DL07 HYDRAULIC DRILL

⚠ WARNING

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

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

SAFETY, OPERATION AND MAINTENANCE SERVICE MANUAL

60789 12/2006 ver 4D

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SERVICING THE STANLEY HYDRAULIC IMPACT WRENCH: 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.

CERTIFICATE OF CONFORMITY
ÜBEREINSTIMMUNGS-ZERTIFIKAT
CERTIFICAT DE CONFORMITE CEE
CERTIFICADO DE CONFORMIDAD
CERTIFICATO DI CONFORMITA

STANLEY

Hydraulic Tools

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

Burrows, James

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

hereby certify that the construction plant or equipment specified hereunder:
bestätige hiermit, daß das im folgenden genannten Werk oder Gerät:
certifies par ceci que l' usine ou l' équipement de construction indiqué cidessous:
por el presente certifico que la fabrica o el equipo especificado a continuacion:
certifico che l'impianto o l'attrezzatura sotto specificata:

1. Category: Drill
   Kategorie:
   Catégorie:
   Categoria:
   Categoria:
2. Make/Ausführung/Marque/Marca/Marca Stanley
3. Type/Typ/Type/Tipo/Tipo: DL0755001
4. Serial number of equipment:
   Seriennummer des Geräts:
   Numéro de série de l'équipement:
   Numero de serie del equipo:
   Matricola dell´attrezzatura:

   All
5. Year of manufacture/Baujahr/année de fabrication/Año de fabricacion/Anno di fabbricazione 2004

Has been manufactured in conformity with - EEC Type examination as shown.
Wurde hergestellt in Übereinstimmung mit - EEC Typ-Prüfung nach.
Est fabriqué conformément - au(x) type(s) examiné(s) comme indiqué dans le tableau ci-après.
Ha sido fabricado de acuerdo con - tipo examen EEC como dice.
E' stata costruita in conformitá con - le norme CEE come illustrato.

	Examen CEE de type			
Directive Richtlinie Directives particulières Directriz Direttiva	No. Nr Numéro No n.	Date Datum Date Fecha Data	Approved body Prüfung durch Organisme agréé Aprobado Collaudato	Date of expiry Ablaufdatum Date d´expiration Fecha de caducidad Data di scadenza
Machinery Directive EN EN ISO EN	98/37/EC 792-3 3744 28662-1	1998 1994 1995 1988	Self Self Self Self	NA NA NA NA

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

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

Signature/Unterschrift/Signature/Firma/Firma James O'Burrows

Position/Position/Fonction/Puesto/Posizione Engineering Manager

Rev 1 3/05

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, may result in minor or moderate 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.**

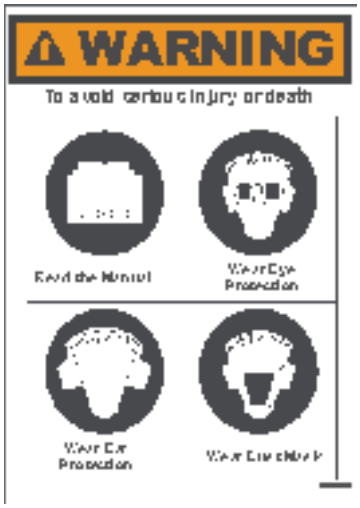
IMPORTANT — **This signal word indicates a situation which, if not avoided, may result in damage to the equipment.**

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.

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 on page 5.

The model DL07 Hydraulic Impact Wrench 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 hose before operation. Failure to do so could result in personal injury or equipment damage.

• The operator must start in a work area without bystanders. Flying debris can cause serious injury.

• Do not operate the tool unless thoroughly trained or under the supervision of an instructor. Establish a training program for all operators to ensure safe operation.

• Always wear safety equipment such as goggles, ear and head protection, and safety shoes at all times when operating the tool. Use gloves and aprons when necessary.

• The operator must be familiar with all prohibited work areas such as excessive slopes and dangerous terrain conditions.

• Maintain proper footing and balance at all times.

• 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 and are in good condition.

• 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.

• Do not operate a damaged, improperly adjusted, or incompletely assembled drill.

• Never wear loose clothing that can get entangled in the working parts of the tool.

• Keep all parts of your body away from the rotating parts. Long hair or loose clothing can become drawn into rotating components.

• Always use accessories that conform to the specifications given in the OPERATION section of this manual.

• Do not reverse impact wrench rotation direction by changing fluid flow direction.

• Release the trigger if the power supply has been interrupted.

• When working near electrical conductors, always assume that all conductors are energized and that insulation, clothing and hoses can conduct electricity. Use hose labeled and certified as non-conductive.

• To avoid personal injury or equipment damage, all tool repair, maintenance and service must only be performed by authorized and properly trained personnel.

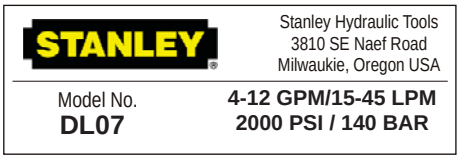
• Do not carry the tool by hoses.

TOOL STICKERS & TAGS

Please refer to the parts illustration for location of stickers.

