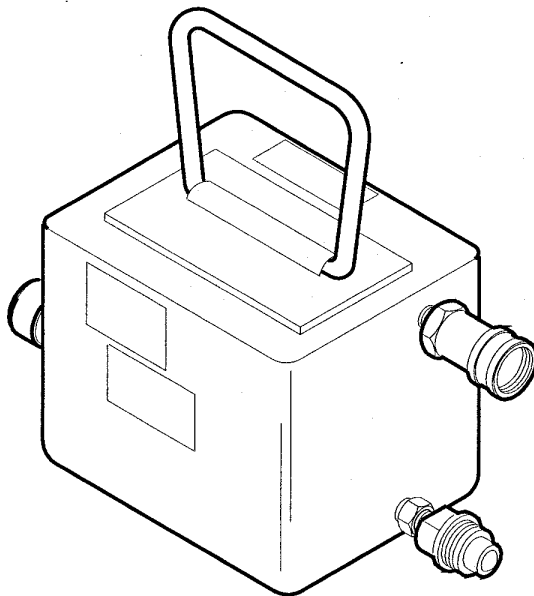


IP18

10,000 PSI

HYDRAULIC

INTENSIFIER



Safety and Operation Manual

⚠ DANGER

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

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

Focused on performance™

STANLEY
*Hydraulic
Tools*

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SERVICING THE IP18 INTENSIFIER: This manual contains safety, operation, and routine maintenance instructions. This manual does not contain detail assembly or disassembly service 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 EQUIPMENT.

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

For the nearest authorized and certified dealer, call Stanley Hydraulic Tools, 1-800-549-0517 and ask for a Customer Service Representative.

SAFETY PRECAUTIONS

⚠ DANGER

Do not operate this equipment or associated equipment until the following safety instructions have been thoroughly read and understood! Read this manual before installing, operating or maintaining this equipment.

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 equipment.

These safety precautions are given for your safety. Review them carefully before operating the intensifier 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.

In addition to this manual, read and understand safety and operating instructions in the Engine Operation Manual furnished with the power unit.

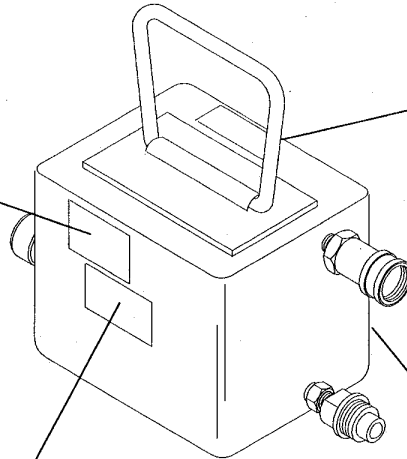
GENERAL SAFETY PRECAUTIONS

The IP18 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. Failure to do so could result in personal injury or equipment damage.

- 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.
- Establish a training program for all operators to ensure safe operation.
- Do not operate the intensifier unless thoroughly trained or under the supervision of an instructor.
- Do not inspect or clean the intensifier while the power source running or with operating pressure to the tool.
- Always use hoses and fittings rated at 10,000 psi/704 bar between the intensifier and the hydraulic tool. The hoses and fittings must have hose guards to prevent kinks and sharp bends. Hoses from the power source to the intensifier must be rated at 2500 psi/172 bar with a 4 to 1 safety factor. Be sure all hose connections are tight. **DO NOT USE TIGHTLY CURLED OR TWISTED HOSES.**
- **DO NOT OPERATE THE INTENSIFIER UNLESS HIGH-PRESSURE HOSES ARE CONNECTED THROUGH AN OPEN-CENTER VALVE BETWEEN THE INTENSIFIER AND THE TOOL.**
- Make sure all hoses are connected for correct flow direction to and from the tool being used.
- Do not inspect hoses and fittings for leaks by using bare hands. "Pin-hole" leaks can penetrate the skin.
- Do not operate a damaged or improperly adjusted intensifier.
- Always wear appropriate safety equipment such as goggles, ear protection, and toe guards. Certain tools used in conjunction with the intensifier may require other safety equipment such as breathing filters.

IMPORTANT INFORMATION

05153 STANLEY
STICKER



STANLEY RAILROAD HELP DESK

1-800-549-0517
FOR CUSTOMER SERVICE OR
TECHNICAL QUESTIONS

25610 RAILROAD HELP DESK STICKER
(U.S.A. Only)

DANGER

DO NOT OPERATE THIS PRODUCT UNLESS BOTH HIGH PRESSURE HYDRAULIC LINES ARE CONNECTED THROUGH AN OPEN-CENTER VALVE. USE ONLY COMPONENTS RATED FOR 10,000 PSI MINIMUM WORKING PRESSURE. FAILURE TO DO SO MAY RESULT IN COMPONENT FAILURE AND SERIOUS PERSONAL INJURY OR DEATH.

