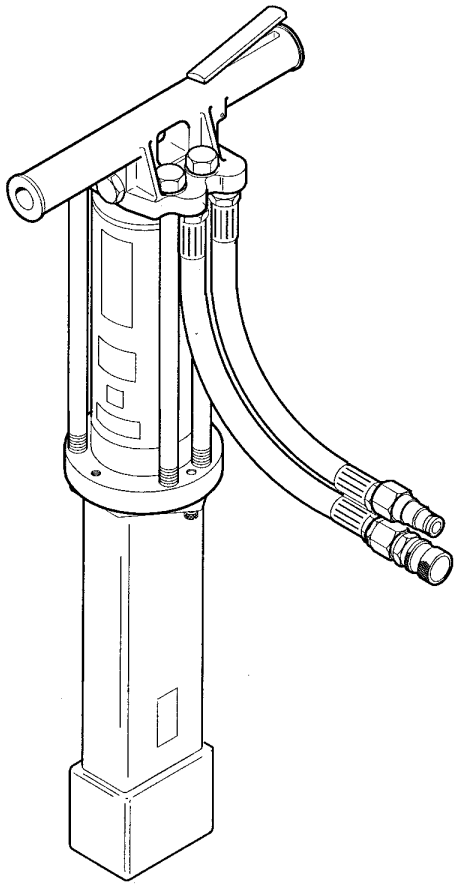
STANLEY®

SP47

Hydraulic Spike Puller



Safety, Operation and Maintenance 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 Hydraulic Tools • 3810 S.E. Naef Road • Milwaukie, OR 97267

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CE

INDEX

SERVICING SP47 SPIKE PULLERS: This manual contains safety, operation, and service 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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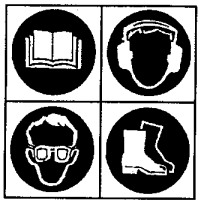
REPAIRS AND / OR SERVICE TO THIS TOOL MUST ONLY BE DONE BY AN AUTHORIZED AND CERTIFIED DEALER.

A list of Stanley Hydraulic Tools Distribution Centers can be found on the last page of this manual.

SAFETY PRECAUTIONS



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

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

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

GENERAL SAFETY PRECAUTIONS

The SP47 Hydraulic Spike Puller will provide safe and dependable service if operated in accordance with the instructions given in this manual. Read and understand this manual and any stickers and tags attached to the tool and hoses before operation. Failure to do so could result in personal injury or equipment damage.

- Operator must start in a work area without bystanders. The operator must be familiar with all prohibited work areas such as excessive slopes and dangerous terrain conditions.
- Establish a training program for all operators to ensure safe operation.
- Do not operate 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.
- Do not inspect or clean the tool while the hydraulic power source is connected. Accidental engagement of the tool can cause serious injury.
- Always connect hoses to the tool hose couplers before energizing the hydraulic power source. Be sure all hose connections are tight.
- Do not operate the tool at oil temperatures above 140°F/60°C. Operation at higher temperatures can cause higher than normal temperatures at the tool which can result in operator discomfort.
- Do not operate a damaged, improperly adjusted, or incompletely assembled spike puller.
- Do not weld or cut with an acetylene torch the chute weldment or jaws of the tool.
- 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 overreach. Maintain proper footing and balance at all times.
- Place the end of the chute squarely against the tie plate, tilting as required, to avoid the sudden realignment that can occur as the tool begins to pull.

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.

DANGER

This safety symbol may appear on the tool. It is used to alert the operator of an action that could place him/her or others in a life threatening situation.

⚠ WARNING

This safety symbol appears in these instructions to identify an action that could cause bodily injury to the operator or other personnel.

IMPORTANT

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.

