where extra length is necessary, for each additional 15M 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 (80psi) or rise above 6.9bar (100 psi).
- In particularly cold weather it is recommended that a proprietary anti-freeze lubricating oil is used.

OPERATION

Prior to operating the tool check:

That all parts of the tool are fully screwed/fitted together and secure, if you are in any doubt ask your supervisor before using this equipment.

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

That a liberal amount of lubricant has been put into the air inlet of the tool. (See suggested lubricants)

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 that the operator adopts a firm and stable position.

Maintain contact with the work surface with sufficient pressure only to keep the tool from bouncing.

Excessive operator pressure will not improve the tool efficiency but could cause premature tool failure and operator fatigue.

To operate the tool, pull the throttle lever towards the handle and then apply the needles to the surface to be worked.

Do not place needles on the surface, and then pull the throttle lever as this will result in the tool bouncing off the surface.

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

To switch off, simply release the throttle lever.

SUGGESTED 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

It is recommended that an inline lubricator be installed in the air hose adjacent to the tool.

Cleaning

If operation becomes unproductive and the piston shows signs of sticking, dismantle and clean with a highly refined paraffin.

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

MACHINE STORAGE

Short period storage: up to 3 months

Clean outside of the equipment and inspect the consumable items for wear, replace any worn parts as required. Insert a liberal quantity of air tool through the air inlet and run briefly to ensure that the internal components are coated with oil. Cover and store the equipment in a dry location.

Long period storage: over 3 months

Follow instructions set out in 'short period storage'. Additionally lubricate any exposed moving parts with one of the suggested lubricants. Repeat this process every 3 months.

SERVICING & MAINTENANCE

SERVICING

Only a competent person, in a suitably equipped workshop, must carry out maintenance. Disconnect the tool from the air supply before carrying out any of the following operations.

For safe efficient running and at intervals of no more than 120 hours, dismantle and clean with highly refined paraffin.

DISMANTLING

After ensuring that the air supply is turned off, remove the tool from the airline. Thoroughly clean the outside of the tool prior to dismantling.

Piston & Cylinder Removal

Hold the cover in a vice using the flats provided, keeping the front tube (31) horizontal. Unscrewing by hand, remove the front tube complete with the needles (28), needle holder (27) and spring (29) as an assembly. Hold a clean lint free cloth over the open end of the intermediate tube, remove from vice and tilt the tube downwards to remove the piston (26). Secure the cover (11) in a vice with the intermediate tube in the vertical position using the flats provided. Use a suitable 6mm bar through the holes provided, unscrew the intermediate tube (21) anticlockwise. Carefully remove the intermediate tube from the cover and remove the cylinder from its location hole in the cylinder guide plate, which is fitted in the cover. The cylinder guide plate (13) can be pulled out of the cover to gain access to the guide plate seal (12).

Cylinder ball valve replacement

This is a consumable item and will require replacing after approximately 120 -160 hours use; this is dependant on the cleanliness of the air supply and frequency of lubrication.

Do not replace this rubber ball with a steel version, as it will damage the cylinder valve seat and piston valve pin. Remove the ball retaining o'ring (15) from its groove just inside the bore of the stem using a suitable pointed implement. Remove the ball from the bore, replace and refit new o'ring into groove.

Piston valve pin replacement

Hold the piston in a vice by the stem, using a pair of pliers break off the valve pin, use a 6mm drill & bit and remove the remainder from the piston. A small socket (4mm) which just fits over the actual pin, will stop damage occurring. Drive the valve pin in up to its shoulder using a vice or a small hammer.

Valve body - valve stem removal

Hold the valve body in a vice using the flats provided. Remove the valve cap with o'ring (1), valve spring (3), valve stem (4) and the valve seat o'ring (5).

Valve body removal (VL203 & VL303 Only)

Remove the front tube and remove needle holder, needles and return spring as per instructions for needle replacement above. Replace the front tube without the needles etc, onto the intermediate tube and screw up until hand tight. Hold the valve body flats securely in a vice, with the cover (10) uppermost. Turn the tool anti-clockwise around the valve body by holding the cover and front tube, unscrew the valve body from the handle until loose, remove from vice and finally unscrew by hand.

ASSEMBLY

Before any assembly takes place, ensure all parts are clean and have a film of air tool oil lubrication unless otherwise stated.

It is strongly recommended to change all o'rings (2), (5), (14), (15), (23), cushion ring (19), seals (12,) (24), rubber ball (16) and needle holder (27) during assembly.

Valve body assembly (VL203 & VL303 Only)

Replacement of the valve body onto the cover assembly is the reverse of removal. Use a few turns of P.T.F.E. Tape on the threads of the handle and screw on the valve body initially by hand, then insert the valve body in a vice, holding securely on the flats provided, and with the cover (11) uppermost. Finally tighten up clockwise by hand holding the front tube and cover, and align the throttle lever with the front of the tool when resistance is felt.

Valve body service

Replace the o'ring (2) on the valve cap (1). Fit a new valve seat o'ring (5) in the valve body (11). Insert the valve stem (4), in the valve body (11). Place the valve spring (3) on top of the valve stem (4), screw down the valve cap (1) by hand, and then fasten until fully tight with a flat blade screwdriver.

Tool assembly

Secure the cover (11) vertically in a vice using the flats provided, insert the cylinder guide plate ensuring that the flat face is uppermost, ensure that it is located onto the shoulder at the bottom of the threaded section inside the cover. Fit the cylinder stem into the bore of the cylinder guide plate. With the removal holes uppermost carefully slide the intermediate tube over the cylinder, screwing down by hand. Tighten using a 6mm bar through the holes provided. Insert the piston, small diameter first into the intermediate tube, if resistance is felt, turn the piston slightly until it is located in the cylinder.

