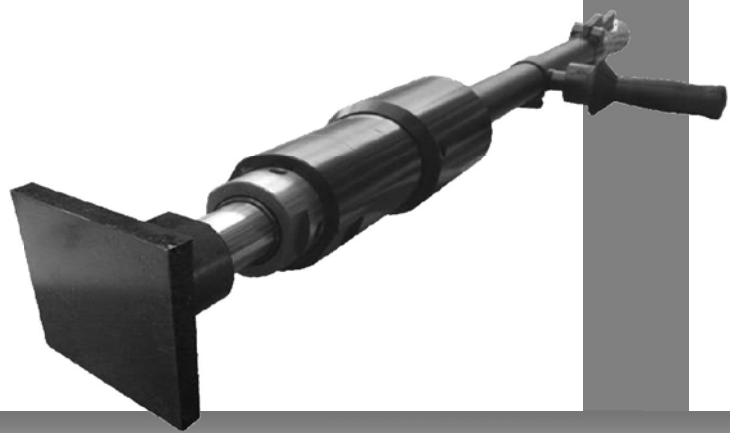


## VL LRS55 COMPACTOR / SCABBLER



## OPERATION & MAINTENANCE



# OPERATION

## Foreword

Thank you for purchasing the Vibro-Lo LRS55 Compactor / Scabbler.

This manual contains the necessary maintenance information for you to ensure proper operation and care for your machine.

**It is essential for you to read through these manuals thoroughly.**

In the unlikely event that you experience problems with your Vibro-Lo LRS55, please do not hesitate to contact your local dealer or agent.

We always welcome feedback and comments from our valued customers.

## General Information

Before operating the VL LRS55 Compactor/Scabbler, 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 Compactor/Scabbler 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 tool, failure to inspect the tool prior to starting work for damage, or other faults that may influence the operation or safe working of the tool, or failure to follow the safety regulations listed or applicable to the job site.

The compactor version is primarily designed for the compacting of M.O.T. type 1 granular fill, it has been certified and is fully compliant with the New Road and Street works act (Appendix 8), and has been designed for use in small reinstatements and restricted excavations.

This tool must not be used in a fixture

It can also be used for the compaction of cold lay tarmac (PCSMs), hot laid tarmac,

The VL LRS55 is also available as a vibration reduced Scabbler or can subsequently be fitted with a Scabbler head for concrete floor reduction or for the removal of laitance from concrete floors.

All versions can be used both indoors and out.

## Safety

Always, read through these instructions first before use.

### IMPORTANT

Before operating this equipment, the operator should read this manual. Whenever possible, he/she should be trained how to operate the machine by an experienced person. Trial and error is not the safe way to become familiar with this piece of equipment.

**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.

**Do** be aware that this tool is not electrically insulated.

**Do** ensure that this tool is lubricated **daily**.

**Do** be aware that this tool can create dust and flying debris.

**Do** be aware of others working around you.

**Do** keep hands and clothing away from moving parts.

**Do** store this tool in a secure and dry environment.

**Always observe safe working practices and local safety regulations at all times.**

**Do not** allow the tool to run unattended.

**Do not** allow the tool to run continuously whilst not in contact with the surface being prepared.

**Do not** modify this tool in any way, as this will invalidate the warranty and could lead to serious injury.

**Do not** use this tool in potentially explosive environments.

**Do not** drag this tool by the air hose.

**Do not** use petrol (gasoline), thinners or any other high flash point solvent to clean the tool.

## Air Supply

The compressed air supply 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 connection to the tool. Ensure that no moisture (condensation) is present in the air hose.

Ensure that a minimum 19mm (3/4") bore air hose is used and that all couplings are secure; leak free and in good condition. Limit the length of air hose to 15M (50ft).

Where extra length is necessary, for each additional 15M (50ft) of air hose used, the pressure drop is approximately 0.16bar (3psi).

**The correct air pressure for this machine is to 6.2bar (90psi).**

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 18.9 L/s (40cfm) free air.

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

### **Recommended Lubricants**

Oil the tool daily before use. Put a liberal quantity of one of the following zinc free air tool lubricants through the air inlet. It is recommended that an inline lubricator be installed in the air hose adjacent to the tool.

SHELL	Naturelle HF
CASTROL	Carelube HTG 22

### **Cleaning**

At intervals of no more than 100 hours use, or if operation becomes unproductive, or if the piston shows signs of sticking, dismantle and clean with highly refined paraffin. Replace any worn components as necessary.