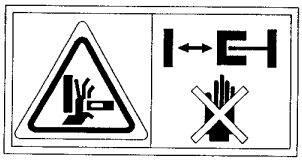
TOOL STICKERS & TAGS

WARNING

PINCH POINT

STAY CLEAR OF ALL MOVING PARTS

17572 PINCH POINT STICKER
(USA Models Only)



31064 CRUSH HAZARD STICKER
(CE Models Only)

STANLEY **RAILROAD HELP DESK**

1-800-549-0517

FOR CUSTOMER SERVICE OR TECHNICAL QUESTIONS

25610 RAILROAD HELP DESK STICKER
(USA Models Only)

TOOL STICKERS & TAGS

SP47
SPIKE PULLER

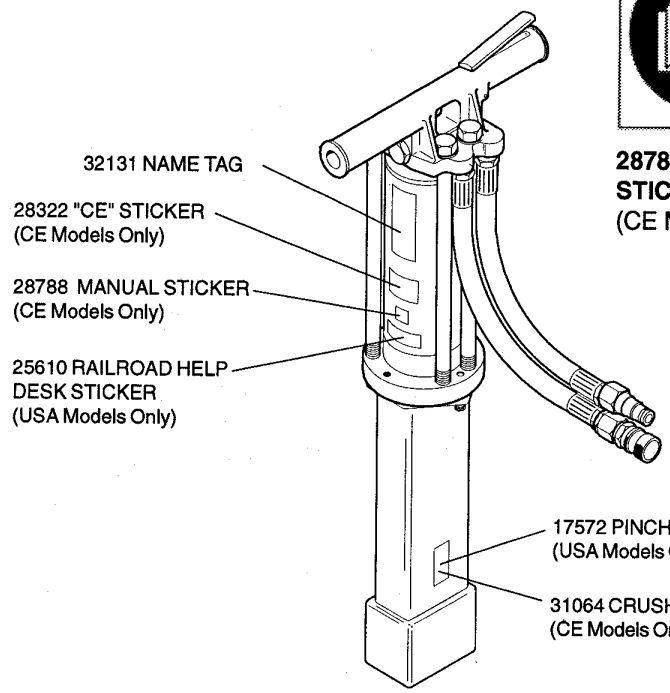
SERIAL NO.

FLOW 4-10 GPM/15-38 LPM

PRESS 2000 PSI / 140 BAR

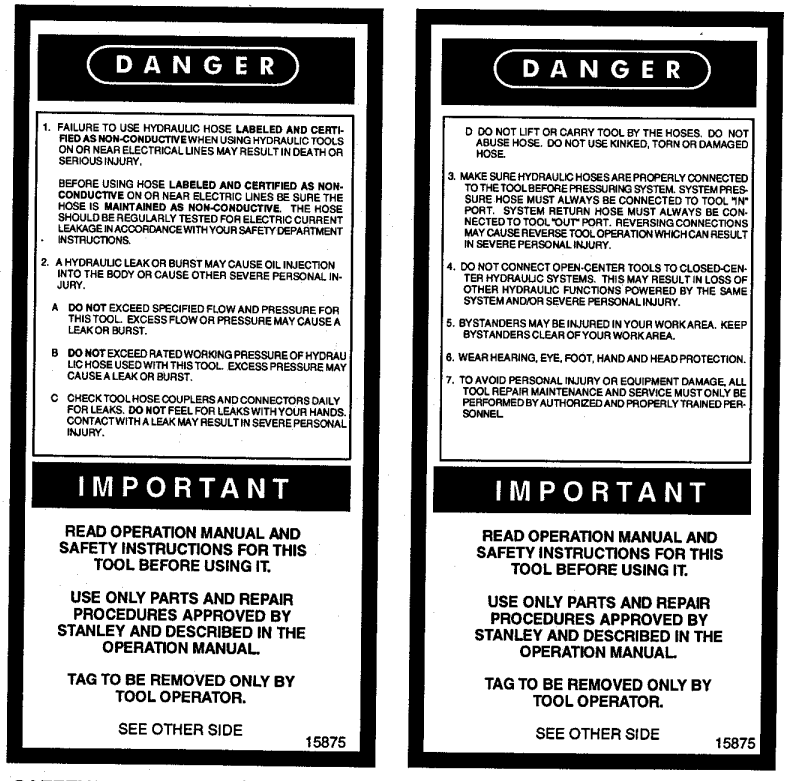
STANLEY®
Stanley Hydraulic Tools
Division of The Stanley Works

32131 NAME TAG STICKER



28788 MANUAL STICKER
(CE Manuals Only)

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 then 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.

