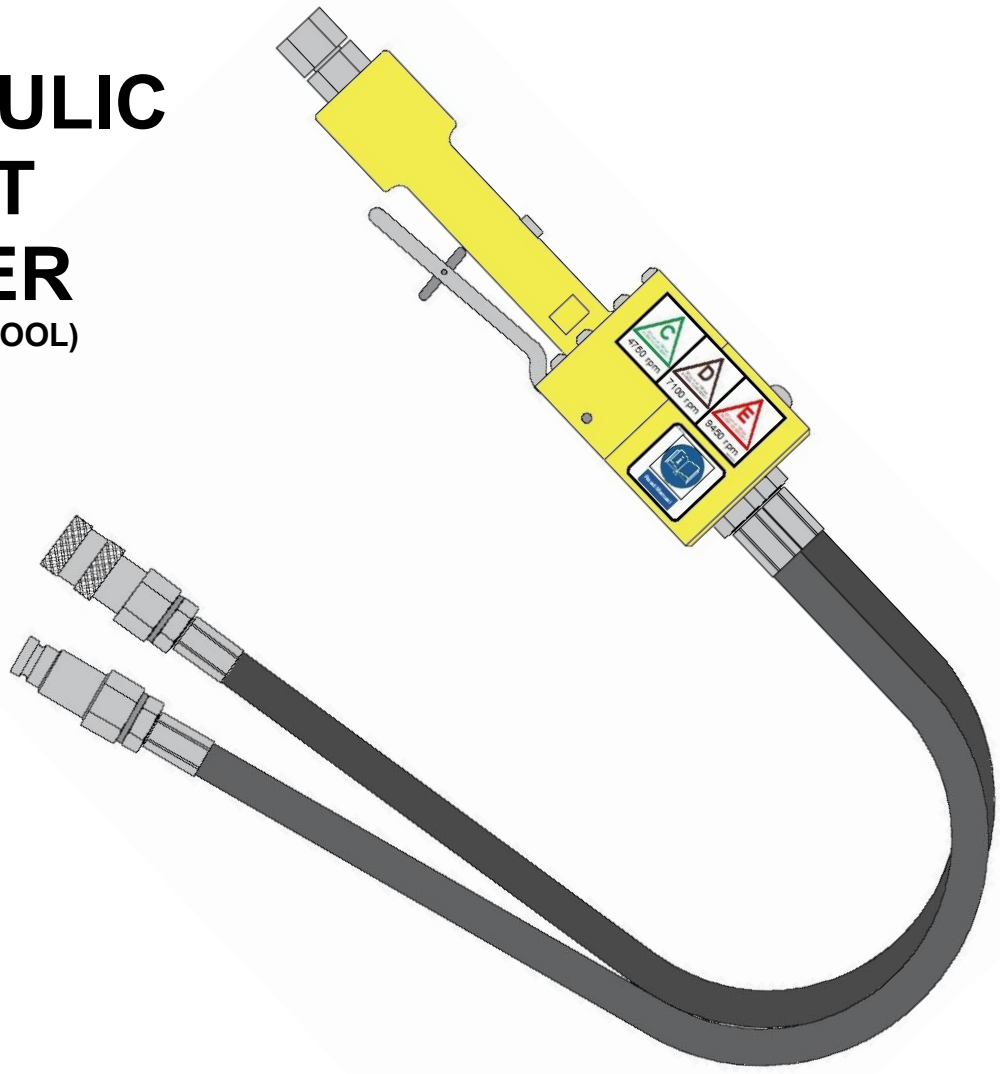
# USER MANUAL

# PG03 HYDRAULIC PEANUT GRINDER

**(UNDERWATER TOOL)**




Version 6
(061125)

From Serial No. 0451

Hopkins

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Technical Support: -


EC Hopkins Ltd
Unit 1, 82 Kettles Wood Drive
Woodgate Business Park
Birmingham B32 3DB UK

Tel: +44 (0)121 506 6095
Email: enquiries@echopkins.com

# SAFTEY SYMBOLS

This manual aims to provide the user with information to allow for the safe operation and maintenance of the power tool. The following symbols are used throughout this manual, they are included for your safety and for the protection of the power tool. Always observe and respect the safety symbols found throughout this manual, on equipment labels and information plates.

| | |
|---|---|
|  | **WARNING – Read the user manual**<br>Thoroughly read the user manual paying particular attention to all safety warnings, precautions and instructions. Failure to do so could result in tool damage and/or serious injury. DO NOT discard this manual, store in a safe place for future use. |
|  | **DANGER SYMBOL**<br>Indicates an imminently hazardous situation which will result in death or serious injury. |
|  | **WARNING SYMBOL**<br>Indicates a potentially hazardous situation which could result in death or serious injury. |
|  | **CAUTION SYMBOL**<br>Indicates a potentially hazardous situation which could result in product or property damage. |
|  | **NOTICE - Information / Helpful hints**<br>Indicates important and useful hints for handling, maintaining and servicing the tool throughout the user manual. |

## GENERAL CAUTIONS AND WARNINGS


DO NOT operate this power tool without thoroughly reading this manual, take time to familiarise yourself with the power tool and its functions before use. Make sure you know how to use and maintain this equipment safely.

This power tool should only be used and operated by a competent person who has received adequate training in its operation. If there are any questions or anything is not clear, contact the manufacturer for further guidance and assistance.

It is the buyer or user's responsibility to ensure that the selected hydraulic power source is compatible for use with this power tool, check both hydraulic flow and pressure relief settings are within the rated range of the power tool.

Only personnel who have attended a recognised Abrasive Wheels Course and hold a valid certificate can fit abrasive wheels to the power tool. Ensure any accessory being fitted is compatible and speed rated within the tools maximum speed.

NEVER operate this power tool if you are ill, feeling tired, on medication or under the influence of alcohol or drugs. Your judgement will become impaired under any of these conditions and could lead to serious injury or death to you and/or others around you.

Other than routine maintenance, repairs and/or service to this power tool must only be carried out by a trained and competent person. Serious injury or death could result from the improper repair or service of this tool.

DO NOT modify or fit non-approved parts to the tool without prior written consent from the manufacturer, tool warranty will be voided without this. Failure to comply with this warning could result in serious injury or death.

# SAFTEY PRECAUTIONS

Operators and maintenance personnel must always comply with the safety precautions given in this manual and on the labels attached to the equipment.

These safety precautions are given for your safety, review them carefully before operating the power tool and before performing any maintenance or repairs.

Supervising personnel should develop additional precautions relating to the specific work area and local safety regulations. A risk assessment should be performed and procedures established before any work proceeds.

This power tool will provide safe and dependable service if operated in accordance with the precautions and instructions given in this manual. Thoroughly read and understand this manual and any labels attached to the equipment, failure to do so could result in personal injury or equipment damage.

Do not discard this manual, pass to the operator for their future reference. Copies are available on request or downloadable from our website.

