PD45
Post Driver

Remote ON/OFF Valve Model

Valve-In-Handle Model

⚠ WARNING

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

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

Read The Manual | Wear Breathing Protection | Wear Hearing Protection | Wear Eye Protection

Safety, Operation, and Service
User's Manual

STANLEY®

OPS & SERVICE USA
17472 01/03 Ver. 2

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PD45
Post Driver

SERVICING THE PD45 Post Driver:

This manual contains Safety, Operation, Service and Troubleshooting information. 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 DANGER warning on the cover and the SAFETY warning below.

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.

Specifications

Weight (Standard)_____65 lbs / 29.5 kg
Weight (Extended anvil)_____71 lbs / 32 kg.
Pressure Range_____2000 psi / 140 bar
Flow Range_____7-9 gpm / 26-34 lmp
Optimum Flow_____8 gpm / 30 lpm
Couplers_____ HTMA Flush Face
Per NFPA T3.20.15/ISO 16028
Connect Size_____3/8 female pipe
Length_____30 in. / 76 cm
Width (Across Handles)_____10-1/8 in./25.7 cm
System Type_____open center

Port Size_____SAE 8 O-Ring
Hose Whips_____Yes
Capacity_____#2, #3 and #4 lb/ft.
"U" Channel Sign Post
_____#3 and #4 Strong Back (Heavy Duty)
"U" Channel Sign Post
_____#1 Delineator Post
_____2-1/2 in. / 63.5 mm Square Post
_____2-5/8 in. / 67 mm Round Post

HTMA Class II _____7-9 gpm @ 2000 psi

NOTE

Weights, dimensions and operating specifications listed are subject to change without notice. Where specifications are critical to your application, please consult the factory.

SAFETY SYMBOLS

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

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

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

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

⚠ CAUTION — **This safety alert and signal word indicate a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.**

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

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

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

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

⚠ WARNING

SOME HYDRAULIC FLUIDS ARE FLAMMABLE, NEVER ALLOW THESE HYDRAULIC FLUIDS TO COME IN CONTACT WITH AN OPEN FLAME.

IF A HOSE WERE TO BURST OR IF A TOOL LEAK OCCURS NEXT TO AN OPEN FLAME, THESE HYDRAULIC FLUIDS WILL IGNITE AND COULD RESULT IN SERIOUS INJURY OR DEATH.

LOCAL SAFETY REGULATIONS

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

General Safety Instructions

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

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

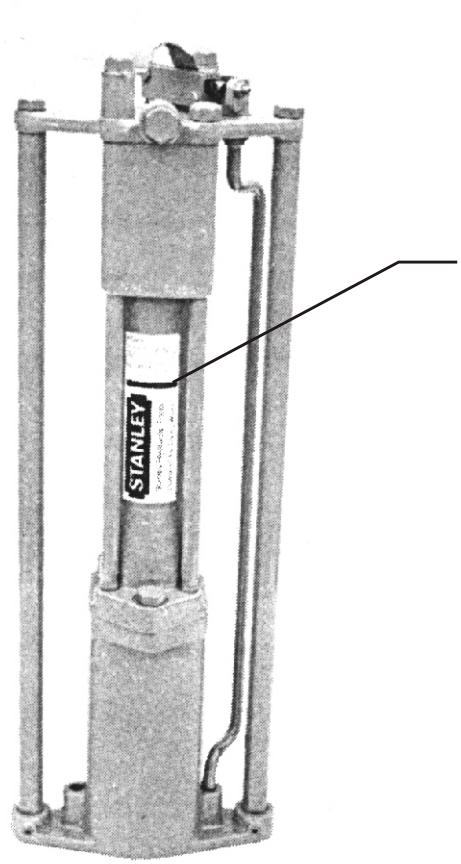
Supervising personnel should develop additional precautions relating to the specific work area and local safety regulations. If so, place the added precautions in the space provided on page 5.

This tool 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 operations.
- Do not operate the tool unless thoroughly trained or under the supervision of an instructor.
- Always wear safety equipment such as goggles, 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.
- Do not operate this tool without first reading the Operating Instructions.
- Do not install or remove this tool while the hydraulic power source is connected. Accidental engagement of the tool can cause serious injury.
- Never operate the tool if you cannot be sure that underground utilities are not present. Underground electrical utilities present an electrocution hazard. Underground gas utilities present an explosion hazard. Other underground utilities may present other hazards.
- Do not wear loose fitting clothing when operating the tool. Loose fitting clothing can get entangled with the tool and cause serious injury.
- Supply hoses must have a minimum working pressure rating of 2500 psi/175 bar.
- Be sure all hose connections are tight.
- The hydraulic circuit control valve must be in the “OFF” position when coupling or uncoupling the tool. Wipe all couplers clean before connecting. Failure to do so may result in damage to the quick couplers and cause overheating. Use only lint-free cloths.
- Do not operate the tool at oil temperatures above 140° F/60° C. Operation at higher oil temperatures can cause operator discomfort and may cause damage to the tool.
- Do not operate a damaged, improperly adjusted, or incompletely assembled tool.
- To avoid personal injury or equipment damage, all tool repair, maintenance and service must only be performed by authorized and properly trained personnel.
- Do not exceed the rated limits of the tool or use the tool for applications beyond its design capacity.
- Always keep critical tool markings, such as labels and warning stickers legible.
- Always replace parts with replacement parts recommended by Stanley Hydraulic Tools.
- Check fastener tightness often and before each use daily.