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

# OPERATION / MAINTENANCE

## 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 any 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.

## Starting Work

Before use, screw the vibration reducing side handle to the bracket fitted on the main tube handle and tighten by hand.

The side handle height can be positioned for operator comfort; the lower the side handle is positioned down the tube the easier it will be to manoeuvre the tool.

Prior to operating the tool check: -  
That all fittings are secure, free from air leaks and that air hoses are in good condition.

That all parts of the tool are fully screwed 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 recommended lubricants)

Before operating the tool ensure that the tool is not near your chin or face.

Safe use of this tool requires a solid stance and secure foothold; the operator must adopt a firm and stable position at all times.

On start up, the vibration reduction component within the tool will cause the machine to rise three to four inches (100mm), to operate the tool pull the lever towards the handle grip.

### Compactor Version

Let the tool do the work; allow a period of time to become accustomed to the vibration dampened compaction action. The tool does not require any down force to operate; excessive pressure will prevent the tool from working effectively and may reduce the compaction rate.

The optimum speed for a compaction pass is approximately ten seconds per linear meter; it will achieve optimum compaction after four passes, using an average depth of 150mm (6") of un-compacted MOT Type 1 granular fill.

### Scabblers Version

Let the tool do the work; allow a period of time to become accustomed to the vibration-dampened action. The tool does not require any down force to operate; excessive pressure will prevent the tool from working effectively.

Bush Hammer style headed pistons are best suited to concrete reduction and for laitance removal; these may reduce the likelihood of damage to the aggregate, ensuring that a stronger bond is created with the next layer.

Cruciform headed pistons are suited to the reduction of concrete or where a smoother finish is required; these will reduce the aggregate as well as the concrete surface.

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

## 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 of the following operations.**

## Dismantling

Clean all debris from the exterior of the tool.

Loosen the 8mm caphead screw on the side handle and slide the side handle (10) up towards the handle valve body (4). Hold the body assembly (18) in a vice, using the flats provided.

Check to see if the body and cowls original mating identification dimples are still visible, if not make a mark opposite one another on the body and the cowl to aid assembly.

With a 9mm punch, drive out the 2 securing pins on either side of the cowl (9). Slide the cowl (8) and the secondary spring (12) towards the side handle (10). Unscrew the locknut (16) by holding the handle tube (11) in a vice, approximately six inches (150mm) away from the lock nut.

Using a cold chisel bend back the tab washer (16A) from the flats of the locknut (16).

Using a suitable spanner on the flats of the locknut (16) unscrew from handle tube (11). This may need a sharp blow to break the bond. Supporting the weight of the body, unscrew the locknut and remove the body assembly from the handle tube (11).

Remove the tube from the vice. Next hold the body in the vice using the flats provided. Insert a 4mm steel rod/bar into the hole on centre shaft, located near the top of the spring. Rotate the spring (15) on the shaft so that it "screws" down the 4mm rod/bar; rotate until a gap appears between the spring (15) and thrust ring (13).

Remove circlip and thrust ring. To relieve the spring tension wind the spring in the opposite direction until the spring is at its free 'unloaded' length. Withdraw the 4mm pin and remove the spring (15), locknut (16) and O' Ring cushion (17).

# OPERATION / MAINTENANCE

Hold body assembly (18) on the flats provided and unscrew the cylinder (23).

## **(Threaded Piston)**

Hold the Compactor foot (25) or Scabblers head (27) securely in a vice, then using a 1¼" (32mm) spanner on the piston flats, unscrew the compactor foot and remove the piston (19) from the cylinder (23). Remove the piston O' Ring (20) and remove cylinder wiper seal (24) and O' Rings (21) and (22).

## **(Pin fit Piston)**

Hold the compactor foot or Scabblers head (25) securely in a vice, then using a 12mm punch drive out the spiral retaining pin (30) and remove the compactor foot or Scabblers head, remove the piston (19) from the cylinder (23). Remove cylinder wiper seal (24) and O' Rings (21) and (22).

## **Valve Body Servicing**

Hold handle tube (11) in vice, approximately six inches (150mm) away from the valve assembly and with the locking rivet uppermost, knock out the rivet using a sharp chisel. Looking as from the top of the handle, using a soft-faced hammer, strike the air inlet boss downward in an anti clockwise direction and unscrew from handle tube (11).

This may need a sharp blow initially to break the bond. Remove the handle tube (11) from the vice.

Secure the valve body assembly in the vice, holding on the main body. Using a suitable spanner unscrew the adapter (1) from the valve body, remove the spring (2) and retrieve the valve stem (6) with its O'Rings (3) and (26). Using a 8mm punch, drive out the throttle lever pivot pin and withdraw the throttle lever (5).

