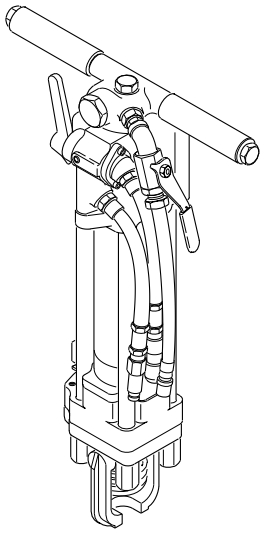
SK58

Hydraulic Sinker Drill

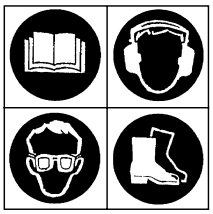


Safety, Operation and Maintenance
Service Manual

⚠ DANGER

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.



STANLEY®

OPS/MAINT USA VERSION
05449 03/99 Ver 2

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SAFETY FIRST

It is the responsibility of the operator
and service technician to read rules and
instructions for safe and proper
operation and maintenance.

A cautious worker
using common sense
is the greatest safety device

CONTENTS

SERVICING THE SK58 SINKER DRILL: This manual contains safety, operation, and detailed maintenance instructions. Stanley Hydraulic Tools recommends that servicing of hydraulic tools, other than routine maintenance, must be performed by an authorized and certified dealer. Please read the following warning.

⚠ DANGER

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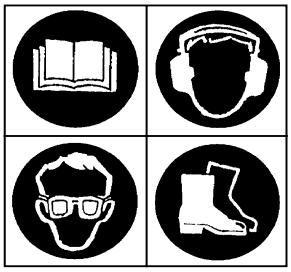
REPAIRS AND / OR SERVICE TO THIS TOOL MUST ONLY BE DONE BY AN AUTHORIZED AND CERTIFIED DEALER.

For the nearest authorized and certified dealer, call Stanley Hydraulic Tools at 1-503-659-5660 and ask for a Customer Service Representative.



The SK58 Hydraulic Sinker Drill 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.

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 3.

GENERAL SAFETY PRECAUTIONS

- 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 the tool unless thoroughly trained or under the supervision of an instructor.
- Always wear safety equipment such as goggles, ear and head protection, and safety shoes at all times when operating the tool.
- Know the location of buried or covered underground utilities before begining any work.
- 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 oil 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 breaker.
- Do not weld, cut with an acetylene torch, or hard face the drill bit.
- 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.

SAFETY SYMBOLS

Safety symbols 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.

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

LOCAL SAFETY REGULATIONS

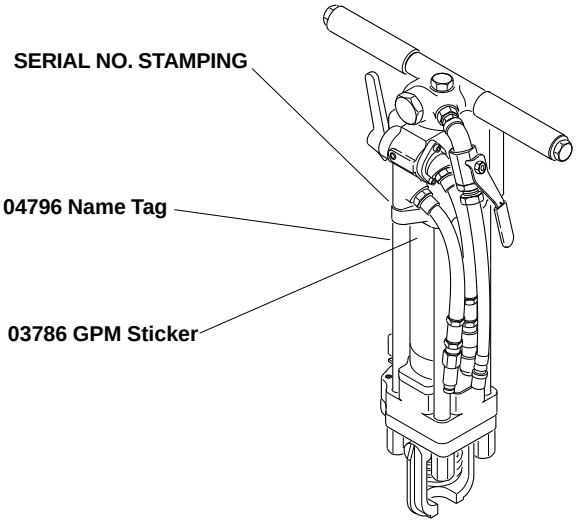
Enter any local safety regulations here. Keep these instructions in an area accessible to the operator and maintenance personnel.

TOOL STICKERS & TAGS

Stickers and decals placed on the tool at time of manufacture are shown below and on the next page. These stickers and decals have been placed on the tool to aid the operator with safety and general maintenance.

The information listed on these stickers and decals must be legible at all times.

Always replace any sticker or decal that has become worn or damaged. Replacements are available from your Stanley distributor.



CAUTION

7-9 GPM/26-34 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 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.

03786

03786 GPM STICKER

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

15875

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

15875

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

HYDRAULIC HOSE REQUIREMENTS

HOSE TYPES

Hydraulic hose types authorized for use with Stanley Hydraulic Tools are as follows:

❶ Certified non-conductive

❷ Wire-braided (conductive)

❸ Fabric-braided (not certified or labeled non-conductive)

Hose ❶ listed above is the only hose authorized for use near electrical conductors.

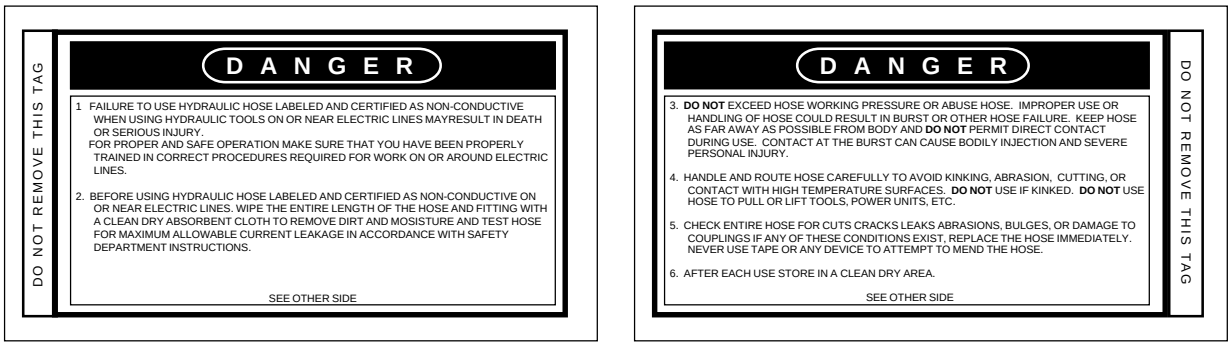
Hoses ❷ and ❸ listed above are **conductive** and **must never** be used near electrical conductors.

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.

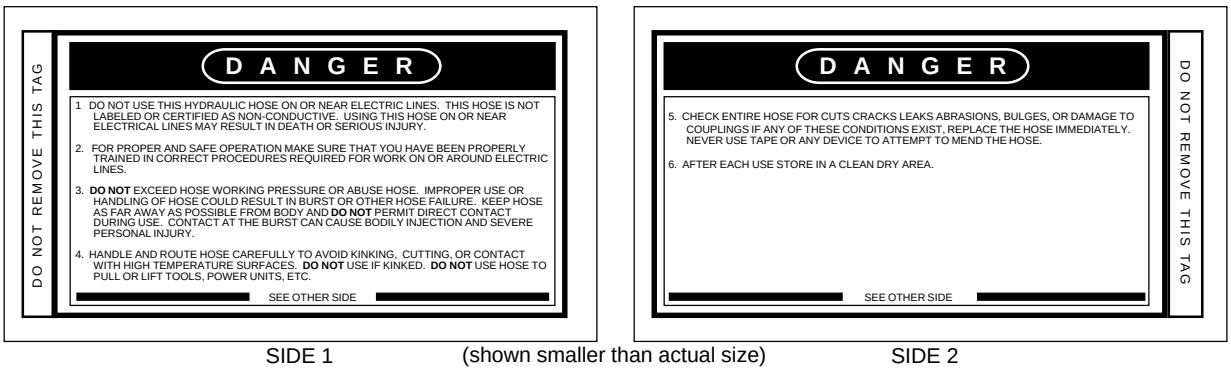
If the information on a tag is illegible because of wear or damage, replace the tag immediately. A new tag may be obtained at no charge from your Stanley Distributor.

