

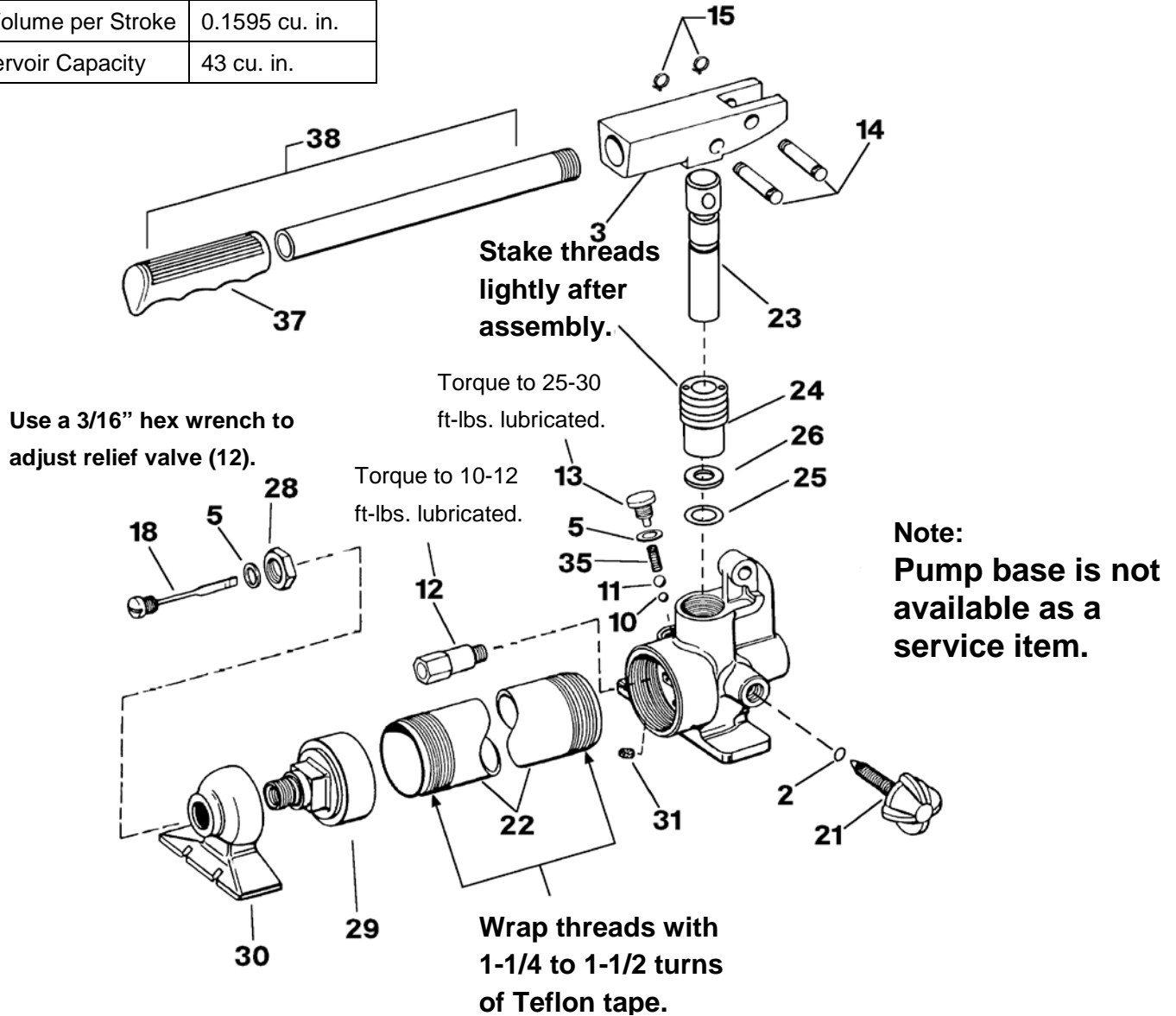


# Repair Parts Sheet

## Model 10508

### SPECIFICATIONS

Operating Pressure	10,000 psi max.
Relief Valve Setting	10,000 psi
Oil Volume per Stroke	0.1595 cu. in.
Reservoir Capacity	43 cu. in.



