

4" Vibration Reduced Angle Grinder

Operation and Maintenance Manual



TRELAWNYTM
SURFACE PREPARATION TECHNOLOGY

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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:

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

A handwritten signature in blue ink, appearing to read "Rob Chapman", written over a horizontal line.

Date and place of issue,
24th June 2016
Leamington Spa, England.

Rob Chapman,
Managing Director.



Registered Office: Trelawny SPT Ltd, Trelawny House, 13 Highdown Road, Sydenham Industrial Estate, Leamington Spa, Warwickshire, CV31 1XT, United Kingdom



DOCUMENT No. Q:57/7

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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 direktiivide(de)le, normatiivaktidele ja nendega 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>
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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 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 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>
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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>MEGFELELŐSÉGI 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 iránylev(ek), Irányadó Dokumentumok előírásainak, és az azokat meghatározó szabványoknak: 2006/42/EC GÉPÉSZETI IRÁNYELVEK 73/23/EC KISFESZÜLTÉSŰ 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 bu belgenin ilgili olduđu apaşýdaki yönetmeliklerin, norm belgelerinin ve ilgili standartlarınyn kopullarýna uygun olduđunu beyan eder: 2006/42/EC MAKYNALAR YÖNETMELÝĐÝ 73/23/EC DÜBÜK GERÝLYM YÖNETMELÝĐÝ (Yalnız elektriğe çalyþan 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

Foreword

Thank you for your purchase of the TRELAWNY 4" Vibro-Lo Angle Grinder.

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

It is essential for you to read through this manual thoroughly.

In the unlikely event that you experience problems with your 4" VL Angle Grinder, please do not hesitate to contact your local Trelawny dealer or agent. We always welcome feedback and comments from our valued customers.

Safety Precautions

WEAR SAFETY BOOTS, FACE MASK, SHATTERPROOF GLASSES, HELMET, GLOVES and any other personal protective equipment required for the working conditions. Avoid loose clothing; this may become trapped in moving parts and cause serious injury.

AIR MOTORS ARE NOT ELECTRICALLY INSULATED.

ENSURE THAT HANDS and clothing are kept away from rotating parts.

ONLY YOUR SUPERVISOR OR AUTHORISED MAINTENANCE ENGINEER should adjust the speed control setting within the air motor; although this has been set to the optimum speed during manufacture, the speed should be checked on a daily basis.

ENSURE THAT THE WORK PLACE IS WELL VENTILATED. Avoid operating engine-powered compressors in an enclosed area, since engine exhaust gases are poisonous.

BE AWARE, when the angle grinder is switched off, the work head will continue to rotate briefly.

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.

Ensure 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.

Grinding Discs, Flap Wheels & Applications

Grinding Discs

For use on steel.

Flap Wheel

For the removal aggressive removal of paint and coatings and heavy rust from steel work, leaving a bright finish on steel work.

Wire Cup Brush

For the removal of light paint, other coatings and rust from steel work.

Use of tool

This angle grinder is designed for use with reinforced resin bonded depressed centre grinding wheels that have a permitted rotational speed in excess of 10,000rpm.

The tool is designed for light grinding and dressing of welds, etc, but not for cutting off.

The grinder must never be used without a wheel guard fitted.

The air supply should be lubricated. It is strongly recommended that an air filter, regulator, lubricator is used, this will supply clean, lubricated air at the correct pressure to the tool.

Details of such equipment can be obtained from your supplier.

If such equipment is not used then the tool should be lubricated by shutting off the air supply to the tool, depressurising the line by pressing the trigger on the tool.

Disconnect the air line and pour into the air intake a teaspoonful (5ml) of a suitable pneumatic motor lubricating oil preferably incorporating a rust inhibitor.

Reconnect tool to air supply and run tool slowly for a few seconds to allow air to circulate the oil. If tool is used frequently lubricate on daily basis and if tool starts to slow or lose power.

Putting into service

Remove plastic bung from air inlet using a pair of pliers.

Use a clean lubricated air supply that will give a measured air pressure to the tool of 6.3bar (90psi).

It is recommended a air filter/regulator/lubricator is used which can be obtained from air tool supplier.

Recommended lubricants

Oil the tool daily during use. Put a few drops of one of the following bio-degradable air tool lubricants through the air inlet.

SHELL Naturelle HF
CASTROL Carelube HTG 22

Always use clean oil from a sealed container.