The tag shown below is attached to "certified non-conductive" hose.



SIDE 1 (shown smaller than actual size) SIDE 2

The tag shown below is attached to "conductive" hose.



SIDE 1 (shown smaller than actual size) SIDE 2

HOSE PRESSURE RATING

The rated working pressure of the hydraulic hose **must be equal to or higher than** the relief valve setting on the hydraulic system.

HYDRAULIC SYSTEM REQUIREMENTS

• The hydraulic system should provide a flow of 7-9 gpm/26-34 lpm at an operating pressure of 2000 psi/140 bar. Recommended relief valve setting is 2100-2250 psi/145-155 bar.

• The system should have no more than 250 psi/17 bar backpressure measured at the tool end of the operating hoses. The system conditions for measurement are at maximum fluid viscosity of 400 ssu/82 centistokes (minimum operating temperatures).

• The hydraulic system should have enough heat rejection capacity to limit the maximum oil temperature to 140°F/60°C at the maximum expected ambient temperature.

• The hydraulic system should have a minimum of 25 micron filtration. Stanley recommends using filter elements sized for a flow of at least 30 gpm/114 lpm for cold temperature startup and maximum dirt holding capacity.

• The hydraulic fluid used should have a viscosity between 100 and 400 ssu/20 and 82 centistokes at the maximum and minimum expected operating temperatures. Petroleum base hydraulic fluids with antiwear properties and a viscosity index over 140 ssu/28 centistokes will meet the recommended requirements over a wide range of operating temperatures.

• The recommended hose size is .500 inch/12 mm I.D. up to 50 ft/15 m long and .625 inch/16 mm I.D. minimum up to 100 ft/30 m long.

• Quick disconnect couplings must conform to NFPA T3.20,15/EHTMA specifications.

PRINCIPLE OF OPERATION

The SK58 Sinker Drill is designed to be used to drill holes in rock such as blast holes.

A rock bit containing carbides is attached to drill steel which is inserted into the tool. The tool incorporates a reciprocating piston and a varible speed hydraulic motor. During the drilling process, the piston hammers on the drill steel and the hydraulic motor rotates the drill steel. It is the pounding and rotating motion of the rock bit that causes the rock to fracture into small cuttings.

It is necessary to extract the rock shavings during the drilling process. If the rock shavings are not extracted, the rock bit will sit on top of the shavings, which in turn, will prevent the rock bit from penetrating into the rock.

On SK58110, SK58120, and SK58310 models, air is introduced into the drill steel via a valve in the tool to blow the rock cuttings out of the hole. On the SK58130 model, water is used to flush out the rock cuttings.

The air requirements for effective drilling are 30 cfm at 120 psi. The air supply is furnished by an air compressor.

SK58 Sinker Drills are designed to be operated and controlled by one individual. The rotation speed of the drill steel and amount of air introduced into the drill steel is adjusted by the operator based on an experience factor for the particular application. Incorrect rotation speed and/or inadequate extraction of the rock cuttings will significantly reduce drilling effectiveness and result in substantially increased drilling time.

The tool can drill up to a 3 in./75 mm hole up to 20 feet/6 meters deep in rock. The tool has been used for other applications such as dowel drilling and gas leak detection.

Because the tool has been specifically designed to be operated by an individual, it should never be mounted to and operated from a machine such as a drilling rig or small excavator. If a requirement exists to machine mount the tool, the application must first be approved by Stanley Engineering. Failure to obtain this approval can result in tool failure and void the warranty.

See the "OPERATING INSTRUCTIONS" section of this manual for specific operating instructions.

PREOPERATION PROCEDURES

Preparation For Initial Use

The tool, as shipped, has no special unpacking or assembly requirements prior to usage. Inspection to assure the tool was not damaged in shipping and does not contain packing debris is all that is required.

Check Hydraulic Power Source

1. Using a calibrated flowmeter and pressure gauge, check that the hydraulic power source develops a flow of 7-9 gpm/26-34 lpm at 1500-2000 psi/105-140 bar.

2. Make certain 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) operation.

Check Tool

1. Make sure all tool accessories are correctly installed. Failure to install tool accessories 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.

Install Drill Steel & Rock Bit

Use standard 4-1/4 inch shank by 1 inch hex drill steel for SK58110, SK58120 and SK58310 models. Use 4-1/4 inch shank by 7/8 inch hex drill steel for the SK58130 model.

Drill steels are available in a variety of lengths. Start with a short length so that the tool may be operated at a normal standing position. The tool handles should never exceed chest height during operation.

1. Thread a rock bit onto the drill steel.

2. Rotate the latch (61) out and up.

3. Slide the drill steel into the tool.

4. Rotate the latch down being careful not to pinch your fingers. When correctly installed, the collar on the drill steel should be above the bottom of the latch.

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 hose couplers on the tool. It is a good practice to connect the return hose first and disconnect it last to minimize or avoid trapped pressure within the tool.

3. Observe flow indicators stamped on hose couplers to be sure that oil will flow in the proper direction. The female coupler is the inlet coupler.

   NOTE: The pressure increase in uncoupled hoses left in the sun may result in making them difficult to connect. When possible, connect the free ends of operating hoses together.

4. Connect the hose from the air supply to the hose on the tool.

⚠ CAUTION

The air supply must be minimum 30 cfm at 120 psi. Supplying less than these specifications may result in inadequate extraction of rock cuttings; cause cuttings to migrate up the drill steel and into the tool and result in tool damage; diminish drilling time; and cause premature wear of the drill bit.

OPERATING PROCEDURES

1. Observe all safety precautions. Make sure you are wearing eye protection, earing protection, foot protection, and head protection.

2. Start the hydraulic supply and turn the circuit control valve to the "ON" position.

3. Open the air valve on the tool just enough to permit a small amount of air to flow from the rock bit.

> **⚠ CAUTION**
>
> **Air flow must be continuous during drilling to avoid clogging of air passages and/or backflushing of waste products into the drill.**

4. Place the rock bit firmly on the surface to be drilled.

5. Grip the handles on the tool firmly and open the hydraulic valve lever slightly to start the tool at a slow speed. Adequate down pressure is very important.

6. Ensure the rock bit is rotating at a moderate speed (not too fast, not too slow). When starting the hole, it is best to start at a slow impact and rotation speed until the rock bit has carved out a depression in the material being drilled. If the rock bit is not rotating open the hydraulic valve lever further. If the rock bit still does not rotate adjust the motor control knob until rotation is achieved.

7. After the rock bit has carved out a depression in the material being drilled, open the hydraulic valve lever fully. Readjust the motor control knob to obtain a good drilling speed. Adjust the air valve to ensure the cuttings are being extracted from the drill hole.