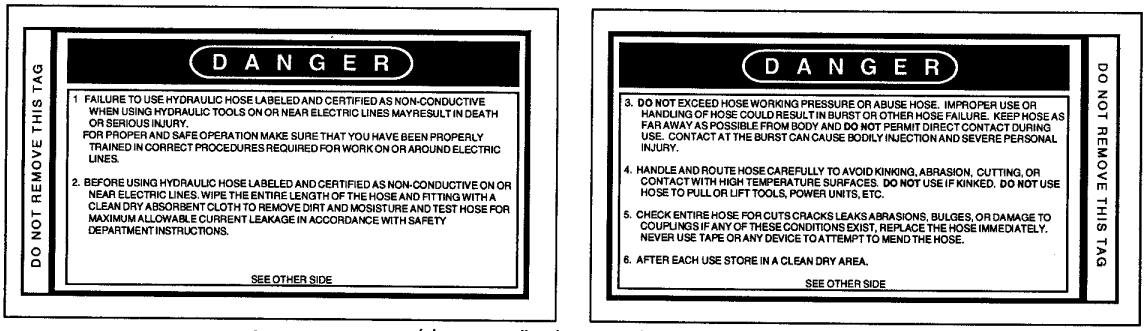
Hoses ❷ and ❸ listed above are **conductive** and **must never** be used near electrical conductors.

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.

❶ CERTIFIED NON-CONDUCTIVE HOSE

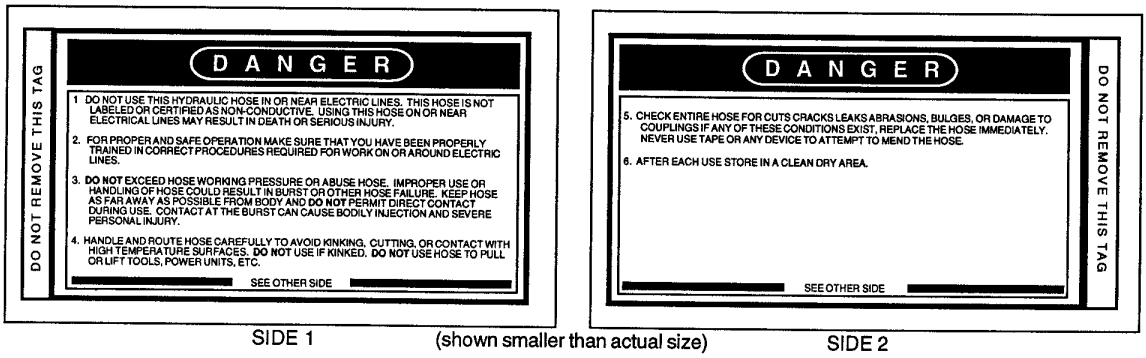
This tag is attached to all certified **non-conductive** hose.



SIDE 1 (shown smaller than actual size) SIDE 2

❷ AND ❸ WIRE-BRAIDED AND FABRIC-BRAIDED (NOT CERTIFIED OR LABELED NON-CONDUCTIVE) HOSE

This tag is attached to all **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 or higher than** the relief valve setting on the hydraulic system.

HYDRAULIC REQUIREMENTS

IMPORTANT

In addition to the Safety Precautions on pages 3 thru 6 of this manual, observe the following for equipment protection and care.

- Always store an idle tool in a clean dry space, safe from damage or pilferage.

- Do not exceed the rated limits or use the tool for applications beyond its design capacity.

- Always keep critical tool markings, such as lables and warning stickers legible.

- 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/175 bar.

- Permit only experienced personnel to perform tool repair.

- Be sure to wipe all couplers clean before connecting. Use only lint-free cloths.

- The hydraulic circuit control valve must be in the "OFF" position when coupling or uncoupling the tool. Failure to do so may result in damage to the quick couplers and cause overheating of the hydraulic system.

- Check fastener tightness often and before each use daily.

HYDRAULIC SYSTEM REQUIREMENTS

- The hydraulic system should provide a flow of 4-10 gpm/15-38 lpm at an operating pressure of 2000 psi/140 bar. Recommended relief valve setting is 2200-2300 psi/152-159 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. Filter elements sized for a flow of at least 30 gpm/114 lpm for cold temperature startup and maximum dirt holding capacity are recommended.

- 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 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/HTMA specifications.

PREOPERATION PROCEDURES

• PREPARATION FOR INITIAL USE

Each unit as shipped has no special unpacking or assembly requirements prior to usage. Inspection to assure the unit 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 4-10 gpm/15-38 lpm at 2000 psi/140 bar.