Tool Decals & Tags

A Name Tag Sticker is attached to the tool. Never exceed the flow and pressure levels specified on this sticker.The information listed on the name tag sticker must be legible at all times. Replace this sticker if it becomes worn or damaged. A replacement is available from your local Stanley distributor.

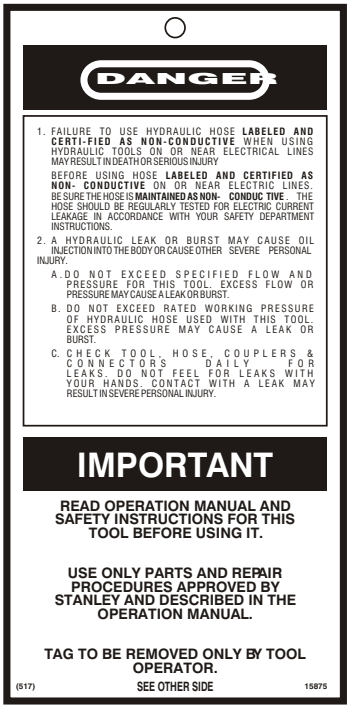


15197
Name Tag

STANLEY®
Stanley Hydraulic Tools
Division of the Stanley Works
3810 S.E. NAEF ROAD
Milwaukie, Oregon 97267 U.S.A.

PD45 POST DRIVER
FLOW: 26-34 LPM/7-9 GPM
PRESS: 105-140 BAR
1500-2000 PSI
ACCUMULATOR CHG:
42 BAR/600 PSI
NITROGEN

The SAFETY TAG, P/N 15875, shown at right, smaller than actual size, 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 CERTI-FIED 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- CONDUC TIVE**. 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 & CONNECTORS DAILY FOR LEAKS. DO NOT FEEL FOR LEAKS WITH YOUR HANDS. CONTACT WITH A LEAK MAY RESULT IN SEVERE PERSONAL INJURY.

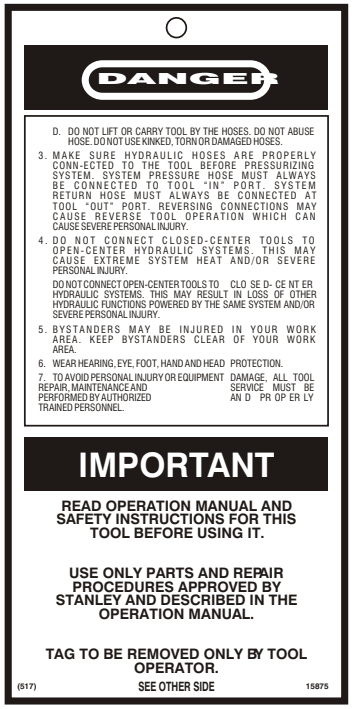
IMPORTANT

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.

(517) 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 HOSES.
3. MAKE SURE HYDRAULIC HOSES ARE PROPERLY CONN-ECTED TO THE TOOL BEFORE PRESSURIZING SYSTEM. SYSTEM PRESSURE HOSE MUST ALWAYS BE CONNECTED TO TOOL "IN" PORT. SYSTEM RETURN HOSE MUST ALWAYS BE CONNECTED AT TOOL "OUT" PORT. REVERSING CONNECTIONS MAY CAUSE REVERSE TOOL OPERATION WHICH CAN CAUSE SEVERE PERSONAL INJURY.
4. DO NOT CONNECT CLOSED-CENTER TOOLS TO OPEN-CENTER HYDRAULIC SYSTEMS. THIS MAY CAUSE EXTREME SYSTEM HEAT AND/OR SEVERE PERSONAL INJURY.
   DO NOT CONNECT OPEN-CENTER TOOLS TO CLO SE D- CE NT ER 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 BE PERFORMED BY AUTHORIZED AN D PR OP ER LY 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.

(517) SEE OTHER SIDE 15875

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 near electrical conductors.

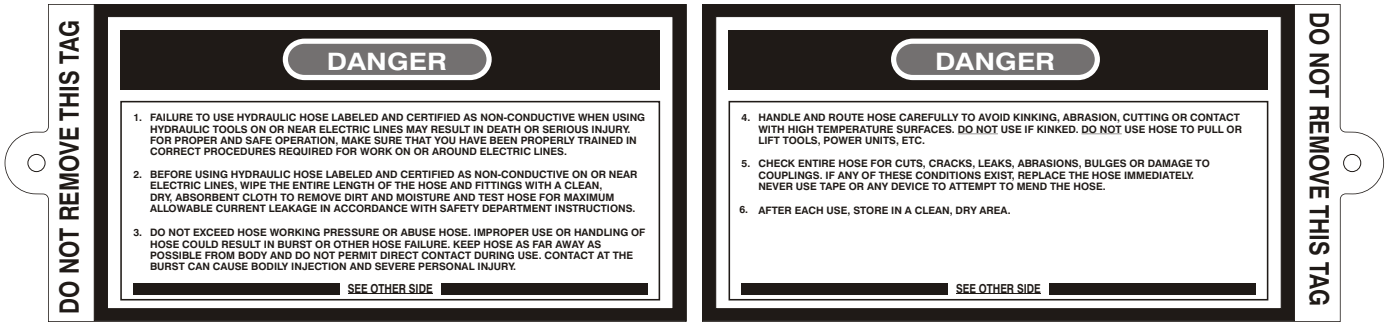
HOSE SAFETY TAGS

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

If the information in 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.

This Tag attached to "Certified Non-Conductive" hose.