8. When the bottom of the tool comes within 6 inches of the drill hole, it is time to either add another section of drill steel or replace the existing drill steel with a longer section. Close the hydraulic valve lever but leave the air valve "ON" and then lift the tool with drill steel and rock bit out of the hole. Leaving the air valve "ON" helps prevent cuttings from falling around the bit while the bit is lifted from the hole.

9. When the tool, drill steel and bit have been removed from the drill hole, turn the valve lever "OFF" and turn the hydraulic supply circuit control valve "OFF" before changing the drill steel or rock bit.

COLD WEATHER OPERATION

If the tool 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.

ROUTINE MAINTENANCE

A very important maintenance practice is to keep the hydraulic fluid clean at all times. Contaminated hydraulic fluid causes rapid wear and/or failure of internal parts.

Periodically apply a light coat of WD40™ between the throttle lever and throttle valve and the motor control knob and motor control valve.

Check the nitrogen charge in the accumulator. If low, recharge the accumulator. See the section titled "ACCUMULATOR CHARGING" found later in this manual.

STORAGE

Disconnect all hoses and wipe the tool clean. Spray the interior of the drive hex and motor plate with WD40™. Also apply a light coat of WD40™ between the throttle lever and throttle valve and the motor control knob and motor control valve.

Store in a clean, dry place.

Good maintenance practices will keep the tool on the job and increase its service life.

A very important maintenance practice is to keep the hydraulic fluid clean at all times. Contaminated hydraulic fluid causes rapid wear and/or failure of internal parts.

Follow the procedures contained in the HYDRAULIC SYSTEM REQUIREMENTS section of this manual to ensure peak performance from the tool. Never disassemble the tool unless proper troubleshooting procedures have isolated the problem to an internal part. Then, only disassemble it to the extent necessary to replace the defective part.

⚠ CAUTION

KEEP CONTAMINANTS SUCH AS DIRT AND GRIT AWAY FROM INTERNAL PARTS AT ALL TIMES.

⚠ WARNING

DO NOT ATTEMPT TO SERVICE THIS TOOL IF YOU ARE NOT THOROUGHLY TRAINED IN THE PROPER DISASSEMBLY AND ASSEMBLY OF THIS TOOL. IMPROPER DISASSEMBLY OR ASSEMBLY MAY RESULT IN BODILY INJURY AND DAMAGE TO THE TOOL. ALWAYS REFER ALL MAINTENANCE TO A QUALIFIED AND TRAINED TECHNICIAN.

Always determine and correct the cause of the problem prior to reassembly. Further wear and tool failure can result if the original cause is not corrected.

PRIOR TO DISASSEMBLY

- Clean the exterior of the tool.
- Obtain a seal kit to replace all seals exposed during disassembly. Note the orientation of seals before removing them. Install new seals in the same position as original seals.

LATCH AND SPRING SERVICE

1. Obtain Stanley special tools latch removal tool (p/n 05045) and latch installation tool (p/n 05062).
2. Swing the latch (61) away from the motor plate (68). Install the latch removal tool over the retaining ring (62), spring back-up (63).
3. Use 2 "C" clamps or bar clamps to squeeze the latch removal tool against the spring so that the spring back-up and spring are depressed enough to expose the retaining ring. Pry the retaining ring out.
4. Slowly release the clamps and remove them. Remove the spring back-up, spring, latch washer (65), and latch.

LATCH RE-ASSEMBLY

1. Install the latch, latch washer, spring and spring back-up onto the motor plate with orientation as shown in the parts drawing.
2. Place the retaining ring in the groove in the latch removal tool. Install the latch installation tool into the recessed bore of the latch removal tool. The retaining ring should now be between the latch removal tool and the latch installation tool. Place this assembly over the spring back-up with the protuding end of the latch installation tool inserted into the bore of the motor plate.
3. Using a large mallet, strike the face of the latch removal tool with one swift blow. This should push the retaining ring into place.

THROTTLE VALVE SERVICE

The throttle valve can be serviced without disassembling the entire tool. Follow the instructions below.

1. Remove the valve lever (8) by unscrewing the locknut (7). Lift out the key (47).
2. Remove the retaining ring (9), washer (10), kap seal (11) and o-ring (6).
3. Remove the inlet flange (35) by unscrewing and removing the 2 capscrews (36). Push the throttle valve (42) out of the accumulator housing toward the inlet flange side. Remove the o-ring (38) and kap seal (37), washer (39), kap seal (40) and o-ring (41).
4. Inspect the surface of the throttle valve and the

throttle valve bore of the accumulator housing for damage. A light surface scuffing is normal. If deep scratches or nicks are noticed, replace the part(s).

THROTTLE VALVE RE-ASSEMBLY

1. Apply grease and install a new o-ring (41) into the channel in the kap seal (40) and then install the assembly into the throttle valve bore of the accumulator housing. When correctly installed, the o-ring faces the wall of the bore. Apply grease and install the washer (39).

2. Lubricate the throttle valve with clean hydraulic fluid and install it into the throttle valve bore of the accumulator housing with the key way facing upward toward the handles on the accumulator housing.

3. Apply grease and install a new kap seal (37) into the groove located on the inlet flange (35) (throttle valve side). Ensure the channel in the kap seal is facing outward. Apply grease and install a new o-ring (38) into the channel in the kap seal. Install the inlet flange and secure with 2 capscrews (36).

4. Apply grease and install a new o-ring (6) into the channel in the kap seal (11). Install the assembly, followed by the washer (10), over the throttle valve and into the bore. Press on the washer with the appropriate o-ring tool to aid in the assembly. When correctly installed, the o-ring faces the wall of the bore.

5. Install the retaining ring (9), key (47), valve lever (8), and secure with the locknut (7).

6. Test the function of the throttle valve by rotating the valve lever back and forth. The lever should rotate with ease. If it seems the throttle valve is binding, disassemble the throttle valve and inspect the parts for damage. If damage is noted, replace the part(s).

HYDRAULIC MOTOR SERVICE

The hydraulic motor assembly can be serviced without disassembling the entire tool. Follow the instructions below.

1. Complete steps 1, 2, 6, and 7 under "ACCUMULATOR HOUSING, FLOW SLEEVE, PISTON, & AUTOMATIC VALVE SERVICE".

2. Unscrew and remove the 3 capscrews (95).

3. Lift off the drive motor control block (82).

4. Unscrew and remove the 2 capscrews (67).

5. Lift off the motor plate (68) being careful to prevent the gears from falling out.

6. Lift out the idler gear (72) and drive gear (99).

7. Remove the woodruff key (77) and push the drive hex (76) out of the drive motor chamber (75).

8. If it is necessary to remove the latch, refer to the section titled "LATCH AND SPRING SERVICE".

9. If it is necessary to remove the bushings (70 & 71), obtain the following Stanley special tools.

   Collet, p/n 05871 - used to remove item 71.
   Actuator Pin, p/n 05067 - used with p/n 05871
   Collet, p/n 5068 - used to remove item 70.
   Actuator Pin, p/n 05067 - used with p/n 05068
   Bearing Installation Tool, p/n 05061
   Bearing Installation Tool, p/n 05044

   A collet is inserted into the bearing until the lip on the collet is under the bearing. The actuator pin is then inserted into the collet to cause the collet to spread. A puller is installed to the actuator to apply force to pull the bearing out.

