

OPERATORS' GUIDE



Shown with optional
REL-370-6FP
Quick Couplers

Sealed for
UNDERWATER
applications



REL-GR-9
9" Hydraulic Grinder

WARNING



All information found in this guide must be read and understood before use or testing of this tool.

Failure to read and understand these warnings and safe handling instructions could result in severe personal injury and or death.

Grinding
Cutting
Cleaning
Buffing
Polishing
De-scaling
Barnacle Removal



**RELIABLE EQUIPMENT
& SERVICE CO., INC.**

REL-GR-9 Manual 07-15

DISTRIBUTED BY

REGISTRATION

UPON RECEIPT OF THIS TOOL, COMPLETE THE REGISTRATION BELOW.

COMPANY _____

ADDRESS _____

PHONE _____ FAX _____

SERIAL NUMBER _____

DATE OF PURCHASE _____

DEALER NAME _____



THIS SYMBOL INDICATES ITEMS OF EXTREME IMPORTANCE.

Safety of user and others may be in jeopardy if these instructions are not read and understood.



CAUTION

The information in this manual is intended to guide the user in the use and application of this tool. It is not intended as a substitute for proper training and experience in safe work practices for this type of equipment.

Consult your supervisor or safety personnel if you have any questions regarding the safe operation of this tool.

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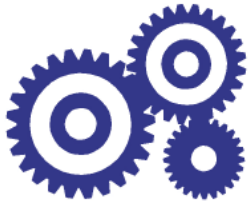
DESCRIPTION

The **REL-GR-9** hydraulic 9” Grinder has broad applications for the utility, line construction, D.O.T., and underwater construction industries.

The well balanced tool feels comfortable and secure. The trigger is designed to be responsive in a heavily gloved hand, enabling the user controlled operation.

The **REL-GR-9** hydraulic 9” Grinder uses standard 9 inch (23 cm) abrasive discs for cutting, grinding, and polishing applications. A variety of specialized accessories are also available to further expand the capabilities of this tool.

If you have any questions regarding the information found in this manual please contact RELIABLE EQUIPMENT at the address, phone or fax numbers found on the back cover of this manual.



RELIABLE EQUIPMENT & SERVICE CO., INC.



Sealed for
UNDERWATER
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Shown with optional
REL-370-6FP
Quick Couplers

REL-GR-9 9" Hydraulic Grinder

Grinding
Cutting
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Barnacle Removal

Model	REL-GR-9 Hydraulic Grinder
Capacity	up to 9" wheel / 23 cm
Spindle	5/8 - 11 Threaded
Pressure	1,000 - 2,500 psi 70 - 176 Bar
Flow Range	4 - 12 gpm / 38 lpm
Optimum Flow	10 gpm / 38 lpm (2,700 rpm)
Porting	8 SAE O-ring
Connector	3/8" adaptors (x2)
Motor	Gear Drive
Weight	14 lbs. / 6.4 kg
Length	11 inch / 28 cm
Width	12 inch / 30.5 cm

A variety of wheels, discs, brushes and accessories are available meet any demand, making the **REL-GR-9** an indispensable addition to any tool inventory.



301 Ivyland Road • Warminster, PA 18974
Phone: 800-966-3530 • Fax: 215-357-0363

www.Reliable-Equip.com

TOOL SPECIFICATIONS

Length11” (28 cm)
Width 12” (30.5 cm)
Weight 14 lb. (6.4 kg)
Disc Diameter (Max.) 9” (23 cm)
Spindle 5/8 - 11 Threaded
Output Speed (Max.).....2,700 rpm
Pressure/Return Ports 8 SAE O-ring
Connector..... 3/8” Adaptors
Drive Gear Driven
Hyd. System TypeOpen Center, HTMA Type II

SPECIFICATIONS

Hydraulic Power Source

Flow: Min.4 gpm (5.1 lpm)
Recommended10 gpm (38 lpm)
Flow Range..... 4-12 gpm (15-45 lpm)
Operating Pressure Min.1,000 psi (70 bar)
Operating Pressure Max.2,500 psi (176 bar)
Pressure Relief Setting2,000 psi Max. (138 bar)
Back Pressure.....200 psi (13.8bar)
Filtration 10 microns Max.
Hydraulic System Open Center
Fluid Temperature, Max. 140° F (60° C)

* Checked with Flowmeter on Pressure Line



WARNING

DISASSEMBLY OF THIS TOOL IS NOT RECOMMENDED

SERIOUS INJURY OR DEATH COULD RESULT FROM
IMPROPER SERVICE OR REPAIR OF THIS TOOL.