**PPE - PERSONAL PROTECTIVE EQUIPMENT**

| | |
|---|---|
|  | Wear Eye Protection at all times when operating the power tool |
|  | Wear Ear Protection at all times when operating the power tool |
|  | Wear Respiratory Protection at all times when operating the power tool |
|  | Wear Hand Protection at all times when operating the power tool |
|  | Wear Safety Boots at all times when operating the power tool |
|  | Wear Head Protection when performing overhead work |
|  | Wear Fire-Retardant Garment(s) when deemed necessary |

- Wear suitably rated protective equipment at all times when operating the power tool, these include but are not limited to safety goggles, ear defenders, respiratory mask, gloves, safety boots and head protection.
- If a risk assessment finds necessary wear approved fire-retardant garments covering arms, legs and body to protect from grinding sparks. Grinding sparks are extremely hot and can ignite clothing, have a bucket of water nearby.
- NEVER wear loose fitting clothing and remove all jewellery. Tie back long hair when operating the power tool. Loose items can become entangled in the working parts of the tool and cause serious injury.

**WORKING AREA / ENVIRONMNET**

- Operator must start in a work area without bystanders. The operator must be familiar with all prohibited work areas such as excessive slopes and dangerous terrain conditions.
- Ensure the working area has adequate lighting, keep well-lit at all times.
- Ensure the working floor area is clear and dry to avoid tripping or slipping hazards.
- Assess and establish a method for hydraulic hose management, hoses within the working area can increase the risk of tripping if not managed correctly.
- Remove all clutter before proceeding to work, keep the working area clean.
- Ensure no personnel can wander in front or to the sides of the operator whilst using the power tool, consider cordoning off the area of working activity.
- DO NOT use the power tool in an explosive environment or near combustible materials.
- Remove all combustible materials and flammable liquids from the vicinity, the power tool will produce sparks whilst in use.
- Avoid using the power tool when there is dust or vapor nearby.
- Check the working area for buried utility cables or pipes, do not proceed to work where you cannot be sure of their presence.

**GENERAL PRECAUTIONS**

- DO NOT operate the power tool without first reading this user manual.
- DO NOT operate the power tool unless thoroughly trained or under the supervision of an instructor.
- Establish a training program for all operators to ensure safe operation of the power tool.
- DO NOT use the power tool for tasks other than those it was designed for, see intended use section of this manual.
- Keep all parts of your body away from the working area of the power tool.
- DO NOT inspect or clean the power tool while the power unit is running, accidental engagement of the tool can cause serious injury.
- DO NOT operate the power tool if there are any signs of damage. If the tool generates a problem while in use, stop immediately and report faults to your supervisor.
- DO NOT operate the power tool if it is missing parts or has been modified. All issues must be rectified before putting the tool to work.
- To prevent unintentional tool startup, ensure the trigger of the power tool is in the OFF position (not depressed) before powering up the hydraulic power unit and setting the circuit live.

- Disconnect the tool from the power unit when fitting or changing accessories. Do not work on the power tool while the hydraulic circuit is live.
- Check and ensure the speed rating of all grinding and cutting accessories are higher than the maximum rated speed of the power tool.
- When new grinding or cutting accessories have been fitted slowly accelerate the speed of the tool and check the accessory is running true and free of any abnormal vibrations. Remove and discard all that fail this procedure.
- Hold the power tool with both hands at all times whilst operating.
- DO NOT overreach, ensure you keep your balance and a sure footing at all times.
- Avoid awkward and unsuitable postures, elect a comfortable stance while using this power tool.
- Ensure the work piece is secured and cannot move whilst grinding or cutting.
- Be aware that the nature of grinding with a power tool can and will generate high velocity projectiles, wear instructed PPE at all times.
- NEVER start the grinder with the tool in contact with a surface, always introduce the free spinning tool to the work piece.
- NEVER walk around with the grinder running.
- DO NOT continue to use the power tool if the system hydraulic oil exceeds 60ºC, this will lead to operator discomfort and create a hazardous situation.
- Be aware that working surfaces will become hot while grinding or cutting, wear PPE at all times and avoid touching or coming into contact with recently worked surfaces.
- DO NOT walk or wander around with the tool activated and running, negligence such as this will invite accidents.
- DO NOT set the power tool down to rest until the spindle shaft has stopped rotating.
- DO NOT leave the power tool unattended while it is in a live / powered condition.
- Allow the power tool to cool before storing.
- DO NOT transport or store the power tool with accessories fitted.
- Always keep critical tool markings such as warning labels legible, replace any that are missing or damaged.
- To avoid personal injury or equipment damage, power tool maintenance, repair and service activities must only be carried out by competent and trained personnel.

**SAFETY WHEEL GUARD AND DISCS**

- Always fit the supplied safety wheel guard when operating the power tool with cutting discs, ensure the guard is securely clamped to the nose of the power tool.
- To protect the operator from flying projectiles, ensure the wheel guard is positioned correctly with the closed side towards the operator.
- DO NOT use the power tool with a loosely fitted safety wheel guard.
- DO NOT adjust the safety wheel guard while working with the tool, remove power from the tool before making any adjustments.
- NEVER use a damaged abrasive cutting disc, inspect all discs for damage, cracks, excessive or uneven wear. Discard any disc that has defects or has been dropped.
- DO NOT forcibly fit an abrasive cutting disc as this will pre-stress the disc and may lead to premature failure.
- DO NOT use non-reinforced abrasive cutting discs with this power tool.
- DO NOT use a cutting disc to grind with, side loading an abrasive cutting disc can cause the disc to shatter.
- DO NOT use toothed saw blades as these will increase the risk of kickback.
- DO NOT use worn down discs from larger tools, they will not be compatible with this grinder.
- DO NOT use reducing bushes to enable the fitting of discs with a larger hub size.
- When cutting do not twist or force the disc to cut as this can cause the disc to shatter. Guide the disc in a straight line applying gentle pressure.

**NOISE**

- Exposure to high noise levels can cause permanent hearing loss and other problems such as tinnitus. Always use ear protection as instructed by your employer and in accordance with occupational health and safety regulations.
- Apply additional controls, if possible (such as material damping) to help reduce the noise generated by work piece materials.
- Maintain and keep the power tool in perfect working condition to help prevent unnecessary increases in noise levels.

**DUST AND FUMES**

- Some dust created by grinding and cutting activities in construction materials is known to contain chemicals that cause cancer, birth defects and other reproductive harm.
- Risk of exposure varies and depends on how frequent you carry out this work.
- A risk assessment must be carried to help identify the composition of the material to be worked, to specify the type of respiratory protection to be used and to identify any national health and safety regulations to be followed.
- Work in a well-ventilated area to help reduce the exposure level to these chemicals.
- Consider the immediate working area, protect yourself and others around you.
- If appropriate arrange for the safe disposal of materials by a registered and qualified waste disposal body.
- Be aware that the dust and fumes that are being created by the working activity could cause a

potentially explosive environment. Take precautions.

- If possible, use some qualified form of dust extraction at the point of emission to control and minimise the amount of dust entering the atmosphere.
- Always use respiratory protection as instructed by your employer and in accordance with occupational health and safety regulations.
- Maintain and keep the power tool in perfect working condition and only use the tool as instructed by this manual.
- Avoid prolonged contact with the dust, keep contact to an absolute minimum.
- DO NOT use this tool on asbestos.