**INSTALL ALL KIT COMPONENTS TO INSURE A COMPLETE AND PROPER REAIR OF THE PUMP**

<b>REPAIR PARTS LIST</b>							
<b>Item</b>	<b>Part Number</b>	<b>Quantity</b>	<b>Description</b>	<b>Item</b>	<b>Part Number</b>	<b>Quantity</b>	<b>Description</b>
2	*	1	O-Ring	23	DA8954900SR	1	Piston Link Assembly
3	B113060-1	1	Beam	24	DA6853446SR	1	Piston Sleeve (Inc. item 25 and 26)
5	*	2	Gasket	25	*	1	O-Ring
10	*	1	Ball	26	*	1	Teflon Back-Up Ring
11	*	1	Ball	28	P75181	1	Lock Nut
12	DA8802900SR	1	Relief Valve Assembly	29	P75266-1	1	Reservoir Cap
13	K3006SR	1	Valve Plug (Includes items 5,10, 11, and 35)	30	P76267-1	1	Pump Rest
14	DC106061SR	2	Beam Pin (Inc. two of item 15)	31	*	1	Oil Strainer
15	*	4	Retaining Ring	35	*	1	Spring
18	B110900SR	1	Filler Plug (Inc. item 5)	37	CL343550	1	Grip
21	DA8786900SR	1	Release Valve (Inc. item 2)	38	C7900SR	1	Handle/Grip Assembly
22	P1625	1	Reservoir				
* Items included in and available only as part of Repair Kit P39K4.							

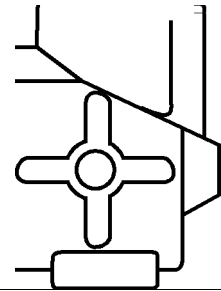




# Instruction Sheet

## Hydraulic Hand Pump 10508

Visually inspect all components for shipping damage. If any shipping damage is found, notify carrier at once. Shipping damage is NOT covered by warranty. The carrier is responsible for all repair or replacement costs resulting from damage in shipment.



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### SPECIFICATIONS


Maximum Pressure Rating psi [bar]	Oil Volume per Stroke in <sup>3</sup> [cm <sup>3</sup> ]	Usable Oil Capacity in <sup>3</sup> [cm <sup>3</sup> ]	Operating Position
10,000 [700]	.16 [2.62]	43 [705]	horizontal or vertical

## SAFETY INFORMATION

Read and follow all CAUTIONS, WARNINGS, and INSTRUCTIONS included with each product to avoid personal injury or property damage during system operation. ESCO CANNOT BE RESPONSIBLE FOR DAMAGE OR INJURY RESULTING FROM UNSAFE USE OF PRODUCT, LACK OF MAINTENANCE, OR INCORRECT PRODUCT AND SYSTEM APPLICATION.

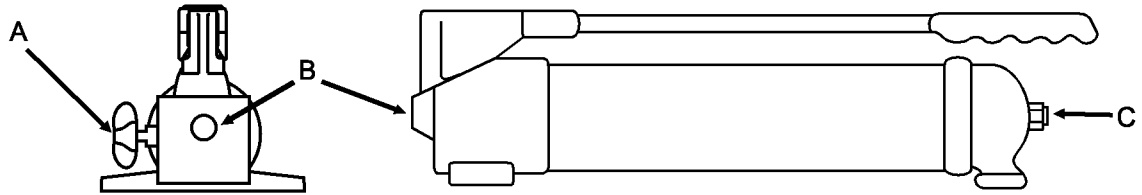
-  **CAUTION**  
Always use the handle to carry the pump. Carrying the pump by the hose may damage the hose and/or the pump.
-  **WARNING**  
Make sure that all system components are protected from external sources of damage, such as excessive heat, flame, moving machine parts, sharp edges, and corrosive chemicals.
-  **WARNING**  
Wear proper personal protective gear when operating hydraulic equipment.
-  **WARNING**  
Always check product limitations regarding pressure ratings, load capacities, and set-up requirements. The system operating pressure must not exceed the pressure rating of the lowest rated component in the system.
-  **WARNING**  
**NEVER** set the relief valve to a higher pressure than the maximum rated pressure of the pump. Higher settings may result in equipment damage and/or personal injury. See chart on page 1 to find the maximum pressure rating for your pump.

as to safety precautions, or applications.