OPERATION

Pre-Start Check (Daily)

Check all bolts and screws for tightness.

Ensure that all fittings are secure.

Check condition of hub or drum assembly and replace flaps, cutters or axles if required.

The air motor speed is preset at the factory to 10,000 rpm (free running).

Always clear the air hose before connection to the machine.

Ensure that no moisture (condensation) is present in the air hose.

Check the security of all hoses clamps and fittings, and that the air pressure is correct at 90psi (6.2bar). The air motor uses approximately 10cfm of air.

The Maximum air pressure is 100psi (7bar) the air consumption will increase as the air pressure rises.

It is recommended that the compressor is capable of supplying at least 30cfm supply of free air (not displaced, as given by some compressor manufactures).

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

Operating

With the grinder correctly connected to the air supply, check the speed of the grinder with an inlet pressure of 100 psi/7.0 bar measured at the tool inlet.

Check with a calibrated tachometer.

Check that the guard is in position and securely fixed.

Check that the grinding wheel is of correct dimensions, is not cracked or chipped and has a permitted speed rating higher than the maximum permissible running speed of the grinder which is 10,000 RPM.

Check that item disc receiver is screwed tightly to the shaft and locates the bore of the grinding wheel on the spigot of the disc receiver and screw on disc nut item (40) using the spanners provided.

Do not over tighten as this could crack the wheel. It should be tight enough to prevent wheel spin off when the air supply is shut off.

When first starting the grinder with a new or changed wheel fitted, the grinder should first be started in a protected area, i.e. such as under a heavy bench well away from other persons and run for one minute.

This will provide protection if the wheel should break because of a fault that was not visibly detected.

Always use eye protection and wear protective gloves if there are sharp edges in the working area.

The tool and the grinding process can create a noise level such that ear protectors should be worn.

If the grinding process creates dust then use a suitable breathing mask.

Check that the material being worked will not cause harmful dust or fumes. If this is so then special breathing apparatus may be required. Seek advice before starting work.

If the grinder vibrates when first fitting the wheel or during use, remove from service immediately and arrange for the fault to be corrected before continuing to use.

Do not apply excessive pressure as this will reduce the cutting efficiency.

Apply light loads and allow the wheel to cut.

Handle the grinder with care.

If the grinder is dropped, carefully examine the wheel for damage and replace if necessary.

Start the machine as if for the first time of fitting a wheel, i.e. under a bench.

Make sure the object to be worked on is in a securely fixed position.

Dismantling & Assembly Instructions

The dismantling and assembly will require some special tools, which can be produced by any machine shop. Special tools required are:

1 x 5.0mm x 50mm bar.

1 x 7.75mm x 50mm bar.

1 x Ø8.5mm x 50mm bar.

1 x Ø9.2mm x 150mm bar.

1 x Ø11.8mm x 50mm bar.

1 x Ø10mm Ø6.2mm bore x 25mm long tube.

2 x Ø15.0mm tubes x Ø8.2 bore x 25mm long.

1 x Ø21.5mm tube x Ø16.0mm bore x 50mm long.

1 x Ø21.9mm x 50mm tube x Ø14mm bore.

Using these tools during assembly will prevent damage to the bearings.

Disconnect tool from air supply.

Remove the side handle (54) by unscrewing anti-clockwise from the body (1).

Dismantling the Gear housing

Press in and hold locking button (60) to lock the spindle Insert spanner (55) into the holes in disc nut (40), unscrew disc nut.

Take off grinding disc and disc receiver (38), remove circlip (71) and take off disc cover, and remove indexing clip (69) and spring (68).

Unscrew and remove the set screw (61) from the housing using a 2.5mm Allen key.

The spindle stop button can now be removed as an assembly comprising of components 56, 57, 58, 59 and 60.

Use a 4mm Allen key and remove the 4 x M5 screws (43) from the gear housing (36).

Pull out the drive shaft assembly from gear housing (23).

Remove spacer (26), taking note of its orientation.

Remove the Screw (27) along with sealing O'Ring (7) using a Philips screw driver.

Remove the Steady (80) and the washer (81).

Remove the felt oiler (79).

Unscrew and remove the 4 x M5 caphead screws (25) using a 4mm Allen key along with their spring washers (24).

Separate the Gear Housing (23) from the Motor Housing (1).

In the Gear Housing is a bevelled gear (22) held in a bearing (20), push the gear and bearing out from the inside of the Gear Housing.