12891 HIGE PRESSURE DANGER STICKER

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.

12412 ELECTRICAL DANGER STICKER

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

The safety tag (p/n 15875) 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 power unit when not in use.

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:

- 1 Certified non-conductive
- 2 Wire-braided (conductive)
- 3 Fabric-braided (not certified or labeled non-conductive)

Hose **1** listed above is the only hose authorized for use near electrical conductors.

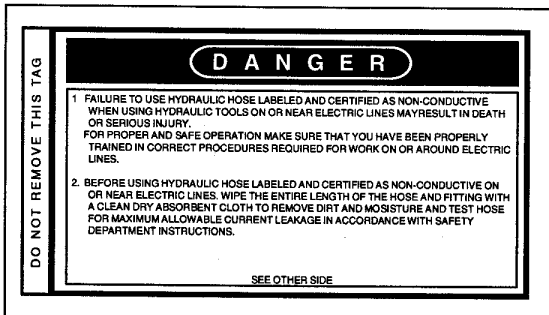
Hoses **2** and **3** listed above are **conductive** and **must never** be used near electrical conductors.

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.

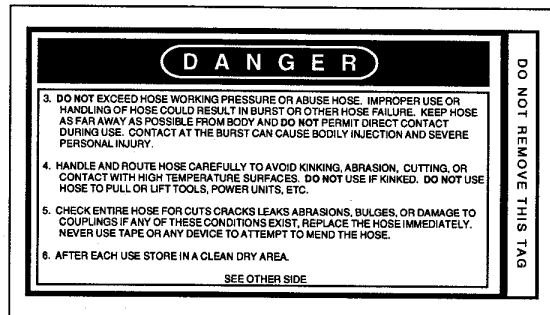
1 CERTIFIED NON-CONDUCTIVE HOSE

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



SIDE 1

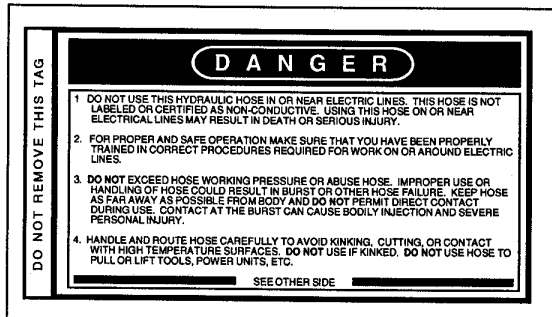
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SIDE 2

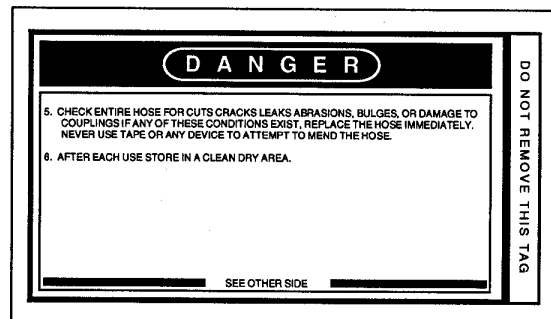
2 AND 3 WIRE-BRAIDED AND FABRIC-BRAIDED (NOT CERTIFIED OR LABELED NON-CONDUCTIVE) HOSE

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.

OPERATING INSTRUCTIONS

PREPARATION FOR USE

PRINCIPLE OF OPERATION (See Figure 1. on next page)

1. The IP18 Intensifier boosts hydraulic pressure furnished from a portable hydraulic power source (such as the Stanley HPR Power Unit) to a maximum of 10,000 psi/690 bar.
2. The IP18 is connected to the portable hydraulic power source via HTMA/FHTMA Flush Faced Couplers and the existing supply and return hoses of the power source.
3. The IP18 must be only operated with a high pressure control valve (such as the Stanley RV06) connected between the IP18 and the hydraulic tool. The control valve permits "ON" and "OFF" and "FORWARD" and "REVERSE" of the hydraulic tool.

DANGER

The IP18 must be used with a control valve rated for 10,000 psi/690 bar! Hydraulic tools used with the IP18 must be rated for 10,000 psi/690 bar! Hoses, fittings, and couplers between the "OUTPUT PORTS" of the IP18, the "IN" and "OUT" ports of the control valve and the "IN" and "OUT" ports of the hydraulic tool must be rated for 10,000 psi/690 bar. Failure to follow this warning will result in damage to the equipment and may cause serious injury or death.

