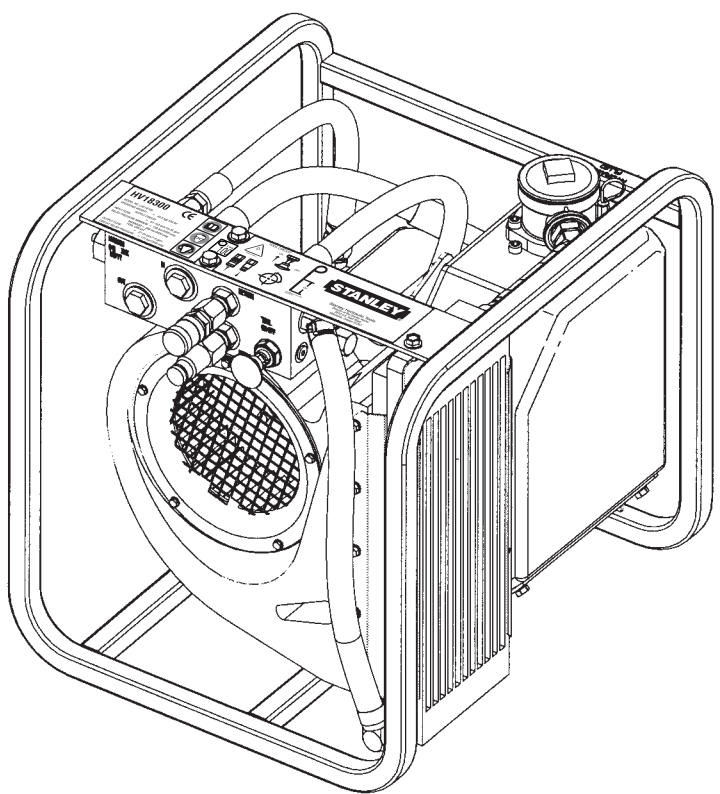




# User's Manual

# HV18 Hydraverter



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OPS USA & CE Version  
40404 1/2002 Ver. 1

**⚠ 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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# Table of Contents

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# HV18

## Hydraverter

### **SERVICING THE HV18 HYDRAVERTER**

This manual contains Safety, Operation, and Troubleshooting information. Stanley Hydraulic Tools recommends that servicing of hydraulic tools, other than routine maintenance, must be performed by an authorized and certified dealer. Please read the DANGER warning on the cover and the

Certificate of Conformity	3
Specifications	3
General Safety Instructions	4
Tools Decals and Tags	5
Hydraulic Hose Requirements	6
HTMA Requirements	7
Operating Instructions	8
Trouble Shooting	9
Parts Illustration	10
Parts List	11
Accessories	12
Warranty	13

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## **SAFETY FIRST**

***It is the responsibility of the operator and service technician to read rules and instructions for safe and proper operation and maintenance.***

***A cautious worker using common sense is the greatest safety device.***

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# Certificate of Conformity

---

I, the undersigned: Mellits, Kirk E.

Surname and First Names

hereby certify that the construction plant or equipment specified hereunder:

1. Category: **Hydraverter**

2. Make: **Stanley**

3. Type: **HV18300/ HV18301**

4. Type Serial Number of equipment: ALL

5. Year of manufacture: **Stamped on tool**

has been manufactured in conformity with- EEC Type examination as shown:

Directive/Date: **EN 982 (1992)**  
**EN ISO 3744 (1994)**

Approved body: **Self**

Date of expiration: **N/A**

6. Special Provisions: **None**

Done at: **Stanley Hydraulic Tools, Milwaukie, Oregon USA** Date: **2001**

Signature:

*Kirk E. Mellits*

Position: **Engineering Manager**

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## Specifications

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Weight \_\_\_\_\_ 109 lbs./49.5 kg  
Overall Length \_\_\_\_\_ 21.25 in./540 mm  
Overall Width \_\_\_\_\_ 19.25 in./489 mm  
Overall Height \_\_\_\_\_ 19.75 in./502 mm

