STANLEY®

GR29
UNDERWATER
HYDRAULIC GRINDER

USER MANUAL
Safety, Operation and Maintenance

New Britain, CT 06053
U.S.A.
66486 2/2015 Ver. 8

DECLARATION OF CONFORMITY

DECLARATION OF CONFORMITY
ÜBEREINSTIMMUNGS-ERKLARUNG
DECLARATION DE CONFORMITE CEE
DECLARACION DE CONFORMIDAD
DICHIARAZIONE DI CONFORMITA

STANLEY
Hydraulic Tools
CE

I, the undersigned:
Ich, der Unterzeichnende:
Je soussigné:
El abajo firmante:
Io sottoscritto:

Weisbeck, Andy

Surname and First names/Familiennname und Vornamen/Nom et prénom/Nombre y apellido/Cognome e nome

hereby declare that the equipment specified hereunder:
bestätige hiermit, daß erklaren Produkt genannten Werk oder Gerät:
déclare que l'équipement visé ci-dessous:
Por la presente declaro que el equipo se especifica a continuación:
Dichiaro che le apparecchiature specificate di seguito:

1. Category:
   Kategorie:
   Catégorie:
   Categoria:
   Categoria: **Grinder, Hydraulic**
2. Make/Marke/Marque/Marca/Marca **Stanley**
3. Type/Typ/Type/Tipo/Tipo: **GR2930101**
4. Serial number of equipment:
   Seriennummer des Geräts:
   Numéro de série de l'équipement:
   Numero de serie del equipo:
   Matricola dell´attrezzatura: **All**

Has been manufactured in conformity with
Wurde hergestellt in Übereinstimmung mit
Est fabriqué conformément
Ha sido fabricado de acuerdo con
E' stata costruita in conformitá con

Directive/Standards Richtlinie/Standards Directives/Normes Directriz/Los Normas Direttiva/Norme	No. Nr Numéro No n.	Approved body Prüfung durch Organisme agréé Aprobado Collaudato
EN ISO EN ISO EN ISO Machinery Directive	3744:2010 11148-7:2012 28927-1:2009 2006/42/EC:2006	Self Self Self Self

5. Special Provisions: **None**
   Spezielle Bestimmungen:
   Dispositions particulières:
   Provisiones especiales:
   Disposizioni speciali:

6. Representative in the Union: **Patrick Vervier**, **Stanley Dubuis 17-19, rue Jules Berthonneau-BP 3406 41034 Blois Cedex, France.**
   Vertreter in der Union/Représentant dans l'union/Representante en la Union/Rappresentante presso l'Unione

Done at/Ort/Fait à/Dado en/Fatto a Stanley Hydraulic Tools, Milwaukie, Oregon USA Date/Datum/le/Fecha/Data 1-4-11

Signature/Unterschrift/Signature/Firma/Firma Andy Weisbeck

Position/Position/Fonction/Cargo/Posizione Director of Product Development

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IMPORTANT

To fill out a Product Warranty Validation form, and for information on your warranty, visit Stanleyhydraulics.com and select the Company tab, Warranty.
(NOTE: The warranty Validation record must be submitted to validate the warranty).

SERVICING: This manual contains safety, operation, and routine maintenance instructions. Servicing of hydraulic tools, other than routine maintenance, must be performed by an authorized and certified dealer. Please read the following warning.

⚠ WARNING

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

REPAIRS AND / OR SERVICE TO THIS TOOL MUST ONLY BE DONE BY AN AUTHORIZED AND CERTIFIED DEALER.

For the nearest authorized and certified dealer, call Stanley Hydraulic Tools at the number listed on the back of this manual and ask for a Customer Service Representative.

SAFETY SYMBOLS

Safety symbols and signal words, as shown below, are used to emphasize all operator, maintenance and repair actions which, if not strictly followed, could result in a life-threatening situation, bodily injury or damage to equipment.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER — This safety alert and signal word indicate an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING — This safety alert and signal word indicate a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION — This safety alert and signal word indicate a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION — This signal word indicates a potentially hazardous situation which, if not avoided, may result in property damage.

NOTICE — This signal word indicates a situation which, if not avoided, will result in damage to the equipment.

IMPORTANT — This signal word indicates a situation which, if not avoided, may result in damage to the equipment.

Always observe safety symbols. They are included for your safety and for the protection of the tool.

LOCAL SAFETY REGULATIONS

Enter any local safety regulations here. Keep these instructions in an area accessible to the operator and maintenance personnel.

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SAFETY PRECAUTIONS

Tool operators and maintenance personnel must always comply with the safety precautions given in this manual and on the stickers and tags attached to the tool and hose.

These safety precautions are given for your safety. Review them carefully before operating the tool and before performing general maintenance or repairs.

Supervising personnel should develop additional precautions relating to the specific work area and local safety regulations. If so, place the added precautions in the space provided in this manual.

The GR29 Hydraulic Grinder will provide safe and dependable service if operated in accordance with the instructions given in this manual. Read and understand this manual and any stickers and tags attached to the tool and hoses before operation. Failure to do so could result in personal injury or equipment damage.

