STANLEY®

PR41

HYDRAULIC PRUNER

Safety, Operation and Maintenance Manual

Focused on performance™

⚠ 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.

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SERVICING THE PR41 PRUNER: This manual contains safety, operation, and 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

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

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

For the nearest authorized and certified dealer, see the Sales & Service Directory on the back 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 on page 3.

GENERAL SAFETY PRECAUTIONS

The models PR41 Hydraulic Pruner 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 pruner 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 tool.
- Do not inspect, clean or replace the pruner blade while the hydraulic power source is connected.
- Never wear loose clothing that can get entangled in the working parts of the tool.
- Keep all parts of your body away from the pruner blade.
- Do not overreach. Maintain proper footing and balance at all times.
- Keep the pruner blade off all surfaces when starting the tool.
- If used near energized electric lines, maintain working distances according to OSHA guidelines for working near energized lines (ref. Section 1926.950). Failure to comply with this warning could result in serious personal injury.
- To avoid personal injury or equipment damage, all tool repair, maintenance and service must only be performed by authorized and properly trained personnel.
- Never cock, jam or wedge the blade during operation.
- Eye injury, and cutting or severing of body parts is possible if proper procedures are not followed.
- Ensure that the blade is correctly mounted before use.

- If the tool is dropped with a blade installed, the blade and associated parts should be examined throughly before use.
- Only use blades manufactured by Stanley Hydraulic Tools. Stanley assumes no responsibility for failure in equipment, accidental damage, or accidental injury as a result of the use of blades not manufactured by Stanley Hydraulic Tools.
- Always ensure the blade is sharp. Do not try to use the tool with a dull blade.

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

This safety symbol appears in these instructions to identify an action or condition that could result in damage to the tool or other equipment.

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

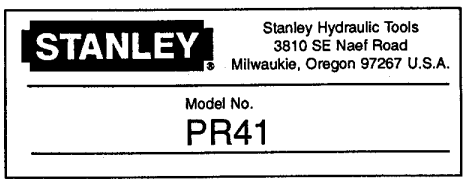
LOCAL SAFETY REGULATIONS

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

TOOL STICKERS & TAGS

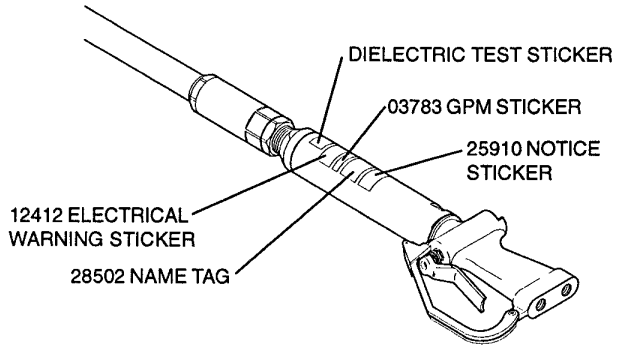
The safety related stickers and tags attached to the tool prior to shipment from the factory are shown below and on the next page. The pressure and flow rates specified must never be exceeded. All stickers and tags must be read and understood prior to operating the tool. The information listed on these stickers and tags must be legible at all times. Always replace those that have become worn or damaged. Replacements are available from your Stanley distributor.

DIELECTRIC CERTIFICATION STICKER
(shown approximate actual size)



NAME TAG STICKER, p/n 28502
(shown approximate actual size)

TOOL STICKERS & TAGS Continued. . .



CAUTION

3-9 GPM/11-34 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.

03783

GPM/PRESSURE STICKER P/N 03783
(shown actual size)

NOTICE

KEEP KNIFE SHARP. A DULL KNIFE WILL GIVE A POOR QUALITY CUT OR MAY CAUSE THE KNIFE TO BREAK.

NOTICE STICKER p/n 25910
(shown approximate actual size)

DANGER

Failure to use hydraulic hose labeled and certified as non-conductive when using hydraulic tools on or near electric lines may result in death or serious injury.

For proper and safe operation read owners manual and make sure that you have been properly trained in correct procedures required for work on or around electric lines.

ELECTRICAL DANGER STICKER p/n 12412
(shown approximate actual size)

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.