**VIBRATION**

- Working with power tools will expose operators to levels of vibration. Operators can experience discomfort in the hands, arms and shoulders, neck or other parts of the body as a result.
- If you experience any signs of tingling, pain, numbness or whitening of the fingers or hands, immediately stop using the power tool. Inform your employer and seek medical attention.
- To help reduce the effects of vibration on the body when working in cold weather conditions, wear thermal clothing and keep hands and arms warm and dry.
- Maintain and keep the power tool in perfect working condition to help prevent unnecessary increases in vibration levels and only use the tool as instructed by this manual.
- It is good practice to carry out periodic vibration tests on all power tools in the working environment, if higher than normal vibration figures are recorded have the power tool serviced by an authorised service and repair centre.

**HYDRAULICS**

- Check the selected hydraulic power unit flow and pressure specifications are fully compatible with this power tool before connection and use.
- DO NOT power this tool from a hydraulic power source with flow and pressure values that exceed the specifications of this power tool.
- NEVER connect hydraulic hoses to the power tool with the power unit powered up and running.
- Only use hydraulic hoses that have a working pressure specification that exceeds the maximum pressure of the power unit.
- Check all hoses are connected for correct hydraulic flow direction / rotation of the tool.
- DO NOT use the tool in reverse direction.
- Regularly inspect hydraulic hose whips for damage and signs of perishing, replace if any noted.
- DO NOT inspect hoses for leaks by using bare hands as ‘pin-hole’ leaks can penetrate the skin.
- Should hydraulic oil penetrate the skin or is inadvertently swallowed, seek medical advice immediately. DO NOT induce vomiting.
- NEVER use the power tool if there is any evidence of hydraulic oil leaking.
- Should any oils or greases come into contact with bare skin, wash off immediately with warm soapy water. Skin conditions such as dry skin or eczema can occur if ignored.

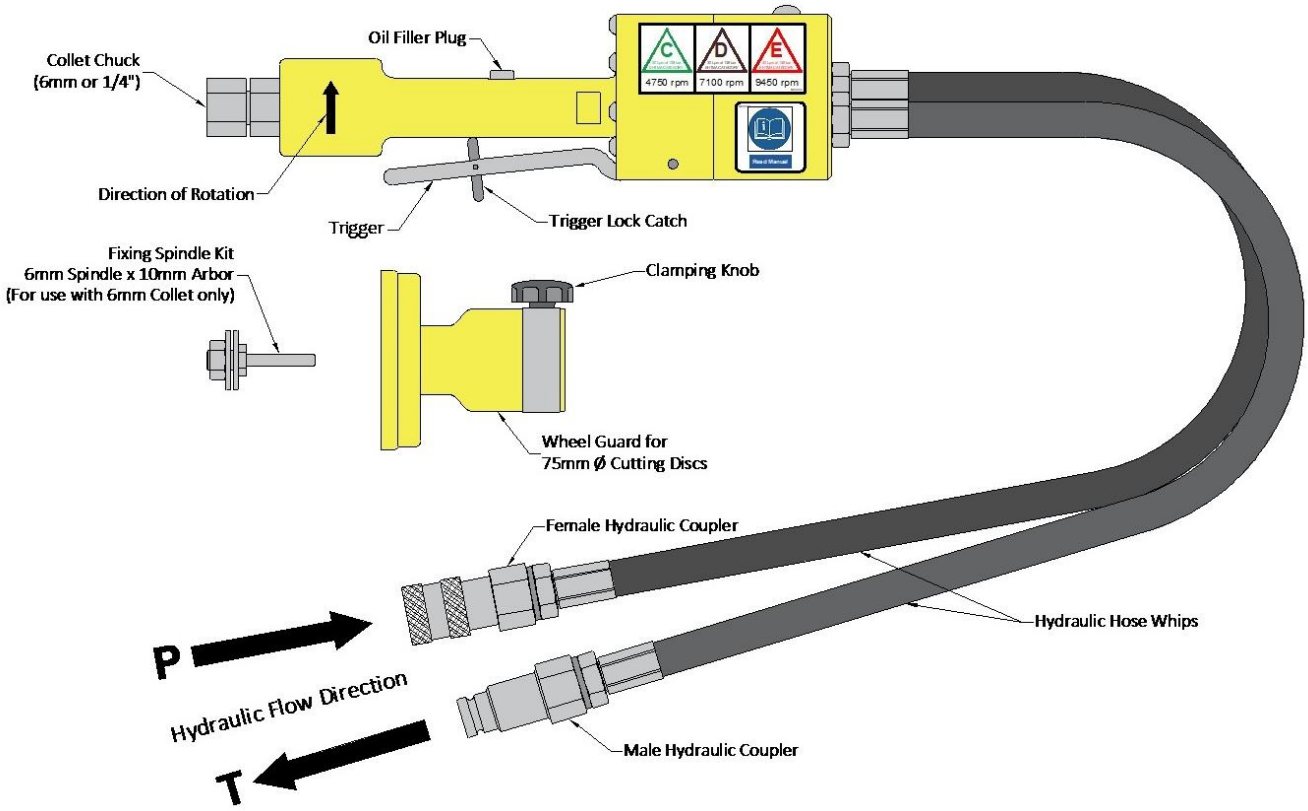
**KICKBACK**

- Be aware of kickback during operation. This happens when a cutting disc is misaligned, binds or is pinched in the work piece. The power tool reacts violently lifting out of the work piece and back towards the operator and could result in serious injury if the disc shatters.
- Kickback occurs due to operator error and injury can be avoided by taking proper precautions and following the procedures listed as following.
- Using both hands, grip the grinder firmly around the trigger / handle body and at the front nose of the tool. Always use both hands when operating and be prepared for the unexpected when using.
- Position your body away from the line of any potential kickback.
- When using a cutting disc always cut in a straight line. Do not twist the disc or try to cut round corners, this puts a side load on the disc and it will either jam or shatter with the potential of causing kickback.
- DO NOT force the disc to cut, only apply light pressure and let the disc do the work.
- NEVER start the grinder with the disc in contact with the work piece, introduce a free spinning disc slowly to the work piece.
- REMEMBER: Complacency can be a killer. The attitude of ‘I’ve been using a grinder for years, I know what I am doing, it’s never happened to me’ could be your undoing. Stay Alert, Stay Alive!

**UNDERWATER**

- Only commercial divers with the correct level of training should be allowed to use power tools in an underwater environment.
- As most of the PPE advised throughout this manual will not be suitable for use in an underwater environment, this will need to be carefully substituted with the appropriate versions of diving wear. Consult your local commercial diving association for advice and guidance with this.