- 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.
- Establish a training program for all operators to ensure safe operation.
- Do not operate this tool without first reading this manual.
- Do not operate the tool unless thoroughly trained or under the supervision of an instructor.
- Always wear safety equipment such as goggles, gloves, safety shoes, ear, breathing and head protection at all times when operating the tool.
- Do not inspect or clean the tool while the hydraulic power source is connected. Accidental engagement of the tool can cause serious injury.
- Always connect hoses to the tool hose couplers before energizing the hydraulic power source. Be sure all hose connections are tight.
- Do not operate the tool at oil temperatures above 140 °F/60 °C. Operation at higher temperatures can cause higher than normal temperatures at the tool which can result in operator discomfort and may cause damage to the tool.
- Do not operate a damaged, improperly adjusted, or incompletely assembled tool.
- To avoid personal injury or equipment damage, all tool repair, maintenance and service must only be performed by authorized and properly trained personnel.
- Always replace parts with replacement parts recommended by Stanley Hydraulic Tools.
- Check fastener tightness often and before each use daily.
- Do not tighten or loosen the wheel nut by impact. Hold the shaft with a second wrench on the the flats behind the wheel and tighten securely.
- Do not overreach. Maintain proper footing and balance at all times.
- Always hold the tool with both hands when the unit is running. Use a firm grip.
- Keep all parts of your body away from the rotating wheel.
- Do not wear loose clothing or unbound long hair when operating the tool. Loose items can get entangled with the tool and cause serious injury.
- Supply hoses must have a minimum working pressure rating of 2500 psi/175 bar.
- The hydraulic circuit control valve must be in the “OFF” position when coupling or uncoupling the tool. Wipe all couplers clear before connecting. Failure to do so may result in damage to the quick couplers and cause overheating. Use only lint-free cloths.
- Do not exceed the rated limits of the tool or use the tool for applications beyond its design capacity.
- Always keep critical tool markings, such as labels and warning stickers, legible.
- **Warning:** Use of this tool on certain materials during demolition could generate dust potentially containing a variety of hazardous substances such as asbestos, silica or lead. Inhalation of dust containing these or other hazardous substances could result in serious injury, cancer or death. Protect yourself and those around you. Research and understand the materials you are cutting. Follow correct safety procedures and comply with all applicable national, state or provisional health and safety regulations relating to them, including, if appropriate arranging for the safe disposal of the materials by a qualified person.

SAFETY PRECAUTIONS

- Warning: Hydraulic fluid under pressure could cause skin injection injury. If you are injured by hydraulic fluid, get medical attention immediately.
- Keep the wheel off all surfaces when starting the grinder.
- Always carry the tool with the wheel stopped.
- Make sure the wheel has stopped before setting down the tool.
- Keep the handles clean and free of fluid at all times.
- Always inspect wheels for possible damage before installation.
- Never transport or store the tool with the wheel mounted on the grinder.
- Never cock, jam or wedge the wheel during operation.
- Never cause sparks in the vicinity of flammable materials.
- Do not operate the tool with the wheel guard removed.
- Do not start grinding until you have a clear work area and secure footing.
- Do not allow other persons near the tool when starting or cutting.
- Never operate the tool when you are tired or fatigued.
- Do not use a wheel that is cracked or otherwise damaged.
- Always use wheels that conform to the specifications given in the Operation section of this manual.
- Do not reverse wheel rotation direction by changing fluid flow direction.
- Always support and secure items being worked on.
- Caution when handling the work piece after grinding, object can be hot and have sharp edges, use your personal protection equipment.
- Keep your work area clean and clear of tripping hazards, oily surfaces and hoses laying about can be hazardous.
- Make sure adequate lighting is always available.
- Never operate the tool if you cannot be sure that underground utilities are not present. Underground electrical utilities present an electrocution hazard. Underground gas utilities present an explosion hazard. Other underground utilities may present other hazards.
- Do not operate this tool in a potentially explosive environment. Do not grind on vessels containing combustible substances.
- Any use of this tool outside those stated in this manual are forbidden.

TOOL STICKERS & TAGS

WHEEL SIZE: 230
RPM: 3600 SPINDLE: 5/8-11
PRESS: 175 BAR 2500 PSI
FLOW: 15-45 LPM 4-12 GPM

28811
Information Plaque

28409
Composite Decal

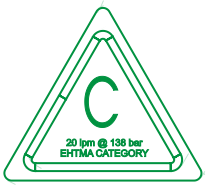
CE

28322
CE Decal

12535
Circuit Type E Decal

WARNING
Grinding Wheel and Jam nut must be tightened with a wrench before use.

10396
Warning Decal



11206
Circuit Type C Decal

CAUTION
PROTECT YOUR EYES
WEAR SAFETY GOGGLES
Do not use damaged wheels use full throttle only while grinding. Use only reinforced resinoid wheels rated for 6500 RPM minimum 9 inch diameter by inch thick maximum. Inspect wheel guard for signs of damage after any wheel failure.

08688
Safety Decal

CAUTION

4-12 GPM / 15-45 LPM
DO NOT EXCEED 2000 PSI / 140 BAR

DO NOT EXCEED SPECIFIED FLOW OR PRESSURE USE CLOSED-CENTER TOOL ON CLOSED-CENTER SYSTEM. USE OPEN-CENTER TOOL ON OPEN-CENTER SYSTEM. CORRECTLY CONNECT HOSES TO TOOL "IN" AND "OUT" PORTS. IMPROPER HANDLING, USE OR OTHER MAINTENANCE OF TOOL COULD RESULT IN A LEAK, BURST OR OTHER TOOL FAILURE. CONTACT AT A LEAK OR BURST CAN CAUSE OIL INJECTION INTO THE BODY. FAILURE TO OBSERVE THESE PRECAUTIONS CAN RESULT IN SERIOUS PERSONAL INJURY.

03788
GPM Decal

The safety tag (p/n 15875) at right is attached to the tool when shipped from the factory. Read and understand the safety instructions listed on this tag before removal. We suggest you retain this tag and attach it to the tool when not in use.