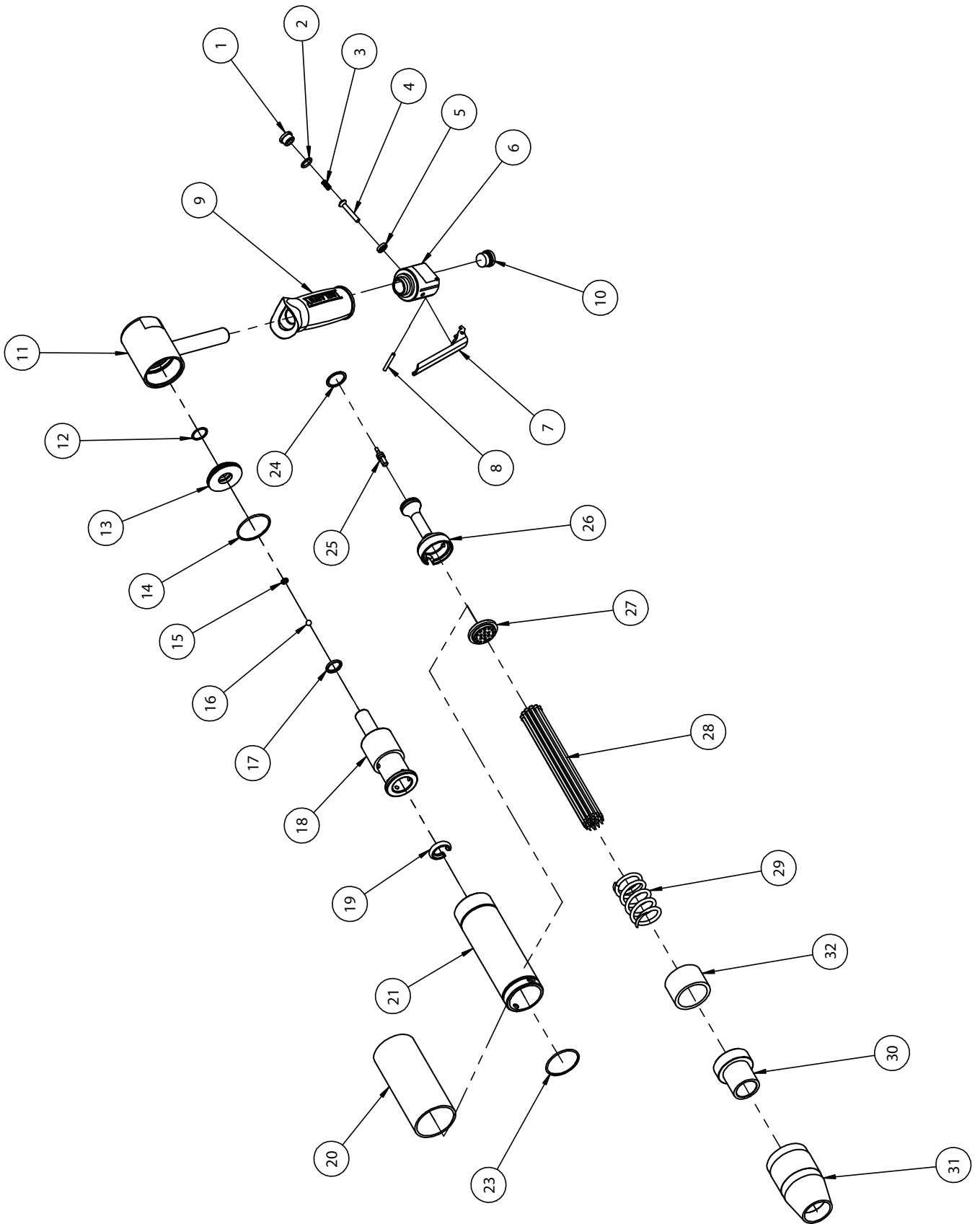
Re-fitting the needles & front tube

Insert the new needles into the needle holder location holes; ensure that the needles are inserted into the chamfered side of the holes. Fit new front tube locking o'ring to the intermediate tube. Fit the return spring over the needles (28) and insert the needle assembly into the front tube. Screw the front tube assembly onto the intermediate tube until hand tight.

Fitting of chisel holder

The chisel holder assembly comprises of an anvil, spring, chisel holder and chisel. Unscrew needle holder attachment and remove the complete assembly. Separate the needle holder assembly and remove the spring. To fit the chisel holder, first fit the spring onto the anvil locating against the large shoulder. Fit this assembly into the intermediate tube and locate the large flat face of the anvil against the front face of the piston. Ensure that the pinch bolt on the chisel holder is loose and screw the chisel holder onto the intermediate tube. Unscrew slightly to position the boss underneath the tool and tighten the pinch bolt using a 6mm allen key. Turn the knurled collar on the chisel holder until the retaining ball is fully visible; insert the chisel aligning the rebate with the ball. Turn the collar half a turn to lock the chisel in place. To release the chisel, rotate the knurled collar until the retaining ball is fully visible and remove the chisel.