## **ASSEMBLY**

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

Avoid lubricating oil or grease contaminating the threads of the cylinder (23), tube handle lock nut (17), and handle valve body (4).

These will require securing with a thread-locking adhesive.

It is good practice to renew all O'Rings and especially the locknut wiper seal O'Ring that is located inside the lock nut (17).

Replace any parts showing signs of wear; paying particular attention to the small bore of the cylinder.

Prior to assembly, inspect the centre shaft of the body, if there is any sign of corrosion lightly polish out any markings with fine emery cloth.

Fit one of the O'Rings (17) over the centre shaft to act as a cushion.

Fit a new O'Ring seal (17) into the locknut (16) and lubricate the seal (17) using general-purpose bearing grease.

Slide the locknut onto the centre shaft, followed by the tab washer (16A) with the tab towards the spring. Liberally grease the centre shaft prior to fitting the spring (15).

Then insert a 4mm rod/bar through hole in the centre shaft.

Rotate the spring (15) until there is sufficient clearance to fit the thrust ring (13).

Fit a new circlip (14). Relieve the tension in the spring by rotating approximately two turns in the opposite direction. Check that the new circlip (14) is seated correctly and is secure before removing the 4mm pin.

## **Piston and Cylinder Assembly.**

(Threaded Piston)

Fit a new wiper seal (24) and O'Rings (21) and (22) to the appropriate small and large grooves on the cylinder (23).

Fit a new O'Ring (20) to the piston (19) and insert into the cylinder (23).

Screw on the compactor foot (25) or Scabblers head until it butts up against shoulder of piston (19).

Hold in vice vertically, gripping on compactor foot (25) or Scabblers head on the spanner flats.

Fully secure using a suitable wrench on the piston's (19) spanner flats to a torque of 500lbs/ft (678Nm).

Ensure that the threads of the cylinder and body are clean and free of oil; apply a bead of Loctite 243 or similar to the first few threads of the cylinder (19).

Hold the body assembly in a vice on the flats provided and screw cylinder (23) in by hand, using a suitable wrench on the spanner flats tighten to a recommended torque of 135Nm (100 lbs/ft).

## **Piston and Cylinder Assembly.**

(Pin fit Piston)

Fit a new wiper seal (24) and both O' rings (21) and (22) to the appropriate small and large grooves on the cylinder (23).

Insert the piston (19) into the cylinder .

Fit the compactor foot (25) or Scabblers head until it butts up against the piston.

Align the holes in the piston and compactor foot or Scabblers head.

A 7/16" Allen Key is a good fit for this purpose or use a suitable piece of wooden dowelling.

Hold the spiral pin (30) with a pair of pliers to avoid hitting the fingers, and then using a hammer, drive in the spiral pin (30) fully to secure the compactor foot or Scabblers head.

Ensure that the threads of the cylinder and body (18) are clean and free of oil; apply a bead of Loctite 243 or similar to the first few threads of the cylinder.

Hold the body in a vice on the flats provided and screw cylinder in by hand, using a suitable wrench on the spanner flats on the cylinder (12) tighten to a recommended torque of 15Nm (100 lbs/ft).

## **Handle/Valve Body Assembly**

Apply general-purpose grease to the valve stem, insert valve stem (6) with its O'Ring (3) into valve guide followed by the spring (2).

Screw in adaptor (1) by hand and using a 27mm (1 1/16") spanner fully tighten.

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Using a 8mm punch align the hole in the throttle lever (5) with the holes in the handle (4). Using a small hammer fit the throttle lever pin (7).

**Tube to Handle Assembly.** Hold handle tube (11) in vice, about six inches (150mm) away from the valve assembly.

Ensure that the threads of the Handle and Tube are of Loctite 243 or a similar product and free of oil; apply a bead to the first few threads of the Handle and screw in the handle (4) until hand tight.

Looking from the top of the handle, using a soft-faced hammer, strike the air inlet boss downward in a clockwise direction until tight.

### **Body to Handle Tube Assembly**

Ensure that the thread of the lock nut (16) is clean and free of oil; apply a bead of Loctite 243 or a similar product to the first few threads of the lock nut (16).

Hold the handle tube (11) firmly in a vice, take extra care while inserting the spring (15) into the tube not to contaminate the tube threads with grease, otherwise the thread lock adhesive will not cure, screw in the locknut (16) until hand tight.

Using a suitable wrench, tighten the locknut to a torque of 100lbs/ft (135.5Nm).