REPAIR AND/OR SERVICE OF THIS TOOL MUST BE DONE BY A
CERTIFIED TECHNICIAN OR AN AUTHORIZED REPAIR CENTER.

Contact RELIABLE EQUIPMENT at 800-966-3530 for an authorized repair center.



WARNING

BEFORE USING THIS TOOL, READ THE WARNINGS and the recommended practices described in this manual. Failure by the operator to read and fully understand these warnings will leave this person unqualified to use and operate this tool. Property damage, severe personal injury, and/or death could result by not following these warnings.

These warnings will appear in appropriate locations when they are pertinent to the particular subject being shown. Read each one carefully and follow them strictly.



Eye Protection

WARNING

Always wear eye protection to avoid injury from flying debris or hydraulic oil leaks. Failure to do so can result in serious personal injury.



Dust Mask

WARNING

Always wear a dust mask. Failure to observe this warning may result in serious health issues and/or breathing difficulty.



Hard Hat

WARNING

Always wear a hard hat to avoid injury from falling debris. Failure to do so can result in serious personal injury.



Foot Protection

WARNING

Always wear foot protection. Failure to do so can result in serious personal injury.



Hearing Protection

WARNING

Always wear hearing protection, to avoid hearing loss due to long term exposure to high noise levels.



Protective Gloves

WARNING

Always wear protective gloves Failure to do so can result in serious personal injury.



WARNING

Safe Operation & Care

USE THIS TOOL FOR ITS INTENDED PURPOSE ONLY

Any other use can result in injury or property damage.

INSPECT TOOL BEFORE USE. Replace any worn, damaged or missing parts. A damaged or improperly assembled tool may malfunction, injuring operator and/or nearby personnel.

INSPECT HYDRAULIC HOSES AND COUPLINGS before each use. Repair or replace if any cracking, leakage, wear or damage is found. Worn or damaged hoses may fail resulting in personal injury or property damage.

CLEAR WORK AREA of all bystanders and unnecessary personnel before operating this tool. Remove any potential tripping hazard or restrictions to free movement.

KEEP ALL PARTS OF THE BODY AWAY FROM MOVING PARTS.
Failure to observe this warning could result in serious injury.



WARNING

Safety

DO NOT attempt to make any changes to any of the component parts or accessories when connected to the power source.

DO NOT adjust, inspect, or clean tool while the tool is connected to the power source. The tool could accidentally start up and cause serious injury.

DO NOT lock the tool in the On Position. In an emergency, serious damage or injury could occur during the time required to stop the tool.



WARNING

Oil Injection Injury

Hydraulic oil or fluid under the skin is a serious injury. Oil under pressure can penetrate the skin and may cause dismemberment or loss of life. Seek medical assistance immediately if such an injury should occur.

Always wear safety gloves, eye protection and all required safety equipment when operating or handling this tool.

DO NOT use fingers or hands to attempt to locate a leak.

DO NOT handle hoses or couplers while system is pressurized.

NEVER open or service the system before depressurizing.



WARNING

Burn Hazard

Do Not connect or disconnect tool, hoses or fittings while power source is running or while hydraulic fluid is hot.

Hot hydraulic fluid may cause serious burns.

Failure to observe this warning could result in serious injury.



WARNING

Electrical Shock Hazard

Use only certified non-conductive hoses and fittings.

Always wear and use the necessary clothing, equipment and safety practices to protect against electrical shock. Failure to follow these rules can result in serious personal injury or death.



CAUTION

Vibration Hazard

Apply just enough pressure to control the tool operation. Applying excess pressure to the tool may cause operator discomfort or temporary numbness.