### Supply Circuit

Input Flow

HV18300 \_\_\_\_\_ 16-35 gpm / 61-133 lpm

HV18301 \_\_\_\_\_ 13-25 gpm / 49-95 lpm

Relief Pressure \_\_\_\_\_ 2000 psi / 138 bar  
\_\_\_\_\_ 3000 psi / 206 bar

Max. Fluid Temp. \_\_\_\_\_ 200°F / 93°C

Port Size \_\_\_\_\_ -12 (3/4) SAE ORB

Max Back Pressure \_\_\_\_\_ 400 psi / 28 bar

### Tool Circuit

Circuit Relief Pressure \_\_\_\_\_ 2150 psi / 148 bar

Couplers \_\_\_\_\_ HTMA Flush Face Type Male & Female  
Per NFPA T3.20.15/ISO 16028

Connect Size & Type \_\_\_\_\_ 1/2 in. NPT

HTMA Class II \_\_\_\_\_ 7-9 gpm @ 2000 psi



EHTMA Category \_\_\_\_\_ 30 lpm @ 138 bar

Sound Power Level \_\_\_\_\_ 100 dBA

Vibration Level \_\_\_\_\_ N/A

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# General Safety Instructions

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

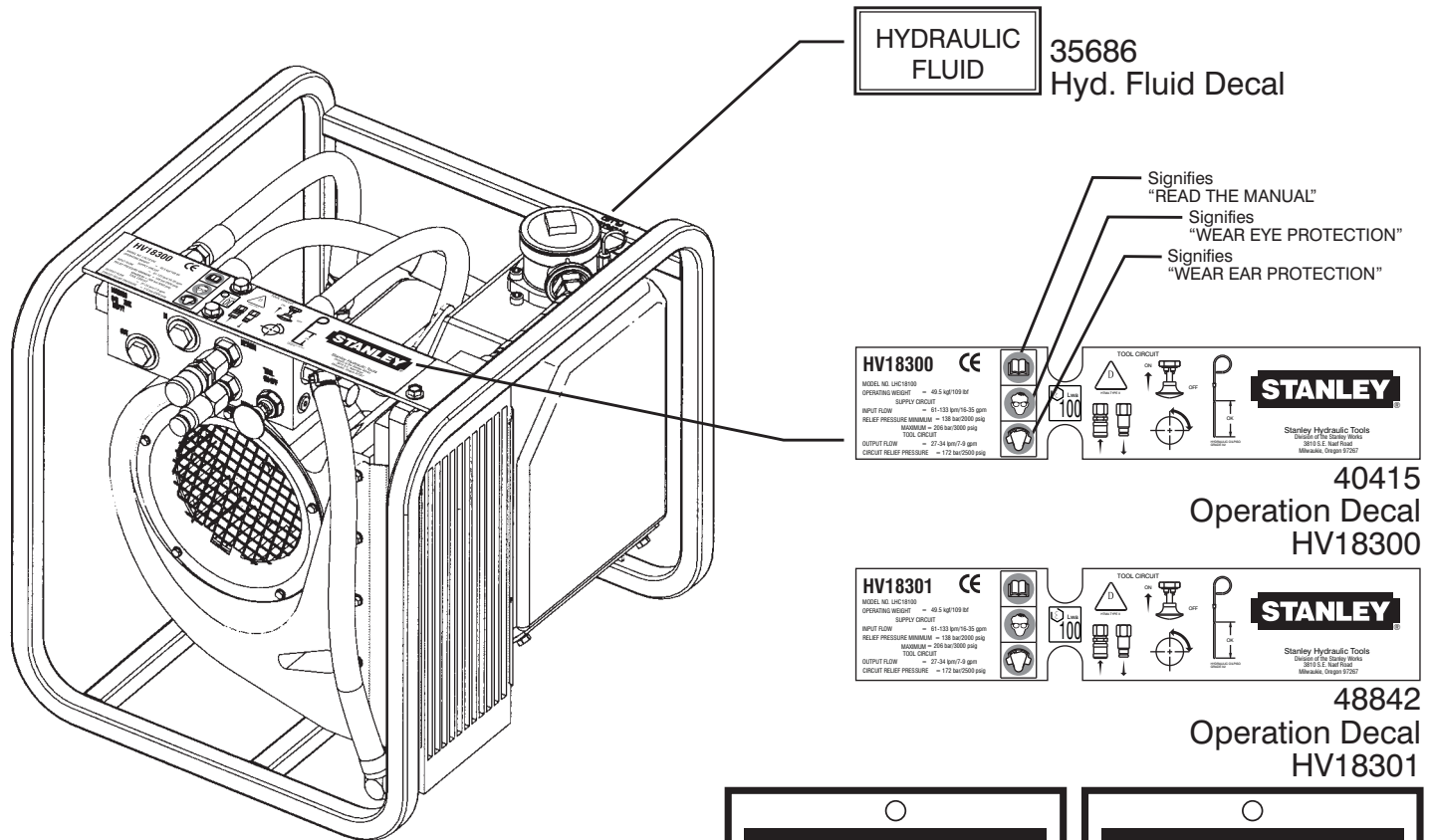


This tool will provide safe and dependable service if operated in accordance with the instructions given in this manual. Read and understand this manual and any stickers and tags attached to the tool and hoses before operation. Failure to do so could result in personal injury or equipment damage.

