

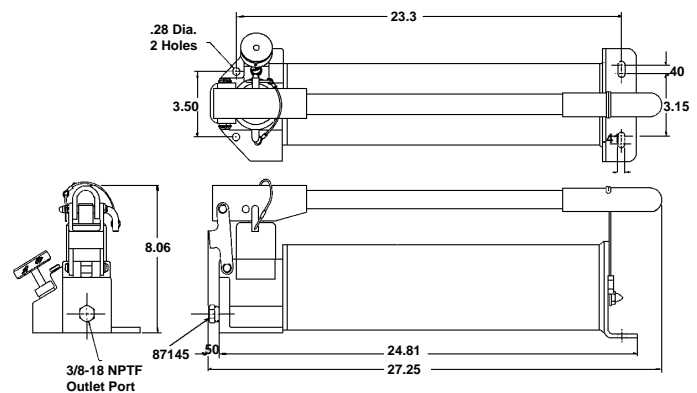


**HAND PUMP**  
**REPAIR PARTS SHEET**  
**OPERATING INSTRUCTIONS**  
 Revised 2-98

**P140**

**NOTE: Be sure to read these instructions completely before operating this pump. Failure to follow these instructions may result in personal injury or damage to the pump. Safety and Operating instructions are on the back of this page.**

**Figure 1 - Dimensions for P140**



**1. INTRODUCTION**

**Dirt** - This will quickly ruin any hydraulic system. Before hooking up a system, insure that couplings are clean and free of foreign matter. Dirt, sand, etc. can cause difficult assembly and premature wear to seals and steel components of your hydraulic equipment. After each use of the system, clean all couplings and assemble all dust caps.

**Air Bleeding** - Air in a hydraulic system can be hazardous because it is compressible. Before loading any cylinder, air must be bled from the system.

With single-acting and spring return cylinders, fully extend the unloaded piston. Invert cylinder and allow it to retract. Do this several times to purge all the air from the system. Note that the pump must be higher than the cylinder.

Air in the system can cause sluggish or hesitant action of the piston when extending or retracting. When air has been purged, cylinder action will be smooth and uniform.

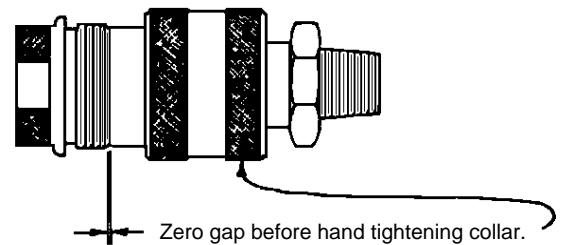
Air can enter your system in many ways, but the most common is by inadequate usable reservoir capacity. (Oil level drops below inlet and pump sucks air.)

**2. ASSEMBLY**

- a). Remove No. 87145 plug from the 3/8" NPT outlet ports located at the front of the pump. (See figure 1).
- b). Assemble hose or quick-disconnect couplings at this port.

- c). Connect hose to cylinder or ram.
- d). All Simplex cylinders are equipped with quick-disconnect couplings. These couplings make assembly of your system simple and quick. These couplings must be assembled by hand. If wrenches or pliers seem to be necessary for assembly, you are doing something wrong. If couplings will not fully engage (See figure 2 for proper engagement), open the **release screw** to release any pressure that may have built up.

**Figure 2**



- e). The reservoir is not vented so there is no need to open any air vents prior to using the pump.

# SAFETY

## **A. WORKING PRESSURE**

The pump's maximum working pressure is 10,000 PSI (700 kg/cm<sup>2</sup>). Make sure that all hydraulic equipment such as rams, hoses, etc. used with this pump are rated at 10,000 PSI operating pressure.

## **B. HYDRAULIC CONNECTIONS**

Never disconnect or connect any hydraulic hoses or fittings without first unloading the ram, then shift, or open all hydraulic controls several times to assure that the system has been depressurized. If the system includes a gauge, double check the gauge to assure pressure has been released.

When making connections with quick-disconnect couplings, make sure the couplings are fully engaged. Threaded connections such as fittings, gauges, etc. must be securely tightened and leak free.

DO NOT overtighten connections. Connections need only be secure and leak free. Overtightening can cause premature thread failure.

