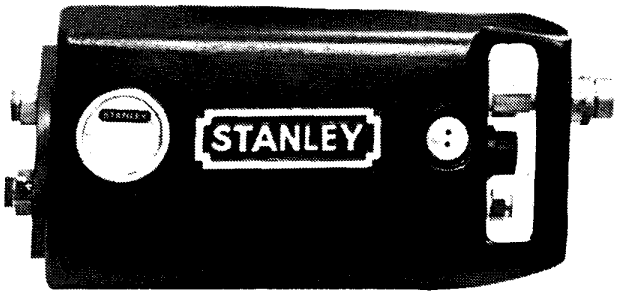
IP16
10,000 PSI HYDRAULIC INTENSIFIER



Safety, Operation and Maintenance Manual

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10413 9/92

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 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

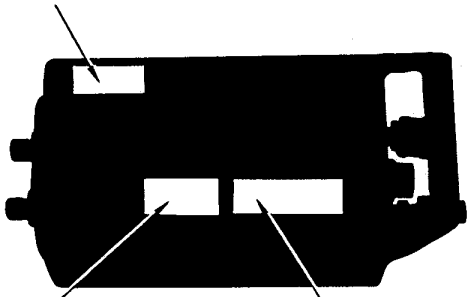
The IP16 Hydraulic Intensifier will provide safe and dependable service if operated in accordance with the instructions given in this manual. Read and understand this manual and any stickers and tags attached to the intensifier and hose before operation. Failure to do so could result in personal injury or equipment damage.

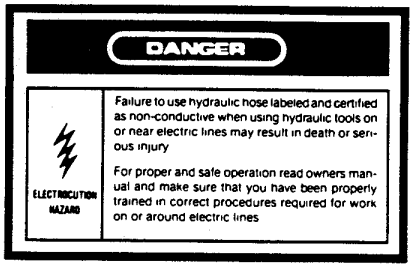
- New operators must start in a work area without bystanders.
- The operator must be familiar with all prohibited work areas such as excessive slopes and dangerous terrain conditions.
- Always wear safety equipment such as goggles, ear protection and safety shoes at all times when operating a connected tool.
- Do not overreach. Maintain proper footing and balance at all times.
- Do not inspect or clean the intensifier with the power source operating or with operating pressure to the tool. Accidental engagement of the tool can cause serious injury.
- Always connect hoses to the tool couplers before energizing the power source. Be sure all hose connections are tight.
- Inlet and outlet hydraulic hoses must be capable of 10,000 psi/704 bar working pressure. They must be fitted with hose guards at each end to help prevent kinks and sharp bends near the fittings. If these requirements are not met, replace the hoses immediately with the correct type before operating the intensifier.
- Check that all fittings, connectors and quick disconnects are rated at 10,000 psi/704 bar working pressure and that they are in good working condition. Replace any improper or damaged components before operating the intensifier.
- Inspect all hoses for the correct pressure rating and for kinks, cuts, swelled areas and damage from abrasion.
- Do not operate the intensifier unless both high-pressure hoses are connected through an open-center valve.
- Do not attempt to locate hydraulic leaks by feeling around hoses and fittings with bare hands. Pinhole leaks can penetrate the skin. To inspect for leaks, depressurize the system, clean around suspected area, repressurize the system, and visually check for leaks.
- Avoid using tightly curled or twisted hoses.
- Read all instructions carefully before using the intensifier.
- To avoid personal injury or equipment damage, all tool repair, maintenance and service must only be performed by authorized and properly trained personnel.

TOOL STICKERS AND TAGS

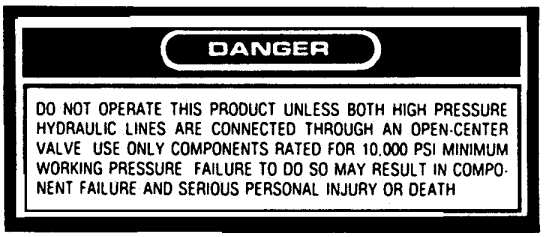
The stickers and tags attached to the intensifier prior to shipment from the factory are shown below. The pressure and flow rates specified must never be exceeded. All sticker and tags must be read and understood prior to operation of the tool.

The information listed on stickers and tags must be legible at all times. Always replace stickers that have become worn or damaged. Replacements are available from your local Stanley distributor.