# PRODUCT DESCRIPTION




# SCOPE OF DELIVERY

1 x Hydraulic Peanut Grinder fitted with 1m hose whips & couplers
1 x Protective Tool Case
1 x Wheel Guard
1 x Fixing Spindle Kit
1 x ALL-CUT Diamond Grit Cutting Disc
1 x User Manual

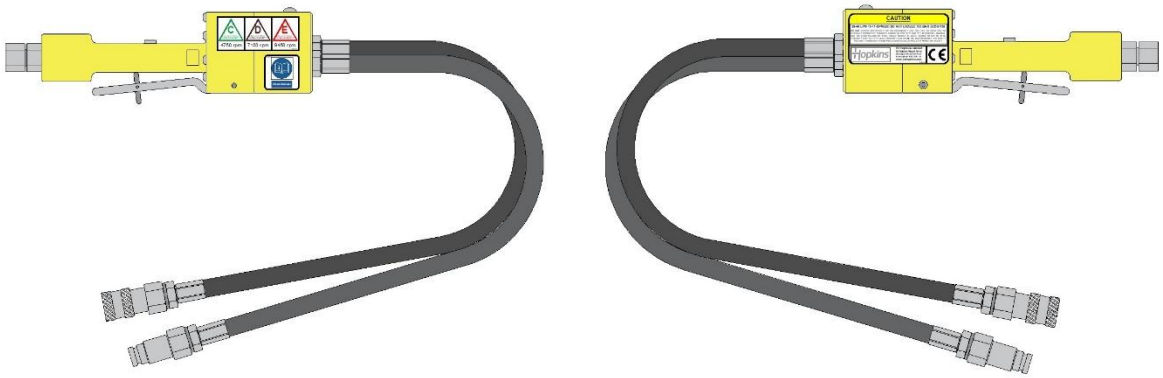
# INTENDED USE

The PG03 Hydraulic Peanut Grinder is a portable handheld lightweight tool designed to be operated with both hands.

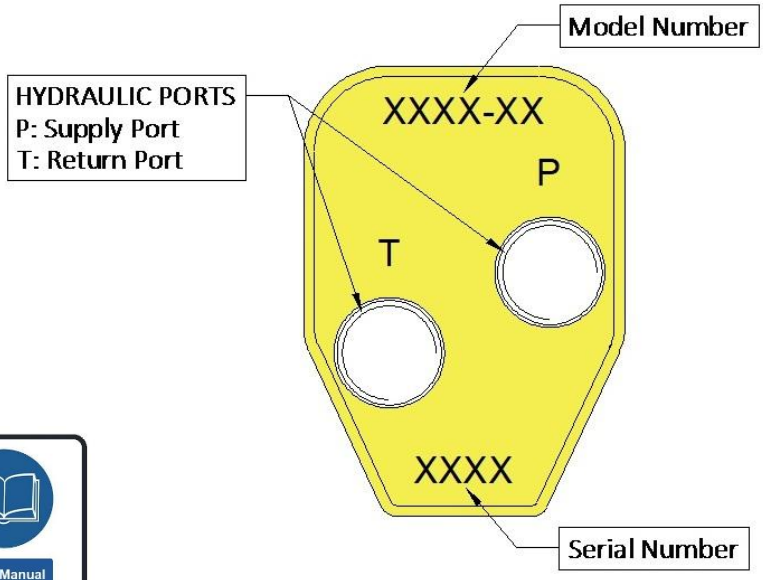
It is intended to be used for deburring, grinding, cutting and cleaning operations of metal materials in an underwater environment, both fresh and saltwater.

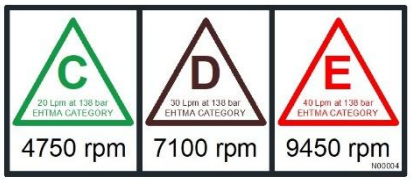
Use above water is not recommended as this will overheat the tool and compromise the rotary shaft seal. However, a brief run of no more than 15 seconds above water to check for oil leaks and correct rotation is acceptable.

# LABELS & IDENTIFICATION

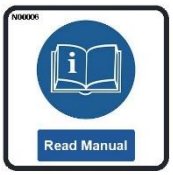



N00005 Caution




N00004 EHTMA Category




N00006 Safety

# SPECIFICATIONS

| | | |
|---|---|---|
| **TOOL MODEL & TYPE** | PG03 Hydraulic Peanut Grinder Underwater | |
| **HYDRAULIC REQUIREMENTS** | | |
| Input Flow Range | 20 ~ 40 lpm (5 ~ 11 USGPM) | |
| Optimum Flow Rate | 30 lpm (8 USGPM) | |
| Maximum Flow Rate | 40 lpm (11 USGPM) | |
| System Pressure | 155 bar (2250 psi) MAX | |
| Back Pressure | 17 bar (250 psi) MAX | |
| Oil Viscosity Grade | Grade 32 mineral or biodegradable oil | |
| System Type | Open Centre (OC) | |
| **HYDRAULIC CONNECTION** | | |
| Tool Ports | -8 SAE O-Ring | |
| Hose Whips | 1m Long | |
| Hyd QR Couplers | Flat Face 1/2" BSP (3/8” Body Size) | |
| **HYDRAULIC TOOL CATEGORY** | | |
| HTMA | Type I, Type II | |
| EHTMA | CAT C, D, E | |
| **CAPACITY** | | |
| Chuck / Arbor | PG03-01: 6mm Collet / 1” AF Hex Nut<br>PG03-02: ¼” Collet / 1” AF Hex nut | |
| **TOOL PERFORMANCE** | | |
| Spindle Speed | 9450rpm @ 40lpm EHTMA CAT E<br>7100rpm @ 30lpm EHTMA CAT D<br>4750rpm @ 20lpm EHTMA CAT C | |
| Rotation | CCW (viewed from chuck end) | |
| **LUBRICATION** | | |
| Oil in Handle | 15W/40 | |
| **DIMENSIONS** | | |
| Length (without guard & hoses) | 319mm | |
| Length (with guard / without hoses) | 334mm | |
| Width (without guard) | 60mm | |
| Height (without guard) | 84mm | |
| Nose Diameter (without guard) | 49.3mm ø | |
| Wheel Guard Diameter | 92mm | |
| **WEIGHT** (without hoses / guard) | 2.2 kg | |
| **SOUND PRESSURE LEVEL $L_{PA}$** (1m) | 87 db(A) Measured | Uncertainty K: 3 db(A) |
| **SOUND POWER LEVEL $L_{WA}$** | 98 db(A) Measured | |
| **VIBRATION** | 3.4 $m/s^2$ Measured | Uncertainty K: 1.5 $m/s^2$ |

# OPERATION


DO NOT operate this hydraulic power tool until you have thoroughly read this manual and familiarized yourself with all tool functions.

**PRE USE CHECKS**

DO NOT perform these checks with the tool connected to the power source, disconnect the tool before proceeding.

Check the hydraulic hose whips are not showing any signs of damage, exposed wire braiding or perishing.

Check the hydraulic couplers are in good condition with no signs of oil leaks.

Check the tool for any signs of oil leaks.

Check all fasteners are tight and secure.

Check both the trigger and safety catch operate and move freely.

Check the tool for any missing, damaged or defective parts.

Replace all missing, damaged and/or defective items identified throughout the pre-use checks before proceeding to use the tool.

Further tool checks are listed and advised under the Maintenance section of this manual.

**PREPERATION FOR USE**

DO NOT fit or change accessories with the tool connected to the power source, disconnect the tool before proceeding.

Select the correct type of accessory for the job in hand, ensure the selected accessory is compatible with this tool and the rpm rating meets or exceeds the max speed of the tool. See specifications page for further information.

DO NOT use any accessories that are damaged or defective, discard and dispose of all damaged accessories.

Guide the spindle of the accessory into the chuck collet and with a couple of 1” AF open ended spanners lock the chuck nut to the tool holder securing the accessory in place, check that the accessory is securely held.