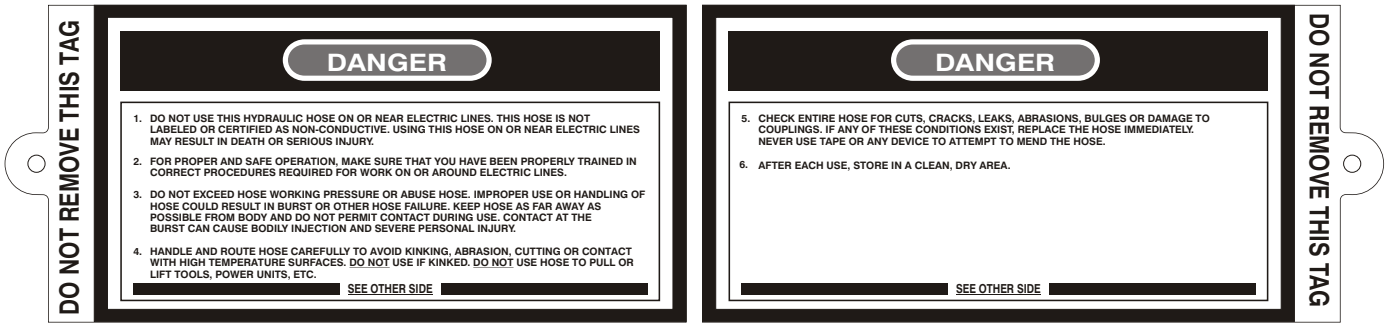
(shown smaller than actual size) p/n 27987



Side 1 Side 2

This Tag attached to "Conductive" hose.

(shown smaller than actual size) p/n 29144



Side 1 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.

NOTICE

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

HTMA Requirements

Hydraulic System Requirements	Tool Category:  Type I	 Type II	Type III	Type RR
Flow rate Tool Operating Pressure *(at the power supply outlet)*	4-6 GPM (15-23 lpm) 2000 psi (138 bar)	7-9 GPM (26-34 Lpm) 2000 psi (138 bar)	11-13 GPM (42-49 lpm) 2000 psi (138 bar)	9-10.5 GPM (34-40 lpm) 2000 psi (138 bar)
System relief valve setting *(at the power supply outlet)*	2100-2250 (145-155 bar)	2100-2250 (145-155 bar)	2100-2250 (145-155 bar)	2200-2300 (152-159 bar)
Maximum back pressure *(at tool end of the return hose)*	250 psi (17 bar)	250 psi (17 bar)	250 psi (17 bar)	250 psi (17 bar)
Measured at a max. fluid viscosity of: *(at min. operating temperature)*	400 SSU (82 centistokes)	400 SSU (82 centistokes)	400 SSU (82 centistokes)	400 SSU (82 centistokes)
Temperature Sufficient heat rejection capacity to limit max. fluid temperature to: *(at max. expected ambient temperature)*	140° F (60° C)	140° F (60° C)	140° F (60° C)	140° F (60° C)
Min. cooling capacity at a temperature difference of between ambient and fluid temps	3 hp (2.24 kW) 40° F (22° C)	5 hp (3.73 kW) 40° F (22° C)	7 hp (5.22 kW) 40° F (22° C)	6 hp (4.5 kW) 40° F (22° C)
NOTE: Do not operate the tool at oil temperatures above 140 ° F (60° C). Operation at higher temperatures can cause operator discomfort at the tool.				
Filter Min. full-flow filtration sized for flow of at least: *(For cold temp. startup and max. dirt-holding capacity)*	25 microns 30 GPM (114 lpm)	25 microns 30 GPM (114 lpm)	25 microns 30 GPM (114 lpm)	25 microns 30 GPM (114 lpm)
Hydraulic fluid Petroleum based *(premium grade, anti-wear, non-conductive)* Viscosity *(at min. and max. operating temps)*	100-400 SSU* (20-82 centistokes)	100-400 SSU* (20-82 centistokes)	100-400 SSU* (20-82 centistokes)	100-400 SSU* (20-82 centistokes)
NOTE: When choosing hydraulic fluid, the expected oil temperature extremes that will be experienced in service determine the most suitable temperature viscosity characteristics. Hydraulic fluids with a viscosity index over 140 will meet the requirements over a wide range of operating temperatures.				

*SSU = Saybolt Seconds Universal

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

Operating Instructions

Pre-Operation Procedures

Check the power source

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

2. Make certain the hydraulic power source is equipped with a relief valve set to open at 2100-2250 psi/140 bar.

Installing Adapters

1. The post hammer is designed to drive No. 1 thought No. 4 sign post, 2-1/2 inch square and up to 2-5/8 inch diameter round post without requiring adapters. If you are driving one of these types of post, orient the post into the tightest fit in the post driver foot.

2. If you are driving smaller square or round post, insert the adapter to the post driver foot using two ½-hex head capscrews.

Connecting Hoses

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

2. Connect the hoses from the hydraulic power source to the tool fittings or quick disconnects. It is a good practice to connect return hoses first and disconnect them last to minimize or avoid trapped pressure within the tool.

3. If hose couplers are used, observe the arrow on the coupler to ensure that the flow is in the proper direction. The female coupler on the tool hose is the inlet (pressure) coupler.

4. Move the hydraulic power source on/off control valve to the **ON** position to operate the tool.

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

Tool Operation

1. Observe all safety precautions.

2. Install the appropriate adapter as required.

3. Place the post driver foot firmly on the surface to be driven.

4. Press the lever assembly on handle to start the post driver.
   Note: On Remote ON/OFF Valve Models Place the post driver on/off control valve in The “ON” position to start the post driver.