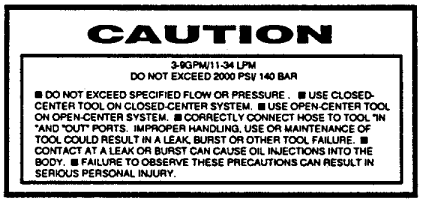




ELECTRICAL DANGER STICKER



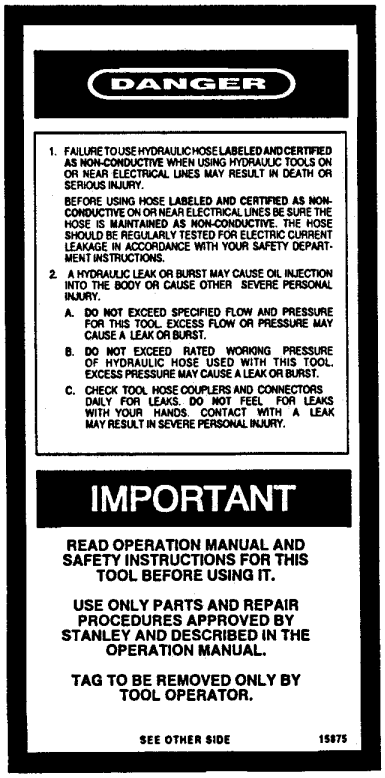
HYDRAULIC DANGER STICKER

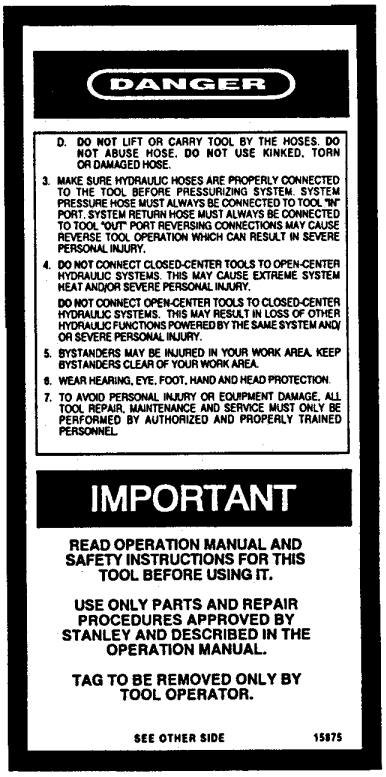


GPM/PRESSURE STICKER

SAFETY TAG

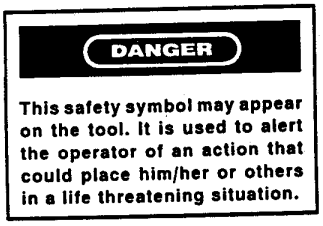
The safety tag at right is attached to the intensifier when shipped from the factory. Read and understand the safety instructions listed on this tag before removal. We suggest you retain this tag and attach it to the intensifier when not in use.

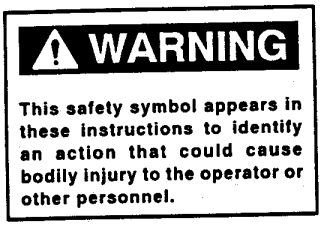


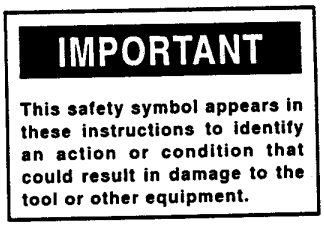


SAFETY SYMBOLS

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







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

LOCAL SAFETY REGULATIONS

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

EQUIPMENT PROTECTION AND CARE

IMPORTANT

In addition to the Safety Precautions on pages 1 thru 3 of this manual, observe the following for equipment protection and care.

- Always store the intensifier in a clean, dry space, safe from damage or pilferage.
- Always keep critical tool markings, such as labels and warning stickers, legible.
- Always replace hoses, couplings and other parts with replacement parts recommended by Stanley Hydraulic Tools. Supply hoses to the intensifier must have a minimum working pressure rating of 2000psi/140 bar.Supply hoses from the intensifier to the tool couplings and other high pressure parts, must have a minimum working pressure rating of 10,000 psi/ 704 bar.
- All hoses must have an oil resistant inner surface and an abrasion resistant outer surface. Whenever near electrical conductors, use **clean** hose labeled and certified non-conductive.
- Intensifier repair should be performed by experienced personnel only.
- Make sure all couplers are undamaged and wiped clean before connection.
- The hydraulic circuit control valve must be in the "OFF" position when coupling or uncoupling hydraulic tools. Failure to do so may result in damage to the quick couplers and cause overheating of the hydraulic system.
- Never allow the working pressure of the intensifier or tool to exceed 10,500 psi/739 bar.
- Make sure that the compression tool, cutter, etc. to be operated is rated at 10,000 psi/704 bar. If other than 10,000 psi/704 bar, the intensifier relief valve must be adjusted to the pressure for the tool being operated.
- Operate the intensifier within its rated capacity.
- Do not use the intensifier for applications for which it was not designed.
- Operate the intensifier only in the upright position or in position with handle up.
- Never connect or disconnect couplers or port connections with hydraulic pressure in the hose.
- Always check high-pressure couplers for leaks and damage before operating the system at maximum rated pressure.
- When the intensifier is not in use, attach thread protectors and install valve caps.

HYDRAULIC HOSE REQUIREMENTS

HOSE TYPES

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

❶ Labeled and 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.