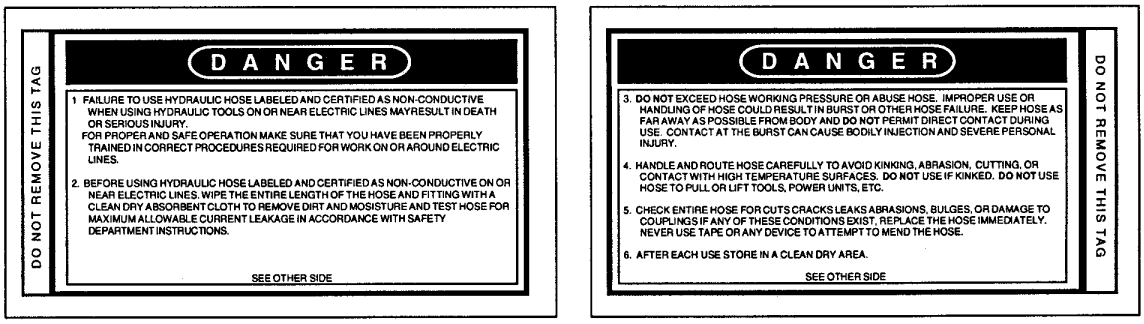
Hoses ❷ and ❸ listed above are **conductive** and **must never** be used near electrical conductors.

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

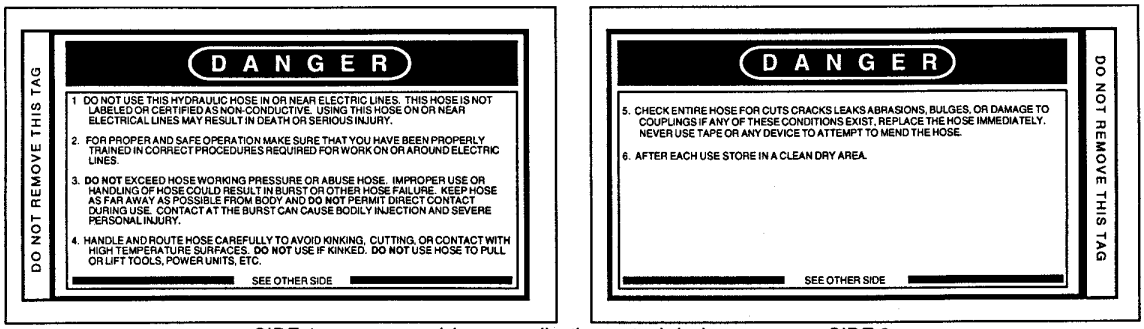
This tag is attached to all certified **non-conductive** hose.



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 2 thru 5 of this manual, observe the following for equipment protection and care.

• 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 3-9 gpm/11-34 lpm at an operating pressure of 1000-2000 psi/70-140 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 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. Recommend 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.

⚠ DANGER

Failure to use hydraulic hose labeled and certified as non-conductive when using hydraulic tools on or near electric lines may result in death or serious injury.

Make sure that you have been properly trained in correct procedures required for work on or around electric lines.

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

OPERATION

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. After installation of hoses and couplers a unit may be put to use.

• CHECK HYDRAULIC POWER SOURCE

1. Using a calibrated flowmeter and pressure gauge, check that the hydraulic power source develops a flow of 3-9 gpm/11-34 lpm at 1000-2000 psi/70-140 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 tool is designed for the hydraulic system type open-center (OC) or closed-center (CC) operation). See the parts illustration for location of marks which identify the tool as a OC or CC tool.

• 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.

4. The tool must be periodically inspected for electric insulation quality to ensure that it has kept its original factory quality per OSHA 100 kV/A requirement.

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

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

IMPORTANT

READ AND BECOME FAMILIAR WITH THE SECTIONS IN THIS MANUAL ON SAFETY PRECAUTIONS, TOOL STICKERS AND TAGS, HYDRAULIC HOSE REQUIREMENTS, HYDRAULIC REQUIREMENTS, AND PREOPERATION PROCEDURES BEFORE USING THIS PRODUCT.

- Observe all safety precautions.

- Do not operate a pruner unless you have been specifically trained to do so.

- Keep all parts of the body away from the pruner blade during operation of the tool.

- Carry the pruner with the unit de-energized and the blade away from the body.

- Always connect the hoses to the tool hose couplers before energizing the power source.

- Do not operate a pruner that is damaged, improperly adjusted or is not completely and securely assembled.

• Keep the tool clean and free of oil and contaminates.

• Do not hang the pruner on utility wires or cables.