DANGER

1. FAILURE TO USE HYDRAULIC HOSE LABELED AND CERTIFIED AS NON-CONDUCTIVE WHEN USING HYDRAULIC TOOLS ON OR NEAR ELECTRICAL LINES MAY RESULT IN DEATH OR SERIOUS INJURY.

   BEFORE USING HOSE **LABELED AND CERTIFIED AS NON-CONDUCTIVE** ON OR NEAR ELECTRIC LINES BE SURE THE HOSE IS **MAINTAINED AS NON-CONDUCTIVE**. THE HOSE SHOULD BE REGULARLY TESTED FOR ELECTRIC CURRENT LEAKAGE IN ACCORDANCE WITH YOUR SAFETY DEPARTMENT INSTRUCTIONS.

2. A HYDRAULIC LEAK OR BURST MAY CAUSE OIL INJECTION INTO THE BODY OR CAUSE OTHER SEVERE PERSONAL INJURY.
   A. **DO NOT** EXCEED SPECIFIED FLOW AND PRESSURE FOR THIS TOOL. EXCESS FLOW OR PRESSURE MAY CAUSE A LEAK OR BURST.
   B. **DO NOT** EXCEED RATED WORKING PRESSURE OF HYDRAULIC HOSE USED WITH THIS TOOL. EXCESS PRESSURE MAY CAUSE A LEAK OR BURST.
   C. CHECK TOOL HOSE COUPLERS AND CONNECTORS DAILY FOR LEAKS. **DO NOT** FEEL FOR LEAKS WITH YOUR HANDS. CONTACT WITH A LEAK MAY RESULT IN SEVERE PERSONAL INJURY.

IMPORTANT

READ OPERATION MANUAL AND SAFETY INSTRUCTIONS FOR THIS TOOL BEFORE USING IT.

USE ONLY PARTS AND REPAIR PROCEDURES APPROVED BY STANLEY AND DESCRIBED IN THE OPERATION MANUAL.

TAG TO BE REMOVED ONLY BY TOOL OPERATOR.

SEE OTHER SIDE

DANGER

   D. DO NOT LIFT OR CARRY TOOL BY THE HOSES. DO NOT ABUSE HOSE. DO NOT USE KINKED, TORN OR DAMAGED HOSE.
3. MAKE SURE HYDRAULIC HOSES ARE PROPERLY CONNECTED TO THE TOOL BEFORE PRESSURING SYSTEM. SYSTEM PRESSURE HOSE MUST ALWAYS BE CONNECTED TO TOOL "IN" PORT. SYSTEM RETURN HOSE MUST ALWAYS BE CONNECTED TO TOOL "OUT" PORT. REVERSING CONNECTIONS MAY CAUSE REVERSE TOOL OPERATION WHICH CAN RESULT IN SEVERE PERSONAL INJURY.
4. DO NOT CONNECT OPEN-CENTER TOOLS TO CLOSED-CENTER HYDRAULIC SYSTEMS. THIS MAY RESULT IN LOSS OF OTHER HYDRAULIC FUNCTIONS POWERED BY THE SAME SYSTEM AND/OR SEVERE PERSONAL INJURY.
5. BYSTANDERS MAY BE INJURED IN YOUR WORK AREA. KEEP BYSTANDERS CLEAR OF YOUR WORK AREA.
6. WEAR HEARING, EYE, FOOT, HAND AND HEAD PROTECTION.
7. TO AVOID PERSONAL INJURY OR EQUIPMENT DAMAGE, ALL TOOL REPAIR MAINTENANCE AND SERVICE MUST ONLY BE PERFORMED BY AUTHORIZED AND PROPERLY TRAINED PERSONNEL.

IMPORTANT

READ OPERATION MANUAL AND SAFETY INSTRUCTIONS FOR THIS TOOL BEFORE USING IT.

USE ONLY PARTS AND REPAIR PROCEDURES APPROVED BY STANLEY AND DESCRIBED IN THE OPERATION MANUAL.

TAG TO BE REMOVED ONLY BY TOOL OPERATOR.

SEE OTHER SIDE

SAFETY TAG P/N 15875 (shown smaller then actual size)

HOSE TYPES

The rated working pressure of the hydraulic hose must be equal to or higher than the relief valve setting on the hydraulic system. There are three types of hydraulic hose that meet this requirement and are authorized for use with Stanley Hydraulic Tools. They are:

Certified non-conductive — constructed of thermoplastic or synthetic rubber inner tube, synthetic fiber braid reinforcement, and weather resistant thermoplastic or synthetic rubber cover. *Hose labeled **certified non-conductive** is the only hose authorized for use near electrical conductors.*

Wire-braided (conductive) — constructed of synthetic rubber inner tube, single or double wire braid reinforcement, and weather resistant synthetic rubber cover. *This hose is **conductive** and must never be used near electrical conductors.*

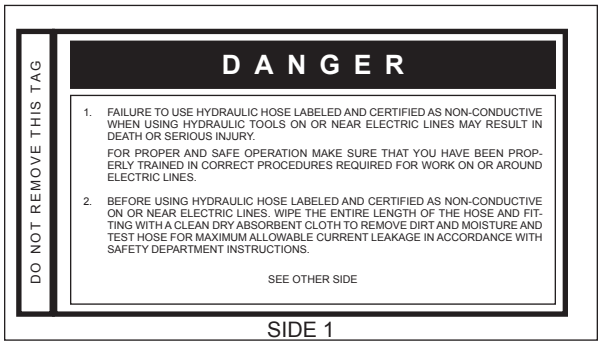
Fabric-braided (not certified or labeled non-conductive) — constructed of thermoplastic or synthetic rubber inner tube, synthetic fiber braid reinforcement, and weather resistant thermoplastic or synthetic rubber cover. *This hose is **not certified non-conductive** and must never be used near electrical conductors.*

HOSE SAFETY TAGS

To help ensure your safety, the following DANGER tags are attached to all hose purchased from Stanley Hydraulic Tools. DO NOT REMOVE THESE TAGS.