Note: Adequate down pressure is very important.

5. When the post is fully set in the ground, release the lever assembly on handle.

Cold Weather Operation

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

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

Service Instructions

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

The single-most 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 post driver.

Never disassemble the post driver 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. 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.

PRIOR TO DISASSEMBLY

Clean the exterior of the tool.

Obtain Seal Kit (Part Number 04595) to replace all seals exposed during disassembly. Note the orientation of the seals before removing them. Install new seals in the same position as the original seals.

POST DRIVER DISASSEMBLY

Note: Steps preceded by an (*) apply to valve in handle models only.

1. Secure the post driver 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 post driver is full of hydraulic fluid and will drip from the ports when the hoses are removed.

3. Remove the male o-ring plug from the top plate and Discharge the Accumulator.

⚠ WARNING

Discharge Accumulator

*4. Spread the retaining ring and slide out the lever assembly. Be careful not to lose the washer or retaining ring.

5. Remove two 5/8-11 x 1-3/4 inch hex head capscrews and four side rods securing the top plate to the accumulator valve block.

6. Remove the top plate to expose the accumulator diaphragm and valve spool.

*7. Remove the valve actuator housing, spacer and lift strap.

8. Remove the accumulator diaphragm, valve spool and spring from the accumulator block, taking care not to damage the valve spool's surfaces.

*9. Remove the rod wiper, two o-rings and bushing from the valve spool.

10. Remove the accumulator valve block from the flow sleeve tube by tapping on the underside of the valve block with a plastic or rubber hammer. Tap on alternate sides to ensure the valve block comes out straight without binding.

11. Remove the piston from the flow sleeve assembly.

12. Clamp the accumulator valve block in a soft-jaw vise with the "IN" and "OUT" ports pointing up.

IMPORTANT

Do not over-tighten the vise and distort the valve block.

13. Remove the porting block from the accumulator valve block with 3/8-16 threaded slide hammer or tamper sleeve tool (Part Number 01120).

14. To disassemble the flow sleeve assembly, proceed as follows:

A. Remove the piston if not previously removed.

Service Instructions Continued:

B. Place the flow sleeve assembly, automatic valve body down, on the flow sleeve removal tool (part Number 04919) which in turn is placed on the flow sleeve removal tube (Part Number 04910).

C. Using an arbor press, and an aluminum disc to protect the flow sleeve, push on the flow sleeve to remove the automatic valve body from the flow sleeve tube.

IMPORTANT

Use a rag in the bottom of the removal tube to protect the automatic valve body when it drops out..

D. The automatic valve, four 1/4 x 1-1/2 inch/6.4 mm push pins (from the flow sleeve) and two 3/16 x 1-1/4 inch/5 mm x 32 mm push pins from the automatic valve body will come out.

E. To remove the flow sleeve from the flow sleeve tube, remove the automatic valve body and associated parts from within the flow sleeve removal tube, and continue pushing on the flow sleeve until it drops out.

15. Remove the cup seal, washer and rod wiper from the adapter block using proper o-ring tools to avoid damage to sealing surfaces.

16. Remove two 5/8-11 x 1-3/4 hex head capscrews and slowly lift the adapter block off of the post driver foot.

17. Remove the spring.

18. Remove the anvil from the post driver foot.

19. Loosen the two 3/8-16 x ½ setscrews and remove the handle bars from the post driver foot if necessary.

PRIOR TO ASSEMBLY

Clean all parts with a degreasing solvent.

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

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

Obtain Seal Kit (Part Number 04595) so that all seals exposed during disassembly can be replaced.

Note: For orientation of parts identified in the following procedures, see the parts list exploded view illustration at the back of this manual.

POST DRIVER ASSEMBLY

Note: Steps preceded by an asterisk (*) apply to valve in handle models only.

1. Coat the anvil with anti-seize compound and install the anvil into the post driver foot. Place the spring on the anvil.

2. Using Loctite 242®, secure the adapter block to the post driver foot with two 5/8-11 x 1-3/4 inch hex head capscrews. Tighten the capscrews to 90 ft lb/120 Nm.

3. Install the rod wiper, washer and cup seal into the adapter block.

4. Using an arbor press and an aluminum disc or accumulator cylinder puller (Part Number 05640) to protect the flow sleeve, push the flow sleeve (with seven holes on its end facing up) until it is FLUSH with the tube. Be sure to lubricate the entire bore of the flow sleeve tube prior to assembly.

5. Install four 1/4 x 1-1/2 inch/6.4 mm x 38 mm push pins, with ground face end up, in the flow sleeve.

6. Install two 3/16 x 1-1/4 inch/5 mm x 32 mm push pins, with ground face end up, in the automatic valve body. Install the automatic valve, small diameter first, into the automatic valve body.

IMPORTANT

The push pins must be installed such that the flat ground faces bear on the flange of the automatic valve.

7. Place the automatic valve body, with proper roll pin alignment and with the side holes up, on top of the flow sleeve. Allow the automatic valve to drop and pilot into the bore of the flow sleeve.

Service Instructions Continued:

8. Use an aluminum disc or accumulator cylinder puller (Part Number 05640) to protect parts and push the automatic valve body into the flow sleeve tube until the valve body shoulder stops on top of the flow sleeve tube.