• Do not leave the pruner hanging in a tree.

• Do not leave cut branches in a tree.

• Branches bent under tension are considered hazardous.

• Do not allow binding of the pruner blade.

• Keep away from energized electric lines the minimum distance per OSHA guidelines.

• Do not inspect, clean or repair the pruner with the power source operating or with operating pressure at the pruner. Accidental engagement of the toolcan cause serious Injury.

• Do not operate the pruner at oil temperatures above 140° F/60° C. Operation at higher temperatures can cause higher then normal temperatures at the tool which can cause operator discomfort.

• The pruner operator must keep other workers and bystanders clear of the work area, including the area into which cut limbs or debris fall. Failure to heed this precaution can result in severe personal injury.

⚠ WARNING

The following are general wood cutting procedures and techniques. Differences in the terrain, vegetation, and type of wood will make this information more or less valid for particular areas. For advice on specific wood cutting problems or techniques for your area, consult your local Stanley representative or your county agent. They can often provide information that will make your work safer and more productive.

• MAKING CUTS

NOTE: The PR41 pruner is designed to cut wood branches up to 2-1/4 inches/5.7 cm in diameter. The operator should be aware that certain hardwoods may not permit this size of cut. Especially if the blade has been dulled by prior cutting operations.

1. Move the hydraulic circuit control valve to the "ON" position to pressurize the circuit.

2. Maintain a firm grip on the pruner handle. While maintaining firm footing and balance, position the pruner hook over the material to be cut.

3. Squeeze the ON/OFF trigger and allow the pruner blade to cut through the material.

4. Release the ON/OFF trigger to retract the blade.

• FLUSH CUTS

To make the proper flush cut with the pruner, the hook is placed over the branch to be cut with the blade next to the lateral branch as shown in figure 1. If the branch to be cut is large and contains much foliage, branch splitting may result at the cut. If splitting might appear to be a problem refer to the next paragraph titled "AVOIDING LIMB SPLITTING".

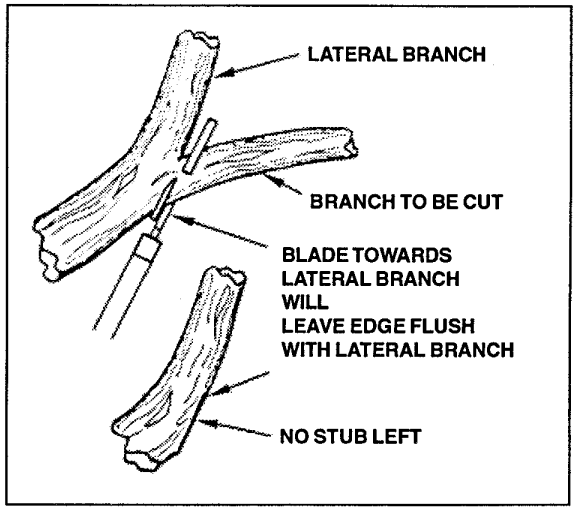


Figure 1.

• AVOIDING LIMB SPLITTING

Pruning limbs which have a tendency to split requires more than one cut. See figure 2. The first cut is made a few inches from the point of the final cut. This removes the weight of the limb being trimmed out and leaves a short stub. The stub is then cut flush to the supporting branch. Whenever practical, treat the cut with tree paint if it is larger than 1-inch/2.540 cm in diameter.

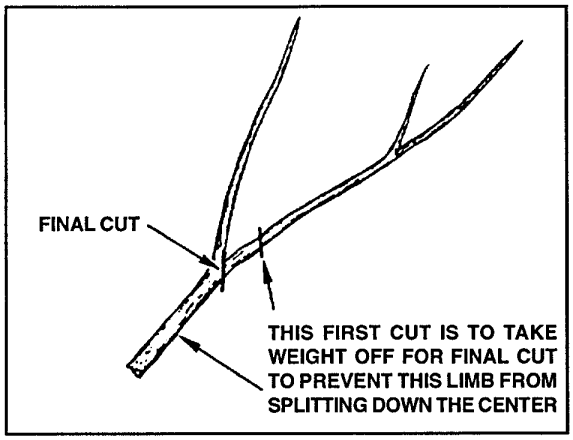


Figure 2.

⚠ WARNING

Do not cut material that is directly overhead. When it falls it may cause operator injury.