If the information on a tag is illegible because of wear or damage, replace the tag immediately. A new tag may be obtained from your Stanley Distributor.

THE TAG SHOWN BELOW IS ATTACHED TO "CERTIFIED NON-CONDUCTIVE" HOSE



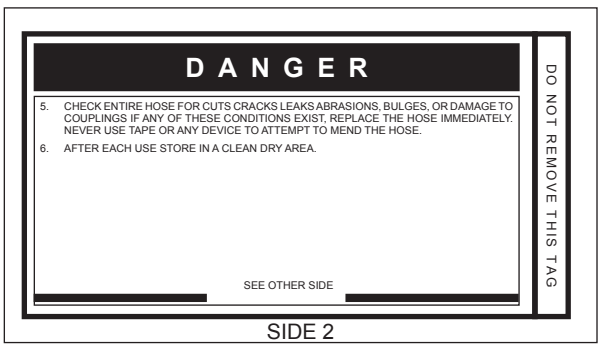
SIDE 1

SIDE 2

(Shown smaller than actual size)

THE TAG SHOWN BELOW IS ATTACHED TO "CONDUCTIVE" HOSE.

SIDE 1



SIDE 2

(Shown smaller than actual size)

Tool to Hydraulic Circuit Hose Recommendations

The chart to the right shows recommended minimum hose diameters for various hose lengths based on gallons per minute (gpm)/ liters per minute (lpm). These recommendations are intended to keep return line pressure (back pressure) to a minimum acceptable level to ensure maximum tool performance.

This chart is intended to be used for hydraulic tool applications only based on Stanley Hydraulic Tools tool operating requirements and should not be used for any other applications.

All hydraulic hose must have at least a rated minimum working pressure equal to the maximum hydraulic system relief valve setting.

All hydraulic hose must meet or exceed specifications as set forth by SAE J517.

Oil Flow		Hose Lengths		Inside Diameter		USE (Press/Return)	Min. Working Pressure	
GPM	LPM	FEET	METERS	INCH	MM		PSI	BAR
Certified Non-Conductive Hose - Fiber Braid - for Utility Bucket Trucks								
4-9	15-34	up to 10	up to 3	3/8	10	Both	2250	155
Conductive Hose - Wire Braid or Fiber Braid -DO NOT USE NEAR ELECTRICAL CONDUCTORS								
4-6	15-23	up to 25	up to 7.5	3/8	10	Both	2500	175
4-6	15-23	26-100	7.5-30	1/2	13	Both	2500	175
5-10.5	19-40	up to 50	up to 15	1/2	13	Both	2500	175
5-10.5	19-40	51-100	15-30	5/8	16	Both	2500	175
5-10.5	19-40	100-300	30-90	5/8	16	Pressure	2500	175
				3/4	19	Return	2500	175
10-13	38-49	up to 50	up to 15	5/8	16	Both	2500	175
10-13	38-49	51-100	15-30	5/8	16	Pressure	2500	175
				3/4	19	Return	2500	175
10-13	38-49	100-200	30-60	3/4	19	Pressure	2500	175
				1	25.4	Return	2500	175
13-16	49-60	up to 25	up to 8	5/8	16	Pressure	2500	175
				3/4	19	Return	2500	175
13-16	49-60	26-100	8-30	3/4	19	Pressure	2500	175
				1	25.4	Return	2500	175