Depending on the build number the tool will be supplied with either a 6mm or ¼” collet, choose accessories accordingly.

A fixing spindle kit (38) is supplied with the tool to enable the use of cutting discs, this is machined with a 6mm diameter spindle and must only be used with the 6mm collet. The arbor of the fixing spindle kit is machined to take 75mm diameter cutting discs with a 10mm mounting hole.

We strongly recommend using our AC075-10 ALL-CUT diamond grit disc for all cutting tasks, these discs do not have a life expiry and can be submerged infinite times in fresh and salt water without compromising their integrity. Bonded abrasive discs may be used but they must be destroyed and disposed of after each task.

ALWAYS fit and use the included safety wheel guard when operating the tool with cutting discs.

If a cutting disc is to be used fit the fixing spindle kit (38) to the chuck collet of the tool before fitting the wheel guard, follow the same accessory fitting procedure as instructed earlier. Fit the wheel guard to the nose of the tool and orientate so that the guard will fall between the operator and the cutting disc, tighten the clamping lobe nut to secure the guard in place. Place the cutting disc between the washer flanges of the fixing spindle kit and secure in place by tightening the locking nut.

Check the cutting disc for damage, deformity and defects. NEVER use discs that are damaged or deformed.

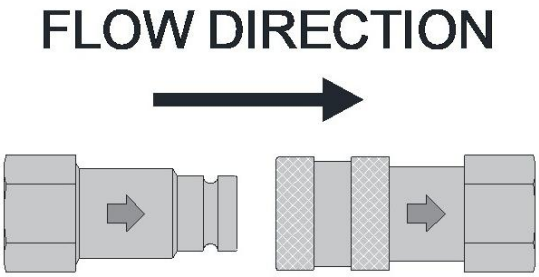
Select a suitable hydraulic power unit (HPU) to power this tool, ensure the hydraulic circuit is of the open centre (OC) type. Check and make sure that the hydraulic power unit does not exceed a maximum output flow of 40 Litres per Minute and that the maximum system pressure is set to no more than 155 Bar (2250 psi). It is advisable to test the selected HPU with a calibrated hydraulic flow & pressure tester to ensure compatibility with the tool.

Connect a suitable main set of commissioned hydraulic hoses (see hydraulic hose section) between the HPU and tool, wipe the faces of all hydraulic couplings with a clean cloth before making any connections. Connect the return hose first followed by the pressure hose and ensure flow direction of the hydraulic circuit is correct i.e. flow supply from HPU to ‘P’ port of tool and ‘R’ port of tool to flow return of HPU.

As the coupling connection is being made the sleeve of the female coupling will spring forward to latch the connection. Once made twist the sleeve approximately 90 degrees in either

direction to mis-align the notch of the sleeve and pip of the coupling body, this function will prevent the coupling connection from unintentionally disconnecting. When ready to disconnect, realign the notch and pip and pull back the sleeve of the coupling body.

Industry convention is that hydraulic oil flows out of the male coupler and returns through the female coupler.




**START UP AND USE**

Follow the startup procedure for the HPU and power up, refer to HPU user manual. Move the 'ON/OFF' lever of the HPU to the 'ON' position – the hydraulic circuit and tool is now LIVE.

Holding the tool with both hands and with a firm footing release the trigger lock mechanism and slowly squeeze the trigger, at startup ensure the chuck is rotating in the correct direction - CCW when viewed from chuck end of tool.

DO NOT start grinder with the cutting tool in contact with the work surface.

Run the grinder for 15 seconds and check for oil leaks or any unusual noises / vibrations, stop immediately if any are noted. Refer to the trouble shooting section for possible causes.

DO NOT run the tool out of water for more than 15 seconds as it could overheat and damage the rotary seal.

Should it require a longer test, submerge the front end of the grinder in a bucket of water so as not to overheat the tool or rotary seal.

Release the trigger to stop the tool, ensure the trigger lock mechanism returns to the lockout position.

Once the task is complete and the spindle has come to rest, set the tool down in a stable position and location.

Ensure the spindle has come to rest before setting down the tool.

**AFTER USE**

Move the 'ON/OFF' lever of the HPU to the 'OFF' position and following the shutdown procedure power down the HPU.

Disconnect the tool from the main set of hydraulic hoses, when disconnecting uncouple the pressure hose first and the return hose last so as to minimize any pressure being trapped in the tool.

Remove any accessories fitted to the tool, discard if damaged or excessively worn.

Check the tool for oil leaks and damage, report any noted faults to your supervisor.

Wash the tool off with clean fresh water and work a light water dispersing oil to the moving parts e.g. valve spool, trigger, safety catch and collet.

Place the tool in its protective tool case and store away in a clean dry environment.

# MAINTENANCE AND SERVICE

## MAINTENANCE INSTRUCTIONS

**Disconnect tool from the hydraulic power supply before carrying out any maintenance or service work.**

Hydraulic tools in general need very little maintenance but they do rely on good maintenance of the hydraulic power supply to fully realize the reliability and longevity that these tools can offer. Particular attention should be paid to the following practices to ensure a good and reliable experience with these tools:

- Regular hydraulic filter changes.
- Regular hydraulic oil changes.
- Cleaning of hydraulic coupler faces before connecting.

DAILY TOOL CHECKS

Visually check the tool for any signs of oil leaks, replace any suspicious seals as required.

Check condition of hydraulic hose whips, replace any that are damaged or showing signs of perishing.

Check hydraulic quick release connectors for leaks and damage, replace if necessary. Always replace both connectors.

Remove oil filler plug fitted to handle and check level, top up with 15W/40 oil if necessary. Refit oil plug and tighten to 3Nm.

Check wheel guard for damage and/or deformities, replace with new if necessary.

Check trigger safety lock is present and working correctly, replace any missing or broken parts.

Check action of trigger / valve spool interaction i.e. valve spool moves with a smooth action and returns to OFF position when trigger released, replace valve spool seals if required.

Check all fasteners are tight and secure.

Check all tool labels are present and legible, replace any that are missing or damaged.

EVERY 100 HOURS OR 12-MONTHS

Remove oil filler plug fitted to handle and drain oil into a suitable container. Refill with fresh 15W/40 oil and refit oil plug tightening to 3Nm. Run the tool for no more than 15 seconds and recheck oil level, top up if necessary.

Perform a spindle speed test and maintain a dated record of the result in the notes section of this manual. Using a calibrated hyd flow & pressure tester check the output of the hydraulic power source to ensure the hydraulic flow matches the specifications of this tool, see relevant section in this manual for details. Connect the tool to the hydraulic power source and with a calibrated contact tachometer record the spindle speed of the tool at the matched hydraulic flow and record the result. Ensure the recorded spindle speed does not exceed the maximum speed of the tool when run at the matched flow (see specifications page) and is no less than 95% of the rated speed. A recording of less than 95% would suggest a worn hydraulic motor and the need for a major service and overhaul. In this instance send the tool to your local authorized repair centre.

## SERVICE INSTRUCTIONS

PRIOR TO DISASSEMBLY

Clean the exterior of the tool removing as much foreign matter such as dirt and grit as possible.

Obtain Seal Kit (N00078) so that all exposed seals during disassembly can be replaced during reassembly. Note seal orientations before removal so that new seals can be fitted in the same positions as the original seals.