• AFTER OPERATION

1. Wipe the pruner thoroughly with a clean dry or slightly oiled cloth.

2. Clean tree pitch and residue from the blade. Handle the blade with care to avoid getting cut by the sharp edge.

3. Check all fasteners for tightness.

4. When the pruner is not in use, store horizontally in a clean dry space and protected from damage.

5. Protect the blade and keep it sharp. A sharp blade will cut cleaner and faster.

• COLD WEATHER OPERATION

If the pruner 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.

• KNIFE BLADE SHARPENING

To ensure cutting performance, keep the cutting edge of the blade sharp.

The knife blade can be dressed with a sharpening stone to restore a sharp edge. It is very important to maintain the original contour of the knife blade.

Dress the tapered side first. Then stone the flat side to remove any burrs and to create a slight back break of approximately 0.03 in./0.8 mm.

The hook should also be dressed periodically with a sharpening stone to restore the inside edge against which the knife cuts. Dress the inside of the cutting edge curve. Finish by stoning the flat side to remove any burrs raised on the cutting edge.

• KNIFE BLADE REMOVAL & REPLACEMENT

REMOVAL

1. Remove the cotter pin (36) and clevis pin (29) which connect the link bar to the knife blade.

2. Remove the roll pin (32), hex slotted nut (31), washer (33) and knife bolt (35). Slide the knife blade out from between the hook (34) and slide head (38).

REPLACEMENT

1. Clean the surfaces of the hook, slide head, knife bolt, washer, nut and knife blade.

2. Lubricate the sliding surfaces of the knife blade, hook and slide head with grease.

3. Install the knife blade between the hook and slide head as shown in the parts drawing.

4. Install the knife bolt, washer and nut and tighten the slotted nut only until there is no slack space between the hook, knife blade and slide head (*snug but not too tight - knife blade should not wobble*). You should be able to rotate the knife blade by hand. Install the roll pin.

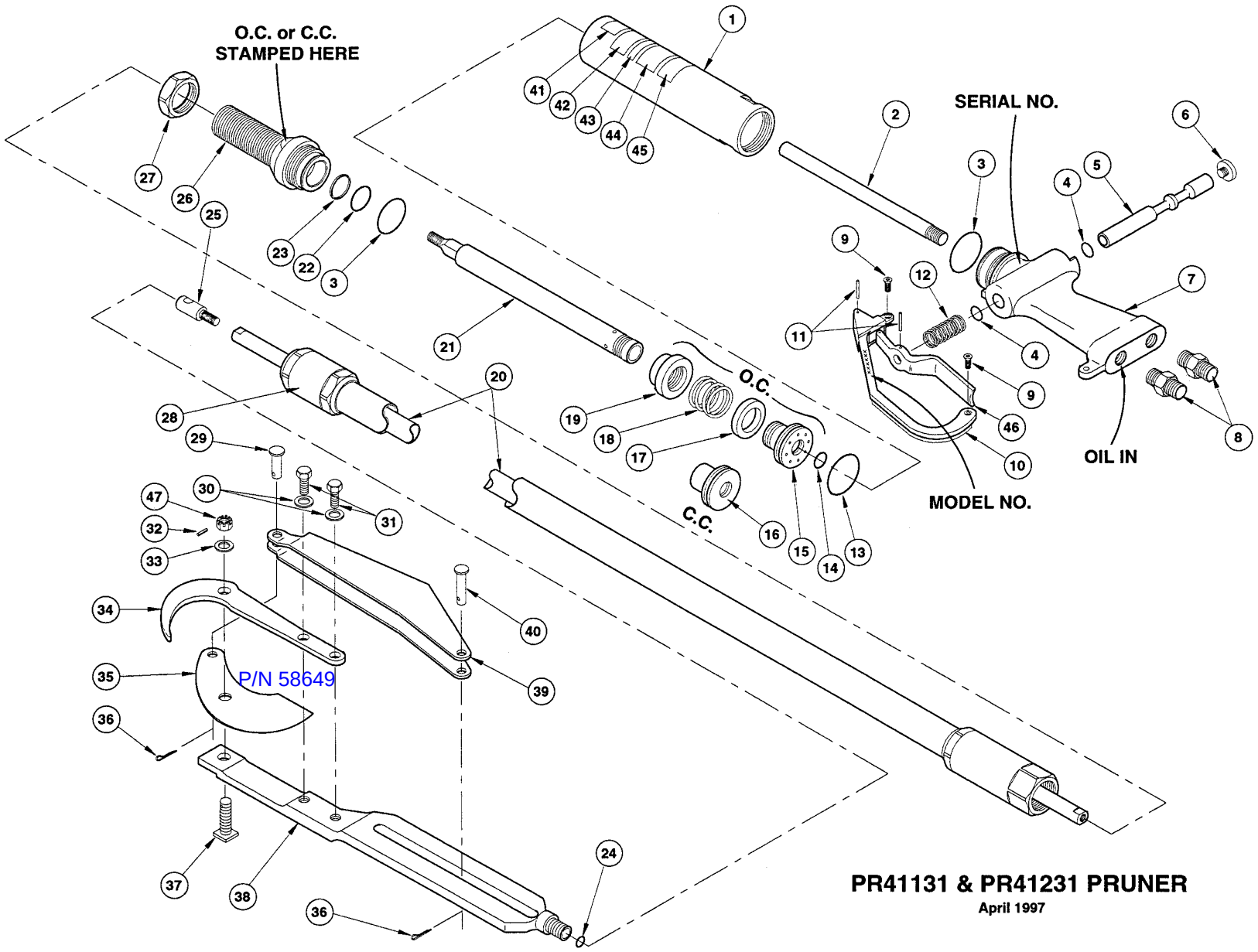
5. Install the clevis pin and cotter pin.