28322
CE STICKER (CE)

58862
PRESSURE WARNING STICKER



60807
DL07 MODEL STICKER

11207
CIRCUIT TYPE D STICKER (CE)

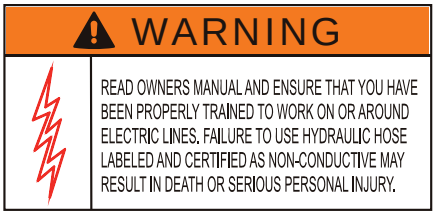
OC/CC
FOR USE ON OPEN CENTER AND CLOSED CENTER HYDRAULIC SYSTEMS. "SET FOR PROPER SYSTEM BEFORE USE"

11354
OC/CC STICKER

RATED NO-LOAD SPEED
1000 RPM AT
8 GPM/30 LPM

29148
RPM STICKER

28788
MANUAL STICKER (CE)



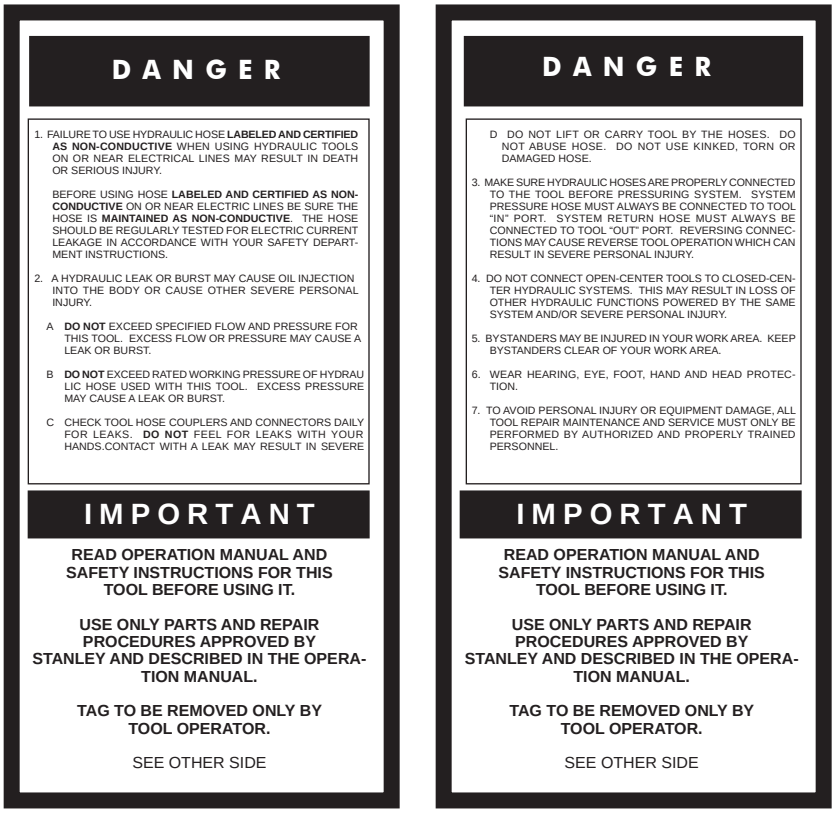
58864
ELECTRICAL WARNING STICKER

NOTE

THE INFORMATION LISTED ON THE STICKERS SHOWN, MUST BE LEGIBLE AT ALL TIMES.

REPLACE DECALS IF THEY BECOME WORN OR DAMAGED. REPLACEMENTS ARE AVAILABLE FROM YOUR LOCAL STANLEY DISTRIBUTOR.

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.



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

TOOL HOSE INFORMATION

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.*

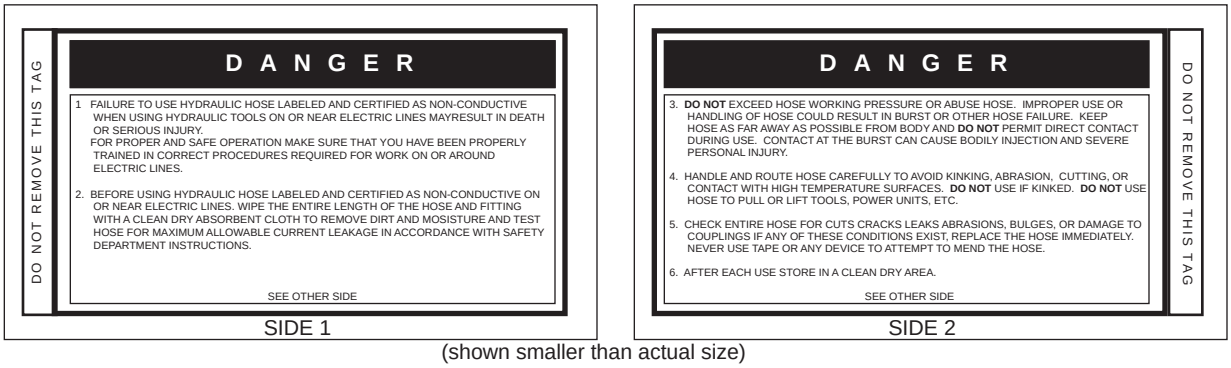
Fabric-braided (not certified or labeled non-conductive) - constucted of thermoplastic or synthetic rubber inner tube, synthetic fiber braid reinforcement, and weather resistant thermoplastic or synthetic rubber cover. *This hose is **not certified non-conductive** and must never be used near electrical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

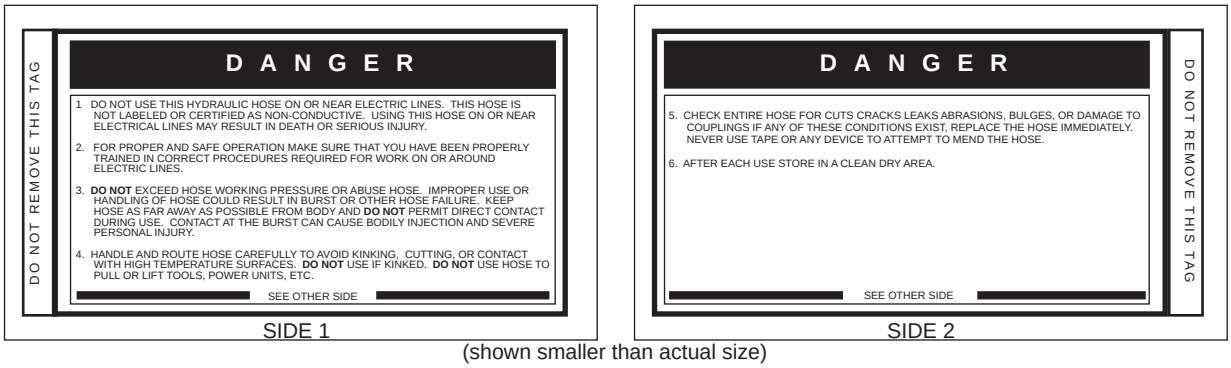
If the information on a tag is illegible because of wear or damage, replace the tag immediately. A new tag may be obtained from your Stanley Distributor.