Failure to observe this warning could result in serious injury.



CAUTION

Safe Handling

HYDRAULIC FLUID MAY CAUSE SKIN IRRITATION.

Prevent hydraulic fluid from making contact with skin.

IN THE EVENT OF SKIN CONTACT immediately wash thoroughly.

Failure to observe this warning could result in injury.



CAUTION

General Safety

Ensure that all fellow employees and bystanders are clear and protected from possible injury caused by this tool or the operations being performed. Persons in close proximity could be injured and property damaged if the tool were to malfunction.

This tool should always be used within the limits and purposes stated by the product manufacturer. Abuse or usage beyond the manufacturers' intended purposes could cause damage to the tool and severe injury to the operator and or bystander.

HOSES AND FITTINGS

Care must be exercised in the use of hose and fittings for use on hydraulic tools, especially in confined areas. Any obstruction or abrasive surrounding could damage the hose and cause a serious accident. Always use the recommended hose for the tool that is being used. Always consult the dealer or distributor for the correct hoses and purchase from him to ensure, from a safety standpoint that the materials used in the manufacture of the hoses is to the correct specification for the application. Fittings must meet the standards established by the industry to adequately assure safety. Poor quality or low rated fittings are not to be used. They invite a serious accident.

Length: Hose must be the correct length for the general use of the tool or for the specific function it is to provide. Pressure surge is an important factor in the selection of hoses. The hose should be rated above the expected surge pressure to ensure adequate safety. Hoses that are too long will have a tendency to coil, kink, or move in multiple directions creating a safety hazard. Hoses that are too long will rub or chafe against the ground or projecting objects, seriously shortening the life of the hose. It may be advisable to carefully restrain a hose which is temporarily too long for the current application. Pressure surge can cause whipping, and seriously damage the hose. Always keep the hose length as short as possible for the operation which is it intended.

Size: The hose must be large enough to carry the pressurized flow of fluid to the end application without creating undue heat generation or excessive turbulence. These factors could cause excessive wear to the hose from any or all of the above reasons.

Pressure: Hose selection must be made so that the *recommended maximum operating pressure is greater than the system pressure*. A surge or sudden drop in pressure will cause the hose to deteriorate faster if the maximum pressure of the hose is significantly below the surge pressure. A hose with a top rate of pressure as the line pressure of the installation is not an accepted safety practice. Always err on the side of safety.

Temperature: Hose can be seriously damaged by passing over or near hot objects. Avoid any situation that will heat the hose. Serious damage and/or failure will occur.

Unusual Applications: Careful thought and research should precede installation of hoses. Thorough and protected testing, with appropriate safety guards, must be done to avoid injury before general use.

Connections: Hoses must have the proper end fittings in order to mate correctly with connectors. Worn or damaged connectors and worn end fittings on the ends of the hose can cause a failure. Pressure surge can cause a slow or sudden failure at the connection causing serious damage or injury.

Safety Check: Before using any installation, perform a thorough checkout to determine if any of the above or unforeseen problems occur. Initial testing with safety guards is an invaluable safety precaution.

Always consult the distributor or manufacturer for the correct specifications regarding any of the items discussed above. **The correct hoses and fitting are available from your supplier.**

There exists the potential for **SHOCK** or **ELECTROCUTION** in using anything other than certified non-conductive hoses and hydraulic oil with dielectric properties near **ENERGIZED ELECTRICAL LINES**.



WARNING

Hoses and fittings used with this tool must comply with **S.A.E. J1273** recommended practice for selection, installation, and maintenance of hose assemblies.

**FAILURE TO COMPLY WITH THESE WARNINGS
COULD RESULT IN SEVERE BODILY INJURY.**



WARNING

HOSES AND FITTINGS

There exists the potential for shock in using anything other than certified nonconductive hoses and hydraulic oil with dielectric properties, and when using system components near energized electrical lines.

Failure to recognize these conditions could cause electrocution.

Hoses and fittings used with this tool must comply with S.A.E. J1273 which covers recommended practice for selection, installation, and maintenance of hose and hose assemblies. The **correct hoses and fittings are available from your supplier.**

WARNING: Failure to comply with these warnings could result in severe bodily injury.