2. Make certain the hydraulic power source is equipped with a relief valve set to open at 2200-2300 psi/152-159 bar minimum.

3. Check that the hydraulic circuit matches the tool for open-center (OC) operation.

• CHECK TOOL

1. There should be no signs of leaks.

2. 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.

• 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 spike puller. It is a good practice to connect the return hose first and disconnect it last to minimize or avoid trapped pressure within the spike puller.

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.

OPERATING PROCEDURES

1. Observe all safety precautions.

2. Move the hydraulic circuit control valve to the "ON" position.

3. Place the spike puller firmly over the spike to be pulled making sure the end of the chute is in full contact with the tie plate.

4. Squeeze the trigger to start the spike puller.

5. When the spike is completely pulled, lift the tool and release the trigger. The spike will be ejected automatically.

COLD WEATHER OPERATION

If the spike puller 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.

SERVICE INSTRUCTIONS

Good maintenance practices will keep the spike puller 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 spike driver unless proper trouble-shooting procedures have isolated the problem to an internal part. Then, only disassemble it to the extent necessary to replace the defective part. KEEP CONTAMINANTS SUCH AS DIRT AND GRIT AWAY FROM INTERNAL PARTS AT ALL TIMES.

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.

DISASSEMBLY

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.

1. Secure the spike puller in a bench vise, with the "IN" and "OUT" ports up, clamping on the outer tube (41) between the capscrews (29). Soft vise jaws are recommended.

CAUTION

DO NOT CLAMP TOO HARD ON THE OUTER TUBE. CLAMPING TOO HARD WILL DISTORT THE OUTER TUBE.

2. Remove the pigtail hose assemblies (38).

Note: The spike puller is full of fluid which will drip from the ports when the hoses are removed.

3. Unscrew and remove the 4 capscrews (29).

4. Alternately tap on each handle grip of the handle (31) with a soft mallet to remove the handle from the outer tube. Set the handle aside being careful not to damage the oil tube (26). The oil tube should not be removed unless necessary. It is threaded into the handle and the threads contain Loctite™ 609 adhesive or epoxy.

CHUTE & GRIP JAWS

5. Unscrew and remove the 2 capscrews (13) and then slide the chute (11) off.

CAUTION

THE SPRING & SPRING CUPS WILL BE EJECTED AS THEY BECOME EXPOSED. PLACE A RAG AROUND THE JAWS & CHUTE TO CONTAIN THEM AS THEY ARE RELEASED.

6. Remove the 2 spring cups (8) and spring (16).

7. Remove the 2 retaining rings (9) and then push the pivot sleeve (17) out of the 2 grip jaws (10).

8. Push the pull pin (21) out of the 2 grip jaws and piston rod (7).

LOWER CYLINDER HEAD, PISTON ASSY & PISTON ROD

9. Pull on the piston rod to remove the piston rod, lower cylinder head (3), and piston assy (46) from the outer tube. Some side to side wiggling motion of the piston rod (while pulling) may be necessary in the removal of the cylinder head and piston assy.

10. Remove the outer tube from the vise and set it aside.

11. It is not recommended to remove the piston rod from the piston assy as the 2 components are assembled using Loctite™ 680. If it is necessary to remove the piston rod from the piston assy, follow the steps below.

a. Place the piston rod in a bench vise with soft jaws, clamping on the flat surfaces located at the grip jaw end of the piston rod. The piston assy should be facing straight up.

b. Using a butane torch, apply heat to the area of the piston rod where it enters the piston assy. This

is a threaded joint and the heat will break down the Loctite™ adhesive. Make sure the seals (42 thru 44) have been removed prior to applying heat.

c. Use a spanner wrench with 3/8 inch pins and 2-1/4 inch opening to turn the piston assy counter clockwise to unscrew it from the piston rod. The piston checks and valves (3 of them) are not field serviceable.

12. The bearing (2) is removed from the lower cylinder head (3) using a collet and bearing puller.

TRIGGER & VALVE SPOOL

13. Using a punch, drive out the roll pin (36) and then lift out the trigger (30).

14. Unscrew the plug (22) and spool cap (34). Pick out the push pin (47). Push the valve spool out of either side. Pick the spring out from the plug (22) side.

ASSEMBLY

PRIOR TO ASSEMBLY

• Clean all parts with a degreasing solvent.