CAUTION: Loose or cross threaded fittings can be potentially dangerous if pressurized. Never hold or stand directly in line with any hydraulic connections while pressurizing. Never grab, touch or in any way come in contact with a hydraulic pressure leak. Escaping oil can penetrate the skin and a serious injury can result.

## **C. JACKING SAFELY**

You should know the weight of what you intend to lift and choose a ram with at least 10% more capacity. The ram must be placed on a solid foundation so that the base of the ram is fully supported. The load must be centered on the ram, or equally distributed on multiple rams. Off-center loading can result in the ram slipping out and loss of the load. Never crawl or place any part of your body under any load at any time. Insert blocking or cribbing under the load as you lift. Hydraulic rams are meant for lifting only and should not be used to support the load for any period of time. You should obtain and be familiar with the American National Standards Institute rules that apply to hydraulic rams and jacks (ANSI B30.1).

## **D. HOSES**

DO NOT DROP HEAVY OBJECTS ON HOSE. A sharp impact may kink wire strands on which the strength of the hose depends.

AVOID SHARP KINKS IN HOSE. Never apply pressure when hose is swung in sharp curves or when the hose is visibly kinked.

KEEP AWAY FROM FIRE AND HEAT. Keep your equipment away from excessive heat which tends to soften packings and cause leakage. Heat also weakens the structure of hose and packings. For best performance, DO NOT expose equipment to temperatures above 160° F.

# OPERATING INSTRUCTIONS

**A.** Be sure the pump reservoir is full of hydraulic oil.

**B.** Operate pump handle several times with the release screw assembly (#88495) open to remove air from the system and to prime the pump. Hand-tighten the release screw to advance the ram. Opening the release screw releases pressure for retracting the ram.

NOTE: Use caution when releasing a loaded ram. Be sure all personnel are clear of the load. Open the release screw slowly to prevent dropping the load.

**NEVER FILL THE RESERVOIR UNLESS THE CONNECTED RAMS ARE FULLY RETRACTED.**

# MAINTENANCE

Completely change oil at least twice a year. The following conditions require more frequent oil changes:

- a. Rigorous duty, where oil may leak out or become contaminated.
- b. High humidity environment and extreme changes in temperature that can result in condensation inside the reservoir.
- c. Dirty or dusty environments that may contaminate the oil.