WARNING

UNIT/HOSE CONNECTIONS

ALWAYS SHUT OFF pump/power source and move flow selector to **OFF** before connecting or disconnecting system components.

ALWAYS DEPRESSURIZE hydraulic system before slowly disconnecting this unit or any of the systems components.

ALWAYS TIGHTEN couplings completely. Loose or improperly tightened couplings will not allow fluid to pass through the hose creating a blockage in the supply or return line.

ALWAYS INSPECT HOSES AND CONNECTORS before connection to tool. Replace or repair if any leakage is evident. Leakage is a sign of deterioration in component parts. Worn or leaking parts must be repaired or replaced, or tool damage or severe injury could result.



CAUTION

HOSE INSTALLATION

Care must be taken to assure the correct connection of the hoses to the pressure and return ports.

Connect the return hose to the return port on the power source, then to the return port on the tool.

Connect the pressure hose to the pressure port on the tool, then to the pressure port on the power source.

**Operation with hydraulic flow reversed can cause malfunction.
Failure to fully comply can result in severe injury or death.**

DAILY MAINTENANCE / INSPECTION

The life, reliability, and safety of the tool is dependent on proper maintenance.

Ensure the hydraulic system control valve is in the “OFF” position and hoses are disconnected before inspecting or servicing the grinder.

Clean & Inspect all surfaces including handle, trigger, spindle, fittings, hoses, disc, and guard. *Inspect tool for dirt build-up, corrosion, wear, and damage.*

All the above items must be replaced with new parts if signs of wear are evident.

Loose, worn or damaged parts can cause tool to malfunction during operation.

Make sure the proper disc is installed for the application being performed.

Check that the maximum operating speed of the disc/wheel is equal to or greater than the rated shaft speed of the grinder. **Wheels must be rated at 2,700 rpm minimum.**

Inspect Wheel or blade for wear or damage (i.e. chips, cracks, surface wear, bending)

For maximum tool performance replace disc/wheel or accessory if wear or damage is evident. (Refer to “INSTALLING & REMOVING GRINDING WHEEL” as needed)

Inspect accessory handle, Handle should be clean and securely fastened to the grinder.

Inspect for cracked hoses and leaking fittings. Never use hands to check for leaking.

All the above items must be replaced with new parts if signs of wear are evident.

Check fluid level of the power source reservoir frequently.

FLUID CONTAMINATION: Cover the ends of fittings with a dust cap when disconnected. This will help keep the fluid from contamination.

MONTHLY MAINTENANCE: Inspect per Appendix A, SAE Standard J1273, 5/86 for hose or fitting damage such as wear, cracks or leakage, replace the necessary parts.

NOTE: Keep Label Set clean and legible. Replace decals when necessary.

Post Operation Maintenance (Underwater Models & Applications ONLY)

The tool must be cleaned and lubricated with waterproof grease after every day of use. The handle body and motor assemblies are sealed and do not require maintenance unless they are malfunctioning.

Salt water applications may require more frequent maintenance.

HYDRAULIC FLUIDS

All hydraulic fluids that meet these listed specifications or the listed HTMA specifications may be used for this tool.

S. U. S.

@ 100° F (38° C) 140 TO 225

@ 210° F (99° C) 40 minimum

FLASH POINT 340° F min. (170° C min.)

POUR POINT -30° F min. (-34° C min.)



WARNING

Operation/Safety methods may vary in accordance with the working guidelines established by each utility or contractor.

For your own safety, ensure that you fully comply with all safe operation guidelines required by your employer.

OPERATIONAL SAFETY WARNINGS

USE ALL APPROPRIATE & APPLICABLE PERSONAL SAFETY EQUIPMENT as required by the operating company and local safety regulations.

INSPECT HYDRAULIC HOSES AND FITTINGS for wear or deterioration every day. Replace all parts that show signs of leaking, wear, or damage.

NEVER CONNECT fittings unless power/pump source is turned off or disconnected.

KEEP ALL PARTS OF THE BODY AWAY from moving parts of the tool when connected to the power source for the tool. Do not wear long hair or loose clothing that may become drawn into moving components.