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



(shown smaller than actual size)

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



(shown smaller than actual size)

Tool to Hydraulic Circuit Hose Recommendations

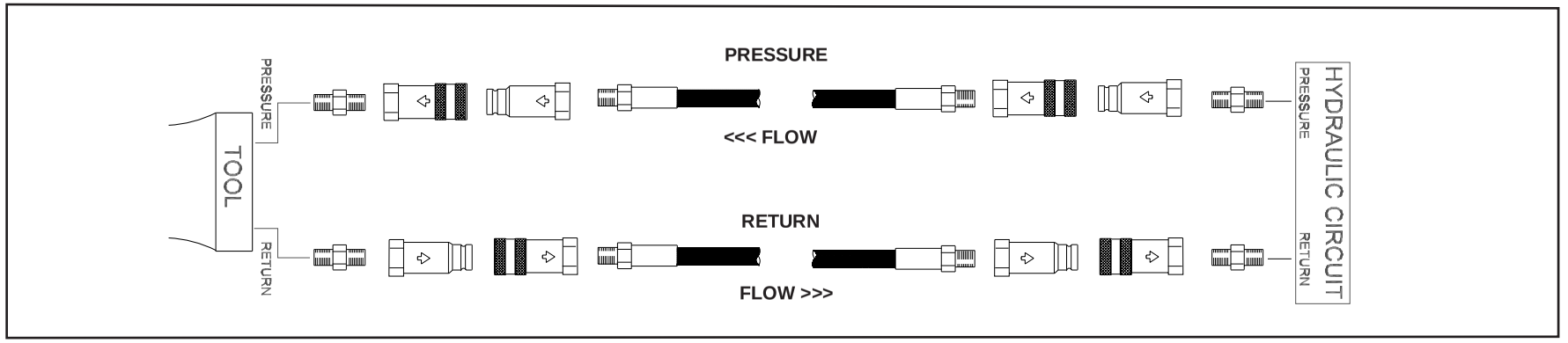
The chart to the right shows recommended minimum hose diameters for various hose lengths based on gallons per minute (gpm)/liters per minute (lpm). These recommendations are intended to keep return line pressure (back pressure) to a minimum acceptable level to ensure maximum tool performance.

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



Typical Hose Connections

HTMA REQUIREMENTS

HYDRAULIC SYSTEM REQUIREMENTS	TOOL CATEGORY  TYPE 1	 TYPEII	TYPEIII	TYPE RR
FLOW RATE	4-6 gpm (15-23 lpm)	7-9 gpm (26-34 lpm)	11-13 gpm (42-49 lpm)	9-10.5 gpm (34-40 lpm)
TOOL OPERATING PRESSURE (at the power supply outlet)	2000 psi (138 bar)	2000 psi (138 bar)	2000 psi (138 bar)	2000 psi (138 bar)
SYSTEM RELIEF VALVE SETTING (at the power supply outlet)	2100-2250 psi (145-155 bar)	2100-2250 psi (145-155 bar)	2100-2250 psi (145-155 bar)	2200-2300 psi (152-159 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)	7 hp (4.47 kW) 40° F (22° C)	6 hp (5.22 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*	100-400 ssu* (20-82 centistokes)	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

NOTE:

These are general hydraulic system requirements. See tool Specification page for tool specific requirements.

OPERATION

PREOPERATION PROCEDURES

CHECK POWER SOURCE

1. Using a calibrated flow meter and pressure gauge, check that the hydraulic power source develops a flow of 4-12 gpm/15-45 lpm at 1000-2000 psi/70-140 bar.

2. Make certain that the hydraulic power source is equipped with a relief valve set to open at 2100 psi/145 bar minimum.

CONNECT HOSES

1. Wipe all hose couplers with a clean lint-free cloth before making connections.

2. Connet hoses from the hydraulic power suupply to the tool quick disconnects. It is good practice to connect the return hose first and disconnect it last to minimize or avoid trapped pressure within the drill.

3. Observe the arrow on hose couplers to ensure that the flow is in the proper direction. The male coupler on the circtuit hose end is the supply (pressure) coupler.

4. Make sure the circuit PRESSURE (male quick disconect) hose is conneced to the port at the back of the drill handle. The circuit RETURN hose (female quick disconnect) is connected to the port closest to the trigger.

5. Move the hyraulic circuit control valve to the ON position to direct hydraulic flow to the drill.

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

OPEN-CENTER (OC) OR CLOSED-CENTER (CC) OPERATION

The DL07 can be configured to run on OC or CC circuits.

1. Determine the system type.

2. Remove the hex plug (81) from the spring cap.

FOR OPEN-CENTER OPERATION:

Using a 3/16 in. hex, reach through the hole in the spring cap and turn the selector screw counter-clockwise until meeting resistance (from the retaining ring). Turn the selector clockwise and then counter-clockwise to be sure the selector is being stopped by the retaining ring. Do not force the selector screw. Open-center operation is now selected.