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

# Tool Decals & Tags

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



HYDRAULIC FLUID

35686  
Hyd. Fluid Decal

Signifies "READ THE MANUAL"  
Signifies "WEAR EYE PROTECTION"  
Signifies "WEAR EAR PROTECTION"

**HV18300** CE

MODEL NO. 18418300  
OPERATING WEIGHT = 45.5 kg/100 lb  
SUPPLY CIRCUIT  
INPUT FLOW = 61-83 gpm/18-32 gpm  
RELIEF PRESSURE MAXIMUM = 138 bar/2000 psi  
MAXIMUM = 258 bar/3800 psi  
TOOL CIRCUIT  
OUTPUT FLOW = 27-34 gpm/7-9 gpm  
CIRCUIT RELIEF PRESSURE = 172 bar/2500 psi

TOOL CIRCUIT

**STANLEY**

Stanley Hydraulic Tools  
Design of the Stanley Works  
600 E. 14th Street  
Milwaukee, Oregon 97507

40415  
Operation Decal  
HV18300

**HV18301** CE

MODEL NO. 18418300  
OPERATING WEIGHT = 45.5 kg/100 lb  
SUPPLY CIRCUIT  
INPUT FLOW = 61-83 gpm/18-32 gpm  
RELIEF PRESSURE MAXIMUM = 138 bar/2000 psi  
MAXIMUM = 258 bar/3800 psi  
TOOL CIRCUIT  
OUTPUT FLOW = 27-34 gpm/7-9 gpm  
CIRCUIT RELIEF PRESSURE = 172 bar/2500 psi

TOOL CIRCUIT

**STANLEY**

Stanley Hydraulic Tools  
Design of the Stanley Works  
600 E. 14th Street  
Milwaukee, Oregon 97507

48842  
Operation Decal  
HV18301

**DANGER**

- 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 ELECTRICAL 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.
- A HYDRAULIC LEAK OR BURST MAY CAUSE OIL INJECTION INTO THE BODY OR CAUSE OTHER SEVERE PERSONAL INJURY.
- A. DO NOT EXCEED SPECIFIED FLOW AND PRESSURE FOR THIS TOOL. EXCESS FLOW OR PRESSURE MAY CAUSE A LEAK OR BURST.
- B. DO NOT EXCEED RATED WORKING PRESSURE OF HYDRAULIC HOSE USED WITH THIS TOOL. EXCESS PRESSURE MAY CAUSE A LEAK OR BURST.
- C. CHECK TOOL, HOSE, COUPLERS & CONNECTORS DAILY FOR LEAKS. DO NOT FEEL FOR LEAKS WITH YOUR HANDS. CONTACT WITH A LEAK MAY RESULT IN SEVERE PERSONAL INJURY.

**IMPORTANT**

READ OPERATION MANUAL AND SAFETY INSTRUCTIONS FOR THIS TOOL BEFORE USING IT.

USE ONLY PARTS AND REPAIR PROCEDURES APPROVED BY STANLEY AND DESCRIBED IN THE OPERATION MANUAL.

TAG TO BE REMOVED ONLY BY TOOL OPERATOR.