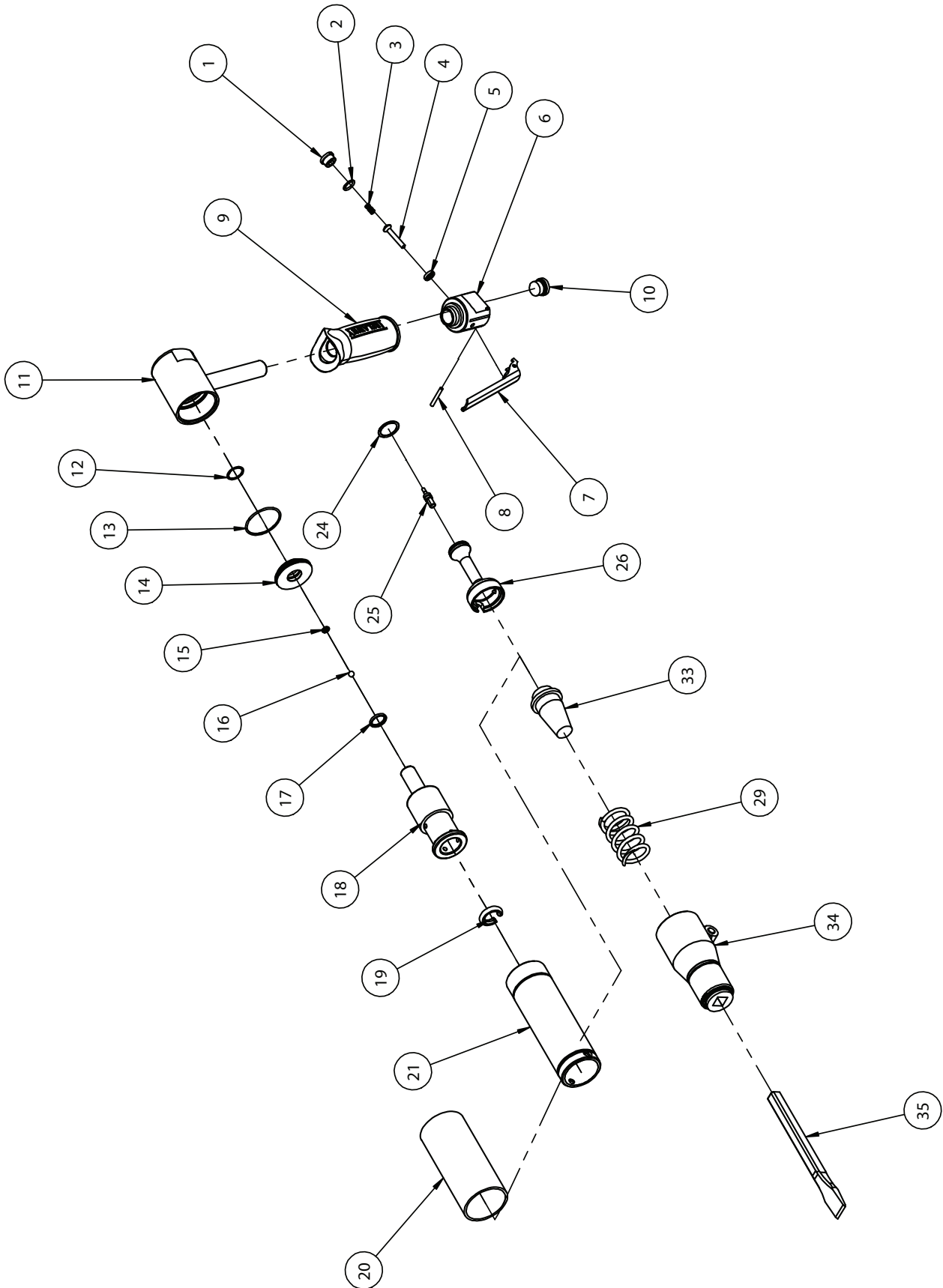
EXPLODED VIEW - VL2003 NEEDLE SCALER



PARTS LIST - VL203 NEEDLE SCALER

ITEM NO.	PART NO.	DESCRIPTION	QUANTITY
1	615.3021	Valve Cap	1
2	809.0139	Valve Cap O'Ring	1
3	712.3022	Valve Spring	1
4	618.3022	Valve Stem	1
5	809.0089	Valve Seat O'Ring	1
6	423.3021	BPG/LR/PG Valve Body Assembly	1
7	716.3000	Throttle Lever	1
8	813.0108	Spring Pin 1/8" x 1" Long	1
9	717.3050	Grip - Trelawny Logo	1
10	818.0250	Plug 1/4" BSP - Red	1
11	425.2003	VL203 Cover Assembly - Red	1
12	829.2003	Guide Plate Seal	1
13	652.2003	Guide Plate VL203/223	1
14	809.0299	O'Ring	1
15	809.0080	O'Ring	1
16	816.3003	Rubber Ball 1/4" dia	1
17	809.3005	Cylinder Stem Reaction Ring	1
18	428.2003	VL203 Cylinder Assembly	1
19	809.2004	Piston Cushion VL203/223 50mm	1
20	721.2003	Int/Tube Sleeve VL203/223 - Black	1
21	622.2031	Intermediate Tube VL203/223	1
23	809.0299	O'Ring	1
24	829.2002	Piston Ring VL203	1
25	636.3003	Valve Pin	1
26	612.2003	Piston VL203/223	1
27	601.2030	Needle holder 3mm VL203/223	1
28	453.2110	3mm Chisel Needles x 100	1
29	712.2003	Front Spring VL203/223	1
30	620.2003	Front Tube Insert	1
31	622.2030	Front Tube VL203/223	1
32	620.2003A	Front Tube Spacer	1
ITEMS NOT SHOWN			
N/A	446.2003	Service Kit VL203/223 Needle Inc 2,3,4,5,7,8,12,15,16,19,23,24,25,27,29 & 28 x Chisel Tip Needles	1
N/A	446.2120	VL203/223 Chisel Attachment Kit	1
N/A	819.2375	Connector 1/4 BSPT-3/8 Stem	1
N/A	418.2003	TVS Vacuum Take-off VL203/223	1
N/A	512.2003	VL203/223 Fall Arrester Kit	1
N/A	458.1530	1/4" BSP Inline Oiler Assembly	1
N/A	453.1110	3mm Flat Needles x 100	1
N/A	453.3110	3mm Pointed Needles x 100	1
N/A	453.1310	3mm Be/Cu Needles x 100	1