CHECK HYDRAULIC POWER SOURCE

1. Always check the hydraulic fluid level before starting the power source. If the tools to be used are not already filled with hydraulic fluid, they will be filled from the reservoir contained on the hydraulic power source. This can create a low hydraulic fluid supply at the power source and can result in damage to the hydraulic equipment.
2. Make certain that the hydraulic power source develops a flow of 3-8 gpm/12-30 lpm at 800-2200 psi/55-150 bar.
3. Make certain that the hydraulic power source is equipped with a relief valve set to open at 2200 psi/152 bar maximum.

QUICK DISCONNECT COUPLERS

E.H.T.M.A./H.T.M.A. approved quick disconnect couplings are only used between the hydraulic power source and the IP18. The direction of oil flow is always from the male to the female quick disconnect. Such couplings are rated for 2500 psi/172 bar.

High pressure couplings are used between the output of the IP18, the valve and the tool. High pressure couplings are not of the "quick disconnect" design but instead are threaded together to prevent accidental disengagement. Oil flow is normally from the female to the male. High pressure couplings must be rated at 10,000 psi/690 bar.

CONNECT HOSES (See Figure 1. On Next Page)

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

DANGER

DO NOT DISCONNECT ANY OF THE QUICK DISCONNECT FITTINGS WHILE THE CONTROL VALVE ON THE POWER SOURCE IS IN THE "ON" POSITION OR WHILE PRESSURE IS BEING MAINTAINED IN THE HIGH PRESSURE CIRCUIT. THIS CAN CAUSE OVER-PRESSURIZATION OF THE HYDRAULIC COMPONENTS AND MAY RESULT IN EQUIPMENT FAILURE AND SERIOUS BODILY INJURY OR DEATH.

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

1. Wipe all hose couplers with a clean lint free cloth before making hose connections.
2. Connect hydraulic lines from the hydraulic source to the intensifier "IN" and "OUT" ports.
3. Connect high pressure hydraulic lines from the control valve to the pressure "P" and return "R" ports of the IP18.
4. Connect high pressure hydraulic lines from the control valve to the tool making sure all connections are to their respective ports ("P" for pressure and "R" for return or "T" for tank).

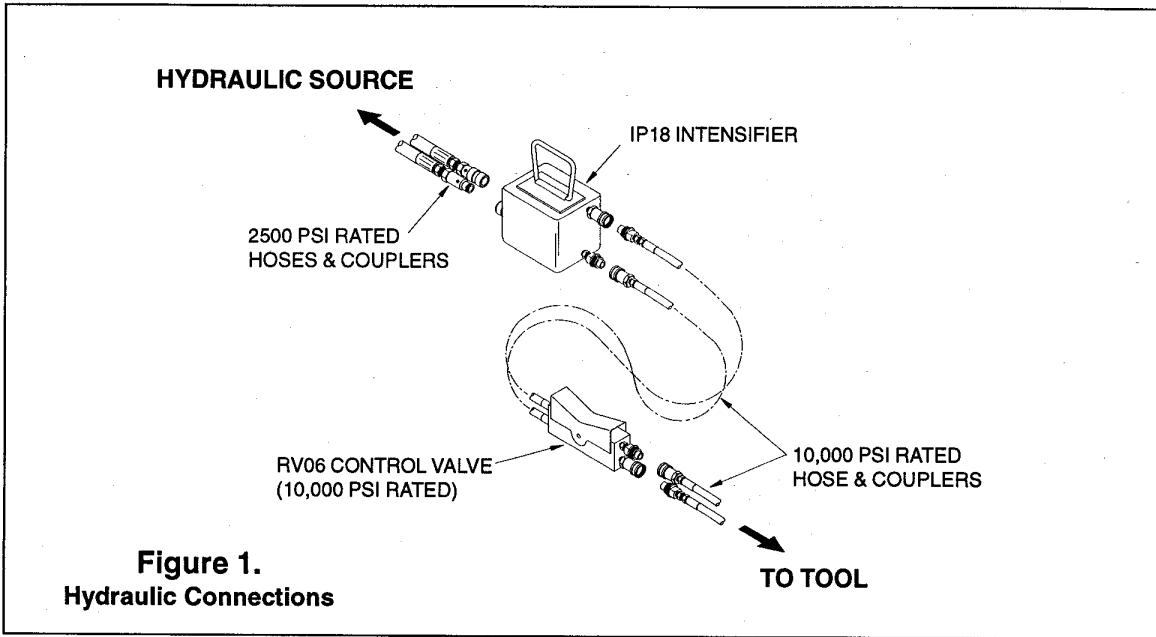


Figure 1.
Hydraulic Connections

TOOL OPERATION

1. Start the hydraulic power source and turn-on the hydraulic supply.
2. Operate the tool using the control valve in accordance with the instructions provided with the tool and control valve.

source be run at low idle long enough to bring the fluid temperature up to a minimum of 50°F/10°C or until the hydraulic filter feels warm.