FOR CLOSED-CENTER OPERATION:

Using a 3/16 in. hex, reach through the hole in the spring cap and turn the selector screw fully clockwise. When the selector screw bottoms. Closed-center operation is now selected.

⚠ CAUTION

To prevent damage to the retaining ring, do not attempt to force the selector screw counter-clockwise beyond the point of initial resistance.

Reinstall the hex plug. Failure to install the plug may introduce contaminants to the spool bore resulting in replacement of the valve spool and main housing.

DRILL OPERATION

1. Observe all safety precautions.

2. Place the selected drill bit fully into the chuck. Center the bit and tighten the chuck using the key provided. Remove the key and store away from the drill.

3. Momentarily press the trigger to ensure that the drill bit rotates clockwise and runs true.

4. Select a work position that gives secure footing and balance while operating the drill.

5. Press the drill against the work and squeeze the trigger.

The drilling method used is determined by the material being drilled and the size and depth requirements of the hole.

Brittle material such as rock, brick or concrete can be drilled efficiently when the bit is caused to strike (hammer) the hole bottom to break up the material. Without hammering, the rotating bit will only grind down and become dull. The Stanley HD08 should be used for this application.

OPERATION

Ductile material such as metal or wood is drilled efficiently when a steady down force is applied to the drill center to cause the bit to slice chips of material from the hole bottom. When drilling in metal, use a cutting lubricant to prolong bit life and reduce the amount of force required to drill effectively.

Large drill holes are more productively created from small drill holes. Drill bits are incrementally selected to enlarge the hole until the desired hole size is obtained. Each bit selected must always be too large to thread and jam into an existing hole; otherwise the bit may break and endanger the operator.

COLD WEATHER OPERATION

If the wrench 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 wrench can result from use with fluid that is too viscous or too thick.

EQUIPMENT PROTECTION & CARE

NOTICE

In addition to the Safety Precautions 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) 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 wrench, always check that the hydraulic power source is supplying the correct hydraulic flow and pressure to the tool as listed in the following table. Use a flow meter known to be accurate. Check the flow with the hydraulic fluid temperature at least 80° F/27° C.

PROBLEM	CAUSE	SOLUTION
Tool will not start.	Power not being supplied.	Check to make certain that both hoses are connected.
		Turn hydraulic circuit control valve ON.
	Defective quick disconnects.	Check each quick disconnect.
Low drilling torque.	Relief valve set too low.	Set relief valve at 2100 psi/145 bar.
	Fluid restriction in hose or valve. Excess flow and pressure loss.	Locate and remove restriction.
		Use correct fluid.
		Fluid not warmed up. Prehead system.
		Hoses too long for hose ID. Use shorter hose.
		Hose ID too small for hose length. Use larger ID hose.
Low tool speed.	Fluid flow rate is too low.	Check circuit flow rate.
High tool speed.	Fluid flow rate is excessive.	Check circuit flow rate. Add proper flow control valve or reduce the pump RPM.
Oil leaks around gear housing.	Hydraulic pressure and return hoses reversed.	Correct hose connections. Pressure should be to the handle port away from the trigger, return is near the trigger, then replace the main shaft oil seal.
Oil gets hot, power unit working hard.	Open-center tool on a closed-center circuit or vice-versa.	Use tools to match circuit.
	Circuit relief set too low.	Adjust relief valve to 2100 psi/145 bar.
	Too much oil going through tool.	Adjust flow for 12 gpm/45 lpm maximum or less.
Oil leaks at reversing spool.	Damaged O-Rings.	Replace as required.
	Wrong hydraulic fluid. Circuit too hot.	Refer to Operation Instructions for correct fluid/circuit specifications.
Oil leak at motor cap face.	Fasteners loose.	Refer to Service Instructions
	Face O-Ring worn or missing.	Replace as required.
	Motor cap/main housing damaged.	Replace as required.

SPECIFICATIONS

Drive Size ..... 1/2 inch / 1.3 cm 3-Jaw Adjustable
5/8 -16 THD Chuck
Drill Torque ..... 20 ft lbs / 27 Nm at 2000 psi / 140 bar
Drill Speed ..... 1000 rpm at 8 gpm / 30 lpm
RPM Range 350-1500
Weight ..... 8 lbs / 3.6 kg
Overall Length ..... 9 inch / 22.9 cm
Width ..... 3.5 inch / 9 cm
Motor ..... Integral
Pressure Range ..... 1000-2000 psi / 70-140 bar
Flow Range ..... 4-12 gpm / 30 lpm
Optimum Flow ..... 8 gpm / 15-34 lpm
System Type ..... Open and Closed Center, HTMA Type I, II and III
Porting ..... -8 SAE O-Ring
Output Torque ..... 500 ft lbs / 675 Nm
Connect Size and Type ..... 3/8 inch NPT Male Adapter
Sound Power Level ..... 87.69 dBA
Vibration Level ..... 9 m/s^2

TORQUE AND DRILL SPEEDS

TORQUE	HYDRAULIC FLOW	DRILL SPEED
4 ft lbs @ 500 psi / .5 Nm @ 35 bar	3 gpm / 11.3 lpm	350 rpm
9 ft lbs @ 1000 psi / 1.2 Nm @ 70 bar	4 gpm / 15 lpm	475 rpm
14 ft lbs @ 1500 psi / 1.9 Nm @ 105 bar	6 gpm / 23 lpm	750 rpm
19 ft lbs @ 2000 psi / 2.6 Nm @ 140 bar	8 gpm / 30 lpm 10 gpm / 38 lpm	1000 rpm 1250 rpm