   Bearing installation tools are inserted into the bearing and then used with an arbor press to press the bearing into the bore. Use of a bearing installation tool ensures a straight bearing to bore installation and correct depth.

10. Loosen the set screw (86) in the knob (87) and remove the knob. Unscrew and remove the valve guide (88). Reinstall the knob and setscrew and then unscrew the motor control valve (89) to remove it.

INSPECTION AND CLEANING

Inspect and clean all parts as follows:

Cleaning

Clean all parts with a degreasing solvent. Blow dry with compressed air and wipe clean. Use only lint-free cloths.

Drive Motor Chamber

The chamber bores and bottoms around the 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 drive hex and idler gear for corresponding wear and replace as required.

Gears

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

Motor Plate

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

Drive Hex and Idler Gear Shaft

The surface diameter at the bushing and seal locations must be smooth. Grooves, roughness or a reduced diameter indicate fluid contamination or damaged bushings. If abnormal wear as above occurs (more than normal polishing), replace the drive hex, idler gear and associated bushings.

Also check the hydraulic system for excess contamination in the fluid and for filter condition.

MOTOR RE-ASSEMBLY

1. If new bushings were installed (see paragraph 9 under "HYDRAULIC MOTOR SERVICE", ensure each bushing is flush with the surface of the part the bushing is installed into. If the bushing sits higher than the surface of the part, it will cause binding of related components.

2. Apply grease and install a new back-up ring (81) and a new quad ring (80) into the motor plate (68) and into the drive motor control block (82).

3. Lubricate the drive hex (76) with clean hydraulic fluid and install it into the drive motor chamber (75).

4. Install the woodruff key (77) into the slot in the drive hex.

5. Lubricate the idler gear (72) and drive gear (99) with clean hydraulic fluid and then install them into the drive motor chamber.

6. Apply grease and install a new o-ring (73) into the groove in the drive motor chamber.

7. Install the motor plate to the drive motor chamber and secure with 2 capscrews (67). Check that the drive hex rotates freely.

8. Install the thrust washer (98) and thrust back-up washer (97) over the drive hex and against the drive motor chamber.

9. Install a new gasket (79) onto the drive motor chamber.

10. Install the drive motor control block to the drive motor chamber and secure with 3 capscrews (95). Check that the drive hex rotates freely.

11. Apply grease and install a new cup seal (93) into the drive motor control block, lips facing down. Install the seal washer (92) on top of the cup seal. Apply grease and install a new rod seal (91) on top of the washer, lips facing up.

12. Apply grease and install a new o-ring (90) into the groove on the drive motor control block.

13. Apply grease and install a new o-ring (84) into the groove in the motor control valve (89). Install new nylon cap locks (83) to the motor control valve. Install the knob (86) and tighten the set screw. Thread the motor control valve into the drive motor control block. Loosen the set screw and remove the knob.

14. Apply grease and install a new o-ring (85) onto the valve guide (88). Place the valve guide over the motor control valve and thread it into the drive motor control block. Tighten it securely. Re-install the knob and tighten the setscrew.

15. Install the motor over the side rods and into the flow sleeve tube ensuring the roll pin is correctly aligned with the hole in the flow sleeve (31) and the motor control valve is oriented correctly with the handles.

16. Install the 4 side rod nuts. Tighten in 20 ft lb/25 Nm increments to 75 ft lb/100 Nm in a cross pattern.

MOTOR BREAK-IN

Motor break-in is required whenever major components of the motor have been replaced. Break-in the motor by operating the tool with the motor control valve fully open for approximately 15 minutes. Do not attempt to drill with the tool during the break-in period.

ACCUMULATOR HOUSING, ACCUMULATOR, FLOW SLEEVE, PISTON, AND AUTOMATIC VALVE SERVICE

1. Secure the tool in a bench vise, with the "IN" and "OUT" ports up, clamping on the flow sleeve tube between the side rods. Soft vise jaws are recommended.

2. Remove the pigtail hose assemblies.

Note: The tool is full of fluid and will drip from the ports when the hoses are removed.

3. Remove the charge valve cap (12) (1-3/8 inch hex). . Loosen the 5/8 inch hex lock nut on the charging valve (14) 1-1/2 turns. Using a small punch, depress the stem in the charge valve to discharge the accumulator completely.

4. Remove the charge valve.

5. Remove the blower tube nut (43).

6. Remove the four side rod nuts (66) (1 inch hex).

7. Using a soft faced mallet, tap on the edges of the motor assembly to drive it from the flow sleeve tube (30).

8. Remove the accumulator housing assembly (46) from the flow sleeve tube by tapping on alternate ends of the side rods (78) with a soft faced mallet. Be careful to prevent the washer (27), valve body (56), automatic valve (32), and push pins (57) from falling out when the accumulator housing assembly is separated from the flow sleeve tube.

    a. If the valve body remains in the accumulator housing assembly, lift the automatic valve and push pins out immediately after the accumulator housing assembly separates from the flow sleeve tube. Set the accumulator housing assembly aside.

    b. If the valve body remains in the flow sleeve tube when the accumulator housing is separated from the tube, proceed with step 9.

9. Skip this step if the valve body remained with the accumulator housing assembly when separated from the flow sleeve tube. Grasp the valve body with one hand and slide the valve body off of the piston and away from the flow sleeve. Use your other hand to prevent the washer, automatic valve, and push pins from falling out. Remove the washer, automatic valve, and 2 push pins. Do not use a magnet to remove the push pins.

10. Slide the piston (29) out of the flow sleeve (31). Slide it toward the accumulator housing end of the flow sleeve.

11. Remove the flow sleeve tube from the vise and position it over a work bench so as to allow the push pins (58) to drop out. Hold a finger over the flow sleeve to prevent it from sliding out of the flow sleeve tube.

12. Holding the flow sleeve tube in one hand, push on the flow sleeve to slide it out of the flow sleeve tube. The flow sleeve may be removed from the flow sleeve tube from either end of the tube. Use extreme care in handling the flow sleeve as it contains very sharp edges which can cut you. If the flow sleeve does not seem to be easily removeable from the flow sleeve tube, do not remove it unless necessary. To assist in the removal of a flow sleeve that has proven difficult to remove, use the following procedures.

    a. Place the Stanley special split ring tool (p/n 04908) on top of the Stanley special flow sleeve removal tool (p/n 04910). Place the flow sleeve tube on top of the split rings. Using an arbor press and the Stanley special accumulator cylinder puller tool (p/n 05640) to protect the flow sleeve, push the flow sleeve out of the tube.