2. If the tools and tool hoses are cold, it is recommended to allow hydraulic fluid to circulate through the tool hoses until warm before using the tools.

COLD WEATHER OPERATION

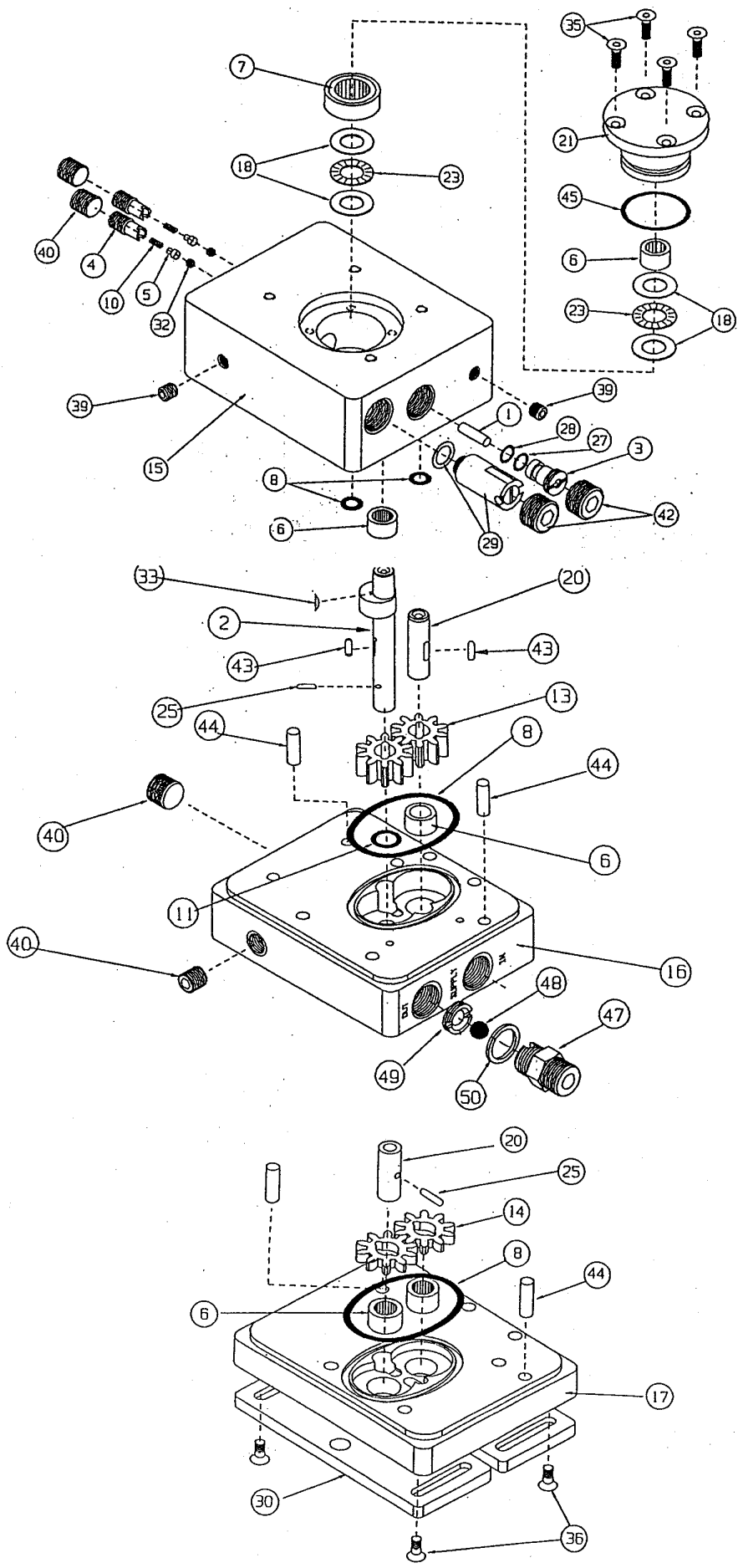
1. Hydraulic fluids are thicker in cold weather, therefore, it is recommended that the power

TROUBLE SHOOTING CHART

PROBLEM	CAUSE	REMEDY
No output.	Couplers or hoses blocked.	Remove obstruction.
	Input pressure and return line hoses reversed at ports.	Check that connections are to their respective ports.
	High pressure relief valve defective.	Have unit serviced by authorized dealer.
	Internal parts failure.	Have unit serviced by authorized dealer.