KEEP ALL BODY PARTS AWAY from path of debris discharge. Discharge may also be deflected by objects. Clear area and/or take additional precautions to ensure operator safety.

MAKE SURE there is no person in close proximity to you or the tool who could be injured by any operation being performed or flying debris expelled by the tool.

DO NOT overextend your position by overreaching or unbalancing the footing necessary to maintain physical control of your body and the tool.

ALWAYS MAINTAIN a firm grip on the tool to avoid having the tool slip out of the hands during an operation, causing a serious personal injury and/or property damage.

DO NOT apply excessive pressure, side load or apply any type of indirect force. Cutting wheel or blade may be damaged creating a potentially dangerous situation.

SHOCK, ELECTRICAL: Using this tool in an energized electrical environment could be dangerous to the user. **Failure to observe this warning may result in electrocution.**

DEPRESSURIZE THE UNIT before attempting to disassemble, connect, or disconnect any of the components. Check oil temperature before disconnecting or disassembling this unit. A serious burn could result from this exposure.

SEE A DOCTOR IMMEDIATELY, if a hot oil injury should occur.

SEE A DOCTOR IMMEDIATELY, if a pressurized oil injury should occur. Infection or serious reaction could result from any hydraulic pressure injury.

USE THIS TOOL FOR THE MANUFACTURERS' INTENDED PURPOSES ONLY.

OBSERVE CLOSELY ALL SAFETY RULES FOR A PARTICULAR JOB CLASS

THE PURCHASER/OWNER of this unit must be certain that all the users of this unit are properly trained in its use and in compliance with all appropriate industrial codes and/or practices.

FAILURE TO HEED THESE WARNINGS COULD RESULT IN SERIOUS PERSONAL INJURY AND/OR PROPERTY DAMAGE.



WARNING

Dust created during the demolition of certain materials may contain hazardous substances. (i.e. Silica, Lead, Asbestos, etc.)

Inhalation of such materials may result in serious injury, cancer, or death. An understanding of the materials you are cutting will allow you to protect yourself, co-workers, and others within the work area.

Follow correct safety procedures and comply with all national, state or provisional health and safety regulations relating to them.

If appropriate arrange for the SAFE disposal of these materials by a qualified person.

PRE-OPERATION

If you are unsure of the proper use or application for this tool consult a supervisor.

Only use accessories that conform to the specifications given in this manual.

NOTE: This saw rotates in the Counter clockwise direction, expelling debris forward away from the operator. Do not allow others to enter the area in front of the tool during operation.

1. It is important to ensure that any couplers used are the correct type, and the flow is going in the right direction. Although the tool may function with the pressure and return lines reversed, the tool's performance, SAFETY, and service life will be adversely affected.

IMPORTANT! The operator of the tool **MUST** know the type of hydraulic system on which the tool is being used. **This tool is factory configured to operate on Open Center Systems.**

Failure to observe all warnings & instructions may result in property damage, or personal injury.

2. Install the proper wheel/blade for intended application. Blade direction is Counterclockwise. Check that the maximum operating speed of the cutting wheel is equal to or greater than the rated shaft speed of the grinder. **Wheels must be rated at 2,700 rpm minimum.** (Refer to "INSTALLING & REMOVING GRINDING WHEEL" as needed)
3. **Check Trigger Mechanism** - Trigger should operate smoothly and freely between ON and OFF positions. Trigger should disengage grinder when released. Safety catch on handle should prevent engagement of the trigger unless the catch is fully depressed.

4. Check that the handle is clean and fully screwed into the bracket.

5. Wheel Guard - Inspect the wheel guard for structural damage.

Adjust the wheel guard as needed. Ensure that the screws are tightened before operation.

6. Ensure that the hydraulic power source is operating within the recommended range for both Pressure of 1,500-2,000 psi (70-140 bar) and Flow of 7-9 gpm (26-34 lpm)

NOTE: Use of a calibrated Flow Meter and Pressure Gauge (REL-FPG) is recommended.