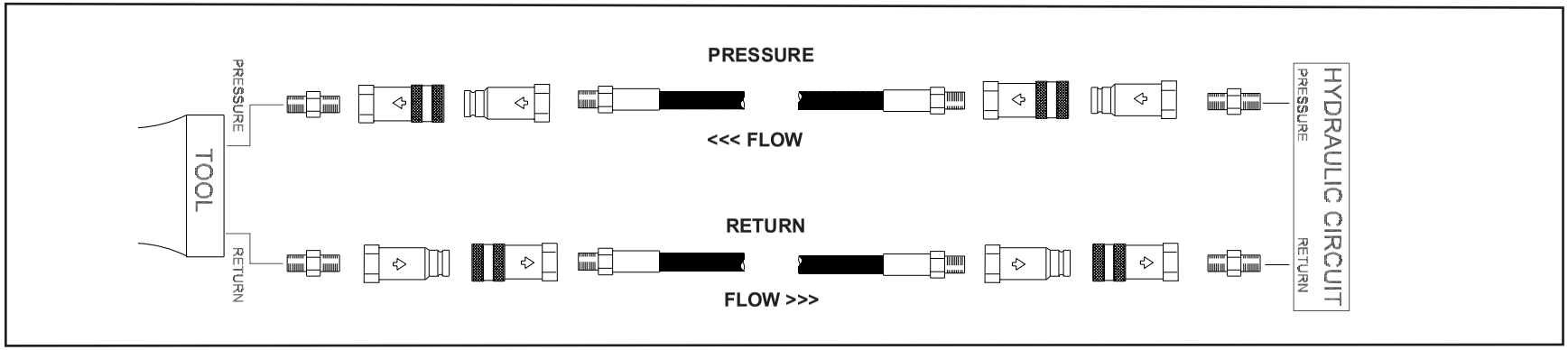


Figure 1. Typical Hose Connections

HTMA / EHTMA REQUIREMENTS

HTMA HYDRAULIC SYSTEM REQUIREMENTS	TOOL TYPE TYPE I	TYPE II	TYPE RR	TYPE III
Flow Range	4-6 gpm (15-23 lpm)	7-9 gpm (26-34 lpm)	9-10.5 gpm (34-40 lpm)	11-13 gpm (42-49 lpm)
Nominal Operating Pressure (at the power supply outlet)	1500 psi (103 bar)	1500 psi (103 bar)	1500 psi (103 bar)	1500 psi (103 bar)
System relief valve setting (at the power supply outlet)	2100-2250 psi (145-155 bar)	2100-2250 psi (145-155 bar)	2200-2300 psi (152-159 bar)	2100-2250 psi (145-155 bar)
Maximum back pressure (at tool end of the return hose)	250 psi (17 bar)	250 psi (17 bar)	250 psi (17 bar)	250 psi (17 bar)
Measured at a max. fluid viscosity of: (at min. operating temperature)	400 ssu* (82 centistokes)	400 ssu* (82 centistokes)	400 ssu* (82 centistokes)	400 ssu* (82 centistokes)
Temperature: Sufficient heat rejection capacity to limit max. fluid temperature to: (at max. expected ambient temperature)	140° F (60° C)	140° F (60° C)	140° F (60° C)	140° F (60° C)
Min. cooling capacity at a temperature difference of between ambient and fluid temps	3 hp (2.24 kW) 40° F (22° C)	5 hp (3.73 kW) 40° F (22° C)	6 hp (5.22 kW) 40° F (22° C)	7 hp (4.47 kW) 40° F (22° C)
NOTE: Do not operate the tool at oil temperatures above 140° F (60° C). Operation at higher temperatures can cause operator discomfort at the tool.				
Filter Min. full-flow filtration Sized for flow of at least: (For cold temp. startup and max. dirt-holding capacity)	25 microns 30 gpm (114 lpm)	25 microns 30 gpm (114 lpm)	25 microns 30 gpm (114 lpm)	25 microns 30 gpm (114 lpm)
Hydraulic fluid Petroleum based (premium grade, anti-wear, non-conductive) Viscosity (at min. and max. operating temps)	100-400 ssu*	100-400 ssu* (20-82 centistokes)	100-400 ssu*	100-400 ssu*

NOTE:
When choosing hydraulic fluid, the expected oil temperature extremes that will be experienced in service determine the most suitable temperature viscosity characteristics. Hydraulic fluids with a viscosity index over 140 will meet the requirements over a wide range of operating temperatures.

*SSU = Saybolt Seconds Universal

EHTMA HYDRAULIC SYSTEM REQUIREMENTS	CLASSIFICATION B (15Lpm at 138bar EHTMA CATEGORY)	C (20Lpm at 138bar EHTMA CATEGORY)	D (30Lpm at 138bar EHTMA CATEGORY)	E (40Lpm at 138bar EHTMA CATEGORY)	F (50Lpm at 138bar EHTMA CATEGORY)
Flow Range	3.5-4.3 gpm (13.5-16.5 lpm)	4.7-5.8 gpm (18-22 lpm)	7.1-8.7 gpm (27-33 lpm)	9.5-11.6 gpm (36-44 lpm)	11.8-14.5 gpm (45-55 lpm)
Nominal Operating Pressure (at the power supply outlet)	1870 psi (129 bar)	1500 psi (103 bar)	1500 psi (103 bar)	1500 psi (103 bar)	1500 psi (103 bar)
System relief valve setting (at the power supply outlet)	2495 psi (172 bar)	2000 psi (138 bar)	2000 psi (138 bar)	2000 psi (138 bar)	2000 psi (138 bar)

NOTE: These are general hydraulic system requirements. See tool specification page for tool specific requirements

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OPERATION

PREOPERATION PROCEDURES

CHECK THE POWER SOURCE

1. Using a calibrated flowmeter and pressure gauge, check that the hydraulic power source develops a flow of 4-12 gpm/15-45 lpm at 950-2000 psi/67-140 bar.
2. Make certain that the hydraulic power source is equipped with a relief valve set to open at 2100-2250 psi/145-155 bar minimum.
3. Check that the hydraulic circuit matches the tool for open-center (OC) or closed-center (CC) operation.

CHECK THE TOOL

1. Make sure all tool accessories are correctly installed. Failure to install tool properly can result in damage to the tool or personal injury.
2. There should be no signs of leaks.
3. The tool should be clean, with all fittings and fasteners tight.

CHECK TRIGGER MECHANISM

1. Check that the trigger operates smoothly and is free to travel between the “ON” and “OFF” positions.
2. Check that the trigger is set to disengage the grinder when released.

CHECK HANDLE

Check that the cross handle is securely screwed into the handle bracket. Remove any oil from the handle.

CHECK AND ADJUST WHEEL GUARD

1. Inspect the wheel guard for cracks and other structural damage.
2. If necessary, adjust the position of the wheel guard by loosening the two capscrews on the guard clamp. Make sure the capscrews are tightened securely after adjustment.

INSTALLING AND REMOVING GRINDING WHEEL

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.
4. Remove the grinding wheel by loosening the jam nut as in Step 3.

IMPORTANT

Never over-tighten the grinding wheel jam nut by impacting either wrench with a mallet or hammer. Sufficient torque is attained by hand-tightening the nut with two open-end wrenches.