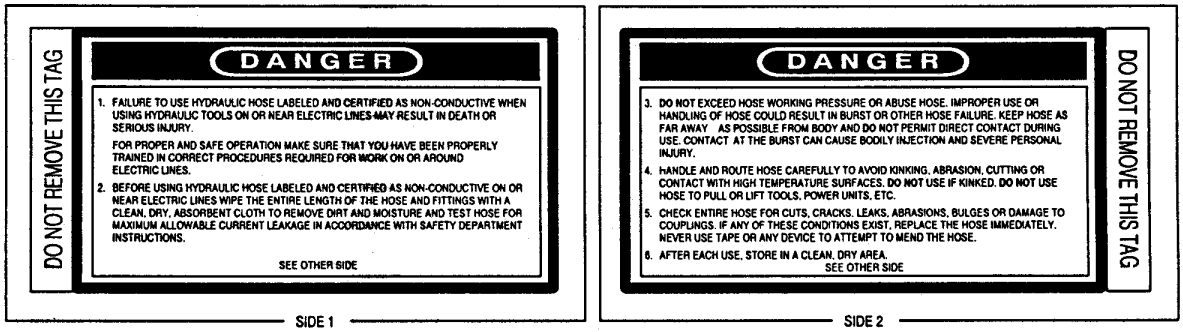
Hoses ❷ and ❸ listed above are **conductive** and **must never** be used near electrical conductors.

To help ensure your safety, the following DANGER tags are attached to all hoses 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 can be obtained at no charge from your Stanley distributor.

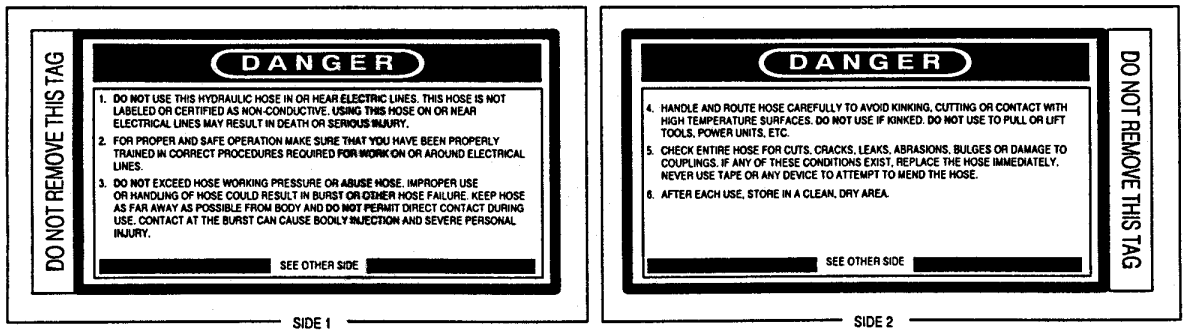
❶ CERTIFIED NON-CONDUCTIVE

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



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

This tag is attached to all **conductive** hose.



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 used to power the earth auger.

HYDRAULIC SYSTEM REQUIREMENTS

- The hydraulic system should provide a flow of 3-10 gpm/11-38 lpm at an operating pressure of 1000-2500 psi/70-176 bar. Recommended relief valve setting is 2100-2250 psi/145-155 bar on the supply side and 10,300 psi/725 bar on the tool end.

- The system should not have 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 sufficient heat rejection capacity to limit the maximum fluid temperature to 140° F/60° C at the maximum expected ambient temperature. The recommended minimum cooling capacity is 5 hp/3.73 kW at a 40° F/22° C difference between ambient temperature and fluid temperature.

- The hydraulic system should have a minimum of 25 micron full-flow filtration. It is recommended that filter elements be sized for a flow of at least 20 to 30 gpm/75 to 113 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. Hydraulic fluids of petroleum base with antiwear and non-conductive properties and viscosity indexes over 140 meet the recommended requirements over a wide range of operating temperatures.

- The recommended system-to-IP16 hose size is 0.500-inch/12 mm I.D. to 50 ft/15 m long and 0.625-inch/16 mm I.D. minimum up to 100 ft/30 m long.

OPERATION

PREOPERATION PROCEDURES

FILL RESERVOIR

IMPORTANT

Mil-H 5606 Hydraulic Oil must not be used in the reservoir of the intensifier.

1. Remove the vent plug from the top of the intensifier. Fill with clean hydraulic oil filtered to 10 microns or less. Fill to top of high pressure pump as viewed from the filler hole.

IMPORTANT

Do not fill to top of hole. An air space is required for hydraulic oil expansion as oil temperature increases.

2. An over-filled reservoir will cause oil leakage from the vent plug as the oil heats. If this condition occurs, remove the vent plug and lower oil level to the point specified.

CHECK POWER SOURCE

1. Using a calibrated flowmeter and pressure gauge, check that the hydraulic power source develops a flow of 3-10 gpm/11-38 lpm at 1000-2000 psi/70-140 bar.

2. Make certain that the hydraulic power source is equipped with a relief valve set to open at 2100 psi/147 bar maximum.

CONNECT HOSES

- It is good practice to connect return hoses first and disconnect them last to minimize or avoid trapped pressure within the tool.