IP18 PARTS LIST

ITEM NO.	PART NO.	QTY	DESCRIPTION
1	32049	1	PISTON
2	32050	1	CAM SHAFT ASSY
3	32051	1	BUSHING (PRESSURE)
4	32052	2	CHECK VALVE BODY
5	32053	2	PINTLE
6	32054	6	SHAFT BEARING
7	32055	1	CAM BEARING ASSY
8	32056	2	O-RING (FACE SEAL)
9	32057	3	O-RING (HOLE SEAL)
10	32058	2	SPRING (PINTLE)
11	32059	2	O-RING (SHAFT SEAL)
12		-	No Item
13	32060	2	PUMP GEAR
14	32061	2	RETURN GEAR
15	32062	1	PRESSURE BLOCK
16	32063	1	PUMP BLOCK
17	32064	1	RETURN BLOCK
18	32065	4	THRUST WASHER
19		-	No Item
20	32066	1	SHAFT (IDLER, PUMP)
21	32067	1	INSERT (REAR)
22	32068	1	SHAFT (IDLER, RETURN)
23	32069	2	BEARING (THRUST)
24		-	No Item
25	32070	2	PIN (DRIVE)
26		-	No Item
27	32071	1	PARBAK RING
28	32072	1	O-RING (BUSHING)
29	32073	1	VALVE ASSY (PRES. REL)
30	32074	2	MOUNT
31	32075	1	HANDLE
32	01608	2	BALL (3/16, PRECISION)
33	32076	1	KEY (WOODRUFF #213)
34	32077	4	SCREW (10-32 X 1/2 SPS)
35	32078	4	SCREW (10-32 X 1/2 STAINLESS)
36	02487	4	SCREW, SHFH (1/4-20 X 1/2)
37	00120	6	SCREW (1/4-20 X 2 1/4 SHCS)
38	32079	6	LOCKWASHER (1/4 IN)
39	04119	5	1/16 NPT PLUG
40	01545	3	1/4 NPT PLUG
41		-	No Item
42	32080	2	1/2 NPT PLUG
43	32081	2	PINS (DRIVE)
44	04031	4	DOWELS (1/4 X 3/4)
45	32082	1	O-RING (REAR SEAL)
46	32083	2	PLUGS (PLASTIC STORAGE)
47	32084	1	REV. CHECK ADAPTER
48	12100	1	3/8 BALL
49	32085		BALL SEAT
50	32086	1	COPPER WASHER



SPECIFICATIONS

Input Flow Range 12-30 lpm / 3-8 gpm
 Input Pressure Range 55-150 bar / 800-2200 psi



 Weight (with oil) 4.4 kg / 9.75 lbs


Overall Length 16.5 cm / 6.5 in.

Overall Width 11.4 cm / 4.5 in.

Overall Height 11.4 cm / 4.5 in.

Relief Valve Setting (high pressure) 275-690 bar / 4000-10000 psi

  20 lpm @ 138 bar or 30 lpm @ 138 bar

 Sound Power Level Less than 70 dba

ACCESSORIES

PART NO.	DESCRIPTION
RV06001D	Rocker Valve with high pressure hoses and couplers
24069	HTMA Flush Face Coupler Set with 3/8 NPTF threads (male & female)
24070	HTMA Flush Face Coupler Set with 1/2 NPTF threads (male & female)
05338	High Pressure Coupler Body (female), 1/4 in. NPT
05337	High Pressure Coupler Nipple (male), 1/4 in. NPT
12838	Coupling Fitting, 1/4 in. NPT, 10,000 psi rated
05148	Pipe Nipple, 1/4 in. NPT, 10,000 psi rated
07040	Hose, 1/4 in. NPT, 10,000 psi rated, w/ guard (one only)
31655	Coupler Body (female), 10,000 psi rated, 3/8 in. NPT
31656	Coupler Nipple (male), 10,000 psi rated, 3/8 in. NPT
31657	Dust Cap
31658	Dust Cap
31659	Bushing, 10,000 psi rated, 1/4 in. NPT Female - 3/8 in. NPT Female
31660	Adapter, 10,000 psi rated, 1/4 in. NPT Male - 3/8 in. NPT Female
31661	Hex Nipple, 10,000 psi rated, 1/4 in. NPT

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

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: Any failure or performance deficiency attributable to excess hydraulic pressure, excess hydraulic back-pressure, or excess hydraulic flow.

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.

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.

SALES & SERVICE DIRECTORY

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