Support the bearing with the bevelled gear below and using the Ø11.8mm bar, press the gear out of the bearing.

Carefully remove the gasket (21) from the Motor Housing.

Pull the Rotor assembly (15) out of the Motor Housing (1) comprising of components (13), (19), (3), (18), (39), (17), (16), (15), (14), (13), (42), (41), (45), (46), (47) and (48).

Dismantling the Motor housing

In the bottom of the Motor Housing (1) is the Inlet Guide (44), pull this out along with the O'Ring (49).

Using a pin punch drift out the spring pin (2) that retains the Throttle Lever (4) assembly.

Grip the Throttle Pin (5) and pull out of the Motor Housing.

Unscrew Air inlet using a 21mm spanner and remove the Exhaust diffuser (53) and its O'Ring (86).

Remove the Spring (8) and the Valve stem (10).

At the bottom of the brass insert in the housing is the Valve Seat (6) this can be pushed out using the Ø9.2mm bar from the gear head end of the housing.

Dismantling the Spindle

assembly

Support the bearing (28) with the spindle assembly below, use a Ø5.0mm bar press out the spindle through the bearing.

Using a small pair of external circlip pliers remove the Retaining Ring (29).

Remove the Wavy Washer (31).

Support the Bevel Gear and press out (30), remove the Key (34) and the Spacer (35).

Dismantling this next item may require a new bearing fitting on reassembly.

Support the Bearing (32) and press the Spindle out (33).

Dismantling the Rotor

assembly

Be aware that dismantling the rotor will require new bearings as these are very likely to become damaged during the dismantling process.

Remove the spring pin (17) Using a pair of pliers.

Grasp the Cylinder (18) in the hand and tap the splined end of the Rotor using a small soft faced hammer.

The Front End Plate (19) with its Bearing (13) and Cylinder (18) should then come apart, take care not to lose the 4 x Rotor Blades (16).

At the other end of the Rotor is the governor, this is retained by 2 x Spring Pins (48), use a small pin punch to remove the pins, taking care not to lose any off the 6 x Pendulums (47).

The governor's Plunger (12), Spring (45) and the Adjust Nut (42) can be removed if required but if stripped this will require the motor speed resetting to the correct revolutions per minute using an accurate revolution counter.

This will involve stripping the motor a adjusting many times until the revolutions are correct.

Press out the Rotor (15) from the Bearing (13) fitted inside the rear plate (14).

Support the Front Plate (19) with the oil groove upper most and ensuring there is enough clearance for the bearing to pass.

Using a 8.20mm diameter bar, press out the bearing (13).

Support the bearing Rear Plate (14) with the rotor below and using a 7.75mm diameter bar press out the rotor.

Support the Rear Plate (19) with the oil groove upper most and ensuring there is enough clearance for the bearing to pass. Using a 7.75mm diameter bar, press out the bearing (13).

ASSEMBLY

Ensure that all components are clean and that all internal components are liberally coated in the recommended air tool oil.

Place the Rear Plate (14) on a flat surface with a sheet of paper between to prevent damage to the plate surface.

Using the flat ended 21.9mm diameter tube, press in the Bearing (13) to the bottom of the housing.

Ensure that the bearing turns smoothly and does not feel rough or gritty.

Do the same for the Front End Plate (19) and its Bearing (13).

Insert a new O'Ring (49) into its recess in the Inlet Guide (44).

Assembling the Rotor

Using 1 x Ø15mm diameter tubes, place the Front End Plate (19) centrally over one of the tubes for the base, with the oil groove uppermost. Insert the rotor with the splined end into the bearing centre and lightly press down until solid.

Check that both bearings rotate smoothly.

Using a small hammer lightly tap the Spring Pin (17) into the Cylinder (18) location hole, about 6mm should remain proud.

Using the 15mm diameter tube for the base again, place the Rotor assembly with the threaded end uppermost into the tube.

Insert the rotor Blades, angled edge first into each groove with a coating of oil to keep them in place (do not use grease).

Place the Cylinder (18) centrally over the Rotor assembly locating the shorter spring pin in its location hole in the Front End Plate (19).

With the oil grooves of the Rear Plate (14) assembly facing downwards, place onto the threaded end of the Rotor and using the second Ø15mm tube on the centre race of the bearing.