9. Install the piston, small end first, into the flow sleeve assembly from the automatic valve body end.

10. Install the porting block into the flow sleeve assembly with proper roll pin alignment.

11. Place the accumulator valve block in a bench vise being careful not to over-tighten and distort the block.

12. Push the flow sleeve assembly into the accumulator valve block. It may be necessary to tap on the end of the flow sleeve tube with a rubber or plastic hammer. Be sure to tap on opposite sides to make sure the assembly seats properly.

13. Remove the accumulator valve block from the vise and clamp on the flow sleeve tube with the "IN" and "OUT" ports facing up.

14. Replace (in the following order) the spring and valve spool into the valve spool bore.

*15.Install the bushing, two o-rings and rod wiper on the valve spool.

*16.Install the four balls and plunger in the valve actuator housing. Thoroughly lubricate the balls with multipurpose grease prior to installation. Install the cover plate using the two 1/4-20 x ½ hex head capscrews.

17. Apply a light coating of WD-40 lubricant to the accumulator diaphragm and install in the accumulator bore.

18. Slide the adapter block/post driver foot assembly over the piston. Align the handle bar mounting bosses 90˚ from the hose ports and seat the assembly into the flow sleeve tube with a plastic or rubber hammer.

19. Place the top plate onto the accumulator valve block.

*20.Install the o-ring and pilot ring in the bore of the valve top plate.

*21.Install the spacer, strap and assembled actuator housing on the two side rods as shown in the exploded view illustration at the back of this manual.

22. Secure the top plate. Tighten alternate side rods in 25 ft lb/34 Nm increments to 75 ft lb/100 Nm maximum.

23. Install the handle bars using two 5/8-11 x 1-3/4 inch hex head capscrews. Tighten the capscrews to 90 ft lb/120 Nm. Tighten the setscrews.

24. Install the pigtail hose and valve assemblies.

25. Remove the post driver from the vise.

Troubleshooting

This section describes how to find and resolve problems users may experience. If a situation occurs that is not covered, call your Stanley Customer Service representative for assistance.

⚠ WARNING

Inspecting the tool or installing parts with the hydraulic hoses connected can result in severe personal injury or equipment damage.
To prevent accidental startup, disconnect the hydraulic power before beginning any inspection or installation task.

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.

Symptom	Possible Cause	Solution
Tool does not run.	Power unit not functioning.	*Check power source for proper flow and pressure (7-9 gpm / 26-34 lpm, 2000 psi / 140 bar).
	Couplers or Hoses blocked.	Remove restriction.
	Pressure and return line hoses reversed at ports.	Be sure hoses are connected to their proper ports.
	Mechanical failure of piston or automatic valve.	Disassemble post driver and inspect for damaged parts.
Tool does not hit effectively.	Power unit not functioning.	*Check power unit for proper flow and pressure (7-9 gpm / 26-34 lpm, 2000 psi / 140 bar).
	Couplers or hoses blocked.	Remove restriction.
	Low accumulator charge (pressure hose will pulse more than normal).	Recharge accumulator. Replace diaphragm if charge loss continues.
	Fluid too hot (above 140°F / 60°C)	Provide cooler to maintain proper oil temperature (130°F / 55°C maximum).
	The anvil is not sliding freely in the post driver foot.	Remove, clean, lubricate and replace anvil as required.

continued

* Refer to Page 7, Hydraulic Power Source Check

Troubleshooting

Symptom	Possible Cause	Solution
Tool operates slow.	Low gpm supply from power unit	*Check power source for proper flow (7-9 gpm / 26-64 lpm).
	High backpressure.	Check hydraulic system for excessive backpressure (over 250 psi / 17 bar).
	Couplers or hoses blocked.	Remove restriction.
	Orifice blocked.	Remove restriction.
	Fluid too hot (above 140°F / 60°C) or too cold (below 60°F / 16°C).	Check power source for proper fluid temperature. Bypass cooler to warm fluid up or provide cooler to maintain proper temperature.
	Relief valve set too low.	Adjust relief valve to 2100-2250 psi / 145-155 bar.
	The anvil is not sliding freely in the post driver foot.	Remove, clean, lubricate and replace as required.
Tool gets hot.	Hot fluid going through tool.	Check power unit. Be sure flow rate is not too high causing part of the fluid to go through the relief valve. Provide cooler to maintain proper fluid temperature (140°F / 60°C max).
		Check relief valve setting.
		Eliminate flow control devices.
Oil Leakage on post.	Lower piston seal failure.	Replace seal.

* Refer to Page 7, Hydraulic Power Source Check.

Charging the Accumulator

Accumulator Testing Procedure

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

- Accumulator tester (Part Number 02835).
- Charging kit assembly (Part Number 31254) (includes a regulator, hose and fittings).
- NITROGEN bottle with an 800 psi/56 bar minimum charge.

A. Remove the charging valve plug from the post driver.

B. Holding the chuck end of Stanley tester (Part Number 02835), turn the gauge fully counter-clockwise to ensure the stem inside the chuck is completely retracted.

C. Thread the tester onto the charging valve of the tool accumulator, (Do not advance the guage-end into the chuck end. Turn as a unit.) Seat the chuck on the accumulator charging valve and hand tighten only.

D. Advance the valve stem by turning the guage-end clockwise until pressure is read on the guage (charging pressure should be 500-700 psi/ 34-38 bar).

E. If pressure is OK unscrew the gauge-end from the chuck to retract the stem, then unscrew the entire tester assembly from the tool accumulator charging valve.

If pressure is low, charge the accumulator as described in the following section.