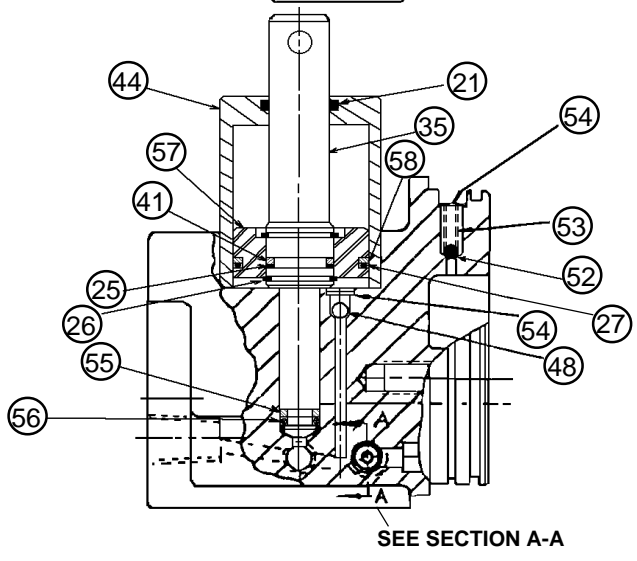
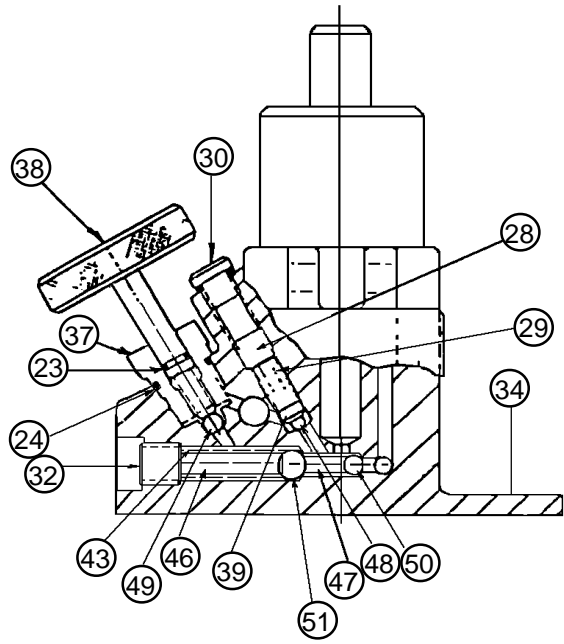
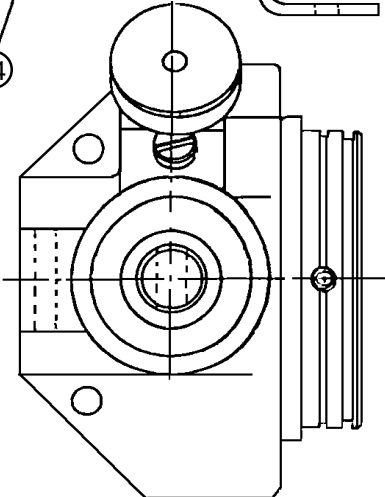
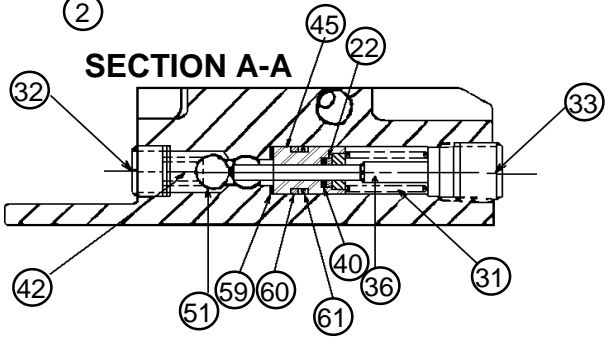
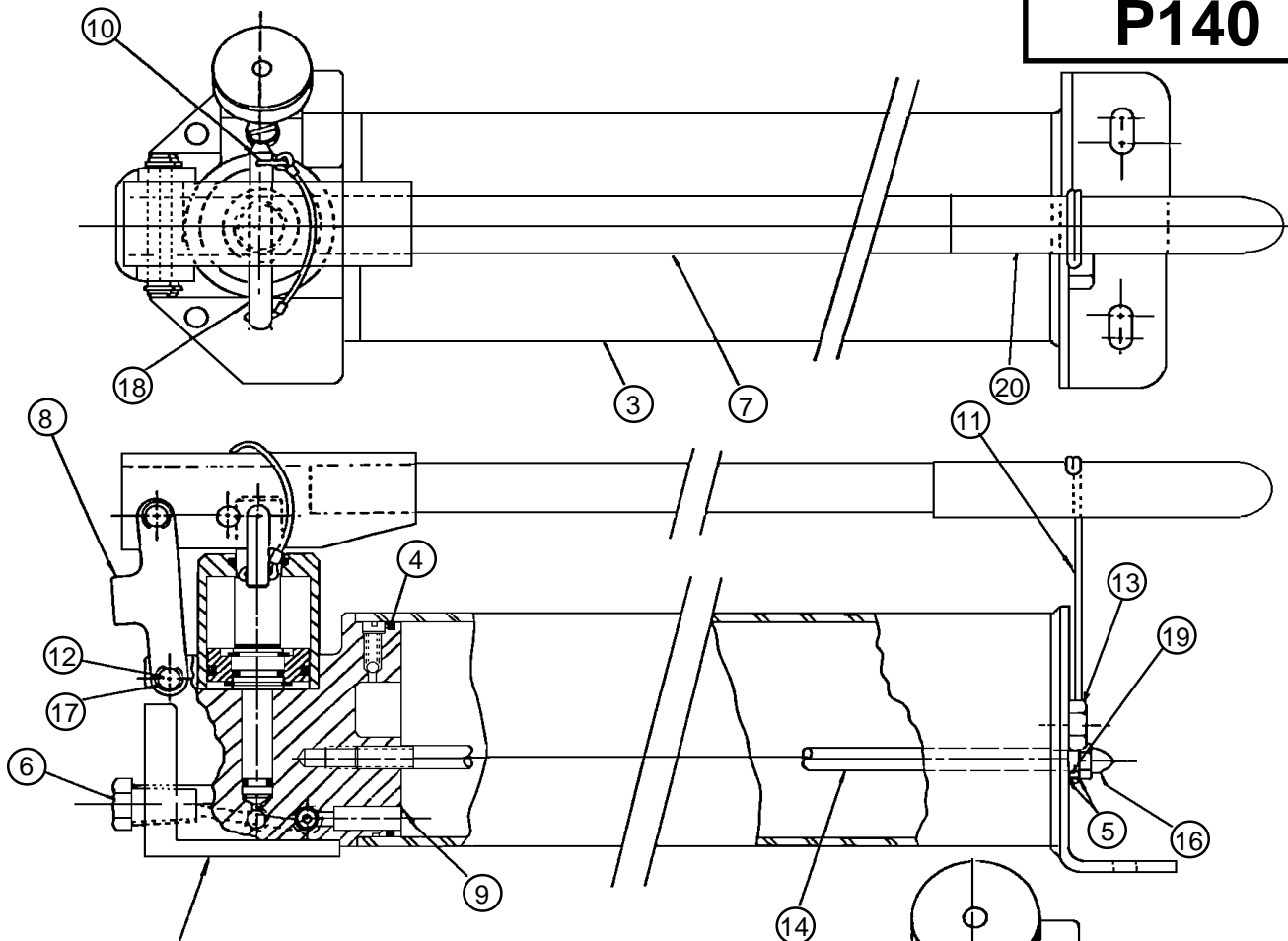
Flushing the pump. If you suspect your pump has been contaminated or discover sludge or other deposits on internal components, you should thoroughly flush the pump.