13. Obtain the accumulator housing assembly. Insert Stanley special accumulator removal tool (p/n 05639) or a 1/2-20 long threaded rod through the blower tube nut hole and thread it into the top of the accumulator. Tap on the special tool or rod with a mallet to drive the accumulator assembly (22, 23, 24, 25, & 26) out of the accumulator housing. If the valve body is in the accumulator housing it will be driven out along with the accumulator assembly. Make sure the washer (27) between the valve body and accumulator is properly located in its counterbore before driving out the valve body and

accumulator. If the washer is not properly located, the parts will be damaged. If the entire accumulator assembly is removed, proceed to step 14. If the accumulator cylinder (22) remains in the accumulator housing, it can be removed using the following procedures.

a. If the entire accumulator assembly was removed, skip this step and proceed to step 14. Assemble the Stanley special accumulator cylinder puller tool (p/n 05640) to a slide hammer containing a 1/2 inch diameter shank. Insert the puller tool into the bottom of the accumulator cylinder so that it seats on the inside lower contour of the cylinder. Hammer the cylinder out of the accumulator housing.

14. Remove the tube connector (102) by pulling it out of the accumulator chamber.

15. To remove the accumulator chamber and diaphragem (23) from the accumulator cylinder, place the accumulator assembly on Stanley special disassembly tools (p/n 05508 ring and p/n 04910 tube). Place a rag in the bottom of the tube to protect the accumulator chamber when it is removed. Drive the chamber and diaphragm out of the cylinder by tapping on the charge valve end of the chamber with a maller or pushing on it with an arbor press.

16. Squeeze the accumulator diaphragm and slide it off the charge valve end of the accumulator chamber.

17. Remove the cup seal (26) and back-up washer (25) from the accumulator chamber.

18. Remove the air tube (1) (or water tube if applicable).

ACCUMULATOR RE-ASSEMBLY

1. Apply grease and install a new o-ring (100) into the groove on the accumulator chamber. NOTE: This o-ring was only used on early models. It was eliminated on later models.

2. Apply a light coating of WD-40™ to the accumulator diaphragm (23) and accumulator chamber (24). Slide the accumulator diaphragm onto the accumulator chamber from the tube connector (102) end.

3. Use grease or rubber lubricant on the inside of the accumulator cylinder (22) and the outside diameter of the diaphragm. Push the accumulator chamber and diaphragm, tube connector end first, halfway into the accumulator cylinder. Be sure the accumulator diaphragm is free of wrinkles and the seal beads are seated correctly to the accumulator chamber before completing the assembly. Use an arbor press to completely seat the assembly using short movements during the last 1/2 inch/12 mm of travel to gently seat the diaphragm.

4. Apply grease and install a new o-ring (21) into the groove on the accumulator cylinder.

5. Apply grease and install the back-up washer (25) and a new cup seal (26) (lips facing out) in the accumulator chamber counterbore.

6. Apply grease and install new o-rings (101) into the grooves on the tube connector. Install the tube connector into the accumulator chamber.

FLOW SLEEVE, PISTON, & AUTOMATIC VALVE RE-ASSEMBLY

The best way to assemble the flow sleeve (31), automatic valve body (56) and piston (29) is by using an assembly fixture such as that shown in figure 1. The fixture permits the parts to be stacked vertically during the assembly process. After the parts are stacked, the handle assembly can then be placed on top of the stacked parts and tapped into place.

The assembly fixture shown in figure 1 should be constructed of aluminum or brass and should be at least 3-1/2 in/88 mm high but no more than 8 in/203 mm high.

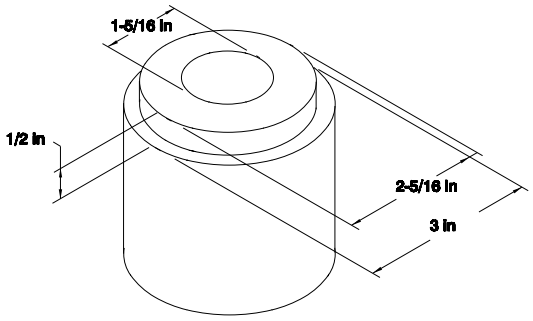


Figure 1.

1. Lubricate the flow sleeve with clean hydraulic fluid and install it into the flow sleeve tube (30). The flow sleeve has a wide groove around the outside of one end. Install this end first. Then place the flow sleeve tube and flow sleeve on top of the assembly fixture shown in figure 1.

2. Apply grease and install an o-ring (21) onto the flow sleeve tube.

3. Apply clean hydraulic fluid and install 4 push pins (58) into the holes in the top of the flow sleeve tube. One end of each push pin contains a machined surface. This surface must be facing up as each push pin is installed. Each push pin must slide freely in or out of the hole. If a push pin does not slide freely or seems to stick, the hole may contain contamination or the top edge of the hole contains a burr. Remove burrs with a deburring tool, clean the hole thoroughly and try the push pin again.

4. Tap the roll pin (33) into the hole on the automatic valve body (56).

5. Apply grease and install an o-ring (21) onto the automatic valve body.

6. Lubricate with clean hydraulic fluid and install 2 push pins (57) into the holes in the valve body. One end of each push pin contains a machined surface. This surface must be facing up as each push pin is installed. Each push pin must slide freely in or out of the hole. If a push pin does not slide freely or seems to stick, the hole may contain contamination or the top edge of the hole contains a burr. Remove burrs with a deburring tool, clean the hole thoroughly and try the push pin again.

7. Lubricate the automatic valve (32) with clean hydraulic fluid and install it into the valve body. The automatic valve must freely slide back and forth. If it does not, the valve body or valve may contain contaminants or the bore of the valve body contains burrs. Remove the push pins and scrub the bore of the valve body with emery cloth and then thoroughly clean the bore, push pin holes and valve. Reinstall the push pins and valve.

8. Grasp the automatic valve body and valve so that one or more fingers are gripping the valve to prevent it and the push pins from falling out when the valve body and valve are turned upside down (roll pin facing down). Place the assembly on top of the flow sleeve making sure the roll pin aligns with the appropriate hole in the flow sleeve.

9. Lubricate the piston (29) with clean hydraulic fluid and install into the top of the automatic valve body. Apply grease and install a new o-ring (28) into the groove in the piston (water flush models only).

10. Install the washer (27), smaller diameter first, over the stem of the piston and onto the automatic valve body.

11. Install the accumulator assembly over the stem of the piston and down to the top of the automatic valve body.

12. Insert the air tube (1) (or water tube if applicable) into the top of the accumulator ensuring it aligns with the hole in the piston.

13. Use a felt tip marker to place a mark on the accumulator cylinder and the accumulator housing to align the tube connector with the port in the accumulator housing.

14. Apply grease liberally to the o-ring surfaces on the accumulator, automatic valve body, flow sleeve tube and to the bore of the accumulator housing.

15. Place the accumulator housing over the top of the accumulator, ensure that the felt pen marks are alligned, and then tap it down until the lower part of the housing covers the o-ring on the flow sleeve tube.

16. Lay the completed assembly on its side being careful to prevent movement of the flow sleeve. Remove the assembly fixture.

17. Place the completed assembly horizontally in a vice with soft jaws, oil ports up, and clamp on the flow sleeve tube.

18. Apply grease and Install a new cup seal (93) with lips facing down, the washer (92), new rod seal (91) with lips facing up, and a new o-ring (90).

19. Install the motor over the side rods and into the flow sleeve tube ensuring the roll pin is correctly aligned with the hole in the flow sleeve and the motor control valve is oriented correctly with the handles.