- Observe flow indicators marked on hose couplers to ensure that oil flow will be in the proper direction.

1. Remove the thread protectors and valve caps from the intensifier.

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

3. Connect hydraulic lines from the parent circuit to the intensifier inlet fitting. Make certain the "P" (pressure) and "T" (tank) hoses are connected to their respective ports. If incorrectly connected, high pressure output will not be obtained.

4. Connect the RV04 Rotary or RV05 Rocker Control Valve to the high-pressure outlet and return ports. Observe the markings at the handle end: "P" is the pressure port and should be connected to the "P" port on the control valve. "T" is the tank port and should be connected to the "T" port on the control valve.

Note: High-pressure couplings must be used for the high-pressure connections at the output side of the intensifier.

5. Connect the tool to be used (crimper, cutter, etc.) to the control valve. Refer to the applicable Operation and Maintenance Manual for detailed connection procedures.

⚠ WARNING

Before operation, make sure the control valve has been connected to the tool to be used, as specified in the Operation and Maintenance Manual for the applicable control valve.

6. Move the hydraulic circuit control valve to the "ON" position to operate the intensifier.

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

TOOL OPERATION

1. Observe all safety precautions.

2. Activate the parent circuit to energize the intensifier. Pressure should now beavailable at the pressure port of the control valve. At this time, the control valve and tool are ready for operation.

SERVICE INSTRUCTIONS

Good maintenance practices will keep the intensifier 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 intensifier 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 .

Note: For orientation of parts identified in the following procedures, refer to the parts location diagram contained in the PARTS LIST section of this manual.

PRIOR TO DISASSEMBLY

- Clean the exterior of the tool.
- Obtain Seal Kit (Part Number 14785). All o-ring seals exposed during disassembly must be replaced. Note the orientation of seals before removing them. Install new seals in the same position as original seals.

DISASSEMBLY

1. Remove the four capscrews (22) from the motor housing (1). Pull the motor housing (with pump assembly parts attached) out far enough to reach the male connector (20).

2. Depress the hose release collar on the connector and pull the hose from the connector. On earlier models, it is necessary to unscrew the nut off of the end of the male connector.

3. Remove the six capscrews (15) and flange nuts (11), then separate the motor housing (1) from the oil seal plate (8). Remove the gerotor (6).

4. Pull the assembled gerotor bushing (7), oil seal plate (8), pump housing (10) and driveshaft (14) from the pump case (66). Remove the male connector (20) for inspection.

5. Drive the dowel pin (12) from the gerotor bushing (7) then pull the bushing off the driveshaft (14). Slide the oil seal plate (8), gerotor (9) and pump housing (10) off the driveshaft. Remove the drive pin (13) if damaged .

6. Inspect the bushing (2) inside of the motor housing as described in this section.

7. Unscrew the Low Pressure Valve assembly from the pump housing. Test and adjust the valve as specified in this section.

8. Remove the o-rings (3, 4 and 5) from the motor housing. Remove the o-ring (3) from the ID of the oil seal plate (8).

9. Unscrew and remove the high-pressure coupler (57).

10. Remove the valve cap (47) with o-ring (48), then unscrew and remove the high-pressure unloader valve as an assembly. Test and adjust the valve as described in this section.

11. Remove the two nipples (55 and 56) if damaged.

12. Remove the six capscrews (45), then remove the endplate assembly (46) with the hose and male connector attached. Remove the o-ring (44).

13. Remove the High-pressure Pump Assembly (consisting of items 35 thru 39) from the pump case (66).

14. Separate the parts of the pump assembly by removing the four capscrews (35). Inspect the parts as described in this section. If a part or

parts are worn or damaged, the pump must be replaced as an assembly. Parts cannot be ordered separately.

15. Remove the wobble plate (29) with items (30 thru 36) attached. Remove the retaining ring and separate the parts. Inspect the parts of the wobble plate as specified in this section.

16. Inspect the bushing inside of the motor housing (1) and the wobble plate housing (23) as described in this section. If the bushings are worn or damaged, they can be removed using the following Stanley service tools.

TOOL	PART NUMBER
Collet	11930
Actuator pin	05067
Forcing Screw	05065
Forcing Nut	05066
Bridge	05069

TEST AND ADJUSTMENTS

TESTING AND ADJUSTING THE LOW-PRESSURE VALVE ASSEMBLY

1. Remove the valve assembly from the pump housing as described in the DISASSEMBLY procedures.

2. Connect the valve assembly to a test setup as shown in Figure 1.

3. Fully open the restrictor valve. Apply hydraulic power to the input tee.

4. Slowly close the restrictor valve until the low-pressure valve opens. The valve should open at a pressure between 150 and 300 psi/11 and 21 bar as indicated on the test gauge

5. If necessary, adjust relief pressure by turning the setscrew at the top of the lowpressure relief valve. Turn the setscrew clockwise to increase pressure and counterclockwise to decrease pressure.