-  **WARNING**  
These pumps are operated with a non-vented reservoir. If the reservoir is subjected to high pressure, the casing may rupture, causing personal injury and/or equipment damage. **NEVER** attempt to return more oil to the reservoir than it is capable of holding.

**DESCRIPTION**

Figure 1 and the corresponding table below show the main components of these hand pump models.



**Figure 1**

<b>A</b>	Release Valve
<b>B</b>	$\frac{3}{8}$ NPTF Outlet Port
<b>C</b>	Fill Plug

## INSTALLATION

### Connecting the Pump

1. Thread hose into pump outlet. Use 1 1/2 wraps of Teflon tape (or suitable thread sealant) on hose fitting, leaving the first complete thread free of tape to ensure that tape does not shed into hydraulic system, causing damage. Trim loose ends.
2. Install a pressure gauge in-line from the pump for added safety and better control.
3. Connect the hose to your cylinder or tool.

## OPERATION

### Before Using the Pump

1. Check all system fittings and connections to be sure they are tight and leak free.
2. Check oil level in reservoir before operating pump. See "Adding Oil to the Pump" on page 4.



**CAUTION**  
**NEVER** add extensions to pump handle. Extensions cause unstable pump operation.



**WARNING**  
In certain situations the pump handle can "kick back". Always keep your body to the side of the pump, away from the line of force of the handle.

**NOTE:** To reduce handle effort at high pressure, take short strokes. Maximum leverage is obtained in the last 5 degrees of stroke.

**NOTE:** When operating the pump in the vertical position, the hose end must be pointed down, or the pump will pick up air and will not build pressure properly.

### Single-Acting Applications with Release Valve

1. Close release valve by turning clockwise as shown in Figure 2.

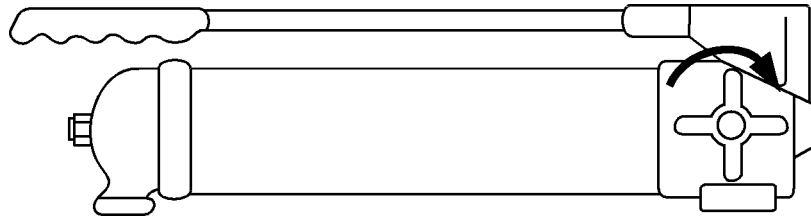


Figure 2



**CAUTION**  
Close release valve finger tight **ONLY**. Using tools on release valve can damage it and cause the pump to malfunction.

Operate pump handle to deliver hydraulic power to system. Pressure will be maintained until release valve is opened.

3. Open release valve (turn counter-clockwise) to release pressure, allowing oil to flow back to the reservoir.

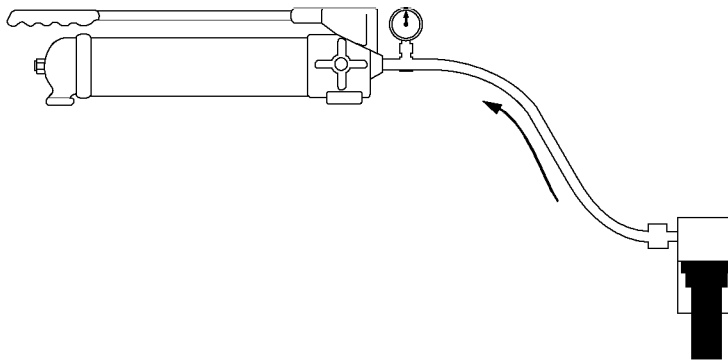
## Air Removal

Removing air from the hydraulic system will help the cylinder to advance and retract smoothly.