20. Install the 4 side rod nuts. Tighten in 20 ft lb/25 Nm increments to 75 ft lb/100 Nm in a cross pattern.

21. Apply grease and install new o-rings (44 & 45) to the blower tube nut. Install the blower tube nut to the accumulator housing.

22. Install the charge valve (14).

23. Charge the accumulator with 600 psi/42 bar nitrogen as described in the "CHARGING THE ACCUMULATOR" section of this manual.

24. Apply grease and install a new o-ring (13) onto the charge valve cap (12). Install the charge valve cap.

CHARGING THE ACCUMULATOR

To check or charge the accumulator the following equipment is required:

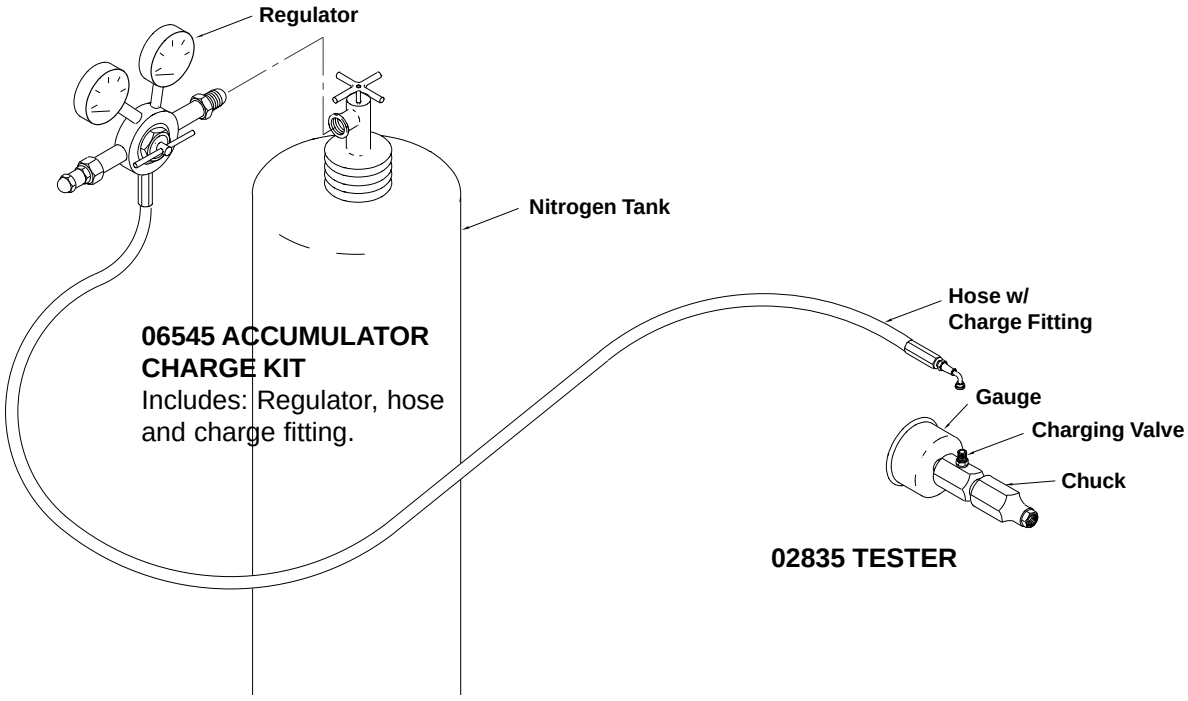
- Accumulator tester (Part Number 02835).
- Charging assembly (Part Number 06545) (includes a regulator, hose and fitting).
- NITROGEN bottle with a 800 psi/56 bar minimum charge.

1. On charge valves containing 5/8 inch hex locking nuts, first loosen the locking nut 1-1/2 turns.
2. Holding the chuck end of the Stanley tester (p/n 02835), turn the gauge fully counterclockwise to ensure the stem inside the chuck is completely retracted.
3. Thread the tester onto the charging valve of the tool accumulator (do not advance the gauge-end into the chuck end. Turn as a unit). Seat the chuck on the accumulator charging valve and hand tighten only.
4. Advance the valve stem by turning the gauge- end clockwise.
5. Connect the charging assembly to the valve on the tester.
6. Adjust the regulator on the nitrogen bottle to 600 psi/42 bar.

   NOTE: It may be necessary to set the regulator at 650-700 psi/45-48 bar to overcome any pressure drop through the charging system.
7. Open the valve on the charging assembly hose. When the tester gauge reads 600 to 700 psi/42 to 48 bar, close the valve on the charging assembly hose and remove the charging assembly.
8. Turn the gauge end of the tester fully counterclockwise to retract the plunger in the chuck. Remove the tester from the charge valve.
9. On charge valves containing 5/8 inch hex locking nuts, tighten the locking nut.

TESTING THE ACCUMULATOR PRESSURE

1. Follow instructions 1 through 4 under "CHARGING THE ACCUMULATOR".
2. Read the pressure on the gauge (pressure should be between 500 & 600 psi/35 & 42 bar.
3. If the pressure is low, recharge the tool.



TROUBLE SHOOTING

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 tool, always check that 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 oil temperature at least 80°F/27°C.

PROBLEM	CAUSE	SOLUTION
Tool doesn't run.	Power unit not functioning.	Check power unit for proper flow and pressure (7-9 gpm @ 1500-2000 psi).
	Couplers or hoses blocked.	Remove obstruction.
	Pressure and return line hoses reversed at ports.	Be sure hoses are connected to the proper ports.
	Mechanical failure of piston or automatic valve.	Disassemble drill and inspect for damaged parts.
Tool doesn't drill effectively.	Power unit not functioning.	Check power unit for proper flow and pressure (7-9 gpm @ 1500-2000 psi).
	Couplers or hoses blocked.	Remove obstruction.
	Insufficient air or water	20 cmf minimum.
	Accumulator charge (pressure hose pulses more than normal).	Recharge accumulator. Replace diaphragm if charge loss continues.
	Oil too hot (above 140°F).	Provide cooler to maintain proper oil temperature (under 140°F).

continued

PROBLEM	CAUSE	SOLUTION
Tool operates slow	Low gpm supply from power unit.	Check power unit for proper flow (7-9 gpm)
	High backpressure.	Check hydraulic system for excessive backpressure (over 250 psi).
	Couplers or hoses blocked.	Remove obstruction.
	Orifice plug blocked.	Remove restriction.
	Oil too hot (above 140°F) or cold (below 60°).	Check power unit for proper oil temperature. Bypass cooler to warm oil up, or provide cooler to maintain proper temperature.
	Relief valve set too low.	Adjust relief valve to 2100-2250 psi.
Tool gets hot.	Hot oil going through tool.	Check power unit. Be sure flow rate is not too high causing part of the oil to go through the relief valve. Provide cooler to maintain proper oil temperature (under 140°F). Check relief valve setting.
Oil leakage on drill steel.	Lower piston or drive hex seal failure.	Replace seals.
Oil leakage through charge valve cap.	Upper piston seal failure or accumulator or o-ring failure or accumulator charge loss or failure.	Replace seals, recharge or replace accumulator diaphragm.
Oil leakage around trigger.	Valve spool seal failure.	Replace seals.
Low rotation torque.	Motor not completely broken in.	Continue operation to break in motor.
	Excessive oil temperature causes operating pressure loss. Damage to motor clearances.	Provide cooler to maintain oil temperature (under 140°F). Repair as required.
	Insufficient air or water.	20 CFM minimum.
	Mechanical binding during drilling.	Take care to guide drill straight.