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

• Obtain a seal kit so that all seals exposed during disassembly can be replaced. **Note:** For orientation of parts identified in the following procedures, see the parts illustration.

VALVE SPOOL & HANDLE

1. Inspect the spool bore of the handle and the outer surfaces of the spool for damage. **Some light surface scratches will be noticeable. Grooves, roughness or a reduced diameter indicate fluid contamination. If abnormal wear is present (more than normal polishing), replace both the spool and the handle.**

2. Apply grease to the seals (32, 33, & 35) and then install them into the spool cap (34).

3. Apply grease or hydraulic fluid to the push pin (47) and install it into the spool cap (32). Install the spool cap into the handle and tighten it securely.

4. Insert the spool into the spool bore in the handle from the plug (22) side as shown in the parts illustration. Install the spring (24) and then the plug. Make sure a new o-ring (23) in installed on the plug.

5. Install the trigger (30) into the handle as shown in the parts drawing and then secure it with the roll pin (36).

OIL TUBE, PISTON ROD, & PISTON

6. Inspect the outer surfaces of the oil tube (26), piston rod (7), piston (46) , and the inner bore of the piston in which the oil tube moves, and the inner bore of the lower cylinder head (3) in which the piston rod moves. **Some light surface scratches will be noticeable. Grooves, roughness or reduced diameters indicate fluid contamination. If abnormal wear is present (more than normal polishing), replace the parts.**

7. If the oil tube (26) was removed, clean the threads on the tube and in the handle thoroughly, apply Loctite™ 609 or epoxy to the threads on the oil tube, and then reinstall the oil tube. Tighten securely.

8. If the piston rod (7) was removed from the piston (46), clean the threads on the piston rod and piston thoroughly. Apply Loctite™ 680 to the threads on the piston rod and then install it to the piston. **Make sure the Loctite™ does not get into the bore of the piston rod or the piston.** Tighten to 250 lb. ft./339 Nm.

9. Apply grease and install seals (42, 43, 44, & 45) to the piston.

10. Lubricate the piston and the inside of the outer tube with hydraulic fluid and then slide the piston into the outer tube.

11. Apply grease to 0-ring (1) and place it in the groove of the handle (31).

12. Slide the handle/oil tube into the piston, cylinder being careful to align the oil tube with the hole in the piston and the piston rod.

LOWER CYLINDER HEAD

11. Install the bushing (2) into the lower cylinder head using a bearing installation tool. Do not push the bearing completely in. Leave approximately 1/16 in./1.6 mm to 1/8 in./ 3.2 mm between the bottom of the bearing and the bottom of the bore. This distance will allow for the use of a bushing removal tool.

12. Apply grease and install seals (1, 4, 5 & 6) to the lower cylinder head. Slide the lower cylinder head onto the piston rod and up against the outer tube. Tap on the lower cylinder head with a soft mallet to complete the installation. Align the bolt holes with those in the handle.

13. Install the capscrews (29) and washers (28). Tighten in a cross pattern in 25 lb. ft. increments to 75 lb. ft/100 Nm.

JAWS

14. Apply underwater grease to the slots of the jaws (10) and the pivot sleeve (17). Place the jaws together as shown in the parts illustration and then insert the pivot sleeve. Install a retaining ring (9) on each end of the pivot sleeve.

15. Apply underwater grease to the pull pin (21). Place the jaws over the piston rod and then insert the pull pin so that it passes through the slots of each jaw and the hole in the piston rod.

16. Apply underwater grease to the spring (16) and the outside diameter of the spring cups (8). Install the spring and spring cups and compress them with suitable means such as a "C" Clamp and then slide the chute over the jaws making sure the spring cups are aligned with the long slots in the chute. Slide the chute up next to the lower cylinder head.

17. Turn the chute until it is oriented as shown in the parts illustration and aligned with the capscrew holes in the lower cylinder head. **NOTE: The chute can be turned 90° clockwise or counter clockwise from the position shown in the parts illustration. This positions the jaws perpendicular to the rail instead of in-line with the rail.**

Install the capscrews (13) and washers (12). Tighten to 20 lb. ft./27 Nm.

18. Install the whip hoses (38) with couplers making sure the female coupler is on the hose installed to the port marked "IN".

19. Test for operation and performance. Check for leaks.

20. Make sure all decals and stickers are legible. Replace those that are damaged or not legible.

NOTES

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 spike driver, always check that the hydraulic power source is supplying the correct hydraulic flow and pressure to the spike driver 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.