USE OF DEPRESSED-CENTER WHEEL ADAPTER

The Depressed-Center Wheel Adapter (part number 05194) must be used with wheels having a cupped or depressed center.

CONNECT HOSES

1. Wipe all hose couplers with a clean lint-free cloth before making connections.
2. Connect the hoses from the hydraulic power source to the tool fittings or quick disconnects. It is good practice to connect return hoses first and disconnect them last to minimize or avoid trapped pressure within the tool.
3. Observe the arrow on the couplers to ensure that the flow is in the proper direction. The female coupler on the tool is the inlet (pressure) coupler.
4. Move the hydraulic circuit control valve to the “ON” position to operate the tool.
5. Squeeze the grinder trigger momentarily. If the grinder does not operate, the hoses might be reversed. Verify correct connection of the hoses before continuing.

NOTE:

If uncoupled hoses are left in the sun, pressure increase inside the hose may make them difficult to connect. Whenever possible, connect the free ends of the hoses together.

OPERATION

TOOL OPERATION

For best results, use only Stanley approved accessories. They have been designed and selected to get the most from the tool.

Review the Safety Precautions given at the front of this manual before operating the tool.

Remember to grip the tool with both hands at all times during startup and operation and be sure you have full balance before starting grinder rotation. Always keep your body away from the “plane of rotation” of the grinding wheel.

Always start the grinder with the wheel away from the work surface. Start hydraulic flow at one gpm and slowly increase flow to a level that produces desired efficiency, but allows the operator to maintain full balance and control.

⚠ WARNING

Starting the hydraulic grinder on the work with full hydraulic flow can push the operator off balance, creating a condition that can cause severe personal injury.

Refer to the Troubleshooting section of this manual to isolate other possible conditions that can lower tool efficiency.

COLD WEATHER OPERATION

If the grinder is to be used during cold weather, preheat the hydraulic fluid at low engine speed. When using the normally recommended fluids, fluid temperature should be at or above 50 °F/10 °C (400 ssu/82 centistokes) before use.

Damage to the hydraulic system or grinder can result from use with fluid that is to viscous or too thick.

TOOL PROTECTION & CARE

NOTICE

In addition to the Safety Precautions found in this manual, observe the following for equipment protection and care.

- Make sure all couplers are wiped clean before connection.
- The hydraulic circuit control valve must be in the “OFF” position when coupling or uncoupling hydraulic tools. Failure to do so may result in damage to the quick couplers and cause overheating of the hydraulic system.
- Always store the tool in a clean dry space, safe from damage or pilferage.
- Make sure the circuit PRESSURE hose (with male quick disconnect) is connected to the “IN” port. The circuit RETURN hose (with female quick disconnect) is connected to the opposite port. Do not reverse circuit flow. This can cause damage to internal seals.
- Always replace hoses, couplings and other parts with replacement parts recommended by Stanley Hydraulic Tools. Supply hoses must have a minimum working pressure rating of 2500 psi/172 bar.
- Do not exceed the rated flow (see Specifications) page in this manual for correct flow rate and model number. Rapid failure of the internal seals may result.
- Always keep critical tool markings, such as warning stickers and tags legible.
- Tool repair should be performed by experienced personnel only.
- Make certain that the recommended relief valves are installed in the pressure side of the system.
- Do not use the tool for applications for which it was not intended.

TROUBLESHOOTING

If symptoms of poor performance develop, the following chart can be used as a guide to correct the problem. When diagnosing faults in operation of the grinder, always make sure the hydraulic power source is supplying the correct hydraulic flow and pressure to the tool as listed in the table. Use a flowmeter known to be accurate. Check the flow with the hydraulic fluid temperature at least 80 °F/27 °C.

PROBLEM	CAUSE	SOLUTION
Low performance.	Incorrect hydraulic flow.	Check that the power source is producing 4–12 gpm/15–45 lpm at 1000–2000 psi/70–140 bar.
	Defective quick disconnects.	Check quick disconnects.
Fluid leaks at motor cap assembly face.	Fasteners loose.	Tighten to recommended torque value.
	Face O-ring worn or missing.	Replace as required.
	Motor cap assembly/main housing damaged.	Replace as required.
Fluid leaks at reversing spool.	Damaged O-rings.	Replace as required. Refer to assembly instructions to prevent cutting the O-rings.
	Wrong hydraulic fluid. Circuit too hot.	See Hydraulic System Requirements for correct fluid/circuit specifications.
	Hydraulic pressure and return reversed.	Correct hose connections.
Fluid gets hot, power unit working hard.	Open-center tool on a closed-center circuit and vice versa.	Use tool to match circuit.
	Too much fluid going through tool.	Adjust flow for 12 gpm/34 lpm maximum.
	Circuit is generating high heat with flow controls, open relief valve, etc.	Use pump size and rpm for producing needed flow only. Eliminate circuit heating cause.
	Circuit has contaminants that have caused pump and valve wear and high heat generation.	Replace worn pump and valves. Install a large clean filter and keep circuit fluid clean.
Tool doesn't run.	Power unit not functioning.	Check that the power source is producing 4–12 gpm/15–45 lpm at 1000–2000 psi/70–140 bar.
	Coupler or hoses blocked.	Remove obstruction.
	Mechanical failure.	Disassemble tool and inspect for damage.
Tool runs backwards.	Pressure and return hoses reversed.	Correct for proper flow direction. Grinding wheel should rotate counterclockwise when viewed from the shaft end.
Grinding wheel comes to abrupt stop after trigger is released.	Porting spool incorrectly assembled.	Refer to Service Manual.
	Check valve in trigger spool not functioning correctly.	Replace trigger spool assembly. Check valve not serviceable.
	Mechanical failure.	Disassemble tool and inspect for damage.