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 pruner, always check that the hydraulic power source is supplying the correct hydraulic flow and pressure to the pruner 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	POSSIBLE CAUSE	SOLUTION
Tool will not operate.	Hydraulic system not engaged or running.	Engage or start hydraulic system.
	Hydraulic system control valve "OFF".	Turn the system control valve "ON".
	Tool not connected to the Hydraulic system.	Connect tool to the system.
Trigger and valve spool stick.	Damaged trigger guard.	Have repaired by authorized dealer.
	High back pressure.	Determine cause of high back pressure in return line and remove restriction,
	Tool reverse plumbed to the system.	Correctly connect the pressure and return lines,
	Valve spool or spool bore scored by contaminated hydraulic fluid.	Have repaired by authorized dealer.
Pruner cuts poorly.	Blade is dull.	Replace with sharp blade.
	Pruner is running backwards.	Check direction of blade cut. Correct direction is for blade to cut when squeezing the trigger. Blade should be retracted when not squeezing the trigger.
	System relief valve set too low.	Check system relief and adjust relief valve to crack open at 2100 psi.
	Piston seal leaks or piston or cylinder is damaged.	Have inspected and repaired by authorized dealer.
Hydraulic oil leaks between valve handle and outer tube handle.	Seals worn or piston rod worn.	Have repaired by authorized dealer.



PR41131 & PR41231 PRUNER

April 1997

PR41 PARTS LIST

Item No	Part No	Qty	Description
1	28415	1	Cylinder
2	28416	1	Cylinder Oil Tube
3	00252	2	O-ring, 1-3/8 x 1-1/2 x 1/16 -028 70D ●
4	00175	2	O-ring, 1/2 x 5/8 x 1/16 -014 90D ●
5	01809	1	Spool
6	01812	1	Spool Screw
7	01989	1	Valve Handle Assy
8	03044	2	Hex Nipple
9	16307	2	Capscrew
10	01715	1	Trigger Guard
11	01534	2	Roll Pin
12	16556	1	Spring
13	00560	1	O-ring, 1-5/16 x 1-1/2 x 3/32 -125 70D●
14	00018	1	O-ring, 7/16 x 9/16 x 1/16 -013 90D●
15	00535	1	Piston, *model PR41131 only*
16	18885	1	Piston, *model PR41231 only*
17	00539	1	Disc Valve, *model PR41131 only*
18	00552	1	Disc Valve Spring, *model PR41131 only*
19	00534	1	Piston Nut, *model PR41131 only*
20	28414	1	Internal Tube Assy
21	28417	1	Piston Rod
22	00574	1	O-ring, 3/4 x 15/16 x 3/32 -116 90D●
23	01815	1	Back-up Ring●
24	01211	1	O-ring, 5/8 x 3/4 x 1/16 -016 70D●
25	08248	1	Slide Link Bolt
26	28418	1	Tube Coupling
27	28432	1	Lock Nut
28	31571	1	External Tube Assy
29	08249	1	Clevis Pin
30	00283	2	Lock Washer
31	00569	2	Capscrew
32	00757	1	Roll Pin
33	04487	1	Washer
34	27747	1	Hook
35	~~27746~~	1	Knife Sub: P/N 58649
36	03029	2	Cotter Pin
37	08251	1	Knife Bolt
38	08246	1	Slide Head Assy
39	28401	1	Link Bar
40	08247	1	Clevis Pin
41	-----	1	Dielectric Test Sticker
42	12412	1	Warning Sticker
43	03783	1	GPM Sticker
44	28502	1	Name Tag
45	25910	1	Notice Sticker
46	01718	1	Trigger
47	05268	1	Hex Slotted Nut