Knock over the tab washer onto one of the locknut flats.

Lubricate the mating faces of the cowl and body with a general purpose bearing grease.

Slide cowl (8) and spring (12) down onto body assembly and align the dimple on the body with the dimple on the cowl, align the holes using a 9mm bar.

Drive one of the spiral securing pins (9) through the free hole.

Remove 9mm bar and fit the second spiral pin (9).

It is important that the pins are fitted centrally in the cowl.

Remove tool from vice and re-position side handle (10) and tighten the M8 caphead screw.

### **Machine Storage**

#### **Storage: over 3 months.**

Clean the outside of the machine and inspect the piston and cutterhead for wear, replace any worn parts as required.

Put a liberal amount of lubricant into the air inlet of the tool and run the tool for a few seconds to disperse the oil around the tools internal components.

Lubricate the exposed part of the piston and cylinder.  
(See recommended lubricants)

Cover the machine to protect it: Store the machine in a dry place. When next used, continue as per "Starting work section".

### **Disposal**

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

Dismantle 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

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.

TECHNICAL SPECIFICATIONS	COMPACTOR	SCABBLER
Length	1270mm (50")	
Weight	21.5kg (47.3lbs)	
Blows per minute	1300	
Air Pressure	6.2 bar (90psi)	
Air Consumption	11.61 lps (25cfm)	
Sound pressure level	98.0db(A)	
Vibration Level (H1)*	3.5m/s <sup>2</sup> (K= -0% +40%)	4.2m/s <sup>2</sup> (K= -0% +40%)
Vibration Level (H2)*	2.9m/s <sup>2</sup> (K= -0% +40%)	3.9m/s <sup>2</sup> (K= -0% +40%)

\*H1, Indicates test taken from the primary handgrip location at the trigger.

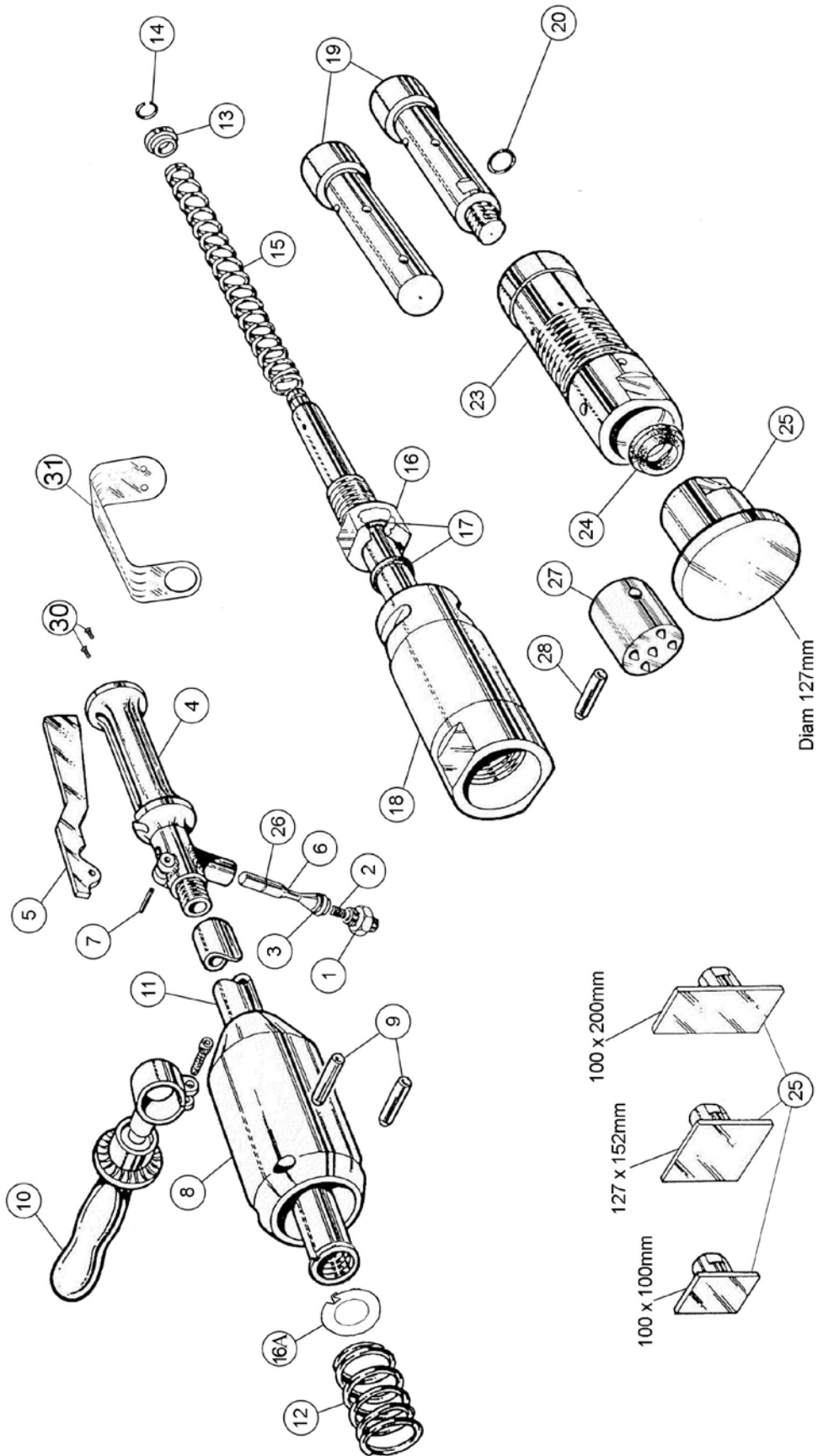
\*H2, Indicates test taken from the secondary handgrip location.