Ensure that the long spring pin (17) is aligned with its location hole in the Rear Plate and lightly press down until there is no visible gap between the Cylinder and Rear Plate.

Check that assembly rotates smoothly.

If stripped reassemble the Governor, Insert the threaded end of the Plunger (12) into the Governor (slotted side).

Fit the Spring (45) and the Adjust Nut (42).

Holding the Plunger tighten the Adjuster Nut until the end of the nut to face of the Governor measures 6mm, which will give a safe starting point.

Attach the three Pendulums to either side of the Governor, retain using the two spring pins (48), tap in with small hammer.

Screw the Governor assembly onto the threaded end of the motor assembly, this is a left hand thread.

Place the splined end of the motor assembly into a soft jawed vice and using a 13mm spanner on the spanner flats, nip up the Governor.

Assembling the Spindle

Using the Ø21.5 tube as a base, place the new bearing (32) centrally over the tube. Insert the Spindle (33) threaded end uppermost and press the spindle onto the bearing until solid.

Place the Spacer (35) on the Bearing and insert the Woodruff Key (34) into its keyway and slide the Bevelled Gear (30) onto the Spindle (33) with the teeth facing away from the bearing.

Place the Wavy Washer (31) on the Spindle followed by the Circlip (29), pressing it down on it against the Wavy Washer (31) to ensure that it is secure in its groove.

Support the Spindle (33) under the boss, threaded end down, use the 21.5mm tube as a base, and using the Ø10mm tube over the Bearing (28) press onto the Spindle until solid.

Assembling the Gear Housing

Place Spacer (81) into the Felt Oiler (79), note that the hole is offset in the oiler, the short side sits at the bottom of the Gear Head.

Insert the Steady (80) into the Felt Oiler Spacer (81) and position the assembly's hole directly over the hole for the retaining Screw (27).

Insert retaining Screw (27) with it's O'Ring (7) but before tightening fully, ensure that the Felt Oiler is fully seated, then tighten.

Insert the Spacer (26) into it's recess at the bottom of the Gear Housing with the domed side first.

Place several drops of gear oil onto the Felt Oiler (79).

Also grease the Bevel Gear (30) with a molybdenum or lithium based general purpose grease and insert the Spindle assembly into the Gear Housing (23).

Insert the Spindle Lock Button assembly with the flat adjacent to the retaining grub Screw threaded hole.

Insert the grub Screw (61) and tighten the grub Screw using a 2.5mm Allen key.

Fit the Bearing Cap (36) over the spindle with the Spring's (68) location hole nearest the Spindle Lock Button location hole.

Fit the 4 x M5 caphead Screws (43) and tighten using a 4mm Allen key.

Assembling the Motor Housing

Insert the throttle Pin (5) into the Motor Housing (1).

Locate the Throttle Lever assembly (4) into position and secure with the Spring Pin (2).

Using the Ø11.8mm bar push in the Valve Seat (6) through the threaded brass insert until seated.

When in the correct position the Valve seat should be 25mm down the bore.

Insert the Valve Stem (10) long stem first into the threaded brass insert, followed by the Spring, small end first.

Fit the O'Ring (66) onto the Exhaust Deflector (53) and push into the end of the Motor Housing (1).

Carefully apply a small drop of Loctite 243 to the thread of the Air Inlet (3) only.

Do not allow Loctite onto the Spring face of the Air Inlet (3) as this could cause the motor to seize if it contaminates internal components.

Fit the Air Inlet (3) into the Exhaust Deflector (53) and tighten using a 21mm spanner.

Assembling the Grinder

Place the Inlet Guide (44) onto the Governor end of the motor locating the spring pin (17) into its slot in the Inlet Guide.

Hold the assembly vertically by the splines with the Inlet Guide (44) at the top and carefully slide into the Motor Housing (1).

The large diameter of the Front End Plate (19) should now be almost level with the Motor Housing face.

Put a smear of grease on the gasket face to hold it in position and place the gasket (21) onto the Motor Housing (1).

Fit the Gear Housing (23) onto the Motor Housing (1) by inserting the splined shaft into the centre of the bearing, you may have to turn the spindle (33) to engage the splines into the Bevel Gear (30).

Line up with the Screw holes and insert the 4 x M5 Screws (25) with their Spring Washers (24). Using a 4mm Allen key, tighten all equally.

With the spindle facing upwards, insert the spring (68) onto its recess.