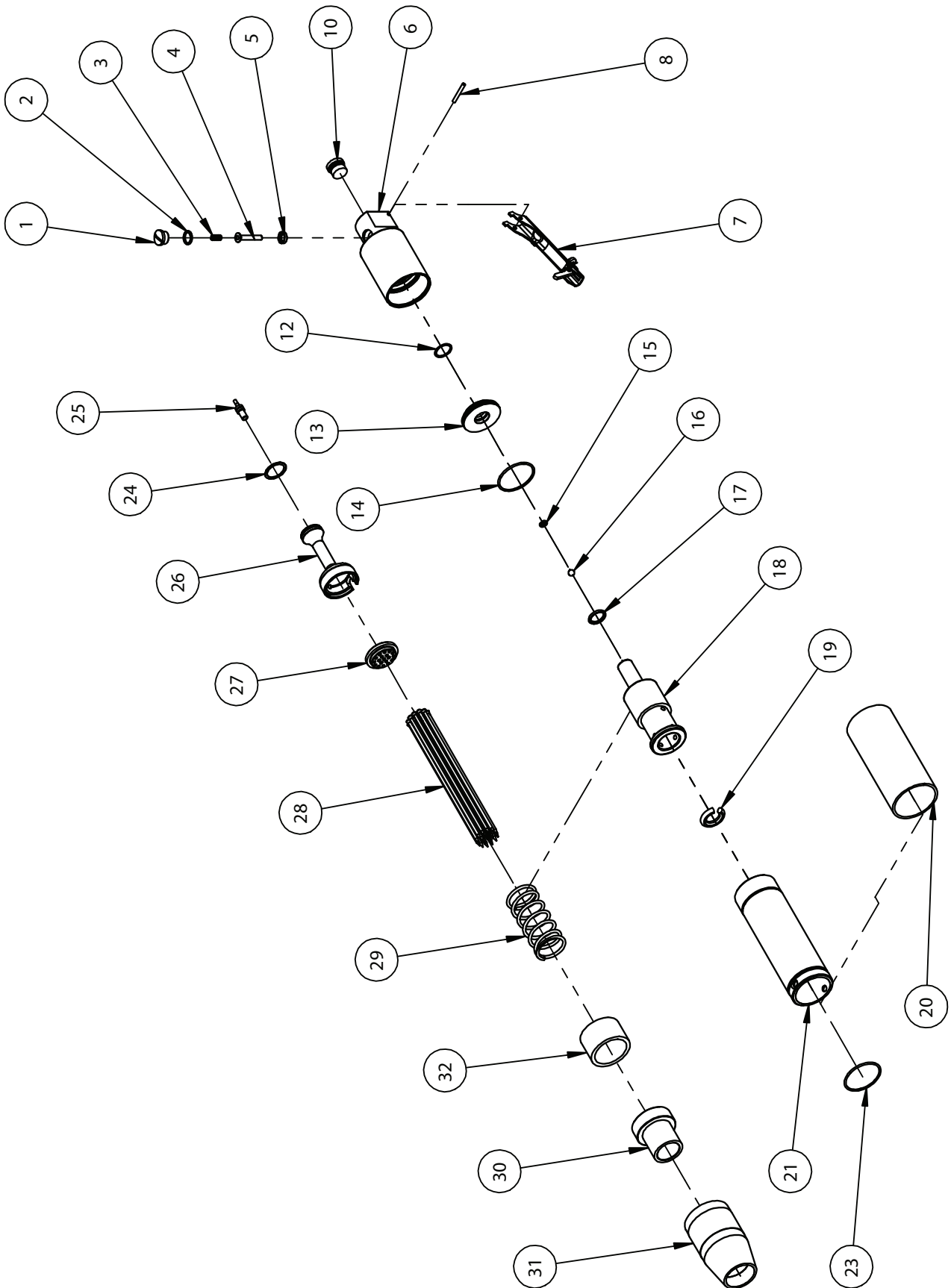
EXPLODED VIEW - VL203 CHISEL SCALER



PARTS LIST - VL203 CHISEL SCALER

ITEM NO.	PART NO.	DESCRIPTION	QUANTITY
1	615.3021	Valve Cap	1
2	809.0139	Valve Cap O'Ring	1
3	712.3022	Valve Spring	1
4	618.3022	Valve Stem	1
5	809.0089	Valve Seat O'Ring	1
6	423.3021	BPG/LR/PG Valve Body Assembly	1
7	716.3000	Throttle Lever	1
8	813.0108	Spring Pin 1/8" x 1" Long	1
9	717.3050	Grip - Trelawny Logo	1
10	818.0250	Plug 1/4" BSP - Red	1
11	425.2003	VL203 Cover Assembly - Red	1
12	829.2003	Guide Plate Seal	1
13	652.2003	Guide Plate VL203/223	1
14	809.0299	O'Ring	1
15	809.0080	O'Ring	1
16	816.3003	Rubber Ball 1/4" dia	1
17	809.3005	Cylinder Stem Reaction Ring	1
18	428.2003	VL203 Cylinder Assembly	1
19	809.2004	Piston Cushion VL203/223 50mm	1
20	721.2003	Int/Tube Sleeve VL203/223 - Black	1
21	622.2031	Intermediate Tube VL203/223	1
24	829.2002	Piston Ring VL203	1
25	636.3003	Valve Pin	1
26	612.2003	Piston VL203/223	1
29	712.2003	Front Spring VL203/223	1
33	610.2003	Anvil VL203/223	1
34	419.2003	1/2" Chisel Holder VL203	1
35	704.3101	Vibro-Lo Chisel 1/2"Sq x 3/4"	1
ITEMS NOT SHOWN			
N/A	446.2203	Service Kit VL203/223 Chisel Inc 2,3,4,5,7,8,12,14,15,16,19,24,25,29 & 35	1
N/A	819.2375	Connector 1/4 BSPT-3/8 Stem	1
N/A	512.2003	VL203/223 Fall Arrester Kit	1
N/A	704.3103	Vibro-Lo Chisel 1/2" 7x2.1/2"	1
N/A	704.3105	Vibro-Lo Chisel 1/2" 10x2.1/2"	1
N/A	704.3110	Vibro-Lo Chisel 1/2"Sq Al.Brnz	1
N/A	704.3205	Vibro-Lo 1/2" Chisel Cranked	1