(617) SEE OTHER SIDE 15875

**DANGER**

- DO NOT LIFT OR CARRY TOOL BY THE HOSES. DO NOT ABUSE HOSE. DO NOT USE KINKED, TORN OR DAMAGED HOSES.
- MAKE SURE HYDRAULIC HOSES ARE PROPERLY CONNECTED TO THE TOOL BEFORE PRESSURIZING SYSTEM. SYSTEM PRESSURE HOSE MUST ALWAYS BE CONNECTED TO TOOL "IN" PORT. SYSTEM RETURN HOSE MUST ALWAYS BE CONNECTED AT TOOL "OUT" PORT. REVERSING CONNECTIONS MAY CAUSE REVERSE TOOL OPERATION WHICH CAN CAUSE SEVERE PERSONAL INJURY.
- DO NOT CONNECT CLOSED-CENTER TOOLS TO OPEN-CENTER HYDRAULIC SYSTEMS. THIS MAY CAUSE EXTREME SYSTEM HEAT AND/OR SEVERE PERSONAL INJURY.
- DO NOT CONNECT OPEN-CENTER TOOLS TO CLOSED-CENTER HYDRAULIC SYSTEMS. THIS MAY RESULT IN LOSS OF OTHER HYDRAULIC FUNCTIONS POWERED BY THE SAME SYSTEM AND/OR SEVERE PERSONAL INJURY.
- BYSTANDERS MAY BE INJURED IN YOUR WORK AREA. KEEP BYSTANDERS CLEAR OF YOUR WORK AREA.
- WEAR HEARING, EYE, FOOT, HAND AND HEAD PROTECTION.
- TO AVOID PERSONAL INJURY OR EQUIPMENT DAMAGE, ALL TOOL REPAIR, MAINTENANCE AND SERVICE MUST BE PERFORMED BY AUTHORIZED AND 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.

(617) SEE OTHER SIDE 15875

The SAFETY TAG, P/N 15875, shown at right, smaller than actual size, is attached to the tool when shipped from the factory. Read and understand the safety instructions listed on this tag before removal. We suggest you retain this tag and attach it to the tool when not in use.

# 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 near electrical conductors.

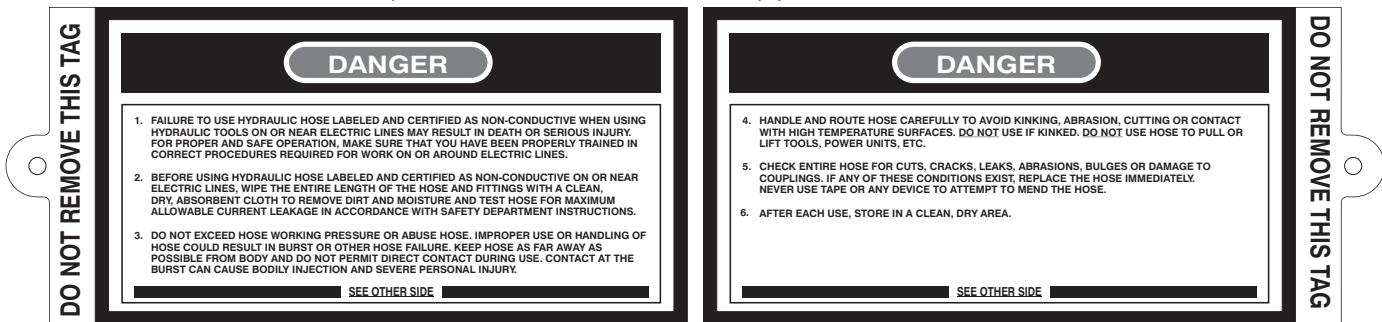
## HOSE SAFETY TAGS

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

If the information in a tag is illegible because of wear or damage, replace the tag immediately. A new tag may be obtained at no charge from your Stanley Distributor.