Place the Lock Ring (69) into its location, with the three recessed holes on the tab facing towards the Bearing Cap (36), followed by the Disc Cover (37), and the Disc Spring (70).

Fit the Circlip (71) using circlip pliers, ensuring its locates into the location groove.

Check the spindle RPM and if necessary strip down and adjust the governor until 10,000rpm ±100rpm is achieved.

SAFETY RULES

Safety Rules for a Grinder

- 1) Read all the instructions before using this tool. All operators must be fully trained in its use and aware of these safety rules.
- 2) Do not exceed the maximum working air pressure.
- 3) Use personal protective safety equipment.
- 5) If the tool appears to malfunction remove from use immediately and arrange for service and repair.
- 6) If the tool is used with a balancer or other support device ensure that it is fixed securely.
- 7) Always keep hands away from the working attachment fitted to the tool.
- 8) The tool is not electrically insulated. Never use the tool if there is any chance of it coming into contact with a live electrical source.
- 9) Always when using the tool adopt a firm footing and/or position and grip the tool firmly to be able to counteract any forces or reaction forces that may be generated whilst using the tool.
- 10) Use only correct spare parts. Do not improvise or make temporary repairs.
- 11) Do not lock, tape, wire, etc. the on/off valve in the run position. The trigger/lever etc. must always be free to return to the 'off' position when it is released.
- 12) Always shut off the air supply to the tool, and depress the trigger/lever etc. to release air from the feed hose before fitting, adjusting or removing the working attachment.
- 13) Check hose and fittings regularly for wear. Replace if necessary. Do not carry the tool by its hose and ensure the hand is remote from the on/off control when carrying the tool with the air supply connected.
- 14) Take care against entanglement of moving parts of the tool with clothing, ties, hair, cleaning rags, etc. This will cause the body to be drawn towards the tool and can be very dangerous.
- 15) Users will adopt safe working practices and observe all relevant legal requirements when installing, using or maintaining the tool.
- 16) Do not install the tool unless an easily accessible and easily operable on/off valve is incorporated in the air supply.
- 17) Take care that the tool exhaust air does not cause a problem or blows on another person.
- 18) Never lay a tool down unless the working attachment has stopped moving.
- 19) A grinding wheel should only be fitted by a competent person trained to do so. The wheel must be of the correct size and speed rating.
- 20) Check the speed of the grinder at least once per week, if it is in regular use, with an accurate tachometer.
- 21) The tool must only be used with the grinding wheels as set out in section "Use of the Tool" and shown on parts list. Never fit any other device.
- 22) Carry out the instructions as set out in "Putting into Service".
- 23) Many countries have local or national rules re the use and fitting of grinding wheels. Make sure such rules are observed.
- 24) Use a barrier to prevent sparks causing a hazard to the operator, any other person or anything within the vicinity of the sparks.
- 25) If a wheel guard becomes damaged or has withstood a wheel breakage, the guard must be changed.
- 26) Do not use chipped or cracked grinding wheels.
- 27) Always wear impact resistant eye protection.
- 28) Use only the disc plates, Items (38) and (40) provided with the grinder for locating and clamping the wheel. Never use substitutes. Use the paper blotter fixed to the wheel as this ensures even tightness when the wheel is secured.
- 29) Tighten the wheel plates sufficiently to prevent wheel spin off when the grinder is turned off. Do not tighten excessively as this may crack the wheel.
- 30) The noise from the tool or the process noise of the grinding operation may be such that hearing protection should be worn.
- 31) Avoid inhaling dust from the grinding process. Wearing of a breathing mask is recommended. Grinder certain materials may mean that special breathing precautions are necessary. Seek advice before using the tool.
- 32) Always ensure that the work piece is firmly supported so that it cannot move during the grinding process.
- 33) If the grinder is dropped do not use unless the wheel is first checked for damage by a competent person.
- 34) When not in use the grinder should be stored in a safe place where it will not be damaged. If a tool has not been used for a period of time check the tool as for the first time of using.
- 35) Be aware that if the grinding process causes high vibration, special precautions should be taken.
- 36) The operator should be aware that the grinding wheel will continue to rotate after the power supply has been shut off. This could cause a hazard.
- 37) Always store grinding wheels in accordance with the manufacturer's instructions.
- 38) Check frequently that the spindle thread has not become damaged or worn.
- 39) Always ensure that the grinding wheel has a higher permissible running speed to the speed of the grinder.

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