SEAL KIT 32473

● Denotes part in seal kit

NOTE: Use Part Number and Part Name when ordering.

MODEL DESIGNATIONS

PR41131 Open Center (O.C.) only
PR41231 Closed Center (C.C.) only

NOTES

SERVICE INSTRUCTIONS

PRIOR TO DISASSEMBLY

Thoroughly clean the exterior of the tool.

Obtain a seal kit so all seals exposed may be replaced. Note orientation of seals before removing them. Install new seals in the same way.

PRUNER DISASSEMBLY

KNIFE BLADE, HOOK, LINK BAR & SLIDE HEAD DISASSEMBLY

1. Remove the cotter pin (36) and clevis pin (29) which connect the link bar to the knife blade.

2. Remove the roll pin (32), hex slotted nut (47), washer (33) and knife bolt (35). Slide the knife blade out from between the hook (34) and slide head (38).

3. To remove the link bar (39), remove the cotter pin (36) and clevis pin (40).

4. To remove the hook (34), remove the two capscrews (31) and washers (30).

IMPORTANT

The slide link bolt (25), slide head (38) and internal tube (20) need to be thoroughly cleaned of pitch and other debris prior to performing the next step.

5. Using a 1/2 inch open end wrench on the slide head (38) wrench flats, and a 1-1/2 inch open end wrench on the external tube (28) wrench flats closest to the slide head, unscrew the slide head counter clockwise to remove it from the external tube. Once unscrewed, slide the slide head off of the internal tube (20) and slide link bolt (25). Pick out and discard the o-ring (24).

EXTERNAL TUBE ASSEMBLY

6. Using 1-1/2 inch open end wrenches on the lock nut (27) wrench flats, and on the external tube wrench flats closest to the lock nut, loosen the lock nut by turning it counter clockwise. Unscrew the external tube off of the tube coupling (26) and then slide it off of the internal tube.

INTERNAL TUBE ASSEMBLY

7. Using 1/2 inch open end wrenches on the internal tube (20) wrench flats and on the piston rod (21) wrench flats, unscrew the internal tube from the piston rod by turning it counter clockwise.

8. The slide link bolt (25) is installed with Loctite™. If it requires removal, apply heat to the area of the threaded joint to break down the Loctite™, then unscrew the slide link bolt counter clockwise.

TUBE COUPLING

9. Using a 1-1/2 inch open end wrench on the tube coupling (26) wrench flats and a 1-3/4 inch open end wrench on the cylinder (1) wrench flats, unscrew the tube coupling from the cylinder oil tube by turning it counter clockwise. Slide the tube coupling off of the piston rod. Pick out the o-ring (22) and the back-up ring (23) and discard.

PISTON & PISTON ROD

10. Remove a coupler or hose to prevent a vacuum between the piston and valve handle.Pull on the piston rod to remove the piston rod and piston from the cylinder. Remove and discard the o-rings (13 & 14).

a. The piston assembly for the o.c. system is removed from the piston rod by turning the piston nut (19) counter clockwise to unscrew it off of the piston rod.

b. The o.c. piston assembly is disassembled by unscrewing the piston counter clockwise from the piston nut.

c. The piston (16) for the c.c. system is removed from the piston rod by turning the piston counter clockwise to unscrew it off of the piston rod.

CYLINDER & CYLINDER OIL TUBE

11. The cylinder is removed by unscrewing it counter clockwise.

12. The cylinder oil tube (21) is removed by unscrewing it counter clockwise. Use oil tube clamp 01239.

VALVE HANDLE ASSEMBLY

13. Using a small punch, drive out the roll pin (11) that retains the valve spool (5) to the trigger (46).

14. Unscrew two capscrews (9) and set aside. Pull the trigger and trigger guard (10) away from the valve handle. Set the spring (12) aside.