ACCESSORIES

DESCRIPTION	PART NUMBER

WOOD AUGER BITS, 5/8 INCH HEX

9/16 inch dia x 18 inch Carbide Tipped Auger Bit (22 inch OAL)	27845
13/16 inch dia x 18 inch Carbide Tipped Auger Bit (22 inch OAL)	27847

WOOD AUGER BITS, 7/16 INCH HEX

9/16 inch dia x 8 inch Carbide Tipped Auger Bit (12 inch OAL)	27850
11/16 inch dia x 8 inch Carbide Tipped Auger Bit (12 inch OAL)	27851
13/16 inch dia x 8 inch Carbide Tipped Auger Bit (12 inch OAL)	27852
15/16 inch dia x 8 inch Carbide Tipped Auger Bit (12 inch OAL)	27853
1-1/16 inch dia x 8 inch Carbide Tipped Auger Bit (12 inch OAL)	27854
9/16 inch dia x 12 inch Carbide Tipped Auger Bit (16 inch OAL)	27855
11/16 inch dia x 12 inch Carbide Tipped Auger Bit (16 inch OAL)	27856
13/16 inch dia x 12 inch Carbide Tipped Auger Bit (16 inch OAL)	27857
15/16 inch dia x 12 inch Carbide Tipped Auger Bit (16 inch OAL)	17858
1-1/16 inch dia x 12 inch Carbide Tipped Auger Bit (16 inch OAL)	27859
9/16 inch dia x 18 inch Carbide Tipped Auger Bit (22 inch OAL)	27860
11/16 inch dia x 18 inch Carbide Tipped Auger Bit (22 inch OAL)	27861
13/16 inch dia x 18 inch Carbide Tipped Auger Bit (22 inch OAL)	27862
15/16 inch dia x 18 inch Carbide Tipped Auger Bit (22 inch OAL)	27863
1-1/16 inch dia x 18 inch Carbide Tipped Auger Bit (22 inch OAL)	27864
13/16 inch dia x 36 inch Carbide Tipped Auger Bit (48 inch OAL)	27869
11/16 inch dia x 15 inch Carbide Tipped Auger Bit (18 inch OAL)	32399
13/16 inch dia x 15 inch Carbide Tipped Auger Bit (18 inch OAL)	32400

SERVICE

PRIOR TO DISASSEMBLY

Note:
For orientation of parts in the following procedures, refer to the parts drawing later in this manual

1. Clean the exterior of the tool and place on a clean work surface.

2. Obtain the seal kit listed on the PARTS LIST so all seals exposed during disassembly can be replaced.

PRIOR TO REASSEMBLY

1. Clean all parts with a degreasing solution.

2. Blow dry all parts or use lint-free cloths.

3. Ensure that all seals exposed during disassembly are replaced with new parts.

4. Apply clean grease or o-ring lubricant to all parts during assembly.

TOOL DISASSEMBLY

GEAR HOUSING

1. Remove the chuck (33) from the output shaft (36) by holding the seal nut (35) with an open end wrench and turning the chuck counter-clockwise.

2. Remove the capscrews (31) and lockwashers (32) securing the gear housing (69) to the main housing assembly (76). If the tool has a trigger guard (80), remove capscrew (34), nut (20) and trigger guard before removing the gear housing.

3. Remove the ring gear (27), roll pin (5) and gasket (71).

4. Remove the retaining ring (29) near the planet shafts (23) before removing the planet shafts. Remove the seal nut (35) by using the planet shaft holes to keep the output shaft from turning. Pull the output shaft with attached parts from the gear housing.

5. Remove the planet gears (26) from the output shaft. Inspect shafts, gears and gear bore bushings (see CLEANING AND INSPECTION procedure).

6. Spin the ball bearing (28) on the output shaft. The bearing should turn smoothly. To replace the bearing, support the outer race and press down on the output shaft from the chuck end. Do not reuse the ball bearing once it has been removed from the output shaft.

7. Remove the output shaft seal (30) by pressing it from the gear housing bore.

8. Check the end faces of the seal nut and output shaft for nicks and war (see CLEANING AND INSPECTION procedure).

MOTOR CAP

9. Remove the six capscrews (41) and lockwashers (3) securing the motor cap assembly (46) to the main housing assembly and lift off the motor cap assembly. Do not in any way excessively force the motor cap off the main housing assembly.

10. Remove the o-ring (9) from the motor cap.

MAIN SHAFT AND IDLER SHAFT

11. Tap on the small gear end of the main shaft (5) and push the shaft from the main body.

12. Remove the idler gear (45) and idler shaft (47).

13. Remove the retaining ring (16) and then pick out the seal washer (44), back-up ring (39) and o-ring (4) from the main housing.

VALVE SPOOL

14. Unscrew the spring cap (66), pick out the spring (79) and push the valve spool (59) out the spring cap end of the main housing.

TRIGGER

15. Remove the trigger by first removing the capscrews (8) and lockwashers (32) and removing the trigger and trigger mount (78) as an assembly. Drive out the roll pin (21).

REVERSING SPOOL

16. Remove the retaining rings (67) and end caps (65).

17. Unscrew the seal caps (64) and slide the reversing spool (68) out of the main housing. Make sure the idler shaft has been removed prior to completing this step.

SERVICE

CLEANING AND INSPECTION

CLEANING

Clean all parts with a de-greasing solution. Blow dry with compressed air or use lint-free cloths.

GEAR CHAMBER (MOTOR CAP)

The chamber bores and bottoms around the shaft bushings should be polished and not rough or grooved. If the bushing bores are yellow-bronze, replace them and investigate the cause of wear.

The flat surfaces around the chamber and bolt holes should be flat and free of nicks or burrs that could cause misalignment or leaks.

BUSHINGS

The inside of the bushings should be gray with some bronze showing through. If significant yellow-bronze shows, replace the bushings. Inspect the motor shaft and idler shaft for corresponding wear and replace as required.