5. Ensure that the power source is equipped with a relieve valve set to 2,100 psi (145 bar)

ENSURE THAT POWER SUPPLY IS OFF BEFORE CONNECTING THE TOOL.

6. Squeeze the trigger to relieve any internal pressure.

7. Connect appropriate hydraulic hoses to the tool beginning with the return hose. (Refer to Hoses & Fittings on Page 9 & 10)

8. Start the hydraulic system and move the control valve to the "ON" position.

9. Operate the grinder in a safe position at no load for 30 seconds. If O.K. proceed. If considerable vibration, noise or other defects are detected, STOP operation immediately.

OPERATION

If you are unsure of the proper use or application for this tool consult a supervisor.

The operator must be familiar with the intended work area. Avoid potential hazards and prohibited work areas such as dangerous terrain, excessive slopes, or unmarked utilities.

Only use accessories that conform to the specifications given in this manual.

Do not allow others to enter the discharge area around the tool during operation.

WARNING: Never operate a tool without the wheel guard in place.

1. Clamp or secure the work and support it on both sides of the cut.
2. Start the hydraulic tool system & move the control valve to the “ON” position.

COLD WEATHER OPERATION - Run power unit at low speed to preheat the hydraulic fluid. The oil should be at or above 50° (10°C) with a viscosity of 400 SSU (82 cs) before operation.

WARNING: Know the location of buried or covered services BEFORE starting the work.

Operate the tool in well ventilated areas ONLY.

Do not operate the tool near flammable materials. Do not cut or grind on vessels containing combustible substances. Sparks can ignite flammable or combustible substances.

3. Grip the tool with both hands during startup and operation and be sure you have full balance before starting grinder rotation.

NOTE: Always keep your body away from the “plane of rotation” of the grinding wheel.

4. Always start the grinder with the disc/wheel away from the work surface.

Press the safety switch into the handle and slowly squeeze the trigger.

Start hydraulic flow low and slowly increase to a level that produces efficient operation, but allows the operator to maintain full balance and control.

NOTE: Run the tool at operating speed for at least one minute at the beginning of each shift, or after a new disc/wheel is installed. Never exceed the max. speed marked on the disc.

4. With the disc rotating, start the operation. Holding the tool securely move the tool gently into the work with consistent pressure. Do not bump the tool into the workpiece. Never cock, jam or wedge the disc during the operation.

5. Allowing the disc to do the work without slowing the rotation speed.

Forcing the operation may increase operator fatigue.

Pinching due to heat expansion may cause disc breakage.

(Refer to INSTALLING & REMOVING GRINDING WHEEL on page 15)

NOTE: If a wheel breaks while operating the tool, investigate the cause of the failure before continuing the operation.

NOTE: Inspect the guard and collars for damage after any disc breakage on tool.

6. Release the Trigger and the Safety Latch and allow tool to stop.

WARNING: Never carry the tool or put it down while the disc is still moving.

7. Move the hydraulic system control valve to the “OFF” position and shut down system.

CAUTION: Work piece may be HOT and/or sharp. Use your personal protection equipment.

8. Disconnect the hydraulic hoses from the tool.

First the INPUT (Supply), then the Output (Return) hose.

9. Place dust plugs or caps on hose ends, couplers and/or tool ports as needed.

10. Remove the disc after use.

POST OPERATION CARE & STORAGE

Disconnect the hydraulic hoses from the tool.

First the INPUT (Supply), then the Output (Return) hose.

Place dust plugs or caps on hose ends, couplers and/or tool ports as needed.

Remove the disc after use.

NOTE: Never transport or store the tool with the cut-off wheel mounted on the saw.

TOOL CARE

Clean tool to remove dirt, grease or debris. Dry with compressed air or clean dry cloth.

Replace any damaged or missing safety labels and tags before storing.

Store the tool in a clean dry place.

DISC/WHEEL CARE

All abrasive discs/wheels are breakable.

Care should be taken to prevent damage during handling and storage.

Clean and inspect the wheel before storing.

Clean wheel to remove dirt, grease & debris.

Dry thoroughly.

Store wheels on a flat rigid surface of steel or comparable material.