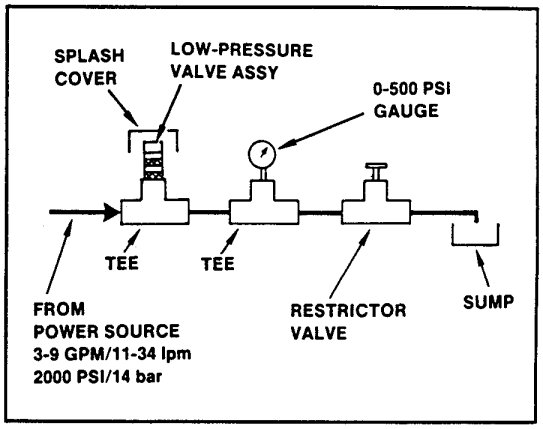


Figure 1. Low-Pressure Valve Test Setup

6. When the correct relief pressure has been obtained, fully open the restrictor valve and shut-down the hydraulic power source.

TESTING AND ADJUSTING THE HIGH-PRESSURE UNLOADER VALVE

Adjustment of the high-pressure relief setting is accomplished by turning the adjusting plug located under the valve cap. See Parts List illustration. To test and adjust the valve, proceed as follows:

1. Connect the pressure and return hoses from the hydraulic power source to the "P" and "T" ports on the inlet side of the intensifier.

2. Remove the valve cap from the high-pressure unloader valve. Loosen the hex socket setscrew (49) located on the side of the valve body (50). Replace the valve cap.

3. Connect a 0-20,000 psi/1400 bar test gauge, restrictor valve and 10,000 psi/704 bar high-pressure hoses to the output side of the intensifier as shown in Figure 2.

4. Fully open the restrictor valve, then apply hydraulic power to the inlet side of the intensifier.

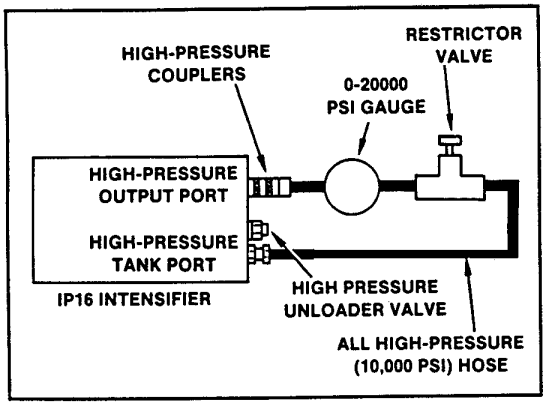


Figure 2. High-Pressure Unloader Valve Test Setup

5. Slowly close the restrictor valve while observing the pressure gauge. When the high-pressure unloader valve opens, there will be an audible sound and the pressure on the gauge will drop.

6. Fully open the restrictor valve, then remove the valve cap. Adjust the unloader valve adjusting plug clockwise to increase relief pressure or counterclockwise to decrease pressure.

7. Install the valve cap and repeat step 5. Adjust the relief pressure to 10,300 psi/725 bar.

8. After valve is properly adjusted, remove valve cap, tighten setscrew (49) and replace valve cap.

CLEANING OF PARTS BEFORE ASSEMBLY

⚠ WARNING

Use clean solvent in well-ventilated areas. Avoid prolonged inhalation of vapors and prolonged or repeated contact with skin. Keep away from heat or open fire.

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

If dirt particles and other contamination are found on parts, always determine and correct the cause. Flush the hydraulic system with clean oil and install a new filter.

INSPECTION OF PARTS BEFORE ASSEMBLY

BUSHINGS

The inside of the bushing should be gray with some bronze showing through. If a significant amount of yellow bronze shows (more than 50 percent of the surface), bushing replacement is required .

DRIVE SHAFT

The shaft diameter at the bushing and o-ring locations must be smooth. Grooves, roughness or a reduced diameter indicate fluid contamination or damaged bushings. Grit particles may have imbedded into the bushings, grinding into the hardened shaft. If abnormal shaft wear as above occurs (in excess of normal polishing) both the shaft and associated bushings must be replaced.

HOSE ASSEMBLY

Check the fitting (male connector) at each end of the hose for damage. Check the entire length of the hose for chafing and cracks.

GEROTORS

Inspect the two gerotors for excessive wear or damage. The inner section of the gerotor should have smooth, round tips, with an even polish on the tip surfaces. Check all surfaces for cracks and damage from contaminated oil. Replace parts that are scored, worn or that show signs of any other damage.

OIL SEAL PLATE

Check that both sides of the plate are smooth and polished. The surfaces that contact the gerotors must be free of scratches and scoring caused by contaminated oil. Always correct the cause of oil contamination before operating the intensifier.

HIGH-PRESSURE PUMP ASSEMBLY PARTS

Inspect the mating surfaces of the piston block, check ball block assembly and manifold assembly. These surfaces should be smooth and polished. Scratches and scoring are most likely caused by grit particles in the oil. Flush the unit with solvent and blow dry with compressed air. Always correct the cause of oil contamination before operating the intensifier.