F. Install the charging valve cap (or plug).

Accumulator Charging Procedure

A. Perform steps A through D of the accumulator testing procedure above.

B. Connect the chuck of the charging assembly to the charging valve on the accumulator tester or, if preferred, remove the tester from the tool charging valve and connect the charging assembly chuck directly to the tool charging valve.

C. Adjust the regulator to the charging pressure of 600 psi/42 bar.

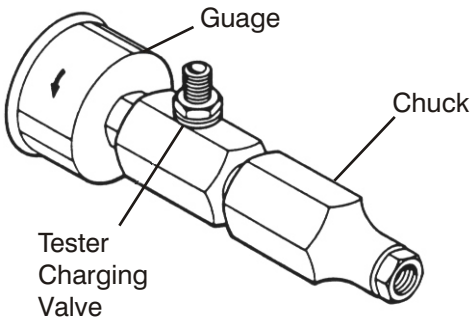
Note: It may be necessary to set the regulator at 650 to 700 psi/45-48 bar to overcome any pressure drop through the charging system.

D. Open the valve on the charging assembly hose.

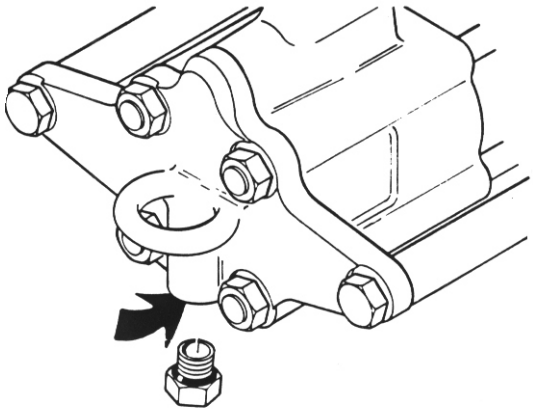
E. When the accumulator is fully charged close the valve on the charging assembly hose and remove the charging assembly chuck from the accumulator tester of tool charging valve.

F. If the accumulator tester has been used, be sure to turn the gauge-end fully counterclockwise before removing the tester from the charging valve of the tool.

G. Replace the o-ring plug.

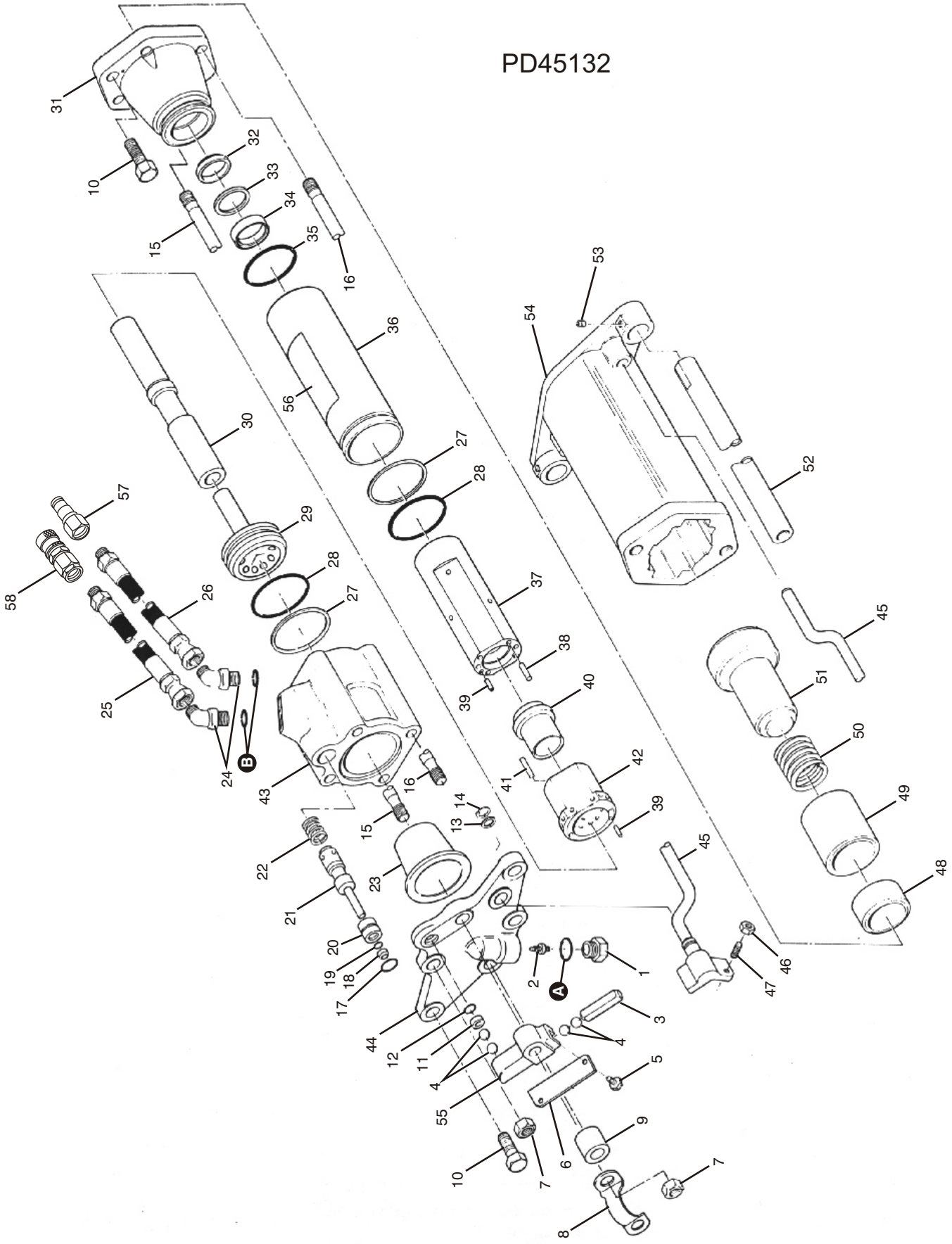


Accumulator Tester (P/N 02835)



Location Of Charging Valve

PD45 Parts Illustration



NOTE:
Use **Part Number** and **Description** when ordering.