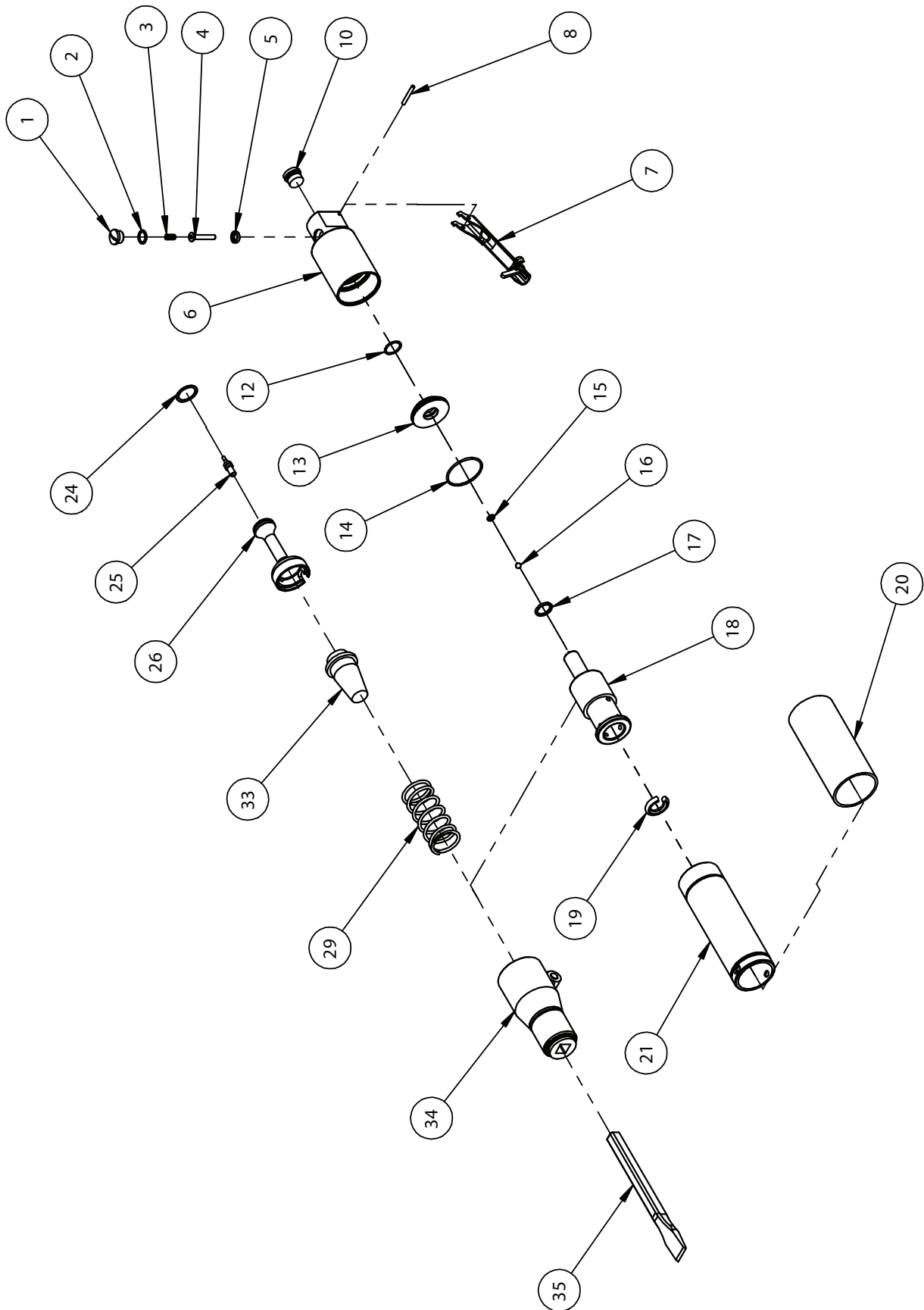
EXPLODED VIEW - VL223 NEEDLE SCALER



PARTS LIST - VL223 NEEDLE SCALER

ITEM NO.	PART NO.	DESCRIPTION	QUANTITY
1	615.3021	Valve Cap	1
2	809.0139	Valve Cap O'Ring	1
3	712.3022	Valve Spring	1
4	618.3022	Valve Stem	1
5	809.0089	Valve Seat O'Ring	1
6	423.2023	VL223 Valve Body Assembly - Black	1
7	716.3000	Throttle Lever	1
8	813.0108	Spring Pin 1/8" x 1" Long	1
10	818.0250	Plug 1/4" BSP - Red	1
12	829.2003	Guide Plate Seal	1
13	652.2003	Guide Plate VL203/223	1
14	809.0299	O'Ring	1
15	809.0080	O'Ring	1
16	816.3003	Rubber Ball 1/4" dia	1
17	809.3005	Cylinder Stem Reaction Ring	1
18	428.2003	VL203 Cylinder Assembly	1
19	809.2004	Piston Cushion VL203/223 50mm	1
20	721.2003	Int/Tube Sleeve VL203/223 - Black	1
21	622.2031	Intermediate Tube VL203/223	1
23	809.0299	O'Ring	1
24	829.2002	Piston Ring VL203	1
25	636.3003	Valve Pin	1
26	612.2003	Piston VL203/223	1
27	601.2030	Needle holder 3mm VL203/223	1
28	453.2110	3mm Chisel Needles x 100	1
29	712.2003	Front Spring VL203/223	1
30	620.2003	Front Tube Insert	1
31	622.2030	Front Tube VL203/223	1
32	620.2003A	Front Tube Spacer	1
ITEMS NOT SHOWN			
N/A	446.2003	Service Kit VL203/223 Needle Inc 2,3,4,5,7,8,12,15,16,19,23,24,25,27,29 & 28 x Chisel Tip Needles	1
N/A	446.2120	VL203/223 Chisel Attachment Kit	1
N/A	819.2375	Connector 1/4 BSPT-3/8 Stem	1
N/A	418.2003	TVS Vacuum Take-off VL203/223	1
N/A	512.2003	VL203/223 Fall Arrester Kit	1
N/A	458.1530	1/4" BSP Inline Oiler Assembly	1
N/A	453.1110	3mm Flat Needles x 100	1
N/A	453.2110	3mm Chisel Needles x 100	1
N/A	453.3110	3mm Pointed Needles x 100	1
N/A	453.1310	3mm Be/Cu Needles x 100	1