DISASSEMBLY

If fitted remove the wheel guard (35) along with any accessories mounted to the tool chuck.

Remove the hydraulic hose whips (40) and allow the hydraulic oil from both the hoses and the tool ports to drain into a suitable container.

Unscrew the tool chuck nut (1) and remove along with the collet (2). Using an impact driver with a 1” AF impact socket fitted, undo the tool chuck holder (3). Should the chuck holder not come undone it can be removed later using service tool N00257.

Using a 5mm hex key remove the filler plug (10) and drain the oil from the handle housing (4) into a suitable container.

Using a 4mm hex key remove the trigger pivot screw (27). Unhook the trigger assy (30) from the valve spool (23) and remove.

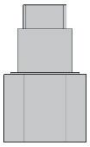
Using a 5mm hex key and a large flat bladed screwdriver remove the button screw (18) from the valve spool (23). Remove the valve spring washer (19) and spring (20) from the end of the valve spool then withdraw the valve spool from the trigger side of the valve block (21).

Using a 4mm hex key remove the eight button head screws (11), the tool will separate into two sections: valve block assy (21) and handle c/w gear handle housing (4 & 14).

Remove both drive and idle gears (16 & 25). Clamp the gear handle housing (14) in a vice

fitted with soft jaws and unscrew the handle (4) using a 1” AF open ended spanner.

Using a suitable bearing extraction tool remove the drive shaft bearing (29) from the bearing pocket of the gear handle housing. Remove the seal spacer (28) and shaft seal (26).



If the chuck holder failed to release as instructed earlier, clamp service tool N00257 in a vice and sit the handle housing (4) onto the service tool locating its tang into the recessed drive slot of the drive shaft (9). The tool chuck holder can now be loosened and removed using a 1” AF spanner. The tool chuck holder will contain the spring half of the rotary seal (5), slide & remove this from the shaft of the chuck holder.

Using a suitable drift, drive the drive shaft (9) through handle bearing (8) and remove from handle (4). Remove the static half of the rotary seal (5) from the handle, a little persuasion may be needed. Remove the bearing spacer (6) from the handle.

Using a set of internal circlip pliers remove circlip (7) from the nose end of handle (4).

Remove bearing (8) from bearing pocket of handle (4). It is best to warm up the handle first then tap this out using a suitable drift. Fit a new bearing whilst the housing is still warm.

Remove all seals and discard.

REASSEMBLY

Assembly is the reverse procedure of the above with consideration of the following notes.

Thoroughly wash, degrease and dry all parts before proceeding with reassembly.

Inspect all components for excessive wear and damage, replace with new parts as necessary. Pay particular attention to condition of bushings and seal contact areas on rotary shafts. Replace all bushings if they are showing signs of excessive wear ensuring they are driven fractionally below the surface of the housing when fitting. Inspect the condition of the gear cavity in the gear handle housing, replace the housing if excessive wear is present.

With new bearings fitted, lubricate all new seals with a high temperature lithium-based grease and fit to seal pockets. Lubricate seal pockets and seal contact surfaces in addition to seals.

Tighten all threaded fasteners to torque settings advised in the remarks section of the parts list.

Before fitting a new drive shaft bearing (29) ensure the drive shaft seal (26) and bearing spacer (28) have been fitted to the pocket of the gear handle housing (14) taking care to sit the flat surface of the spacer against the seal i.e. spacer step toward the bearing to be fitted. Offer the drive shaft bearing to the same pocket and with a suitable drift partially drive the bearing into the pocket until it is approx. 1mm proud of the pocket surface, ensure the bearing is driven reasonably true to the pocket. Offer and screw the handle (4) into the housing, hand tighten until the step at the front of the large M35 thread bottoms to the bearing outer race. With a 1” AF open ended spanner continue to tighten the handle into the pocket, a little resistance will be felt while the step of the handle trues up the bearing and drives it deeper into the bearing pocket and ultimately securing against the seal spacer and shaft seal. The handle is fully fitted once the large shoulder has bottomed to the outer pocket of the gear handle housing, both surfaces need to be perfectly flush to confirm and the spanner flats should finish parallel to the gear handle housing.

When fitting a new rotary seal (5) be careful not to mark or damage the mirrored face of the stationary half when fitting to the housing. Smear some grease inside the housing in front of the bearing where the seal sits and on the O-ring of the static seal. Place the seal in position inside the housing with the mirrored finish uppermost. Utilizing the piece of protecting card supplied with the rotary seal, place it on top of the seal and using a piece of nylon bar or an equivalent material push down until the stationary seal sits against the shoulder of the seal pocket.

Tighten the eight button head motor screws (11) in opposing sequence stages ensuring the drive shaft rotates freely throughout.

Fit new O-rings (39) to the hydraulic hose whips and reassemble to the tool ports. The hose with the female coupling (knurled sleeve) fits to the ‘P’ port and the hose with the male coupling fits to the ‘T’ port.

Position the assembled tool on its side with the filler port of the handle uppermost. Completely fill the handle cavity (approx. 20ml) with 15W/40 oil. Fit and tighten the oil filler plug (42).

Remember DO NOT run out of water for longer than 15 seconds.

# STORAGE

- Wash the tool off with clean fresh water and work a light water dispersing oil to the moving parts such as the valve spool, trigger, safety catch and collet.
- Place the tool in its protective tool case along with its wheel guard and accessories.
- Store the tool in a clean and dry location.

# TOOL DISPOSAL

At the point of retiring, this tool contains many components which can be recycled, please act responsibly and dispose of individual items in accordance with local and national environmental regulations.

**Hydraulic Hoses**

Drain waste oil from all hydraulic hoses and collect into a suitable container for recycling. Dispose of drained hoses by dropping them off or having them collected by a registered waste hose facility. Note: Hydraulic oil is hazardous to the environment, DO NOT allow waste oil to contaminate the ground or water table.