SPECIFICATIONS

Capacity..... 9 in./23 cm Wheel on 5/8 in. -11 THD Arbor
Weight (with Wheel Guard) .....15 lbs/6387 kg
Length..... 9 in./23 cm
Width (without Wheel Guard) ..... 4-1/2 in./11.5 cm
Pressure ..... 1000–2500 psi/70–175 bar
Flow Range ..... 4–12 gpm/15–45 lpm
Optimum Flow .....2700 rpm at 10 gpm/38 lpm
Porting .....-8 SAE O-ring
Connect Size and Type ..... (2) 3/8 in. NPT Adapters
Hose Whips ..... No
Motor .....Integral

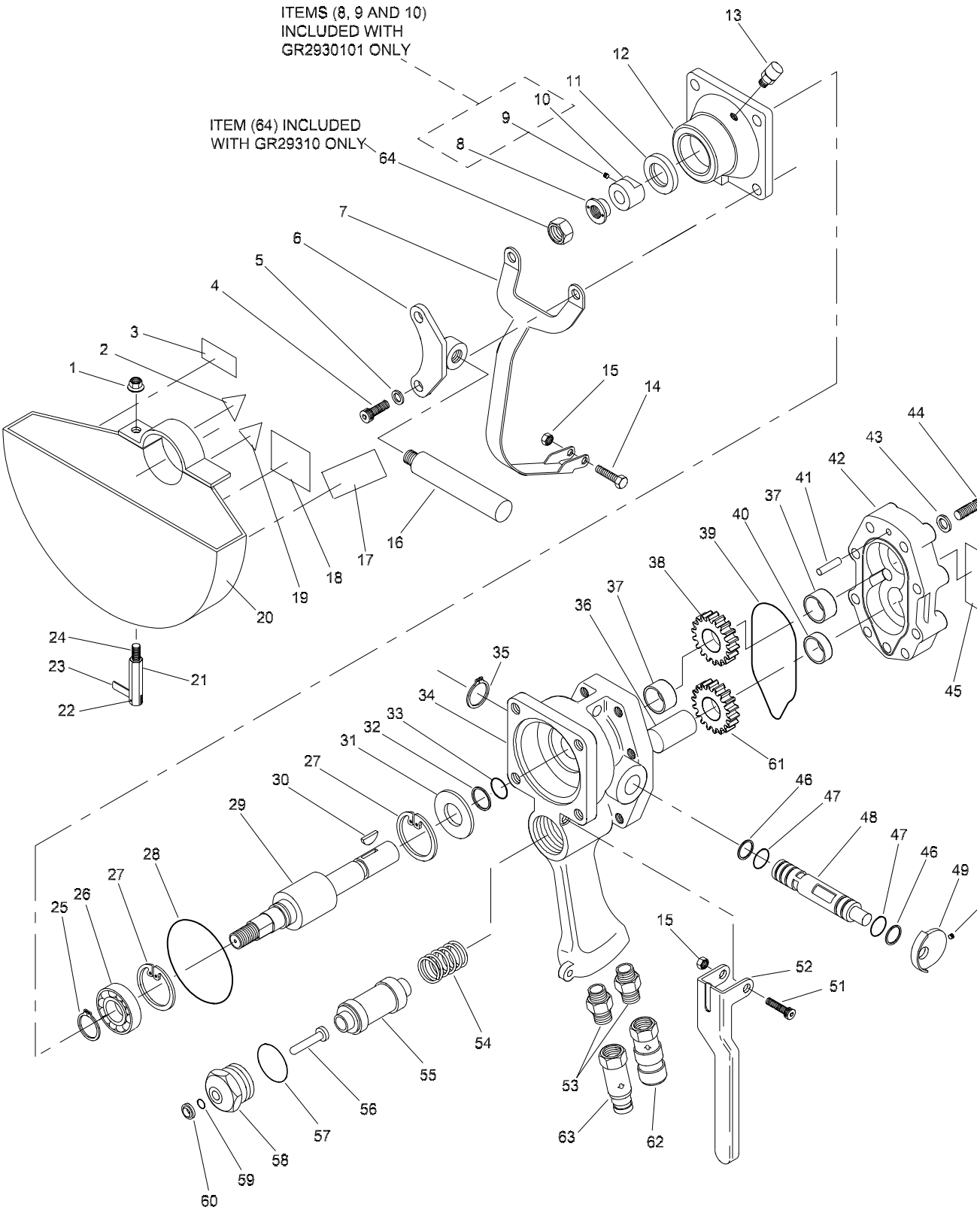
SOUND POWER AND VIBRATION DECLARATION	
Test conducted on GR29310, S/N 1989 operated at standard 10 gpm input	
Measured A-weighted sound power level, Lwa (ref. 1pW) in decibels	105 dBA
Measured A-weighted sound pressure level, Lpa (ref. 20 µPa) at operator's position, in decibels	97 dBA
Values determined according to noise test code given in using the basic standard ISO 3744 **NOTE: The sum of a measured noise emission value and its associated uncertainty represents an upper boundary of the range of values which is likely to occur in measurements.**	
Declared vibration emission value in accordance with EN 12096	
Measured vibration emission value: a (Throttle Handle)	1.0 m/sec^2
Uncertainty: K (Throttle Handle)	0.15 m/sec^2
Measured vibration emission value: a (Support Handle)	2.1 m/sec^2
Uncertainty: K (Support Handle)	0.20 m/sec^2
Values determined according to ISO 8662-1, ISO 8662-4, ISO 5349-1	