GEARS

The drive and idler gears should have straight tips without nicks, square tooth ends and have a smooth even polish on the teeth and end faces. Replace the gear if cracks are present.

MAIN HOUSING ASSEMBLY

The surface near the gears should show two interconnecting polished circles without a step.

SHAFTS

The shaft diameter at the bearing and seal locations must be smooth. Grooves, roughness or a reduced diameter indicate fluid contamination or damaged bushings. Grit particles may have been imbedded in the bushings, grinding into the hardened shaft. If abnormal shaft wear as noted above occurs (more than normal polishing), replace both the shaft and associated bushings.

Also check the hydraulic system for excess contamination in the fluid and for filter condition. Operating conditions may require changing from a 25-micron filter to an oversized 10-micron filter.

TOOL REASSEMBLY

1. Lubricate and install a new o-ring (4) and back-up ring (39) into the main housing. Install the seal back-up washer (44) and retaining ring (16).

2. Slide the reversing spool (68) into the main housing assembly. Insert the spool with the slot toward the idler shaft hole and the narrow side of the depression in the spool facing up toward the top of the main housing.

3. Insert the idler shaft (47) to prevent the reversing spool from turning.

4. Lubricate and install a new wiper seal (63), o-ring (10), back-up ring (17) and o-ring (2) into each seal cap (64). Install each seal cap onto the main housing assembly.

5. Install each end cap (65) and secure with snap ring (67).

6. Lubricate seal area of main shaft (50) and install it into the main housing. Install the idler gear (45) onto the idler shaft.

7. Lubricate and install a new o-ring (9) onto the motor cap (46). Lubricate capscrew threads (41) with an anti-seize compound and install the motor cap with the capscrews and lockwashers (3). Tighten bolts to 15-17 ft lbs / 20-23 Nm in a cross pattern.

⚠ CAUTION

Do not force parts together.

8. Lubricate and install a new o-ring (19) in the main housing and a new seal wiper (61) in the trigger mount (78). Secure the trigger (77) to trigger mount with roll pin (21). Install trigger assembly to main housing with capscrews (8) and lockwashers (32).

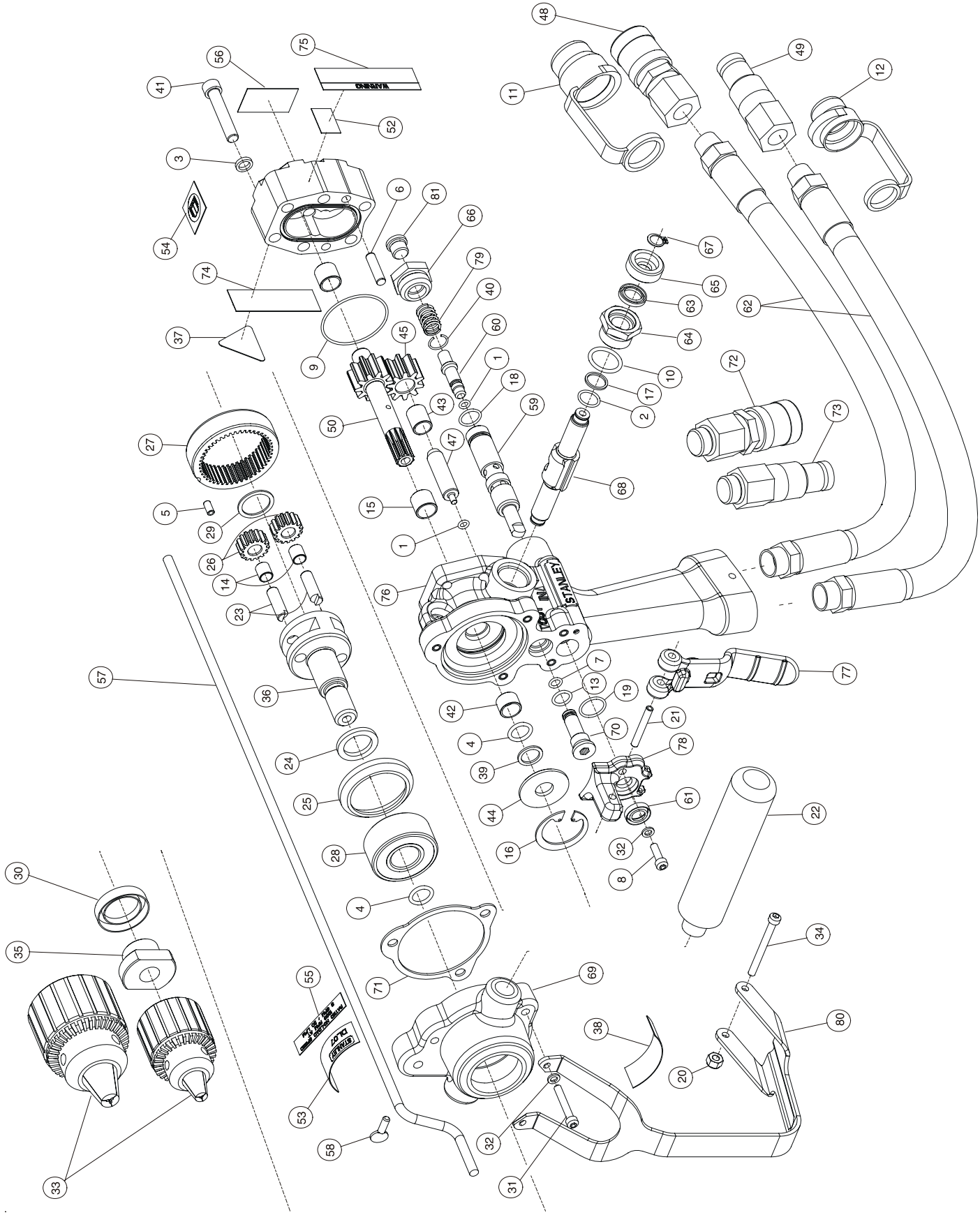
9. Lubricate and install a new o-ring (18) on the valve spool (59) before installing valve spool into the main housing from the spring cap end. Do not install the vavle spool from the trigger side of the main housing as this will result in spool seal damage. Ensure that the tab on the valve spool nose is aligned with the slot in the trigger. Install spring (79) behind valve spool. Using Loctite™ 242, install the spring cap (66) to the main housing.