**Hydraulic Oil**

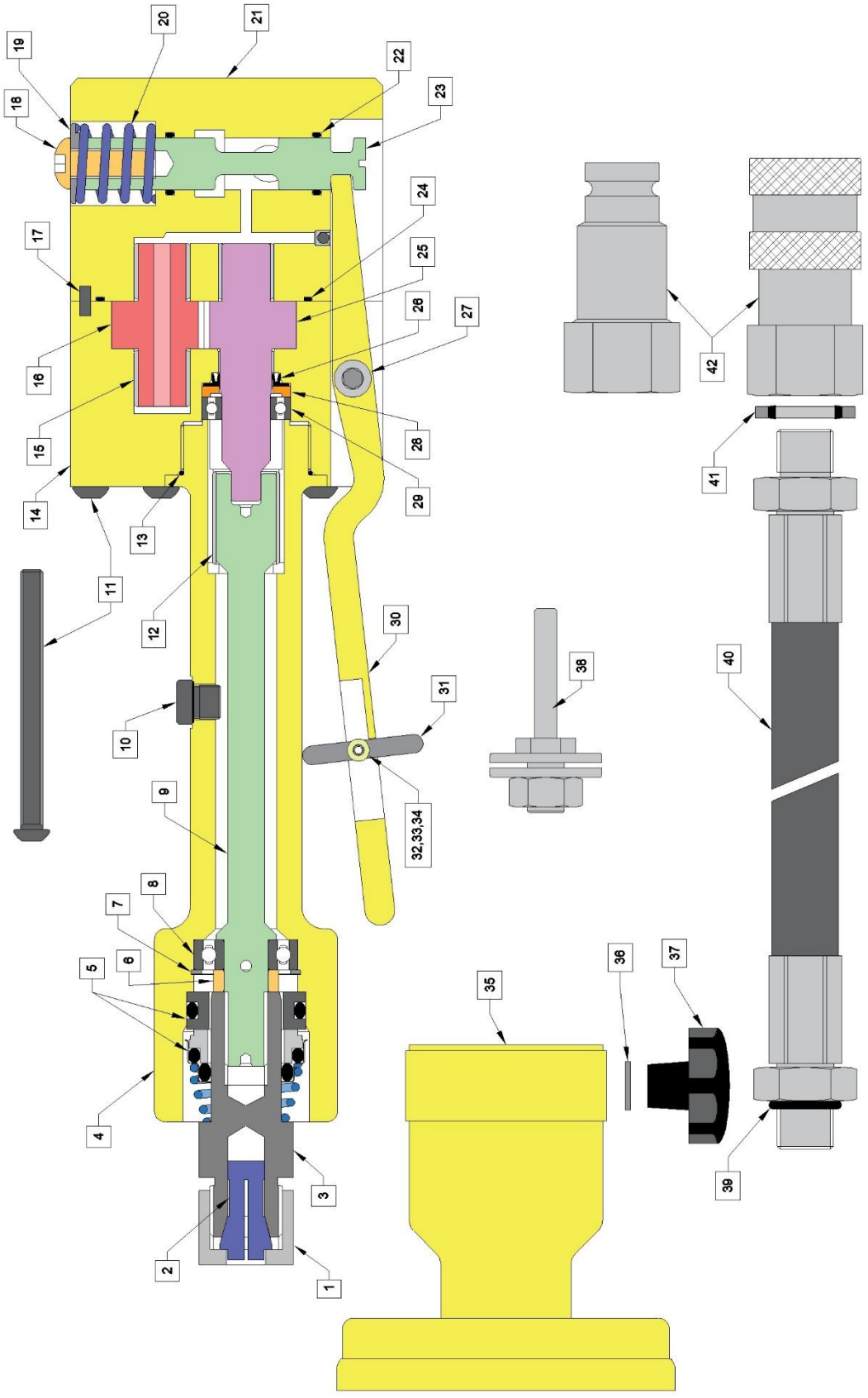
Collect all waste oil in a suitable container for recycling purposes, contact your local waste oil recycling facility for collection or drop off instructions. Note: Hydraulic oil is hazardous to the environment, DO NOT allow waste oil to contaminate the ground or water table.

**Tool Body**

Drain waste oil from the retired tool and collect in a suitable container for recycling purposes. Strip the tool and dispose of all non-metallic parts. Contact your local recycling facility for guidance and instructions on recycling metal items.

# PARTS ILLUSTRATION

Serial No 0451 onwards



# PARTS LIST

Serial No 0451 onwards

| Item No. | Description | Part No. | Qty | Remarks |
|---|---|---|---|---|
| 1 | Tool Chuck Nut | N00020 | 1 | |
| 2 | Collet 6mm | N00022 | 1 | PG03-01 |
| | Collet 1/4” | N00099 | 1 | PG03-02 |
| 3 | Tool Chuck Holder | N00019 | 1 | 7/16-20 UNF Torque to 15Nm |
| 4 | Handle Assy | N00241 | 1 | Inc. 12 |
| 5 | Rotary Seal | N00023 | 1 | part of seal kit |
| 6 | Bearing Spacer | N00247 | 1 | |
| 7 | Retaining Ring | N00248 | 1 | |
| 8 | Bearing | N00089 | 1 | |
| 9 | Drive Shaft | N00036 | 1 | |
| 10 | Oil Filler Plug | N00018 | 1 | 1/8” BSP Torque to 3Nm |
| 11 | Button Head Screw | N00012 | 8 | M6 Torque to 5Nm |
| 12 | Bushing - Drive Shaft | N00025 | 1 | |
| 13 | O-Ring | N00049 | 1 | part of seal kit |
| 14 | Gear Handle Housing Assy | N00239 | 1 | Inc. 15 |
| 15 | Bushing | N00028 | 3 | |
| 16 | Idler Gear | N00017 | 1 | |
| 17 | Dowel Pin | N00009 | 2 | |
| 18 | Button Head Screw | N00013 | 1 | M8 Torque to 5Nm |
| 19 | Valve Spring Washer | N00021 | 1 | |
| 20 | Valve Spring | N00007 | 1 | |
| 21 | Valve Block Assy | N00035 | 1 | Inc. 15,17,18,19,20,22,23 |
| 22 | O-Ring | N00103 | 2 | part of seal kit |
| 23 | Valve Spool | N00030 | 1 | |
| 24 | O-Ring | N00051 | 1 | part of seal kit |
| 25 | Drive Gear | N00233 | 1 | |
| 26 | Shaft Seal | N00245 | 1 | part of seal kit |
| 27 | Cap Screw | N00011 | 1 | M5 Torque to 3Nm |
| 28 | Seal Spacer | N00234 | 1 | |
| 29 | Drive Gear Bearing | N00015 | 1 | |
| 30 | Trigger | N00037 | 1 | |
| 31 | Safety Catch | N00010 | 1 | |
| 32 | Roll Pin | N00002 | 1 | |
| 33 | Spacer | N00001 | 1 | |
| 34 | Spring | N00008 | 1 | |
| 35 | Guard Assy | N00046 | 1 | Inc. 36,37 |
| 36 | Washer | N00045 | 1 | |
| 37 | Guard Clamp Knob | N00044 | 1 | |
| 38 | Fixing Spindle Kit 6mm x M10 | N00085 | 1 | |
| 39 | O-Ring | N00048 | 2 | part of seal kit |
| 40 | Hose Whip Set 1m | HW1M8R17S8B8 | 1 | |
| 41 | Bonded Seal | RB00-08 | 2 | part of seal kit |
| 42 | FF Hyd Coupler Set 1/2 BSP | FIRG12BSP | 1 | |
| | Seal Kit | N00078 | 1 | Inc. 5,13,22,24,26,39,41 |
| | Service Tool | N00257 | 1 | |
| | Protective Tool Storage Case | N00086 | 1 | |

# TROUBLESHOOTING

Below are various types of faults that may be encountered. Should a fault persist please call our technical helpline for assistance.