### This Tag attached to “Certified Non-Conductive” hose.

(shown smaller than actual size) p/n 27987

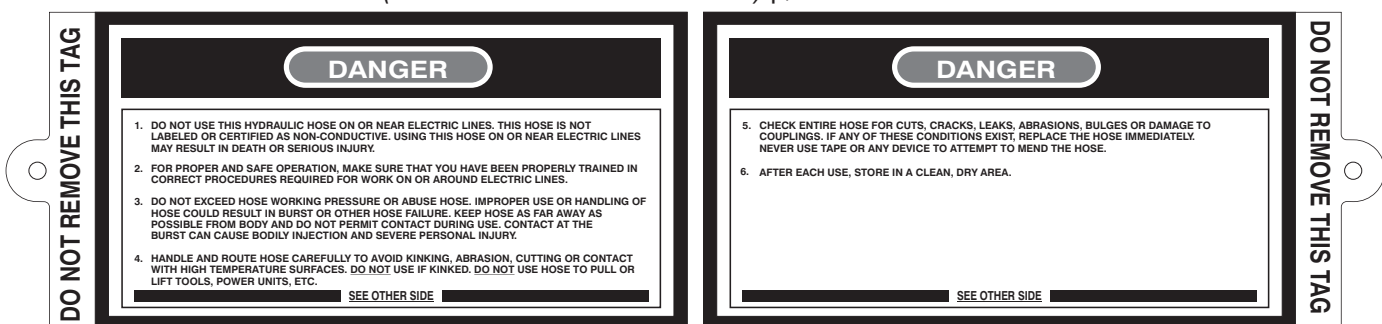


Side 1

Side 2

### This Tag attached to “Conductive” hose.

(shown smaller than actual size) p/n 29144



Side 1




Side 2

## HOSE PRESSURE RATING

The rated working pressure of the hydraulic hose must be equal to or higher than the relief valve setting on the hydraulic system.

# HTMA Requirements

## Tool Category

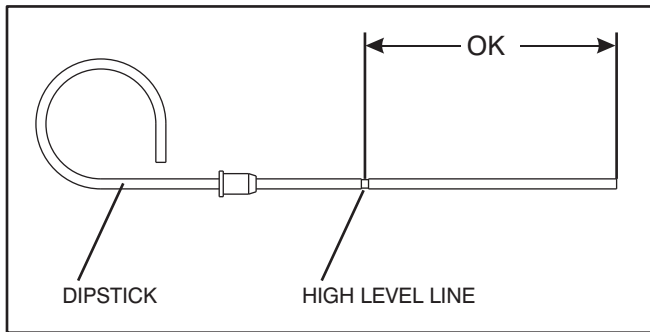
Hydraulic System Requirements				Type III
	Type I	Type II	Type III	Type III
<b>Flow rate</b> Tool Operating Pressure <i>(at the power supply outlet)</i>	4-6 gpm (15-23 lpm) 2000 psi (138 bar)	7-9 gpm (26-34 lpm) 2000 psi (138 bar)	10.5-11.6 gpm (36-44 lpm) 2000 psi (138 bar)	11-13 gpm (42-49 lpm) 2000 psi (138 bar)
<b>System relief valve setting</b> <i>(at the power supply outlet)</i>	2100-2250 psi (145-155 bar)	2100-2250 psi (145-155 bar)	2100-2250 psi (145-155 bar)	2100-2250 psi (145-155 bar)
<b>Maximum back pressure</b> <i>(at tool end of the return hose)</i>	200 psi (14 bar)	200 psi (14 bar)	200 psi (14 bar)	200 psi (14 bar)
Measured at a max. fluid viscosity of: <i>(at min. operating temperature)</i>	400 ssu* (82 centistokes)	400 ssu* (82 centistokes)	400 ssu* (82 centistokes)	400 ssu* (82 centistokes)
<b>Temperature</b> Sufficient heat rejection capacity to limit max. fluid temperature to: <i>(at max. expected ambient temperature)</i>	140° F (60° C)	140° F (60° C)	140° F (60° C)	140° F (60° C)
Min. cooling capacity at a temperature difference of between ambient and fluid temps	3 hp (2.24 kW) 40° F (22° C)	5 hp (3.73 kW) 40° F (22° C)	6 hp (4.47 kW) 40° F (22° C)	7 hp (5.22 kW) 40° F (22° C)
<b>NOTE:</b> Do not operate the tool at oil temperatures above 140° F (60° C). Operation at higher temperatures can cause operator discomfort at the tool.				
<b>Filter</b> Min. full-flow filtration Sized for flow of at least: <i>(For cold temp. startup and max. dirt-holding capacity)</i>	25 microns 18 gpm (68 lpm)	25 microns 30 gpm (114 lpm)	25 microns 35 gpm (132 lpm)	25 microns 40 gpm (151 lpm)
<b>Hydraulic fluid</b> Petroleum based <i>(premium grade, anti-wear, non-conductive)</i> Viscosity <i>(at min. and max. operating temps)</i>	100-400 ssu* (20-82 centistokes)	100-400 ssu* (20-82 centistokes)	100-400 ssu* (20-82 centistokes)	100-400 ssu* (20-82 centistokes)
<b>NOTE:</b> When choosing hydraulic fluid, the expected oil temperature extremes that will be experienced in service determine the most suitable temperature viscosity characteristics. Hydraulic fluids with a viscosity index over 140 will meet the requirements over a wide range of operating temperatures.				