Check that the pistons slide freely in the bores of the piston block and check ball block assembly.

THRUST WASHERS

Check all surfaces for pits and scoring.

THRUST BEARINGS

Check for loose or missing rollers. Check the bearing sideplates for pitting and scoring.

PRIOR TO ASSEMBLY

- Clean all parts with a degreasing solvent. Blow dry to remove any abrasive particles.
- Make sure that Seal Kit (part number 14785) is available so all O-Ring Seals exposed during disassembly can be replaced.
- Clean and inspect parts as described in this section.

ASSEMBLY

Note: Apply grease or o-ring lubricant to all seals during assembly. Coat all moving parts with clean hydraulic fluid before assembly.

1. Install the sight glass and vent assembly.

2. Install the four pistons (37) in the piston block. Assemble the manifold assembly (39), check ball block assembly (38) and the piston block using the four 1/4 - 20 x 1-1/2 inch socket head capscrews.

3. Install a new bushing in the wobble plate housing if inspection has shown the bushing to be defective. Use a brass drift slightly larger than the O.D. of the bushing.

4. Attach the wobble plate housing to the inside of the pump case (66) using the two10-32 x 1 inch socket head capscrews.

5. Install a new bushing in the motor housing (1) if inspection has shown the bushing to be defective. Use a brass drift slightly larger than the O.D. of the bushing. Be sure to install a new o-ring (3) under the bushing.

6. Install o-rings (4 and 5).

7. Carefully tap the drive pin into the drive shaft. Make sure the pin end fits into the keyway in the gerotor gear.

8. Insert the drive shaft (14) through the pump housing (10), then install the inner gear of the gerotor (9) onto the shaft against the pump housing. Slide the outer section of the gerotor onto the gerotor gear.

9. Install a new o-ring (3) in the I.D. of the oil seal plate, then slide the plate onto the shaft.

10. Slide the bushing onto the shaft. Align the hole in the bushing with the hole in the shaft then carefully tap the dowel pin (12) through the bushing and into the shaft. One end of the pin must be flush with the O.D. of the bushing. Install the gerotor (6) on the bushing. The keyway of the gear should fit freely over the end of the drive pin.

11. Carefully install the assembled shaft in the motor housing, making sure the end of the shaft fits squarely into the motor housing bushing. Be careful not to damage the o-ring previously installed in the housmg. Rotate the oil seal plate and pump housing so the six capscrew holes are in line with the holes in the motor housing.

12. Insert the six 10-24 x 3 inch socket head capscrews (15) through the motor housing, oil seal plate and pump housing. Install the six flange nuts (11). Tighten securely.

13. Make sure the low-pressure relief valve has been tested and adjusted as specified in this section. Install the valve in the pump housing. Tighten securely.

14. Push the hose (42) into the fitting (male connector). On some units, the hose end must be attached with a compression sleeve and nut to the fitting.

15. Install the o-ring on the O.D of the endplate assembly.

16. Insert the hose (42) completely through the pump case. Position the assembled motor housing against the pump case and secure in place using the four 10-32 x 3/8 inch socket head capscrews.

17. Install the thrust washer (30), thrust bearing (31) and thrust washer (32) against the wobble plate (29). Install the bearing (33), then install the retaining ring (32) to secure the parts together.

18. Make sure the roll pin (28) is installed in the wobble plate and neither end of the pin extends beyond the O.D. of the hub, then install the two thrust washers (26) and thrust bearing (27) onto the wobble plate in the order shown in the parts list illustration.

19. Carefully position the assembled wobble plate on the drive shaft. Push the assembly into the wobble plate housing (23) (previously installed). Rotate the wobble plate so the pin in the plate slips into the notch in the end of the drive shaft.

20. Install the male connector (43) in the endplate assembly (46). Position the endplate close enough to the pump case so the hose end can be attached to the male connector.

21. Position the assembled High-pressure Pump Assembly in the end of the wobble plate housing (23), then attach the endplate assembly to the wobble plate housing using the six 10-32 x 3 inch socket head capscrews. Tighten the capscrews in a cross pattern, making sure that the high-pressure pump assembly remains correctly mated with the wobble plate housing.

22. Make sure the high-pressure unloader valve has been tested and adjusted as specified in this section. Install the valve in the endplate assembly. Tighten securely, then install the valve cap (47).

23. Install the hex nipple (56), high-pressure nipple (55) and the high-pressure coupler in the endplate assembly. Use Locktite PST to seal the threads. The coupler should be installed in the "P" pressure port and the nipple installed in the "T" tank port.