10. Lubricate and install the shaft seal (30) into the gear housing. Install shaft keeper (24) and bearing keeper (25) beofre installing bearing (28) on output shaft (36). Install planet gears (26) into output shaft and install the output shaft with aqttached parts into the gear housing (69). Install the ring gear (27) into the gear housing and secure with the roll pin (5). Install the seal gasket (71) around the ring gear.

11. Lubricate and install the o-ring (4) on the output shaft. Install the seal nut (35), using the planet shaft bores to prevent the output shaft from turning. Install the planet shafts (23) and secure them with retaining ring (29). Install the gear chamber and attached parts to the main housing using capscrews (31) and lockswashers (32). If the tool has a trigger guard (80), install guard with capscrew (34) and nut (20) at this time.

12. Lubricate the output shaft threads and install the chuck (33). While holding the seal nut secure with an open end wrench, torque the chuck to 50 ft lbs / 69 Nm.

DL07 PARTS ILLUSTRATION



DL07 PARTS LIST

ITEM NO.	PART NO.	QTY	DESCRIPTION
1	00026	1	O-RING
2	00175	2	O-RING
3	00231	6	LOCKWASHER
4	00354	1	O-RING
5	00563	1	ROLL PIN
6	00713	2	DOWEL PIN
7	00717	1	O-RING
8	62229	2	CAPSCREW
9	01262	1	O-RING
10	01604	1	O-RING
11	02324	1	CAP AND PLUG, 1/2 INCH
12	03288	1	CAP AND PLUG, 3/8 INCH
13	03364	1	O-RING
14	05206	2	BUSHING
15	05207	2	BUSHING
16	06635	1	RETAINING RING
17	07224	2	BACKUP RING
18	----	--	NO ITEM
19	07627	1	O-RING
20	07724	1	NYLOCK NUT
21	07970	1	ROLL PIN
22	08130	1	HANDLE
23	08161	2	PLANET SHAFT
24	08162	1	SHAFT KEEPER
25	08163	1	BEARING KEEPER
26	08165	2	PLANET GEAR ASSY
27	08166	1	RING GEAR
28	08175	1	BALL BEARING
29	08440	1	RETAINING RING
30	09621	1	SHAFT SEAL
31	62228	3	CAPSCREW
32	09623	5	LOCKWASHER
33	09624 27628	1	DRILL CHUCK, 1/2 INCH DRILL CHUCK, 5/8 INCH
34	09687	1	CAPSCREW
35	09778	1	SEAL NUT
36	09779	1	OUTPUT SHAFT
37	11207	1	CIRCUIT TYPE D STICKER
38	11354	1	OC/CC STICKER
39	13995	1	BACKUP RING
40	----	--	NO ITEM
41	18206	6	CAPSCREW
42	20758	1	BUSHING
43	20760	1	BUSHING
44	27067	1	SEAL BACKUP WASHER
45	20769	1	IDLER GEAR ASSY

ITEM NO.	PART NO.	QTY	DESCRIPTION
46	20770	1	MOTOR CAP ASSY
47	20782	1	IDLER SHAFT
48	03972	1	3/8 NPT FLUSHFACE COUPLER BODY PART OF SET 03971 (PARKER) OR 47436 (AEROQUIP) FOR DL07552S, 552SUP, 572S
49	03973	1	3/8 NPT FLUSHFACE COUPLER NOSE PART OF SET 03971 (PARKER) OR 47437 (AEROQUIP) FOR DL07552S, 552SUP, 572S
50	24271	1	MAIN SHAFT
51	25610	1	RAILROAD HELP DESK STICKER (DL07552S, 552SUP, 572S ONLY)
52	28323	2	CE STICKER (DL0755001 ONLY)
53	60807	1	DL07 MODEL NUMBER STICKER
54	28788	2	MANUAL STICKER
55	29148	1	RPM STICKER (DL0755001 ONLY)
56	29149	1	ROTATION DIRECTION STICKER (DL0755001 ONLY)
57	38676	1	DEPTH GAUGE ROD (DL07552S, 572S ONLY)
58	38685	1	THUMB SCREW (DL07552S, 572S ONLY)
59	48986	1	VALVE SPOOL ASSY
60	----	--	NO ITEM
61	49139	1	SEAL WIPER
62	56725 66727	2	HOSE ASSY (PARKER) HOSE ASSY (AEROQUIP)
63	56747	2	SEAL WIPER
64	56749	2	SEAL CAP
65	56757	2	END CAP
66	56758	1	SPRING CAP
67	56764	2	RETAINING RING
68	56765	1	REVERSING SPOOL
69	58403	1	GEAR HOUSING MACHINING
70	58462	1	RELIEF CARTRIDGE PLUG ASSY (INCL ITEMS 7 AND 13)
71	58635	1	SEAL GASKET
72	58856	1	3/8 FLUSHFACE COUPLER BODY 1/2 INCH MALE SAE (PART OF SET 58718 FOR DL07550, 55001, 652 ONLY)
73	58857	1	3/8 FLUSHFACE COUPLER NOSE 1/2 INCH MALE SAE (PART OF SET 58718 FOR DL07550, 5501, 652 ONLY)
74	58862	1	PRESSURE WARNING STICKER (DL07550, 652, 552S, 552SUP, 572S ONLY)
75	58864	1	ELECTRICAL WARNING STICKER (DL07550, 652, 552S, 552SUP, 572S ONLY)
76	59049	1	MAIN HOUSING ASSY (INCL ITEMS 15, 42)
77	60677	1	TRIGGER CASTING
78	60678	1	TRIGGER MOUNT CASTING
79	65480	1	SPRING
80	60710	1	TRIGGER GUARD
81	350041	1	HOLLOW HEX PLUG
	60792	**1**	**SEAL KIT**