SPECIFICATIONS

Pressure Range ..... 1500-2000 psi/104-140 bar
Shank Size (SK58110 (Air) ,SK58120 (Water) , & SK58310 UW (Air)..... 4-1/4 in. x 1 in. hex
Shank Size (SK58130(Air) ..... 4-1/4 in. x 7/8 in. hex
Maximum Back Pressure ..... 250 psi/17 bar
Flow Range ..... 7-9 gpm/26-34 lpm
Porting ..... -8 SAE O-ring
Couplers ..... Not Included
Connect Size and Type ..... 3/8 in. Male Pipe Adapter
Hose Whips ..... Included

Weight ..... 67 lbs / 30 kg
Overall Length ..... 26 in. / 66 cm
Overall Width - Standard Handle ..... 18 in. / 46 cm
Maximum Fluid Temperature ..... 140° F/60° C

ACCESSORIES

DESCRIPTION	PART NUMBER
Drill Steels for Use with Air	
1 in. Hex x 4-1/4 in. H thread, 12 in./30 cm U/C	05168
1 in. Hex x 4-1/4 in. H thread, 18 in./46 cm U/C	05169
1 in. Hex x 4-1/4 in. H thread, 24 in./61 cm U/C	05170
1 in. Hex x 4-1/4 in. H thread, 36 in./91 cm U/C	04915
1 in. Hex x 4-1/4 in. H thread, 48 in./122 cm U/C	05171
1 in. Hex x 4-1/4 in. H thread, 72 in./183 cm U/C	08905
1 in. Hex x 4-1/4 in. H thread, 96 in./244 cm U/C	08906
7/8 in. Hex x 4-1/4 in. H thread, 12 in./30 cm U/C	05172
7/8 in. Hex x 4-1/4 in. H thread, 24 in./61 cm U/C	05174
7/8 in. Hex x 4-1/4 in. H thread, 36 in./91 cm U/C	05175
7/8 in. Hex x 4-1/4 in. H thread, 48 in./122 cm U/C	05176
Drill Steels for Use with Water	
1 in. Hex x 4-1/4 in. 125 Rope Thread, 48 in./122 cm U/C	05189
1 in. Hex x 4-1/4 in. 125 Rope Thread, 60 in./152 cm U/C	05184
Striking Bar, 1 in. Hex x 4-1/4 in. 125 Rope Thread	05192
Coupling, 125 Rope Thread	05193
Replacement Cup Seal for Striking Bar	06929
Carbide Rock Bits for Use with Air (Shoulder Design)	
1-3/8 in. Diameter, H thread	05177
1-1/2 in. Diameter, H thread	05178
Carbide Rock Bits for Use with Water	
2 in. Diameter, 125 Rope Thread	05189
2-1/4 in. Diameter, 125 Rope Thread	05190
2-1/2 in. Diameter, 125 Rope Thread	05191

SPECIAL SERVICE TOOLS

DESCRIPTION	PART NUMBER	USAGE
O-ring Tool Kit	04337	General Service of Seals
Spil Ring (Auto Valve Removal)	04908	Auto Valve Removal - Requires 04910
Flow Sleeve Removal Tube	04910	Used with 04908 & 05508
Bearing Puller Kit	05064	General Bearing Pulling
Bearing Installation Tool	05044	Install Motor Bushings
Bearing Installation Tool	05061	Install Motor Bushings
Latch Removal Tool	05045	Removal of Retaining Ring and Latch
Latch Installation Tool	05879	Installation of Retaining Ring and Latch
Accumulator Disassembly Tool	05508	Removal of Chamber from Cylinder
Accumulator Cylinder Puller	05640	Removal of Cylinder from Accumulator Housing
Collet, 7/8 inch	05871	Removal of Motor Bushings
Collet	05068	Removal of Motor Bushings
Accumulator Removal Tool	05639	Removal of Accumulator from Accumulator Housing

Item No	Part No	Qty	Description
1	04763	1	AIR TUBE (SK58110, SK58 130 & SK58310 MODELS ONLY)
	04965	1	WATER TUBE (SK58120 MODEL ONLY)
2	07064	1	VENT PLUG
3	04964	2	HANDLE GRIP ASSEMBLY
4	01714	1	NUT HEAVY HEX JAM
5	04786	2	WASHER 5/8 TYPE A N
6	04794	1	O-RING 2-214 R16 •
7	04147	1	LOCKNUT 1/2-20
8	04718	1	VALVE LEVER
9	04902	1	RETAINING RING
10	04751	1	WASHER
11	04793	1	KAP SEAL •
12	04775	1	CHARGE VALVE CAP
13	04052	1	O-RING 3-914 R17 •
14	04051	1	CHARGING VALVE
15	——-	1	O-RING (INCLD WITH ITEM 14)•
16	00955	1	PIPE PLUG
17	00955	1	PIPE PLUG
18	01411	1	O-RING 3-906 R17 •
19	04772	1	ORIFICE PLUG
20	01605	2	O-RING
21	04054	3	O-RING 2-233 R17 •
22	04060	1	ACCUMULATOR CYLINDER
23	04059	1	ACCUMULATOR DIAPHRAG
24	04779	1	ACCUMULATOR CHAMBER
25	04780	1	BACK UP WASHER
26	04386	1	CUP SEAL •
27	04750	1	WASHER
28	06268	1	TUBE SEAL (SK58120 & SK58130 MODELS ONLY) •
29	04734	1	PISTON (SK58110 MODEL ONLY)
	06265	1	PISTON (SK58120, SK58130 & SK58310 MODELS ONLY)
30	04068	1	FLOW SLEEVE TUBE
31	07889	1	FLOW SLEEVE
32	04065	1	AUTOMATIC VALVE
33	07890	1	ROLL PIN 3/16 X 1.5
34	01652	2	PIGTAIL HOSE ASSEMBLY
35	04781	1	INLET FLANGE
36	02688	2	CAPSCREW
37	04792	1	KAP SEAL •
38	02003	1	O-RING 2-113 R16 •
39	04771	1	WASHER
40	04791	1	KAP SEAL •
41	04795	1	O-RING 2-218 R16 •
42	04777	1	THROTTLE VALVE
43	04778	1	BLOWER TUBE NUT
44	00016	1	O-RING 2-015 R16 •
45	00175	1	O-RING 2-014 R17 •
46	04660	1	HOUSING
47	00772	1	KEY
48	07291	1	MODIFIED CAPSCREW
49	04512	1	RETAINING RING
50	04764	1	SWIVEL FITTING
51	00106	1	O-RING 2-012 R16
52	04765	1	INLET SWIVEL BODY
53	04767	1	STREET ELBOW 45° 3/8
54	05202	1	VALVE-AIR ONLY (SK58110, SK58130 & SK58310 MODELS ONLY)
55	04801	1	HOSE ASSEMBLY
56	04066	1	AUTOMATIC VALVE BODY
57	04571	2	PUSH PIN
58	04067	4	PUSH PIN
59	03786	1	GPM STICKER 7-9 2000P
60	05152	1	STANLEY STICKER
61	04721	1	LATCH CASTING
62	04761	1	RETAINING RING
63	04759	1	SPRING BACK-UP
64	04758	1	COIL SPRING
65	04756	1	LATCH WASHER
66	04075	4	SIDE ROD NUT
67	01217	2	CAPSCREW 3/8-16UNCX2-1/4
68	04748	1	MOTOR PLATE
69	00783	2	PIPEPLUG 1/16-27X.242
70	04788	2	DU BEARING
71	03826	2	DU BEARING
72	04033	1	IDLER GEAR
73	01277	1	O-RING 2-044 R17 •
74	00713	2	DOWEL PIN
75	04744	1	DRIVE MOTOR CHAMBER
76	04784	1	DRIVE HEX (SK58110 MODEL ONLY)
	06267	1	DRIVE HEX (SK58120 & SK58310 MODELS ONLY)
	05195	1	DRIVE HEX (SK58130 MODEL ONLY)
77	04787	1	WOODRUFF KEY
78	04373	4	SIDE ROD
79	04774	1	GASKET •
80	23395	2	QUAD RING -327 •
81	23399	2	BACK-UP RING •
82	04769	1	DRIVE MOTOR CONTROL BLOCK (SK58110, SK58130 & SK58310 MODELS ONLY)
	06266	1	DRIVE MOTOR CONTROL BLOCK (SK58120 MODEL ONLY)
83	00634	2	NYLON CAP LOCK
84	01362	1	O-RING 2-011 R16 •
85	01605	1	O-RING 3-908 R17 •
86	18643	1	SETSCREW 10-24 X 1/4
87	04753	1	MOTOR CONTROL KNOB
88	04773	1	VALVE GUIDE
89	04783	1	MOTOR CONTROL VALVE
90	04073	1	O-RING 2-231 R17 •
91	30890	1	ROD SEAL •
92	04755	1	SEAL WASHER
93	04790	1	CUP SEAL •
94	03009	1	ROLL PIN
95	02688	1	HSHCS 5/16-18UNCX3/4
96	03047	2	ROLL PIN 3/16DIAX3/4
97	04754	1	THRUST BACK-UP WASHER
98	04789	1	THRUST WASHER
99	04752	1	DRIVE GEAR
100	05641	1	O-RING 2-3/8X2-1/2X1/16 90D (USED ON EARLY MODELS ONLY)
101	00026	2	O-RING 2-008 R16 •
102	04776	1	TUBE CONNECTOR
103	04796	1	NAME TAG-SK58 (NOT A SERVICE ITEM)
104	04768	1	WATER VALVE (SK58120 MODEL ONLY)