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

# Operating Instructions

## Pre-operation Procedures

Check oil in reservoir. The end of the dipstick is the low level and the high level is at the line on the dipstick. If necessary fill the reservoir with ISO Grade 32 hydraulic oil.



Connect the pressure hose from the supply circuit to the **IN** port on the manifold and the return hose to the **OUT** port.

The recommended hose size for the supply hoses is 3/4 in. I.D. with 3000 psi working pressure.

## **⚠ WARNING**

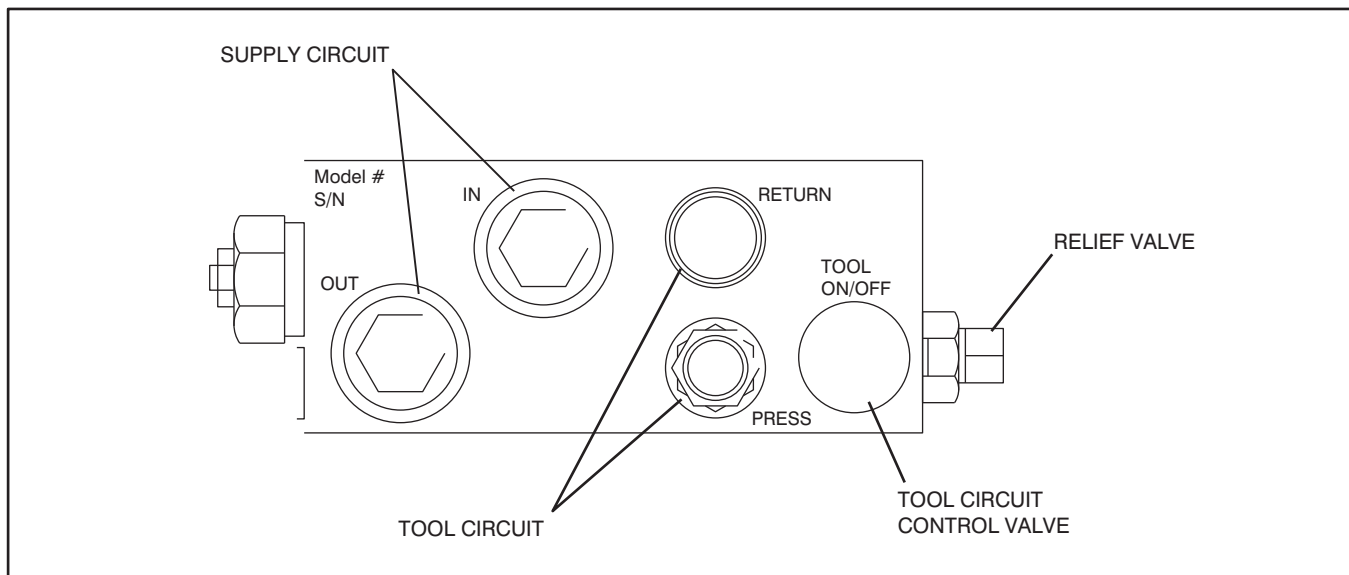
*Supply circuit relief setting must not exceed 3000 psi/207 bar. Higher pressures may cause personal injury and damage to the equipment.  
The rated working pressure of supply circuit hydraulic hoses must be equal or higher than the relief setting on the hydraulic system.*

## Operation

Turn the tool circuit control valve off by pulling the knob and turning until the detent pin is locked into the shallow groove.

Connect tool hoses to the couplers in the "PRESS" and "RETURN" ports. The recommended hose length is 25 ft. / 8 m with a 1/2 in. / 12.7 mm inside diameter. The hoses must have a working pressure rating of at least 2500 psi/175 bar. Also see "HYDRAULIC HOSE REQUIREMENTS" earlier in this manual.

Turn supply circuit on then turn tool circuit control valve on to enable tool circuit.