Do not subject to high humidity, water or liquids.

Avoid excessive heat, freezing, or temperatures low enough to cause condensation if temperature is increased.

INSTALLING & REMOVING GRINDING WHEEL

Inspect for chips, cracks, wear, or damage. Replace the wheel if it is worn or damaged.

1. Remove and set aside the jam nut from the output shaft.
2. Position the grinding wheel over the shaft.
3. Screw the jam nut down onto the spindle shaft. Tighten the nut securely by using two open-end wrenches, one wrench on the flats of the spindle shaft, the other wrench on the jam nut. NEVER over-tighten by impacting either wrench with a hammer or mallet.
4. Remove the grinding wheel by loosening the jam nut. (Reverse of Step 3)

PERIODIC INSPECTION & MAINTENANCE - For maximum performance, reliability and SAFETY of the tool, periodically check the following components.

DRIVE-SHAFT SPEED CHECK

The maximum rated speed of the Hydraulic Grinder is 2,700 rpm.

The rated speed of the disc must be equal to, or greater than that of the tool to ensure the integrity of the wheel at maximum tool speed.

Use the hydraulic power supply normally used with the cut-off saw when conducting this test.

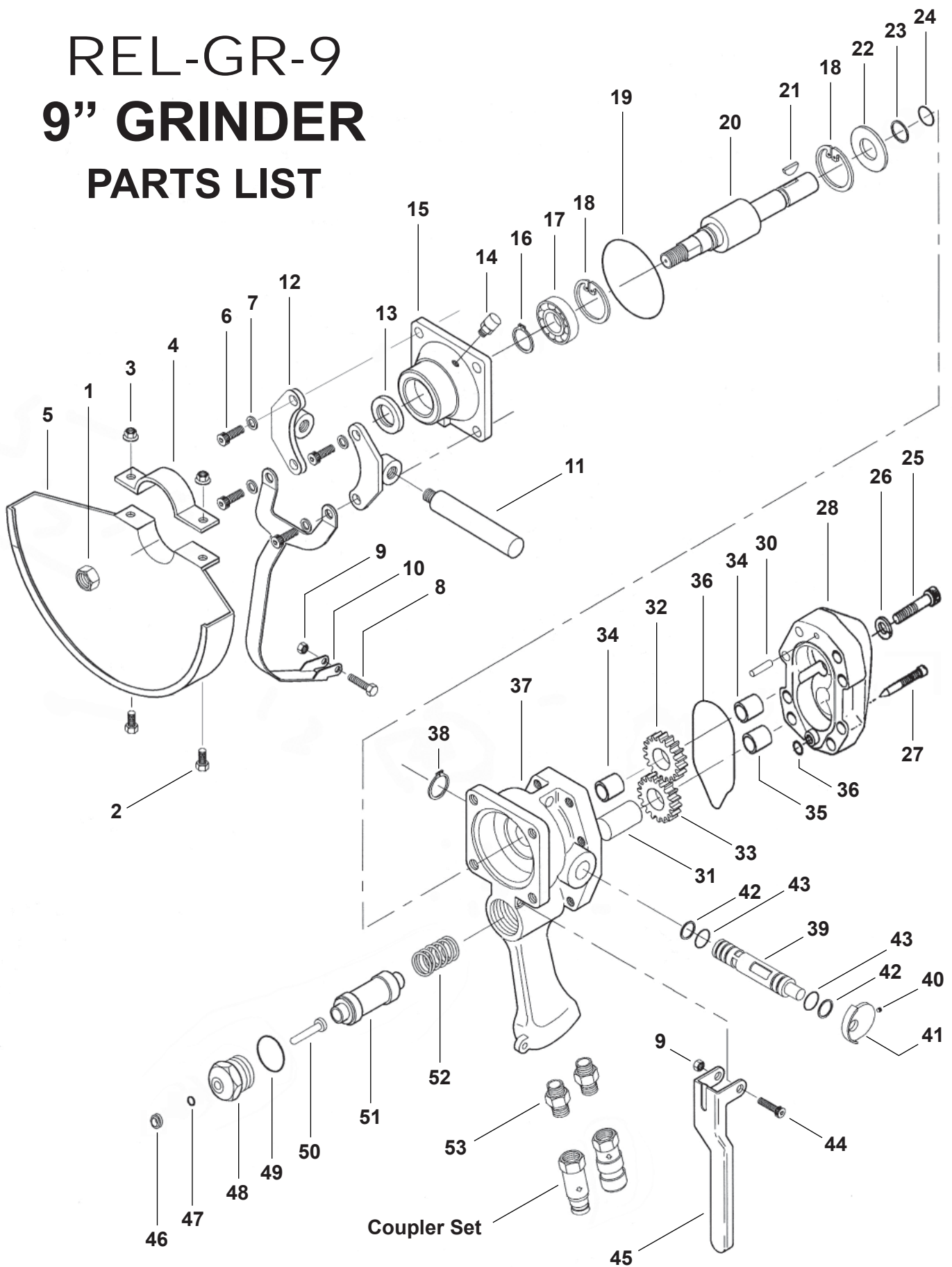
Excessive speed may be caused by increased flow. Refer to SPECIFICATIONS on page 5.