PD45132

Item	Part	Description	QTY
1	07493	O-Ring Plug-Male	1
2	20499	Charge Valve	1
3	20387	Plunger	1
4	12100	Steel Ball 3/8 Dia. G	4
5	00899	HHCS 1/4-20 UNC x ½ G	2
6	20386	Cover Plate	1
7	04374	Lock Nut 5/8-18	4
8	20390	Lift Strap	1
9	20384	Spacer	1
10	370351	HHCS 5/8-11 UNC x 1-3/4	4
11	20385	Pilot Ring	1
12	02003	O-Ring 2-013 R16	1
13	20398	Support Washer 3/4 Tr	1
14	08016	Retaining Ring-3/4 Ex	1
15	12139	Side Rod	2
16	08087	Side Rod	2
17	00293	O-Ring 2-115 R17●	1
18	04056	Rod Wiper 5/16 x 9/16●	1
19	01362	O-Ring 2-011 R16●	1
20	04057	Bushing	1
21	04077	Valve Spool OC	1
22	04058	Spring	1
23	07479	Accumulator Diaphragm	1
24	350000	Straight Thread 45 EL	2
25	15195	Hose Assy-15 in.	1
26	15196	Hose Assy-14 in.	1
27	04381	Back-Up Ring●	2
28	04379	O-Ring 2-145 R17●	2
29	04378	Porting Block	1
30	07481	Piston	1
31	15191	Adaptor Block	1
32	04387	Rod Wiper●	1
33	04780	Back up Washer	1
34	04386	Cup Seal	1
35	02022	O-Ring 2-228 R16●	1
36	04383	Flow Sleeve Tube	1
37	07485	Flow Sleeve	1
38	04605	Push Pin	4
39	02900	Roll Pin	2
40	04382	Automatic Valve	1
41	04571	Push Pin	2
42	07480	Automatic Valve Body	1
43	11588	Accumulator Valve Block	1
44	20396	Valve Top Plate	1
45	20392	Trigger Assy	1
46	00038	Nut 1/4-20 Plain	1
47	20399	Oval Pt. Set Screw 1/4	1
48	12143	Upper Anvil Stop	1
49	15183	Anvil Bushing	1
50	12146	Spring	1
51	15189	Anvil	1
52	15182	Handle Bar	2
53	15194	Set Screw	2
54	15170	Post Driver Foot	1
55	20388	Valve Actuator Housing	1
56	48962	Decal, Name Tag LPH30	1
57	24059	Male Coupler	1
58	24058	Female Coupler	1

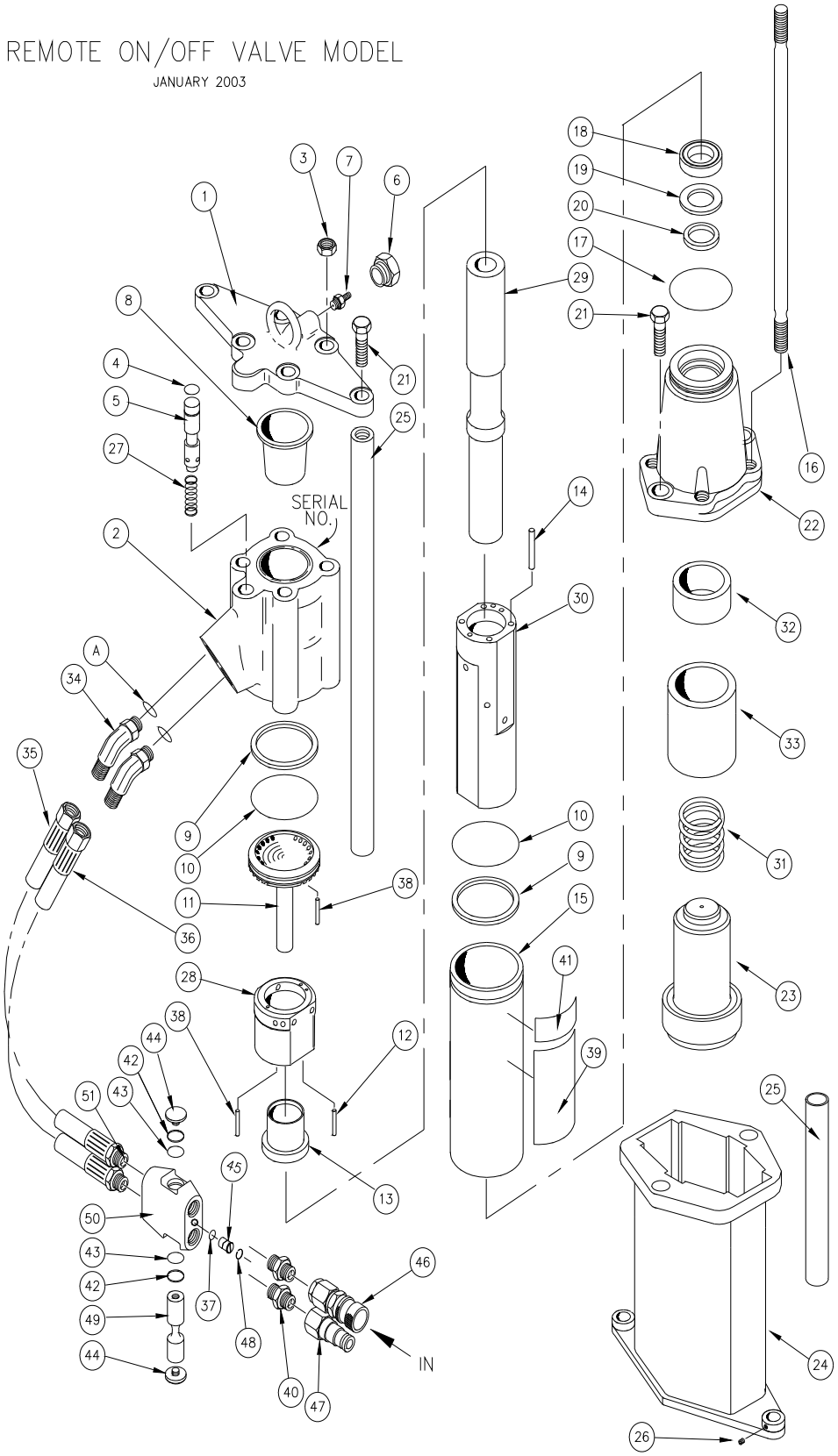
A- Supplied With Item # 1
B- Supplied With Item # 24