# Troubleshooting

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

## **WARNING**

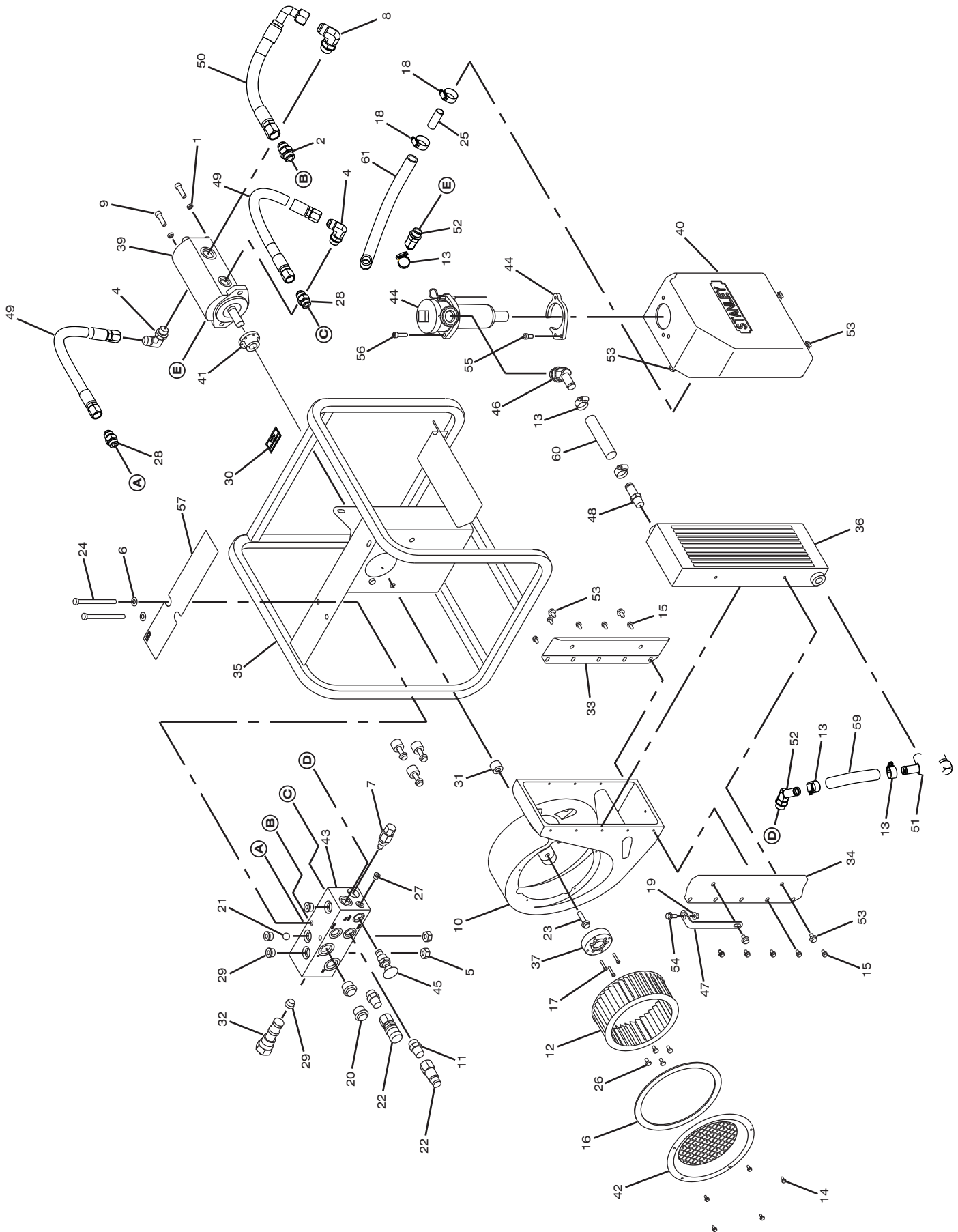
*Inspecting the tool or installing parts with the hydraulic hoses connected can result in severe personal injury or equipment damage.  
To prevent accidental startup, disconnect the hydraulic power before beginning any inspection or installation task.*

If symptoms of poor performance develop, the following chart can be used as a guide to correct the problem.

When diagnosing faults in operation of the tool, always check that the hydraulic power source is supplying the correct hydraulic flow and pressure to the tool as listed in the table. Use a flowmeter known to be accurate. Check the flow with the hydraulic oil temperature at least 80° F/27° C.