| Problem | Probable Cause | Remedy |
|---|---|---|
| Grinder does not start | Tool not connected to HPU | Connect hydraulic hoses |
| | HPU circuit not switched on | Switch HPU hydraulic circuit on |
| | HPU is defective | Refer to troubleshooting section in HPU manual |
| | Hydraulic couplers are blocked | Replace blocked couplers |
| | Mechanical failure with tool | Send tool to service/repair centre |
| Grinder runs too slow | Hydraulic oil flow from HPU is set too low | Flow test HPU for correct hydraulic flow range |
| | Excessive back pressure | Check return line for restrictions |
| | Hydraulic oil viscosity is too thick | Change to thinner viscosity |
| | HPU hydraulic pump is worn | Refer to HPU manual and replace hydraulic pump |
| | Tools hydraulic motor is worn | Send tool to service/repair centre |
| Grinder runs too fast | Hydraulic oil flow from HPU set too high | Flow test HPU for correct hydraulic flow range |
| Grinder gets hot | Incorrect hydraulic flow from HPU | Flow test HPU for correct hydraulic flow range |
| | Running tool above water | Only operate tool underwater |
| | HPU oil cooler not working | Refer to HPU manual |
| | HPU oil cooler matrix fowled | Remove any obstructions |
| | HPU hydraulic pump is worn | Refer to HPU manual and replace hydraulic pump |
| Grinder lacks power | HPU pressure relief valve set too low, stuck open or faulty | Reset or replace HPU pressure relief valve |
| Grinder runs in reverse | Feed & Return hoses fitted the wrong way round | Check system for correct flow path and rectify |
| Oil leaking around tool chuck | Rotary seal worn | Fit new Rotary Seal |
| Oil leaking from valve spool | Valve spool seals worn | Fit new valve spool seals |
| Hydraulic couplings will not connect | Hydraulic pressure locked in tool and hose whips | Loosen one of the hydraulic couplers to release the trapped pressure, retighten once done |

# ACCESSORIES

| | | |
|---|---|---|
| **Description**<br>**Part Number**<br>**Contents** | **Carbide Burr Set (10-Piece)**<br>5793-0010<br>Cylinder without end cut: 10x19x65mm & 12.7x19x65mm<br>Ball Nose Cylinder: 10x19x65mm & 12.7x19x65mm<br>Ball Nose Tree: 10x19x65mm & 12x25.4x70mm<br>Tree: 10x19x65mm & 12x19x65mm<br>Ball: 12x11x51mm<br>Cone: 12.7x19x65mm |  |
| **Description**<br>**Part Number**<br>**Application**<br>**Materials**<br>**Size** | **All-Cut Diamond Disc**<br>AC075-10<br>Diamond Grit Cutting disc with high cutting performance<br>Steel, Stainless Steel, Castings, Concrete, Stone, Rubber, Composite<br>75mm Diameter x 2.0mm Thick x 10mm Bore size |  |
| **Description**<br>**Part Number**<br>**Application**<br>**Materials**<br>**Size** | **Abrasive Cutting Disc**<br>368877<br>Cutting disc with high cutting performance<br>Steel, Stainless Steel, Castings<br>76mm Diameter x 1.6mm Thick x 10mm Bore size |  |
| **Description**<br>**Part Number**<br>**Size** | **Fixing Spindle for Abrasive & Diamond Wheels**<br>N00085<br>10mm centre mounting hole for cutting discs 6mm Spigot |  |

# HYDRAULIC HOSE RECOMMENDATIONS

We offer a large range of hydraulic hose sets suitably designed and constructed for use with the PG03 Peanut Grinder as well as most other handheld hydraulic tools. These hose sets are offered to suit two Hydraulic Power Unit (HPU) coupling size arrangements, hose length compatibility will depend on the specifics of the HPU. All our hydraulic hose sets and their lengths have been carefully configured to satisfy the hydraulic flow & pressure demands of this and all other handheld hydraulic tools we offer. Please contact us should you wish to discuss the specifications of any of our hose sets further.

| **Hydraulic Hose Sets for HPU fitted with 1/2" Flat Face Hydraulic Couplers** | | | | | |
|---|---|---|---|---|---|
| **Part No.** | **Length** | **Pressure Hose** | **Return Hose** | **Coupling HPU** | **Coupling Tool** |
| HS07M08B3-FF | 7m | 1/2 R2 | 1/2 R2 | 1/2" | 1/2" |
| HS10M08B3-FF | 10m | 1/2 R2 | 1/2 R2 | 1/2" | 1/2" |
| HS15M10B3-FF | 15m | 5/8 R2 | 5/8 R2 | 1/2" | 1/2" |
| HS20M10B3-FF | 20m | 5/8 R2 | 5/8 R2 | 1/2" | 1/2" |
| HS25M10B3-FF | 25m | 5/8 R2 | 5/8 R2 | 1/2" | 1/2" |
| HS30M10B3-FF | 30m | 5/8 R2 | 5/8 R2 | 1/2" | 1/2" |

| **Hydraulic Hose Sets for HPU fitted with 3/4" Flat Face Hydraulic Couplers** | | | | | |
|---|---|---|---|---|---|
| **Part No.** | **Length** | **Pressure Hose** | **Return Hose** | **Coupling HPU** | **Coupling Tool** |
| HS030M1012B2-FF | 30m | 5/8 R2 | 3/4 R1 | 3/4" | 1/2" |
| HS050M1012B2-FF | 50m | 5/8 R2 | 3/4 R1 | 3/4" | 1/2" |
| TS050M1012B2-FF | 50m Thermoplastic | 5/8 R8 | 3/4 R7 | 3/4" | 1/2" |
| HS075M1216B2-FF | 75m | 3/4 R2 | 1 R1 | 3/4" | 1/2" |
| HS100M1216B2-FF | 100m | 3/4 R2 | 1 R1 | 3/4" | 1/2" |

All hydraulic hose sets are fitted with flat face hydraulic couplings and commissioned with ISO32 mineral hydraulic oil, plug & play on receipt. If required and on request we can also commission with biodegradable hydraulic oils.

# EU DECLARATION OF CONFORMITY

DECLARATION OF CONFORMITY

I, the undersigned, hereby declare that the equipment specified hereunder:

| | |
|---|---|
| Category: | Hydraulic Peanut Grinder |
| Make: | Hopkins |
| Type: | PG03 |
| Serial Number: | ALL |

Has been manufactured in conformity with:

| **Directive / Standard** | **No.** |
|---|---|
| Machinery Directive | 2006/42/EC |
| EN ISO | 11148-9:2011 |
| EN ISO | 12100:2010 |
| EN ISO | 15744:2008 |
| EN ISO | 28927-12:2012 |

Special Provisions: None

EC Hopkins Limited, Woodgate Business Park, Birmingham B32 3DB, UK

Name: Andrew Gray

Signature: 

Position: Technical Manager

Date: 3 November 2025

# WARRANTY

This product is guaranteed (subject to normal wear and tear) against defective parts and faulty workmanship for a period of 12 months from date of purchase.

It does not cover: -

- Parts already covered by original equipment manufacturers own warranties already in place
- Failure of parts due to lack of maintenance and services
- Any failure due to non-genuine parts fitted
- Rubber products
- Product subject to misuse/abuse or being neglected in any way
- Being modified in any way without prior written consent from EC Hopkins Ltd

In case of disagreement between parties as to whether it is or not warranty, the failed part will be returned to our supplier for inspection. The findings by that supplier as to why the part failed will be binding.

With an ongoing design and development program EC Hopkins Ltd reserve the right to alter the design or specification of any product without prior notice.

# NOTES

**EC HOPKINS LTD**
82 Kettles Wood Drive
Woodgate Business Park
Birmingham, B32 3DB, UK

+44 (0)121 506 6095
enquiries@echopkins.com
www.echopkins.com