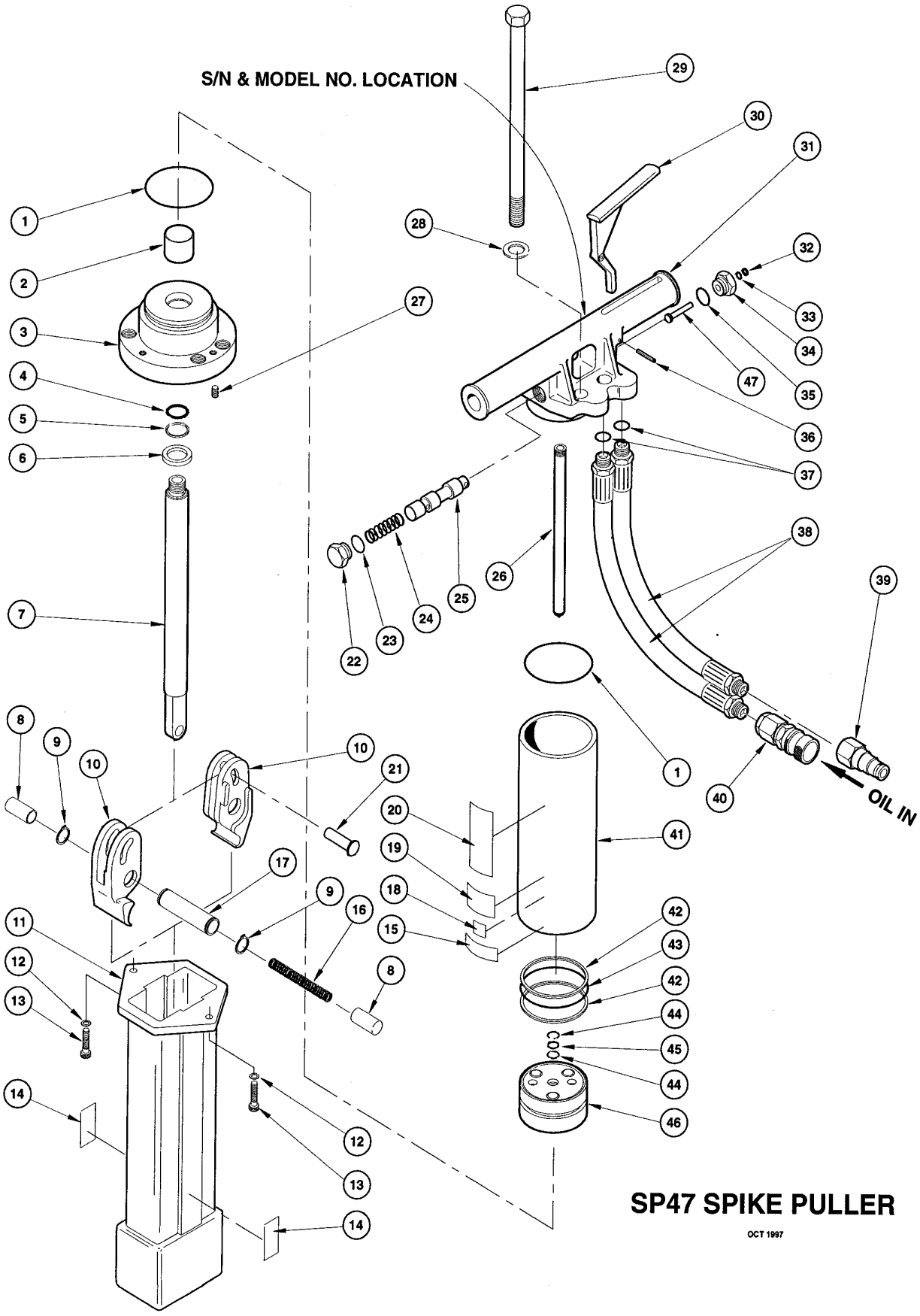
Spike puller does not cycle.	Power unit not functioning.	Check power unit for proper flow and pressure (4-10 gpm / 15-38 lpm, 2000 psi / 140 bar).
	Couplers or hoses blocked.	Remove restriction.
	Presssure and return line hoses reversed at ports.	Be sure hoses are connected to their proper ports.
Spike puller does not pull effectively.	Power unit not functioning.	Check power unit for proper flow and pressure (4-10 gpm / 15-38 lpm, 2000 psi / 140 bar).
	Couplers or hose blocked.	Remove restriction,
	Fluid too hot (above 140° F / 60° C).	Provide cooler to maintain proper fluid temperature.
	The jaw is not sliding freely in the chute.	Remove, clean and replace as required.
Spike puller operates slow.	Low oil flow from power unit.	Check power source for proper flow.
	High backpressure.	Check hydraulic system for excessive backpressure and correct as required.
	Couplers or hoses blocked.	Remove restriction.
Jaw retracted with tool in neutral position.	Pressure and return lines reversed at ports.	Be sure hoses are connected to their proper ports.