WARRANTY

Stanley Hydraulic Tools (hereinafter called “Stanley”), subject to the exceptions contained below, warrants new hydraulic tools for a period of one year from the date of sale to the first retail purchaser, or for a period of 2 years from the shipping date from Stanley, whichever period expires first, to be free of defects in material and/or workmanship at the time of delivery, and will, at its option, repair or replace any tool or part of a tool, or new part, which is found upon examination by a Stanley authorized service outlet or by Stanley’s factory in Milwaukie, Oregon to be DEFECTIVE IN MATERIAL AND/OR WORKMANSHIP.

EXCEPTIONS FROM WARRANTY

NEW PARTS: New parts which are obtained individually are warranted, subject to the exceptions herein, to be free of defects in material and/or workmanship at the time of delivery and for a period of 6 months after the date of first usage. Seals and diaphragms are warranted to be free of defects in material and/or workmanship at the time of delivery and for a period of 6 months after the date of first usage or 2 years after the date of delivery, whichever period expires first. Warranty for new parts is limited to replacement of defective parts only. Labor is not covered.

FREIGHT COSTS: Freight costs to return parts to Stanley, if requested by Stanley for the purpose of evaluating a warranty claim for warranty credit, are covered under this policy if the claimed part or parts are approved for warranty credit. Freight costs for any part or parts which are not approved for warranty credit will be the responsibility of the individual.

SEALS & DIAPHRAGMS: Seals and diaphragms installed in new tools are warranted to be free of defects in material and/or workmanship for a period of 6 months after the date of first usage, or for a period of 2 years from the shipping date from Stanley, whichever period expires first.

CUTTING ACCESSORIES: Cutting accessories such as breaker tool bits are warranted to be free of defects in material and or workmanship at the time of delivery only.

ITEMS PRODUCED BY OTHER MANUFACTURERS: Components which are not manufactured by Stanley and are warranted by their respective manufacturers.

a. Costs incurred to remove a Stanley manufactured component in order to service an item manufactured by other manufacturers.

ALTERATIONS & MODIFICATIONS: Alterations or modifications to any tool or part. All obligations under this warranty shall be terminated if the new tool or part is altered or modified in any way.

NORMAL WEAR: any failure or performance deficiency attributable to normal wear and tear such as tool bushings, retaining pins, wear plates, bumpers, retaining rings and plugs, rubber bushings, recoil springs, etc.

INCIDENTAL/CONSEQUENTIAL DAMAGES: To the fullest extent permitted by applicable law, in no event will STANLEY be liable for any incidental, consequential or special damages and/or expenses.

FREIGHT DAMAGE: Damage caused by improper storage or freight handling.

LOSS TIME: Loss of operating time to the user while the tool(s) is out of service.

IMPROPER OPERATION: Any failure or performance deficiency attributable to a failure to follow the guidelines and/or procedures as outlined in the tool’s operation and maintenance manual.

MAINTENANCE: Any failure or performance deficiency attributable to not maintaining the tool(s) in good operating condition as outlined in the Operation and Maintenance Manual.

HYDRAULIC PRESSURE & FLOW, HEAT, TYPE OF FLUID: Any failure or performance deficiency attributable to excess hydraulic pressure, excess hydraulic back-pressure, excess hydraulic flow, excessive heat, or incorrect hydraulic fluid.

REPAIRS OR ALTERATIONS: Any failure or performance deficiency attributable to repairs by anyone which in Stanley’s sole judgement caused or contributed to the failure or deficiency.

MIS-APPLICATION: Any failure or performance deficiency attributable to mis-application. “Mis-application” is defined as usage of products for which they were not originally intended or usage of products in such a matter which exposes them to abuse or accident, without first obtaining the written consent of Stanley. PERMISSION TO APPLY ANY PRODUCT FOR WHICH IT WAS NOT ORIGINALLY INTENDED CAN ONLY BE OBTAINED FROM STANLEY ENGINEERING.

WARRANTY REGISTRATION: STANLEY ASSUMES NO LIABILITY FOR WARRANTY CLAIMS SUBMITTED FOR WHICH NO TOOL REGISTRATION IS ON RECORD. In the event a warranty claim is submitted and no tool registration is on record, no warranty credit will be issued without first receiving documentation which proves the sale of the tool or the tools’ first date of usage. The term “DOCUMENTATION” as used in this paragraph is defined as a bill of sale, or letter of intent from the first retail customer. A WARRANTY REGISTRATION FORM THAT IS NOT ALSO ON RECORD WITH STANLEY WILL NOT BE ACCEPTED AS “DOCUMENTATION”.

NO ADDITIONAL WARRANTIES OR REPRESENTATIONS

This limited warranty and the obligation of Stanley thereunder is in lieu of all other warranties, expressed or implied including merchantability or fitness for a particular purpose except for that provided herein. There is no other warranty. This warranty gives the purchaser specific legal rights and other rights may be available which might vary depending upon applicable law.

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