● Denotes Part in Seal Kit

04595	**Seal Kit**	
00293	O-Ring	1
01362	O-Ring	1
01604	O-Ring (For item 1)	1
01605	O-Ring (For item 24)	2
02022	O-Ring	1
04056	Rod Wiper	1
04379	O-Ring	2
04381	Backup Ring	2
04386	Cup Seal	1
04387	Rod Wiper	1

REMOTE ON/OFF VALVE MODEL

JANUARY 2003



PD45 Parts List

NOTE:
Use **Part Number** and **Description** when ordering.

PD45131

Item	Part	Description	QTY
1	15190	Top Plate	1
2	11588	Accumulator Valve Block	1
3	04374	Locknut 5/8-18	4
4	00293	O-ring 11/16x7/8x3/32-115-R17●	1
5	15188	Valve Spool	1
6	07493	Male O-ring Plug	1
7	20499	Charge Valve	1
8	07479	Accumulator Diaphragm	1
9	04381	Back Up Ring●	2
10	04379	O-ring 2-9/16x2-3/4x3/32-R17●	2
11	04378	Porting Block	1
12	04571	Push Pin	2
13	04382	Automatic Valve	1
14	04605	Push Pin	4
15	04383	Flow Sleeve Tube	1
16	12139	Side Rod	4
17	02022	O-Ring 2-1/4x2-1/2x1/8-228,R16●	1
18	04386	Cup Seal●	1
19	04780	Washer	1
20	04387	Rod Wiper●	1
21	370351	Capscrew,5/8-11x1-3/4 Hex HD	4
22	15191	Adapter Block	1
23	15189	Anvil	1
24	15170	Post Driver Foot	1
25	15182	Handle Bar	2
26	15194	Set Screw, 3/8-16 x ½	2
27	04058	Spring	1
28	07480	Automatic Valve Body	1
29	07481	Piston	1
30	07485	Flow Sleeve	1
31	12146	Spring	1
32	12143	Upper Anvil Stop	1
33	15183	Anvil Bushing	1
34	350000	45° Elbow, 8-V50X-S	2
35	15195	Hose Assy, Aeroquip #FG1055HHG0150	1
36	15196	Hose Assy, Aeroquip # FG1055HHG0140	1
37	00026	O-ring	1
38	02900	Roll Pin	2
39	15197	Name Tag	1
40	03044	Hex Nipple 3/8 NPT	2
41	19693	Danger Sricker	1
42	13568	Back Up Ring A5 568-015	2
43	13567	O-ring,9/16x11/16x1/16-015 R24	2
44	01003	On-Off Valve Button	2
45	10536	Selector Screw	1
46	24058	Female Coupler 3/8 NPT	1
47	24059	Male Coupler 3/8 NPT	1
48	16070	Retaining Ring	1
49	38631	Valve Spool	1
50	38629	Valve Body Assy	1
51	11499	Adaptor ½ SAE to 3/8 NPTF	2

A-Supplied With Item # 34

● Denotes Part in Seal Kit

04595	**Seal Kit**	
00293	O-Ring	1
01362	O-Ring	1
01604	O-Ring (For item 1)	1
01605	O-Ring (For item 24)	2
02022	O-Ring	1
04056	Rod Wiper	1
04379	O-Ring	2
04381	Backup Ring	2
04386	Cup Seal	1
04387	Rod Wiper	1

Accessories

NOTE:
Use **Part Number** and **Description** when ordering.

Part	Description
15184	Adapter - 1-3/4 in. Square Post
15185	Adapter - 2 in. Round Pipe
15186	Adapter - 2-1/4 in. Square Post
15187	Adapter - 2 in. Square Post

Service Tools

NOTE:
Use **Part Number** and **Description** when ordering.

Part	Description
01120	Tamper Sleeve Tool
04337	O-ring Tool Kit
04910	Flow Sleeve Removal Tube
15187	Flow Sleeve Removal Tool
05640	Accumulator Cylinder Puller

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

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