Users should be aware that for other applications, the vibration readings may be higher than specified.

The 4.2 m/s<sup>2</sup> value is only applicable to compaction of MOT (DOT) type 1. sub-base material



# EXPLODED VIEW



# PARTS LIST

ITEM	PART NUMBER	DESCRIPTION
1	627.5002	Adapter
2	712.5001	Valve Spring
3	809.5599	O'Ring (Valve seat)
4	422.5000	Handle c/w Valve Body
5	649.5001	Throttle Lever
6	448.5022	Valve Stem (Includes O'Rings)
7	813.0840	Throttle Lever Pivot Pin
8/18	411.5052	Cowl & Body Assembly
9	813.1040	Locking Pin
10	422.5220	Side Handle
11	624.5002	Handle Tube
	624.5006	Handle Tube Long Version (400mm longer)
12	712.5003	Secondary Spring
13	628.5002	Thrust Ring
14	815.5509	Circlip
15	712.5002	Spring
16	625.5002	Locknut
16A	720.5003	Tab washer
17	809.6289	O'Ring (Centre Bar Seal & Cushion)
18	<i>see item 8</i>	Body Assembly
19	612.5001	Piston (Screw fit)
	612.5005	Piston (Pin fit)
20	809.6499	Piston O'Ring (Screw fit)
23	613.5001	Cylinder
24	829.5001	Wiper seal
25	450.5007	127mm Diameter Compactor Foot (Screw Fit)
	450.5017	127mm Diameter Compactor Foot (Pin Fit)
	450.5001	100 x 100mm Compactor Foot (Screw Fit)
	450.5011	100 x 100mm Compactor Foot (Pin Fit)
	450.5003	127 x 152mm Compactor Foot (Screw Fit)
	450.5013	127 x 152mm Compactor Foot (Pin Fit)
	450.5006	100 x 200mm Compactor Foot (Screw Fit)
	450.5016	100 x 200mm Compactor Foot (Pin Fit)
26	809.0069	O'Ring (Valve Stem Seal)
27	426.5051	Scabbler Head - Five Point TCT (Screw Fit)
	426.5359	Scabbler Head - Five Point TCT (Pin Fit)
	426.5052	Scabbler Head - Cruciform TCT (Screw Fit)
28	813.1050	Roll Pin (Pin Fit Type)
29		<i>Not Assigned</i>
30	806.2080	Trigger Guard Screw
31	665.5500	Trigger Guard
	809.6599	Cylinder O'Ring (Small) (No longer fitted 8/2012)
	809.6619	Cylinder O'Ring (Large) (No longer fitted 8/2012)

# TECHNICAL DATA

## Vibration Statement

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

## Risk of Hand Arm Injury

Because of various factors, the range of vibration emission during intended use of these tools is expected to be between 3.5m/s<sup>2</sup> – 5.88m/s<sup>2</sup>.

The vibration is dependent on the tool model, task, the operators grip, and feed force employed etc.

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

Vibration measured in accordance with: EN ISO 28927:2012 and EN ISO 20643:2005

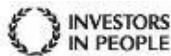
Trelawny tools are thoroughly tested under specified conditions in accordance with applicable internationally recognised standards. When a tool is used on site the conditions may not be the same as those used in our tests.

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 spares.

**The use of non-Trelawny spare parts invalidates the warranty.**



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