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

PROBLEM	CAUSE	REMEDY
No output.	Couplers or hoses blocked.	Remove obstruction.
	Input pressure and return line hoses reversed at ports.	Be sure hoses are connected to the proper ports.
	No oil in reservoir.	Fill reservoir to proper level.
	High-pressure relief valve stuck open.	Test and adjust as specified in SERVICE section.
	Motor to pump hose leaking.	Remove and replace hose.
	Intensifier turned over with vent assembly down.	Return intensifier to upright position.
Oil mist from center of motor housing assembly.	Rear drive shaft seal bad.	Replace shaft seal located behind shaft bushing in motor housing assembly.
Oil leaking from vent assembly.	Oil reservoir over-filled.	Reduce oil level to the top of the high-pressure pump as viewed through the vent assembly port while the intensifier is in the horizontal position. (Reservoir must have room for oil expansion).
	Defective shaft seal. Seal is located in the oil seal plate between the motor housing assembly and pump housing.	Turn off intensifier. Remove vent assembly and turn on intensifier. Operate compression tool or cutter. If oil reservoir fills up and overflows, replace the shaft seal.

SPECIFICATIONS

Type	Hydraulic/Hydraulic
Output Pressure	10,000 psi/704 bar
Input Pressure	Up to 2500 psi/176 bar
Flow Range	3-10 gpm/11-38 lpm
Opimum Flow	8 gpm/30 lpm
Porting	8 SAE o-ring
Connect Size and Type.	3/8 NPT Male Adapter
Weight	12 lb/5.4 kg
Length	10 1/2-inches/26.7 cm
Width	6-inches/15.2 cm
Height	5-inches/12.7 cm
Reservoir Capacity	2 qt/1.9 l

NOTE

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

ACCESSORIES

PART NO.	DESCRIPTION
	CONTROL VALVES
RV05000	RV05 Rocker Control Valve

WARRANTY

Hand held tools and their parts are warranted against defects in materials and workmanship for a period of 12 months from the date of purchase, except for cutting parts, steels and other parts not manufactured by Stanley (such as impact mechanisms, alternators, regulators and hoses).

The Warranty Registration Card packed with the tool must be filled out and returned to Stanley upon receipt of the tool.

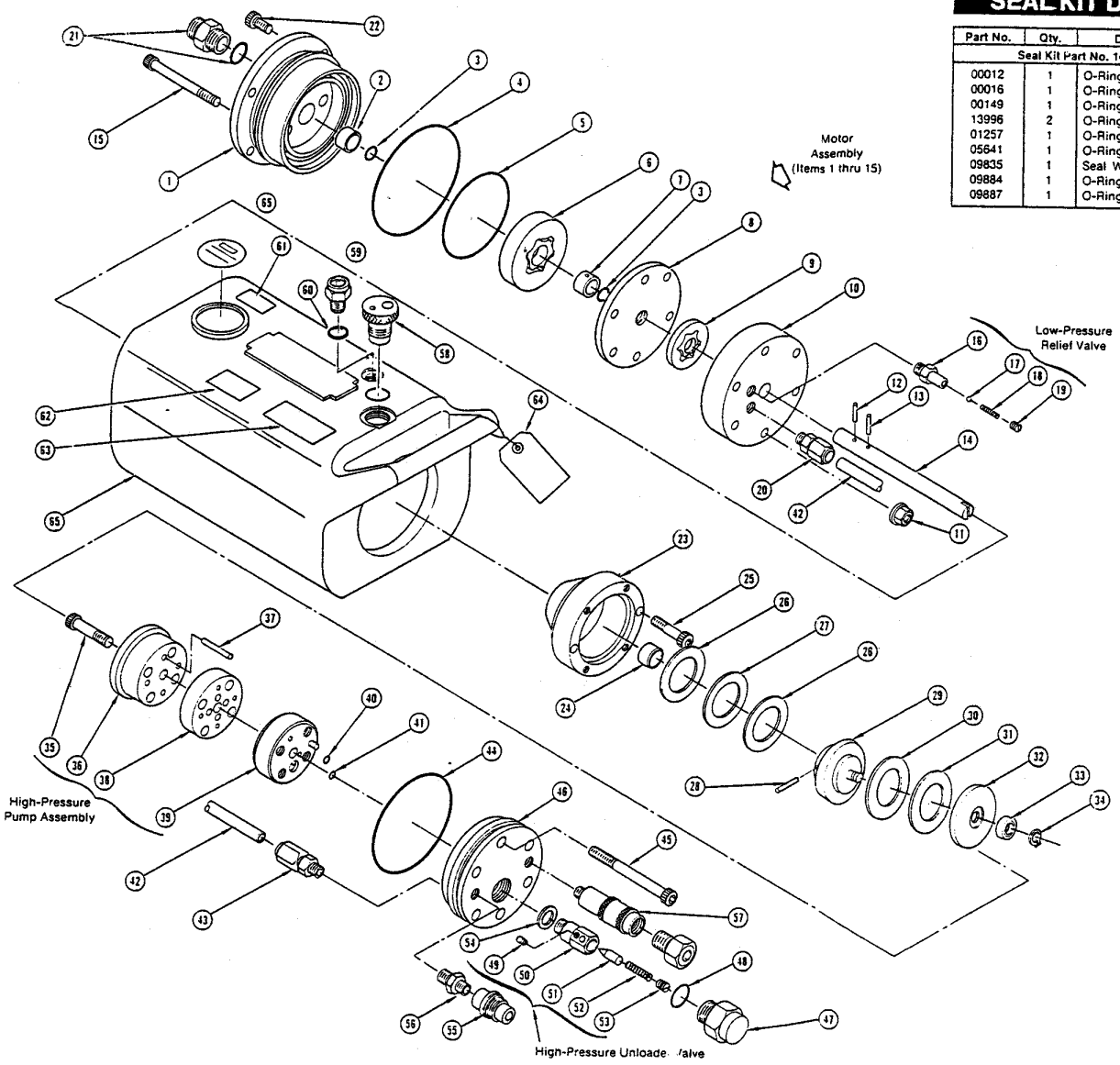
Stanley reserves the right to replace or repair only those parts which under our examination prove to have been defective at the time of purchase.