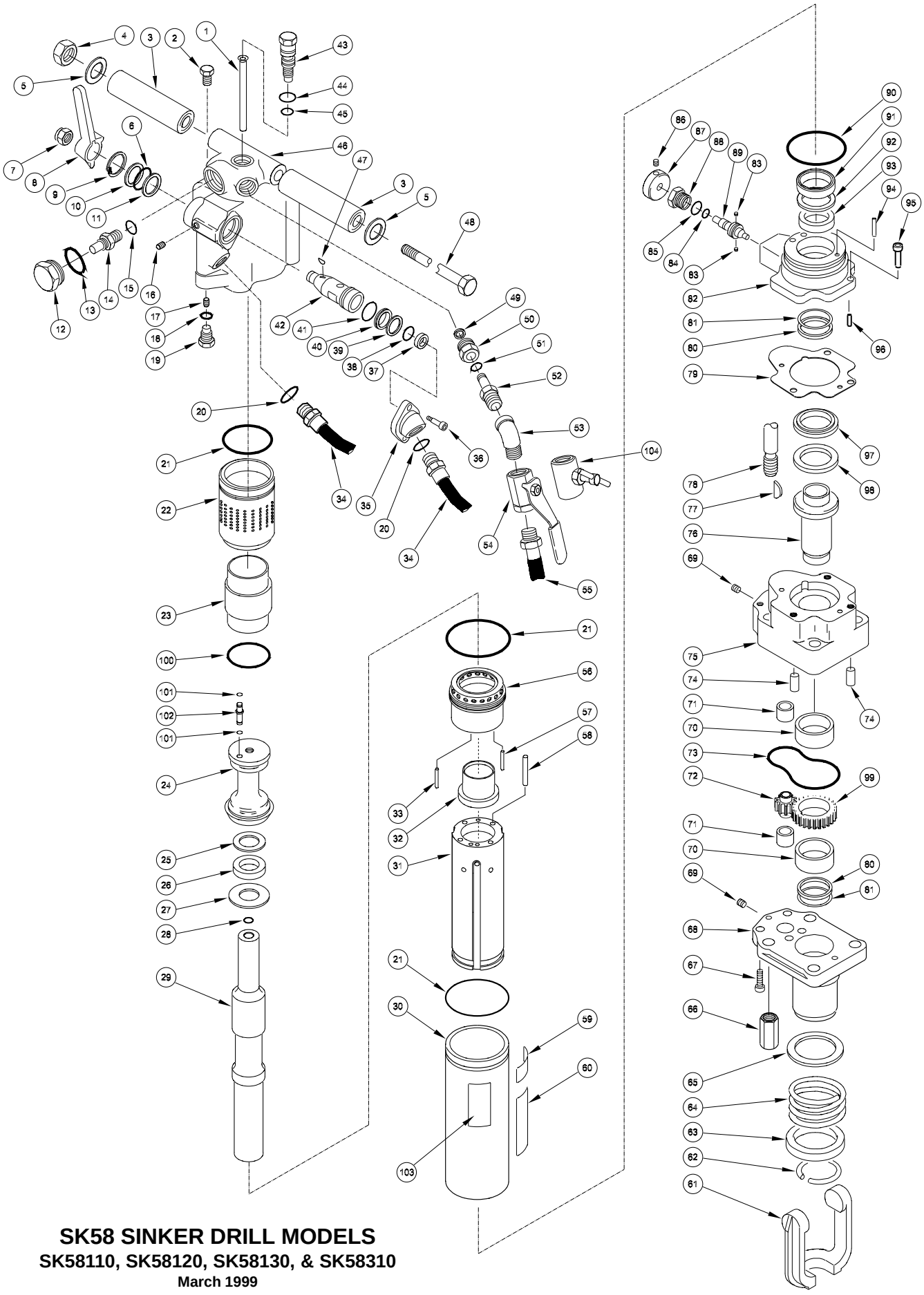
MODEL DESIGNATIONS

SK58110 1 in. x 4-1/4 hex shank, air
SK58120 1 in. x 4-1/4 hex shank, water
SK58130 7/8 in. x 4-1/4 hex shank, air
SK58310 1 in. x 4-1/4 hex shank, air, under water use

SEAL KIT P/N 04805

NOTE: Use Part Number, Part Name when ordering.

• Denotes Part Furnished in Seal Kit 04805.



SK58 SINKER DRILL MODELS

SK58110, SK58120, SK58130, & SK58310

March 1999

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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