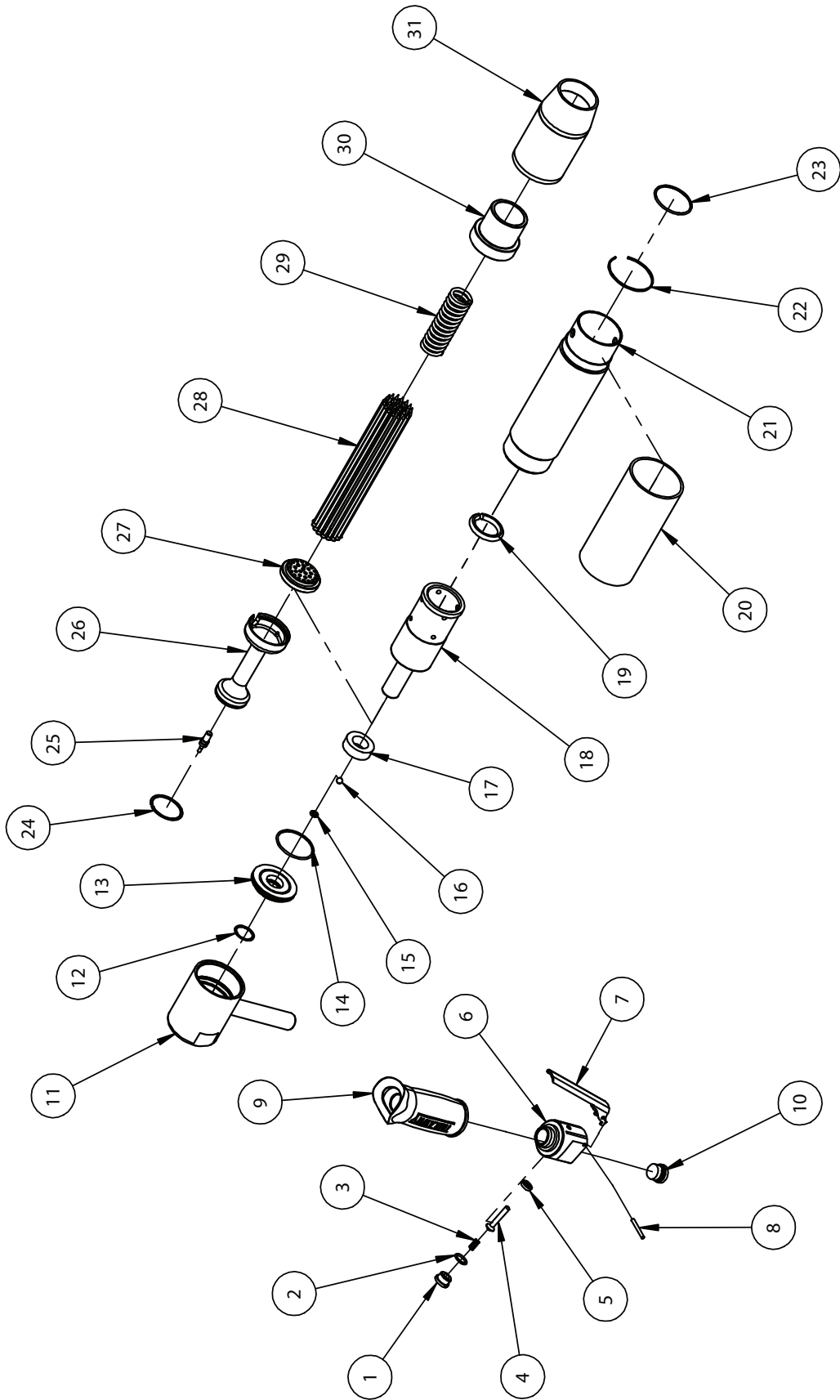
EXPLODED VIEW - VL223 CHISEL SCALER



PARTS LIST - VL223 CHISEL SCALER

ITEM NO.	PART NO.	DESCRIPTION	QUANTITY
1	615.3021	Valve Cap	1
2	809.0139	Valve Cap O'Ring	1
3	712.3022	Valve Spring	1
4	618.3022	Valve Stem	1
5	809.0089	Valve Seat O'Ring	1
6	423.2023	VL223 Valve Body Assembly - Black	1
7	716.3000	Throttle Lever	1
8	813.0108	Spring Pin 1/8" x 1" Long	1
10	818.0250	Plug 1/4" BSP - Red	1
12	829.2003	Guide Plate Seal	1
13	652.2003	Guide Plate VL203/223	1
14	809.0299	O'Ring	1
15	809.0080	O'Ring	1
16	816.3003	Rubber Ball 1/4" dia	1
17	809.3005	Cylinder Stem Reaction Ring	1
18	428.2003	VL203 Cylinder Assembly	1
19	809.2004	Piston Cushion VL203/223 50mm	1
20	721.2003	Int/Tube Sleeve VL203/223 - Black	1
21	622.2031	Intermediate Tube VL203/223	1
24	829.2002	Piston Ring VL203	1
25	636.3003	Valve Pin	1
26	612.2003	Piston VL203/223	1
29	712.2003	Front Spring VL203/223	1
33	610.2003	Anvil VL203/223	1
34	419.2003	1/2" Chisel Holder VL203	1
35	704.3101	Vibro-Lo Chisel 1/2"Sq x 3/4"	1
ITEMS NOT SHOWN			
N/A	446.2203	Service Kit VL203/223 Chisel Inc 2,3,4,5,7,8,12,14,15,16,19,24,25,29 & 35	1
N/A	819.2375	Connector 1/4 BSPT-3/8 Stem	1
N/A	512.2003	VL203/223 Fall Arrester Kit	1
N/A	704.3103	Vibro-Lo Chisel 1/2" 7x2.1/2"	1
N/A	704.3105	Vibro-Lo Chisel 1/2" 10x2.1/2"	1
N/A	704.3110	Vibro-Lo Chisel 1/2"Sq Al.Brnz	1
N/A	704.3205	Vibro-Lo 1/2" Chisel Cranked	1

EXPLODED VIEW - VL303 NEEDLE SCALER



PARTS LIST - VL303 NEEDLE SCALER

ITEM NO.	PART NO.	DESCRIPTION	QUANTITY
1	615.3021	Valve Cap	1
2	809.0139	Valve Cap O'Ring	1
3	712.3022	Valve Spring	1
4	618.3022	Valve Stem	1
5	809.0089	Valve Seat O'Ring	1
6	423.3021	BPG/LR/PG Valve Body Assembly	1
7	716.3000	Throttle Lever	1
8	813.0108	Spring Pin 1/8" x 1" Long	1
9	717.3050	Grip - Trelawny Logo	1
10	818.0250	Plug 1/4" BSP - Red	1
11	425.3003	VL303 Cover Assembly - Red	1
12	829.3003	Guide Plate Seal	1
13	652.3003	Guide Plate	1
14	809.0299	O'Ring	1
15	809.0080	O'Ring	1
16	816.3003	Rubber Ball 1/4" dia	1
17	729.3003	Cylinder Stem Reaction Ring	1
18	428.3003	VL303 Cylinder Assembly	1
19	809.3004	Piston Cushion 85mm long	1
20	721.3003	Int/Tube Sleeve VL303 - Black	1
21	622.3031	Intermediate Tube VL303	1