### Pump With Single-Acting Cylinder (A):

1. Close release valve.
2. Position pump at higher elevation than cylinder.
3. Position cylinder with the plunger end down (up if using pull cylinder). See Figure 3. 4. Operate pump to fully extend the cylinder (retract if using pull cylinder).
5. Open release valve to retract cylinder (extend if a pull cylinder). This will force the trapped air to move up to the pump reservoir.
6. Repeat the above steps as necessary. 7.

Add oil if necessary.



**Figure 3**

## MAINTENANCE

### Adding Oil to the Pump

Check oil level regularly.

**WARNING**  
 Always add oil with cylinders fully retracted (extended if pull cylinders) or the system will contain more oil than the reservoir can hold.

1. Remove vent/fill cap from reservoir.
2. Fill reservoir only to level mark shown on pump.
3. Remove air from system if necessary. Recheck oil level after removing air.
4. Return vent/fill cap to proper position.

**NOTE:** Non-vented hand pumps require air in the reservoir to function properly. If the reservoir is completely filled, a vacuum will form preventing oil from flowing out of the pump.

**Keeping Oil Lines Clean**

When coupler halves are disconnected, always screw on dust caps. Use every precaution to guard unit against entrance of dirt because foreign matter may cause pump, cylinder, or valve failure.

**Lubricating the Pump**

To extend pump life and improve performance, lubricate the beam pin (A), cross pin (B), and piston head (C) regularly, using roller bearing grease. See Figure 4 below.

**Changing the Oil**

1. Drain all oil and refill with clean oil every 12 months. If pump is used in dirty environments, change the oil more often.
2. Remove vent/fill cap or plug from reservoir. 3. Tilt pump to drain out old oil.
4. Fill reservoir only to level mark shown on pump. 5. Replace the vent/fill cap or plug. 6. Dispose of used oil properly.

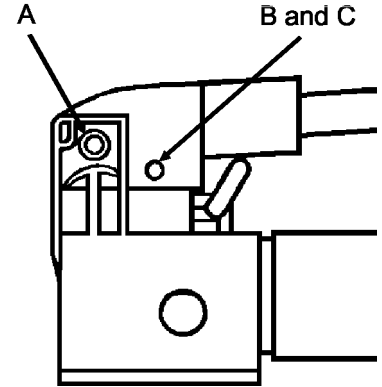


Figure 4

**TROUBLESHOOTING GUIDE**

The following information is intended as an aid in determining if a problem exists. For repair service, contact the Authorized ESCO Service Center in your area.

Problem	Possible Cause	Solution
Cylinder does not advance, advances slowly, or advances in spurts.	Oil level in pump reservoir is low.	Add oil according to the Maintenance instructions on page 4.
	Release valve open.	Close the release valve.
	Loose hydraulic coupler.	Check that all couplers are fully tightened.
	Load is too heavy.	Do not attempt to lift more than rated tonnage.
	Air trapped in system.	Remove air according to the instructions on page 4.
	Cylinder plunger binding.	Check for damage to cylinder. Have cylinder serviced by a qualified hydraulic technician.
Cylinder advances, but does not hold pressure.	Leaking connection.	Check that all connections are tight and leak free.
	Leaking seals.	Locate leak(s) and have equipment serviced by a qualified hydraulic technician.
	Internal leakage in pump.	Have pump serviced by a qualified hydraulic technician.
Cylinder does not retract, retracts part way, or retracts more	Release valve closed.	Open release valve.
	Pump reservoir is over-filled.	Drain oil level to full mark. See page 4 instructions for adding oil.
	Loose hydraulic coupler.	Check that all couplers are fully tightened.
	Air trapped in system.	Remove air according to the instructions on page 4.
	Hose I.D. too narrow.	Use larger diameter hydraulic hose.



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slowly than normal.	Cylinder retraction spring broken or other cylinder damage.	Have cylinder serviced by a qualified hydraulic technician.
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