15. Push the valve spool out of the valve handle.

16. Remove the spool screw (6) from the valve spool by unscrewing it.

17. Remove o-rings (4) and discard them.

18. Remove the o-ring (3) and discard it.

PARTS INSPECTION

Inspect and clean all parts as follows:

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

KNIFE BLADE, HOOK, LINK BAR & SLIDE HEAD ASSEMBLY

1. Inspect the knife blade and hook for wear. Sharpen as explained in the OPERATION section of this manual.

2. Inspect the link bar for damage. Make sure the clevis pin holes are not worn. Replace if damage or wear is noted.

3. Inspect the slot of the slide head for excessive wear. Make sure the knife bolt hole is not worn. Replace if damage or wear is noted.

INTERNAL TUBE

4. Inspect the fiberglass portion of the internal tube for cracks or damage paying particular attention to the areas where the aluminum rods and fiberglass join. Also inspect the threaded ends of the tube for damage. The internal tube is not field serviceable. Replace if damage or wear is noted.

EXTERNAL TUBE

5. Inspect the fiberglass portion of the external tube for cracks or damage. Inspect the metal collars and fiberglass joints to be sure the joints are secure. Do not try to remove the metal collars as they are not field serviceable. If the tube is damaged or the joints are loose, replace the assembly.

PISTON ROD & PISTON

6. Inspect the piston rod, piston and cylinder for extensive wear or deep scratches which might cause premature seal failure. Some surface scuffing is normal.

VALVE SPOOL & VALVE HANDLE

7. Inspect the valve spool and bore of the valve handle for excessive wear or deep scratches which might cause premature seal failure. Some surface scuffing is normal.

HYDRAULIC SUPPLY

8. Finally, - check the hydraulic power supply system for contamination in the fluid and for filter condition. Also, make sure hoses and couplers are in good condition.

PRUNER ASSEMBLY

VALVE HANDLE ASSEMBLY

1. Apply grease and install o-rings (4) into the valve handle (7).

2. If the spool screw (6) was removed from the valve spool (5), install it using Loctite™ 242. Lubricate the spool with hydraulic fluid and install it into the valve handle as shown in the parts drawing.

3. Slide the spring (12) over the valve spool. Position the trigger (46) against the valve spool and spring, align the roll pin hole in the spool with the hole in the trigger and then install the roll pin (11).

4. Align the other roll pin hole in the trigger with the roll pin hole in the trigger guard (10) and install the roll pin (11). Align the screw holes in the trigger guard with the screw holes in the valve handle and then install the screws (9) using Loctite™ 242..

5. Apply grease and install the o-ring (3) onto the valve handle.

CYLINDER & CYLINDER OIL TUBE

6. If the cylinder oil tube (2) was removed, install it into the threaded hole in the valve handle. Use oil tube clamp 01239.

7. Screw the cylinder (1) onto the valve handle until it is flush with the ridge on the valve handle. Hard tighten the assembly.

PISTON & PISTON ROD

8. For c.c. systems, screw the piston (16) onto the piston rod (21) using Loctite™ 242. For o.c. systems, skip this step and proceed to step #9.

9. For o.c. systems, place the spring (18) over the threaded surface of the piston (15) and then screw the piston into the piston nut (19) using Loctite™ 242. Screw the complete assembly onto the piston rod (21) using Loctite™ 242.

10. Apply grease and install the o-rings (13 & 14).

11. Apply hydraulic fluid to the cylinder bore, the cylinder oil tube and the outer surfaces of the piston and piston rod and then slide the piston and piston rod assembly into the cylinder and over the cylinder oil tube.

TUBE COUPLING

12. Apply grease and install the back-up ring (23) and o-ring (22) into the tube coupling (26). Install the back-up ring first. Apply grease and install the o-ring (13).

13. Apply hydraulic fluid to the interior surfaces of the tube coupling and then slide the tube coupling over the piston rod and screw it into the cylinder. Hard tighten the tube coupling to the cylinder.

INTERNAL TUBE ASSEMBLY

14. Screw the internal tube onto the piston rod using Loctite™ 242 and then hard tighten.

15. Pull out on the internal tube until the piston stops against the end of the tube coupling. This is an important step toward completing adjustments which are instructed later in this section titled "FINAL ADJUSTMENTS".