- a. Remove the old oil from the reservoir, then thoroughly clean the reservoir and refill with a clean, nonflammable flushing oil.
- b. Reassemble the pump head to the reservoir and pump the pump handle approximately 50 times with the release screw open.
- c. Empty the reservoir and refill with clean Simplex oil.

ITEM	DESCRIPTION	CONTROL NUMBERS	QUANTITY
		P140	
1	Hydraulic Oil	18139	
2	Pump Body ASM	35112	1
3	Reservoir Weld	35109	1
4	O-Ring	*	1
5	Gasket	85726	2
6	Hex Pipe Plug	87145	1
7	Handle Weld	88477	1
8	Pump Link	88478	1
9	Intake Screen	88481	1
10	Hair Cotter Pin	88483	1
11	Handle Latch	88484	1
12	Pin	88486	2
13	Oil Fill Plug	88743	1
14	Tie Rod	88479	1
15	Decal	88510	1
16	Acorn Nut	88511	1
17	Pin Clip	92540	4
18	Lock Pin	88530	1
19	Spacer Latch	88622	1
20	Handle Grip	95039	1
21	Wiper	*	1
22	2-008 O-Ring	*	1
23	2-010 O-Ring	*	1
24	2-113 O-Ring	*	1
25	O-Ring	*	1
26	Retaining Ring	88528	2
27	O-Ring	*	1
28	Adjusting Screw	66083	1
29	Rel. Valve Spring	66085	1
30	Plug SAE #4 With O-Ring	*	1
31	Spring	88529	1
32	Pipe Plug	82552	2
33	Pressure Plug	84084	1
34	Pump Body	88425	1
35	Piston Pump	88491	1
36	Piston Unloading	88493	1
37	Release Gland	88494	1
38	Release Screw Asm.	88495	1
39	Spring Cap	88497	1
40	Back-Up Washer	*	1
41	Back-Up Washer	*	1
42	Compression Sp.	88500	2
43	Compression Sp.	88501	1
44	Piston Cylinder	88525	1
45	Cartridge Assembly	89061	1
46	Spacer Out. Ball	88717	1
47	Spacer In. Ball	88718	1
48	Ball 3/16	90548	2
49	Ball Bearing	92526	1
50	Ball Bearing	92549	1
51	Ball Bearing	92550	2
52	3/16 Dia. Rubber Ball	88827	1
53	Spring	88828	1
54	Retaining Ring	88835	2
55	Back-Up Washer	*	1
56	O-Ring	*	1
57	Piston Gland	88526	1
58	Back-Up Washer	*	1
59	Shim	89063	2
60	B-Up Ring	5608012	1
61	O-Ring	*	1
	Packing Kit	54385	1

\* Included in Packing Kit

# P140



SEE SECTION A-A