22	814.3003	Circlip (Spring Seat Location)	1
23	809.0299	O'Ring	1
24	829.3002	Piston Ring	1
25	636.3003	Valve Pin	1
26	612.3003	Piston VL303	1
27	601.3030	Needle Holder 3mm VL303	1
28	453.2110	3mm Chisel Needles x 100	1
29	712.3003	Front Spring	1
30	620.3003	Front Tube Insert VL303	1
31	622.3030	Front Tube VL303	1
ITEMS NOT SHOWN			
N/A	446.3003	Service Kit VL303 Challenger Inc 2,3,4,5,7,8,12,15,16,19,23,24,25,27,29 & 28 x Chisel Tip Needles	1
N/A	446.2130	VL303 Chisel Attachment Kit	1
N/A	819.2375	Connector 1/4 BSPT-3/8 Stem	1
N/A	418.3003	TVS Vacuum Take-off VL303	1
N/A	512.3003	VL303 Fall Arrester Kit	1
N/A	458.1530	1/4" BSP Inline Oiler Assembly	1
N/A	453.1110	3mm Flat Needles x 100	1
N/A	453.2110	3mm Chisel Needles x 100	1
N/A	453.3110	3mm Pointed Needles x 100	1
N/A	453.1310	3mm Be/Cu Needles x 100	1

PARTS LIST - VL303 CHISEL SCALER

ITEM NO.	PART NO.	DESCRIPTION	QUANTITY
1	615.3021	Valve Cap	1
2	809.0139	Valve Cap O'Ring	1
3	712.3022	Valve Spring	1
4	618.3022	Valve Stem	1
5	809.0089	Valve Seat O'Ring	1
6	423.3021	BPG/LR/PG Valve Body Assembly	1
7	716.3000	Throttle Lever	1
8	813.0108	Spring Pin 1/8" x 1" Long	1
9	717.3050	Grip - Trelawny Logo	1
10	818.0250	Plug 1/4" BSP - Red	1
11	425.3003	VL303 Cover Assembly - Red	1
12	829.3003	Guide Plate Seal	1
13	652.3003	Guide Plate	1
14	809.0299	O'Ring	1
15	809.0080	O'Ring	1
16	816.3003	Rubber Ball 1/4" dia	1
17	729.3003	Cylinder Stem Reaction Ring	1
18	428.3003	VL303 Cylinder Assembly	1
19	809.3004	Piston Cushion 85mm long	1
20	721.3003	Int/Tube Sleeve VL303 - Black	1
21	622.3031	Intermediate Tube VL303	1
22	814.3003	Circlip (Spring Seat Location)	1
24	829.3002	Piston Ring	1
25	636.3003	Valve Pin	1
26	612.3003	Piston VL303	1
29	712.3003	Front Spring	1
33	610.3003	VL303 Anvil (Chisel Holder)	1
34	419.3003	1/2" Chisel Holder VL303	1
35	704.3101	Vibro-Lo Chisel 1/2"Sq x 3/4"	1
ITEMS NOT SHOWN			
N/A	446.3303	Service Kit VL303 Chisel Inc 2,3,4,5,7,8,12,14,15,16,19,24,25,29 & 35	1
N/A	819.2375	Connector 1/4 BSPT-3/8 Stem	1
N/A	512.3003	VL303 Fall Arrester Kit	1
N/A	704.3103	Vibro-Lo Chisel 1/2" 7x2.1/2"	1
N/A	704.3105	Vibro-Lo Chisel 1/2" 10x2.1/2"	1
N/A	704.3110	Vibro-Lo Chisel 1/2"Sq Al.Brnz	1
N/A	704.3205	Vibro-Lo 1/2" Chisel Cranked	1