EXTERNAL TUBE ASSEMBLY

16. Install the lock nut (27) onto the tube coupling.

17. Slide the external tube assembly (28) over the internal tube assembly, as shown in the parts drawing, and screw it onto the tube coupling. Do not tighten the lock nut at this time.

KNIFE BLADE, HOOK, LINK BAR & SLIDE HEAD DISASSEMBLY

18. Screw the slide link bolt (25) into the internal tube using Loctite™ 242 and hard tighten.

19. Apply grease and install the o-ring (24) into the slide head assembly (38). Apply a light coating of grease to the slide link bolt, the end of the internal tube, and the slot of the slide head assembly and then slide the slide head assembly over the slide link bolt and internal tube. Screw the slide head assembly into the external tube assembly and hard tighten.

20. Install the hook (34) and secure with two capscrews (31) and washers (30).

21. Lubricate the sliding surfaces of the knife blade (35), hook and slide head with grease.

22. Install the knife blade between the hook and slide head as shown in the parts drawing.

23. Install the knife bolt, washer and nut and tighten the slotted nut only until there is no slack space between the hook, knife blade and slide head (*snug but not too tight - knife blade should not wobble*). You should be able to rotate the knife blade by hand. Install the roll pin.

24. Install the clevis pin (29) and cotter pin (36).

FINAL ADJUSTMENTS

25. Make sure the clevis pin (40) is not installed, the lock nut (27) is loose, and the piston is at its full extension (up against the end of the tube coupling).

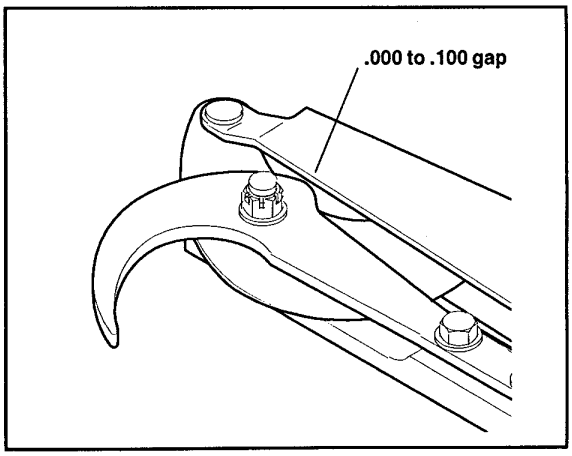


Figure 3.

26. Push on the link bar until the knife blade is in the full open position and the link bar is over the slide head and contacting the hook. See figure 3. While maintaining the knife blade in this position, rotate the external tube assembly in or out until the hole in the slide link bolt is aligned with the hole in the link bar. Continue to adjust the rotation of the external tube until a gap of .100 or less exists between the slide head and the hook and the hook is in line with the trigger guard. Install the clevis pin (40) and cotter pin (36). Hard Tighten the lock nut (27) against the external tube assembly.

A correctly adjusted pruner will put the knife blade in the full open position when hydraulic power is supplied with the trigger in the off position. There should be no contact between the hook and link bar when the knife blade is in this position.

TESTING FOR OPERATION & PERFORMANCE

27. Connect the pruner to a hydraulic source which produces 3-9 gpm/11-34 lpm at an operating pressure up to 1000-2000 psi/70-140 bar.

28. Turn on the hydraulic source and squeeze the trigger on the pruner. The knife blade should complete a full cut.

29. Release the trigger. The knife blade should retract to the full open position.

30. Observe the link bar during the operation of the pruner. The link bar should not contact the hook at anytime during operation. If it does, go to the adjustments section of these instructions and adjust the pruner as necessary.

SPECIFICATIONS

Capacity	2-1/4 inch/5.7 cm cut
Pressure Range	1000-2000 psi/70-140 bar
Maximum Back Pressure	250 psi/17 bar
Flow Range	3-9 gpm/ 11-34 lpm
Porting	3/8 NPT Female Pipe Thread
Connect Size and Type	3/8 in. NPT x 3/8 in. NPT Male Pipe Hex Nipple
Hose Whips	No
Weight	11.5 lb / 5.2 kg
Overall Length	84.25 in. / 214 cm
Maximum Fluid Temperature	140° F/60° C

ACCESSORIES

27746	Knife Blade
05005	Certified Non-Conductive Dual Oil Resistant Hose, 3/8 in. dia. x 10 ft with guards
01239	Oil Tube Clamp (service tool)

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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