SPECIFICATIONS

Capacity	13,000 lbs/5,900 kg
Pressure	2000 psi/140 bar
Maximum Back Pressure	250 psi/17 bar
Flow Range	4-10 gpm/15-38 lpm
Porting	-8 SAE O-ring
Couplers	HTMA/EHTMA Flush Face Type Male & Female
Connect Size and Type	3/8 in. Male Pipe Adapter
Hose Whips	Yes
XX kg Weight	48.5 lbs / 22 kg
Overall Length	32.5 in. / 82.55 cm
Overall Width	16 in. / 40 cm
Maximum Fluid Temperature	140° F/60° C
C D EHTMA Category	"C" (20 lpm @ 138 bar) or "D" (30 lpm @ 138 bar)

ACCESSORIES

DESCRIPTION	PART NUMBER
Hair Pin "W"Grip Jaw (2 required)	24641



SP47 SPIKE PULLER

OCT 1997

SP47 PARTS LIST

Item	Part No.	Qty	Description
1	15385	2	O-ring, 3 x 3-1/8 x 1/16 -041 R17 •
2	32093	1	Bearing
3	32035	1	Lower Cylinder Head
4	350759	1	O-ring, 1-1/2 x 1-3/4 x 1/8 -222 •
5	13992	1	Backup Ring •
6	32094	1	Wiper •
7	30015	1	Piston Rod (250 lb. ft. to piston)
8	26388	2	Spring Cup
9	26812	2	Retaining Ring
10	22314	2	Grip Jaw
11	31720	1	Chute
12	01459	2	Lockwasher
13	06151	2	Capscrew, 3/8-16 (20 lb. ft.)
14	17572	2	Pinch Point Sticker (US Models Only)
	31064	2	Crush Hazard Sticker (CE Models Only)
15	25610	1	Railroad Help Desk Sticker (US Only)
16	32097	1	Spring
17	25992	1	Pivot Sleeve
18	28788	1	Manual Sticker (CE Models Only)
19	28322	1	CE Sticker (CE Models Only)
20	32131	1	Name Tag
21	22349	1	Pull Pin
22	15354	1	Plug
23	21463	1	O-ring •
24	15356	1	Spring
25	33702	1	Valve Spool
26	22350	1	Oil Tube
27	00698	4	Helicoil, 3/8-16
28	03061	4	Lockwasher
29	32095	4	Capscrew, 1/2-13 (25 lb. ft X pattern to 75 lb.ft.)
30	27702	1	Trigger
31	30007	1	Handle
32	22064	1	Rod Wiper •
33	00026	1	O-ring, 3/16 x 5/16 x 1/16 -008 R16 •
34	22914	1	Spool Cap
35	01604	1	O-ring, .755 x .945 x .097 -910 R17 •
36	15384	1	Roll Pin
37	01605	2	O-ring •
38	06830	2	Hose Assy
39	24061	1	Male Coupler
40	24060	1	Female Coupler
41	30157	1	Outer Tube
42	15391	2	Backup Ring
43	15392	1	O-ring, 2-7/8 x 3-1/4 x 3/16 -336 R16 •
44	08041	2	Backup Ring •
45	00016	1	O-ring, 9/16 x 11/16 x 1/16 -015 R16•
46	32045	1	Piston Assy
47	22919	1	Push Pin

• Denotes Part in Seal Kit

SEAL KIT P/N

18098

NOTE: Use Part Number and Part Name when ordering.

MODEL DESCRIPTIONS

SP47100 - U.S.A. model

SP4710001 - European (CE) Model

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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