TECHNICAL SPECIFICATIONS

DETAIL	VL203 Needle	VL203 Chisel	VL223 Needle	VL223 Chisel	VL303 Needle	VL303 Chisel
Part Code	196.2003	196.2203	196.2103	196.2213	196.3003	196.3203
Description	VL203 Needle Scaler	VL203 Chisel Scaler	VL223 Needle Scaler	VL223 Chisel Scaler	VL303 Needle Scaler	VL303 Chisel Scaler
Type	Pistol Grip	Pistol Grip	In-line	In-line	Pistol Grip	Pistol Grip
Piston Diameter	23.5mm	23.5mm	23.5mm	23.5mm	34.4mm	34.4mm
Piston Stroke (approx)	11mm	11mm	11mm	11mm	20mm	20mm
Blows Per Minute	2,400	2,400	2,400	2,400	3,000	3,000
Air Consumption	1.89lps (4.0 cfm)	1.89lps (4.0 cfm)	1.89lps (4.0 cfm)	1.89lps (4.0 cfm)	2.6lps (5.5 cfm)	2.6lps (5.5 cfm)
Air Pressure	6.2 bar (90 psi)	6.2 bar (90 psi)	6.2 bar (90 psi)	6.2 bar (90 psi)	6.2 bar (90 psi)	6.2 bar (90 psi)
Air Inlet	1/4" BSP	1/4" BSP	1/4" BSP	1/4" BSP	1/4" BSP	1/4" BSP
Overall Length	340mm	395mm	370mm	435mm	370mm	400mm
Weight	2.7kg	3.2kg	2.35kg	2.95kg	3.51kg	4.25kg
Needles / Chisel	51 x 2mm 19 x 3mm	19mm (3/4") Standard fit	51 x 2mm 19 x 3mm	19mm (3/4") Standard fit	65 x 2mm 28 x 3mm	19mm (3/4") Standard fit
Noise Level L_{WA} dB (A)	90.7	76.3	90.7	76.3	109.5	78.2
Vibration Level m/s^2 Primary	2.75 (k)	3.3 (k)	2.56 (k)	3.69 (k)	2.3 (k)	3.7 (k)
Vibration Level m/s^2 Secondary	3.26 (k)	4.14 (k)	2.95 (k)	3.59 (k)	3.7 (k)	4.3 (k)
Trelawny SPT Ltd operates a policy of continuous product development and refinement and therefore reserves the right to change technical specifications and product designs without giving prior notice.						

Noise Levels measured in accordance with:
BS EN ISO 15744:2008

Vibration levels measured in accordance with:
BS EN ISO 28927-9:2009 and BS EN ISO 20643:2008+A1:2012

(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.

This equipment has been designed and produced in accordance with the following directive:
2006/42/EC Machinery Directive
and applicable harmonised standard; EN ISO 11148-4:2012

If your company has any problem with our products or would like to discuss the possibility of an improvement being made to them, then please do not hesitate to contact us. Your comments are both important and appreciated.

Trelawny tools are thoroughly tested under specified conditions in accordance with applicable internationally recognised standards. When a tool is used on site the conditions may not be the same as those used in our tests.

Trelawny Surface Preparation Technology operates a policy of continuous product development and refinement and therefore reserves the right to change technical specifications and product designs without giving prior notice.

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Use only genuine Trelawny consumables with this product. The use of non-Trelawny spare parts invalidates the warranty.

TROUBLE SHOOTING

FAULT	POSSIBLE CAUSE	ACTION
Poor performance or lack of power	Low air pressure.	Ensure that the air pressure is correct at 90psi, max 100psi.
	If tool has been left for some time without use, the oil may dry out slightly, causing a sticky residue.	Strip tool down, clean and re-oil.
	Needles worn or some missing.	Replace with new set of needles and new needle holder
	Piston seal worn.	Remove seal from piston and fit into bore of cylinder. If it drops to the bottom of the bore, a replacement is required.
	Incorrect chisel fitted.	Ensure that the chisel is for a vibration reduced tool.
	Valve pin broken.	Replace valve pin and 6mm rubber ball.
Tool continues to run with trigger released	Valve seal may have become dislodged through the tool being disconnected with the trigger in the open position.	Ensure that the trigger has not been taped or wired in the open position. Do not use quick release couplings to switch tool off.
High vibration	High air pressure.	Ensure that the air pressure is correct at 90psi, max 100psi.
	Lack of lubrication.	Lubricate with the recommended air tool oil daily.
	Low air pressure 70-80psi can also cause high vibration.	Ensure that the air pressure is correct at 90psi, max 100psi.
	Front return spring weak or broken.	Replace return spring.
	Guide plate seal worn.	Replace guide plate seal.
	Piston cushion failed. (This is a split o'ring)	Replace with a new piston cushion.
Tool stopped working	6mm rubber ball worn out.	Check for and remove the remains of the ball, possibly in an exhaust hole of cylinder and renew 6mm rubber ball.
	Valve pin broken.	Replace valve pin and 6mm rubber ball.

NOTES

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DEALER STAMP:



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Manual Part Number:

735.3001 01

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