Symptom	Possible Cause	Solution
Pump / Motor does not run with supply circuit energized.	Supply hoses not connected properly.	Make sure hoses are connected to the proper ports. Pressure line must be connected to the "in" port
	Hydraulic supply source relief set too low.	Adjust system relief to 2000-3000 psi.
	Flow control valve damaged or out of adjustment.	Contact authorized dealer for service.
	Mechanical failure of pump / motor unit.	Replace pump / motor unit.
Tool circuit does not operate tools properly.	Relief valve set too low.	Adjust relief valve to 2100 - 2250 psi.
	Supply circuit does not provide enough hydraulic flow.	Make sure supply system provides at least 13 gpm @ 2000 psi on HV18301 and at least 16 gpm @ 2000 psi for HV18300
	Couplers or hose blocked.	Remove obstruction.
Tools get too hot.	Inlet screen or cooler clogged with debris.	Clean out inlet screen or cooler.

# HV18 Parts Illustration



# HV18 Parts List

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

	HV Item 18300	HV 18301	Description	QTY
1	00683		Lockwasher	2
2	02773		Str Thd Conn 12 F5 OX-	1
4	04321		Elbow 90 5/8	3
5	04353		Nut 3/8-16 ESNA	2
6	04585		Plainwasher 3/8 Plate	2
7	05043		Relief Valve	2
8	05967		Elbow 90 Deg 12 SAE	1
9	06151		Hshcs 3/8-16 UNC x 1-1	1
10	07783		Blower Housing	2
11	07882		Adapter-10 SAE 1/2 NTP	1
12	08035		Blower Wheel Modified	2
13	08045		Hose Clamp	1
14	08667		Tapping Screw-#10 x1/2	5
15	08668		Sheet Metal Screw #14	5
16	08669		Inlet Ring Gasket	10
17	10706		Hshcs 10-24 UNC x 1	1
18	11179		Clamp-worm Drive - 1.31	3
19	12787		Nut 5/16 - UNC Hex Flange	2
20	16800		Plstc.plug -10 Allian	1
21	18952		Steel Ball - 5/8 Dia	2
22	24070		Coupler Set 3/8 -1/2 NPT	1
23	24142		Hex Flange Bolt 3/8 x 1-1/2	1
24	27634		Hhcs 3/8-16 UNC x 4-1/2	4
25	27781		Suction Tube	2
26	27931		Hhcs 1/4-20 UNC x 1/2	1
27	350041		Hollow Hex Plug 4	4
28	350104		Straight Thread Connector	1
29	350237		Hollow Hex Plug	2
30	35686		Decal-Hyd. Fluid	4
31	35782		Spacer	1
32	37301		Flow Regulator	4
33	40053		Cooler Mount	1
34	40054		Offset Cooler Mount	1
35	40075		Weldment, Frame	1
36	40078		Oil Cooler	1
37	40079		Blower Hub	1
38	40080		Filter, In-tank	1
39	40081	48841	Pump / Motor	1
40	40082		Tank, Hydraulic	1
41	40083		Bushing QD-JA-3/4 in.	1
42	40084		Inlet Ring Assy	1
43	40089		Manifold	1
44	40133		Plate, Grip	1
45	40137		Valve, Directional	1
46	40364		Elbow,45deg-12 SAE-3/4	1
47	40401		Bracket, Angle	1
48	40405		Hose, Barb 1/2 NPT	1
49	40406		Hose 17 in.	1
50	40407		Hose 15-1/2 in.	2
51	40413		Elbow 90 Deg 1/2 NPT-3/4	1
52	40414		Elbow 45 Deg -10 SAE-3/4	1
53	40433		Bolt,hex Flange 5/16 x 1/2	2
54	40435		Bolt,hex Flange 5/16 x 3/4	7
55	43687		HSHCS M8 x 16	1
56	43688		HSHCS M8 x 30	1
57	40415	48842	Decal, Operation HV18	1
58	40404		Manual, Operation & Safety	1
59	52563		Hose 3/4 x 19 in.	1

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# Accessories

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**NOTE:**

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

<b>Part</b>	<b>Description</b>
43592	Filter Service Kit (Incl. Filter Element, Breather Element, Breather Cover and O-rings for Filter Bowl and Cap.)
40408	Filter Element (Part of P/N 43592)
51290	Supply Hose Kit (Only fits Carriers with 3/4 in. Faster Flush face couplers. Incl. Couplers and two 10 ft. Hoses.)

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# Warranty

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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 manner 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

*For additional Sales & Service information, contact:*



**Stanley Hydraulic Tools**  
**Division of the Stanley Works**  
3810 SE Naef Road  
Milwaukie, OR 97267 USA

Tel: (503) 659-5660  
Fax: (503) 652-1780  
Telex: 360771