Shipping charges are pre-paid by the customer unless otherwise autherized by Stanely.

The warranty is void if maximum flow and pressure ratings are exceeded.

There is no other warranty expressed or implied.

SERVICE AND REPAIR NOTES



SEAL KIT DATA

Part No.	Qty.	Description
Seal Kit Part No. 14785		
00012	1	O-Ring
00016	1	O-Ring
00149	1	O-Ring
13996	2	O-Ring
01257	1	O-Ring
05641	1	O-Ring
09835	1	Seal Washer
09884	1	O-Ring
09887	1	O-Ring

PARTS LIST

Item No.	Part No.	Qty	Description
	09860	1	**Motor Assy.** (Incl. items 1 thru 15)
1	09868	1	Motor Housing (Incl. item 2)
2	05207	1	Bushing
3	13996	2	O-Ring, 1/2 x 11/16 x 3/32 ⊙
4	01257	1	O-Ring, 3-1/2 x 3-5/8 x 1/16 ⊙
5	05641	1	O-Ring, 2-3/8 x 2-1/2 x 1/16 ⊙
6	09594	1	Gerotor
7	09839	1	Gerotor Bushing
8	09844	1	Oil Seal Plate
9	09895	1	Gerotor
10	09850	1	Pump Housing
11	09901	6	Flange Nut
12	09900	1	Dowel Pin
13	09867	1	Drive Pin
14	09838	1	Drive Shaft
15	09883	6	Capscrew, 10-24 x 3 in. Socket Head
	09861	1	**Low Pressure Valve Assy.** (Incl. items 15 thru 18)
16	09841	1	Low-Pressure Valve
17	02436	1	Check Ball
18	09853	1	Spring
19	09829	1	Setscrew
20	09898	1	Male Connector
21	00936	2	Adapter Fitting
22	09886	4	Capscrew, 10-32 x 3/8 in. Socket Head
23	09871	1	Wobble Plate Housing (Incl. item 23)
24	05207	1	Bushing
25	09882	2	Capscrew, 10-32 x 1 in. Socket Head
26	09877	2	Thrust Washer
27	09878	1	Thrust Bearing
28	01851	1	Roll Pin 1/8 x 1 in.
29	09845	1	Wobble Plate
30	09879	1	Thrust Washer
31	09880	1	Thrust Bearing
32	09840	1	Thrust Washer
33	09881	1	Bearing
34	00077	1	Retaining Ring
	15283	1	**Pump Assy.** (Incl. items 34 thru 38)
35	08253	4	Capscrew, 1/4-20 x 1-1/2 in. Socket Head
36	09847	1	Piston Block
37	09836	4	Piston
38	09866	1	Check Ball Block Assembly
39	09869	1	Manifold Assembly
40	09884	1	O-Ring, 7/32 x 11/32 x 1/16 ⊙
41	09887	1	O-Ring, Urethane ⊙
42	09870	1	Hose
43	09898	1	Male Connector
44	00149	1	O-Ring, 3-1/4 x 3-3/8 x 1/16 ⊙
45	09883	6	Capscrew, 10-32 x 3 in. Socket Head
46	09857	1	Endplate Assembly
47	09842	1	Valve Cap
48	00012	1	O-Ring ⊙
	09862	1	**High-Pressure Unloading Valve Assy.** (Incl. items 48 thru 52)
49	09891	1	Setscrew
50	09843	1	Valve Body
51	09837	1	Pintal
52	09309	1	Spring
53	09834	1	Adjusting Plug
54	09835	1	Seal Washer ⊙
55	05337	1	High-Pressure Nipple
56	05148	1	Hex Nipple
57	05338	1	High-Pressure Coupler
58	09865	1	Vent Assy. (Incl. O-Ring)
59	11720	1	Sight Glass
60	03364	1	O-Ring, .414 x .558 x .072
61	03783	1	GPM/Pressure Sticker
62	12412	1	Warning Sticker
63	12891	1	Danger Sticker
64	10515	1	Caution Tag, Unit Shipped Without Oil
65	10146	1	Nameplate Sticker
66	11718	1	Pump Case
	06345	2	Plastic Plug, SAE8 (not shown)

NOTE: Use Part Name and Part Number when ordering.
⊙ Denotes part in Seal Kit.