ACCESSORIES

Description **Part Number**

Grinding Wheel for Metal 9 in. Diameter × 5/8 in. -11 THD Arbor.....02587
Grinding Wheel for Masonry 9 in. Diameter × 5/8 in. -11 THD Arbor.....02588
Grinding Wheel 7 in. × 5/8 in. -11 THD Arbor 03691
Depressed Center Wheel Adapter.....05194

GR29 PARTS ILLUSTRATION



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GR29 PARTS LIST

ITEM NO.	P/N	QTY	DESCRIPTION
1		1	NUT
2	11206	1	CIRCUIT TYPE “C” DECAL (CE ONLY)
3	28322	1	CE DECAL (CE ONLY)
4	00230	4	CAPSCREW
5	00231	2	LOCKWASHER
6	13796	2	DEAD HANDLE BRACKET WELDMENT
7	12285	1	TRIGGER GUARD
8	16495	1	HUB NUT (INCLUDED WITH GR2930101 ONLY)
9	00599	1	SETSCREW (INCLUDED WITH GR2930101 ONLY)
10	28913	1	DRIVE FLANGE (INCLUDED WITH GR2930101 ONLY)
11	13812	1	SHAFT SEAL
12	13790	1	BEARING CARRIER
13	01220	1	GREASE FITTING
14	12470	1	CAPSCREW
15	07724	2	NUT
16	08130	1	HANDLE
17	28811	1	INFORMATION PLAQUE
18	28409	1	COMPOSITE SAFETY DECAL (CE ONLY)
19	12535	1	CIRCUIT TYPE “E” DECAL (CE ONLY)
20	11937 08322	1	WHEEL GUARD WHEEL GUARD GR29310 ONLY
21	12290	1	CLAMP SCREW
22	00285	1	ROLL PIN
23	12291	1	THUMB PLATE
24	12786	1	STUD
25	00672	1	RETAINING RING
26	13813	1	BALL BEARING
27	00166	2	RETAINING RING
28	00149	1	O-RING
29	13791	1	SPINDLE SHAFT
30	13828	1	WOODRUFF KEY
31	07987	1	BACK-UP WASHER
32	09396	1	BACK-UP RING
33	08017	1	O-RING
34	12286	1	MAIN HOUSING
35	09275	1	RETAINING RING
36	07991	1	IDLER SHAFT
37	08014	2	BUSHING
38	13783	1	DRIVE GEAR
39	08023	1	O-RING
40	07978	1	BUSHING

ITEM NO.	P/N	QTY	DESCRIPTION
41	372055	1	DOWEL PIN
42	13789	1	MOTOR CAP ASSY.
43	00812	8	WASHER
44	01870	8	CAPSCREW
45	13778	1	NAME TAG
46	08015	2	BACK-UP RING
47	01211	2	O-RING
48	08002	1	REVERSING SPOOL
49	17061	1	VALVE KEEPER
50	00580	1	SETSCREW
51	00786	1	CAPSCREW
52	12283	1	TRIGGER
53	00936	2	ADAPTER
54	07988	1	SPRING
55	73041	1	SPOOL ON/OFF
56	23678	1	HEADED PUSH PIN
57	06533	1	O-RING
58	22063	1	SPOOL CAP
59	00026	1	O-RING
60	22064	1	ROD WIPER
61	07989	1	IDLER GEAR ASSY.
62	03972	1	FEMALE COUPLER
63	03973	1	MALE COUPLER
	03971	1	COUPLER SET
64	13779	1	JAM NUT (INCLUDED WITH GR29310 ONLY)
	16969	1	SEAL KIT
	12815	1	WHEEL NUT SPANNER WRENCH

UNDERWATER TOOLS DEPTH GUIDELINE

UNDERWATER MODELS ONLY

⚠ CAUTION

DO NOT USE HYDRAULIC TOOLS UNDERWATER THAT ARE NOT DESIGNATED AS AN "UNDERWATER" MODEL, OR THIS WILL RESULT IN DAMAGE TO THE TOOL.

For underwater hydraulic tools the applications are broken down into four quadrants depending on type of tool and method of operation.

The types of tools are percussive and rotational, each with different characteristics allowing for different depth operation. With percussive tools, the nitrogen accumulator PSI must counter the increase in ambient pressure found at lower depths. Since there is a maximum PSI for percussive tools they are limited to certain depths. Rotational tools do not have accumulators and thus capable of deeper depths.

The methods are broken into diver operated or remote operated vehicle (ROV). ROV's can reach lower depths and with an on-board hydraulic power source that is depth compensated, can operate hydraulic tools at depths of thousands of feet. ROV operation is still limited to the tool, for example a percussive tool has the same depth limitation whether ROV or diver operated.

Operation Overview

	Percussive	Rotational
Diver	Tools: Breakers, Hammer Drills and Chipping Hammers Max Depth: 500' - limitations due to accumulator PSI max (increase 40 PSI for every 100')	Tools: Grinders, Saws, Chain Saws Max Depth: 1000' - Reference hose sizing guide below
ROV	Tools: Breakers, Hammer Drills and Chipping Hammers Max Depth: 500' - limitations due to accumulator PSI max (increase 40 PSI for every 100')	Tools: Grinders, Saws, Chain Saws Max Depth: 1000' - Reference hose sizing guide below

Recommended Hose Diameters

Depth (ft)	8 GPM	12 GPM
100	5/8"	5/8"
300	3/4"	1"
600	1"	1"
1000	1"	1-1/4"

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NOTES

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