Check the speed of the motor output shaft. (Every 100 hours of operation is recommended)

The test should be performed only by a trained, experienced technician.

Maintain a record of the checks.

REL-GR-9 9" GRINDER PARTS LIST



GR29 PARTS LIST

1	GR901	1	Jam Nut
2	GR902	2	Hex Bolt, Guard
3	GR903	2	Nut
4	GR904	1	Clamp, Guard
5	GR905	1	Wheel Guard
6	GR906	4	Cap Screw
7	GR907	2	Lockwasher
8	GR908	1	Capscrew
9	GR909	2	Nut
10	GR910	1	Trigger Guard
11	GR911	1	Handle
12	GR912	2	Dead Handle Bracket
13	GR913	1	Shaft Seal
14	GR914	1	Grease Fitting
15	GR915	1	Bearing Carrier
16	GR916	1	Retaining Ring
17	GR917	1	Ball Bearing
18	GR918	2	Retaining Ring
19	GR919	1	O-Ring
20	GR920	1	Spindle Shaft
21	GR921	1	Woodruff Key
22	GR922	1	Back-up Washer
23	GR923	1	Back-up Ring
24	GR924	1	O-Ring
25	GR925	8	Capscrew
26	GR926	8	Washer
27	GR927	1	Plug

28	GR928	1	Motor Cap Assy.
29	GR929	1	O-Ring
30	GR930	1	Dowel Pin
31	GR931	1	Idler Shaft
32	GR932	1	Drive Gear
33	GR933	1	Idler Gear Assy.
34	GR934	2	Bushing
35	GR935	1	Bushing
36	GR936	1	O-Ring
37	GR937	1	Main Housing
38	GR938	1	Retaining Ring
39	GR939	1	Reversing Spool
40	GR940	1	Setscrew
41	GR941	1	Valve Keeper
42	GR942	2	Back-up Ring
43	GR943	2	O-Ring
44	GR944	1	Capscrew
45	GR945	1	Trigger
46	GR946	1	Rod Wiper
47	GR947	1	O-Ring
48	GR948	1	Spool Cap
49	GR949	1	O-Ring
50	GR950	1	Headed Push Pin
51	GR951	1	Spool Assy.
52	GR952	1	Spring
53	GR953	2	Adapter
GR9SK		1	SEAL KIT

Underwater Operation/Service Records

Date	Depth	Operation	Service	Inspection

NOTES

If you have any questions regarding the information found in this manual please contact RELIABLE EQUIPMENT at the address, phone or fax numbers shown below.

Underwater Operation/Service Records

Date	Depth	Operation	Service	Inspection

NOTES

If you have any questions regarding the information found in this manual please contact RELIABLE EQUIPMENT at the address, phone or fax numbers shown below.

Maintenance Records

Date	Parts or Service Required

If you have any questions regarding the information found in this manual please contact RELIABLE EQUIPMENT at the address, phone or fax numbers shown below.



**RELIABLE EQUIPMENT
& SERVICE CO., INC.**

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