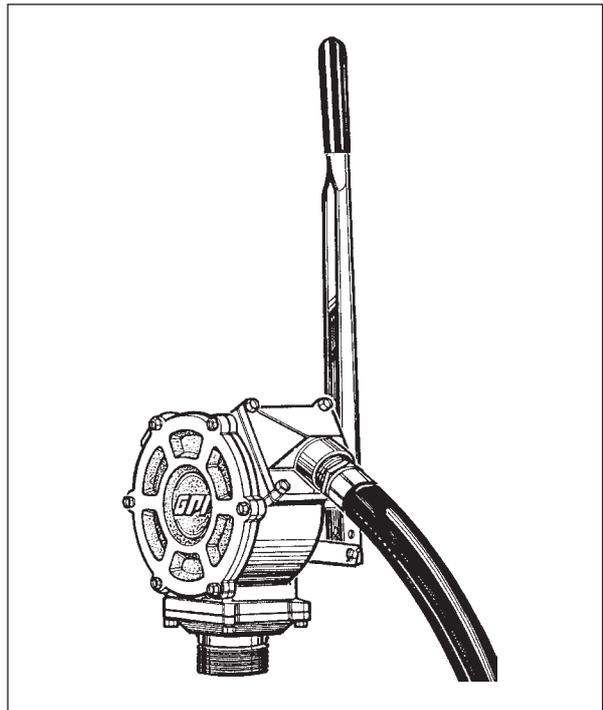


# HP-100 Dual-Flo<sup>®</sup> Petroleum Hand Pump

## Owner's Manual



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### GENERAL INFORMATION

The GPI HP-100 DUAL-FLO<sup>®</sup> Petroleum Hand Pump is designed to manually pump petroleum products compatible with aluminum and Buna-N. The user has the flexibility of operating the pump at two flowrates. A setting of 1/2-gallon provides faster high-capacity flow. A 1/4-gallon setting allows for easier pumping of fluids. The HP-100 Hand Pump is designed for use on a tank with a 2-inch bung.

#### Read Me!

- Observe standard precautions when handling fuel.
- Keep fuel away from open flame or spark.
  - Do not refuel vehicles or equipment with engines running or while equipment engine is hot.
  - Do not smoke while refueling.

Use the HP-100 Hand Pump only with diesel fuel (biodiesel blends B20), gasoline (alcohol blends E15), hydraulic fluid, kerosene and oil (up to 30 wt.). This equipment should not be used to pump chemicals.



**WARNING**  
This product shall not be used for pumping fuel or other liquids into aircraft.

## INSTALLATION

Use the following procedures to install the HP-100 Hand Pump on a tank with a 2-inch bung.

### Install Suction Pipe

1. Remove the two protective plugs from the pump inlet and outlet ports.
2. Wrap the threaded end of the suction pipe with 3 to 4 turns of Teflon® tape.
3. Insert the suction screen into the inlet cover.
4. Place the spacer in the inlet cover to secure the inlet screen.
5. Install the suction pipe into the inlet cover and tighten firmly with a pipe wrench.

### Install Pump on Tank

1. Before installing the pump, clean the tank interior of all dirt and foreign material.
2. Lubricate the threads of the inlet cover with Teflon® tape or a thread-sealing compound approved for use with petroleum fuels.
3. Extend the adjustable suction pipe to its full length and carefully insert it into tank opening. The suction pipe will adjust to the length needed and rest on the bottom of tank.

NOTE: The suction pipe supplied has a variable length of 22 to 40 inches. If additional length is needed, order the 15-inch Suction Pipe Extension Kit.

4. Thread the inlet fitting of the pump onto the tank and turn the pump to tighten snugly.

NOTE: To prevent the buildup of pressure and possible fuel leakage through the nozzle, make sure the tank is vented.

### Install Hose and Nozzle Assembly

Apply 3 to 4 wraps of Teflon® tape to the threaded end of the hose and hand-tighten into the outlet cover until snug.

### Install Handle

The HP-100 Hand Pump gives the operator a choice of two flow settings:

- 1/4 gallon setting has low resistance and pumps 1/4 gallon per stroke cycle.
- 1/2 gallon setting has higher resistance and pumps 1/2 gallon per stroke cycle.

Volume per stroke is determined by connecting the piston shaft to the appropriate handle setting as outlined below.

NOTE: Clevis pins may be installed from either side of handle.

1. Slide the handle grip onto the pump handle.
2. To install the links on the pump, insert a long clevis pin through the link ends and the pump's link holes. Secure with a small cotter pin. (Figure 1)



Figure 1

3. Attach the free ends of the links to the bottom, outer surfaces of the handle. Insert a long clevis pin through the holes on both links and the lowest hole on the handle. Secure with a small cotter pin. (Figure 2)

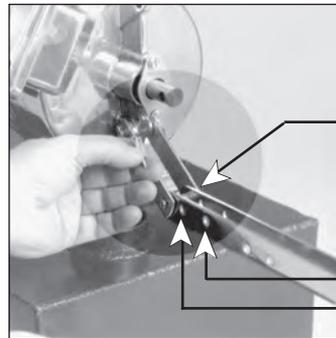


Figure 2

4. Insert a screwdriver in the piston shaft of the pump and pull the piston out. Install the shaft on the handle at either piston hole by placing a short clevis pin through the handle and the piston shaft end and securing with the hitch clip pin.

NOTE: Select the upper piston hole on the handle for the 1/2-gallon setting (Figure 3) or the lower piston hole for the 1/4-gallon setting. Flow settings can be changed at any time by repositioning the piston shaft on the handle.

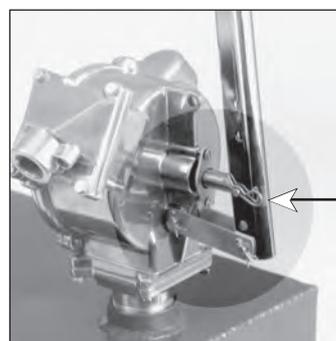


Figure 3

NOTE: Lock the handle to the pump by pushing the handle against the pump and inserting a padlock through either of the top holes in the handle and through the pump's lock hole. (Figure 4)



Figure 4

## OPERATION & MAINTENANCE

### To Dispense Fluid

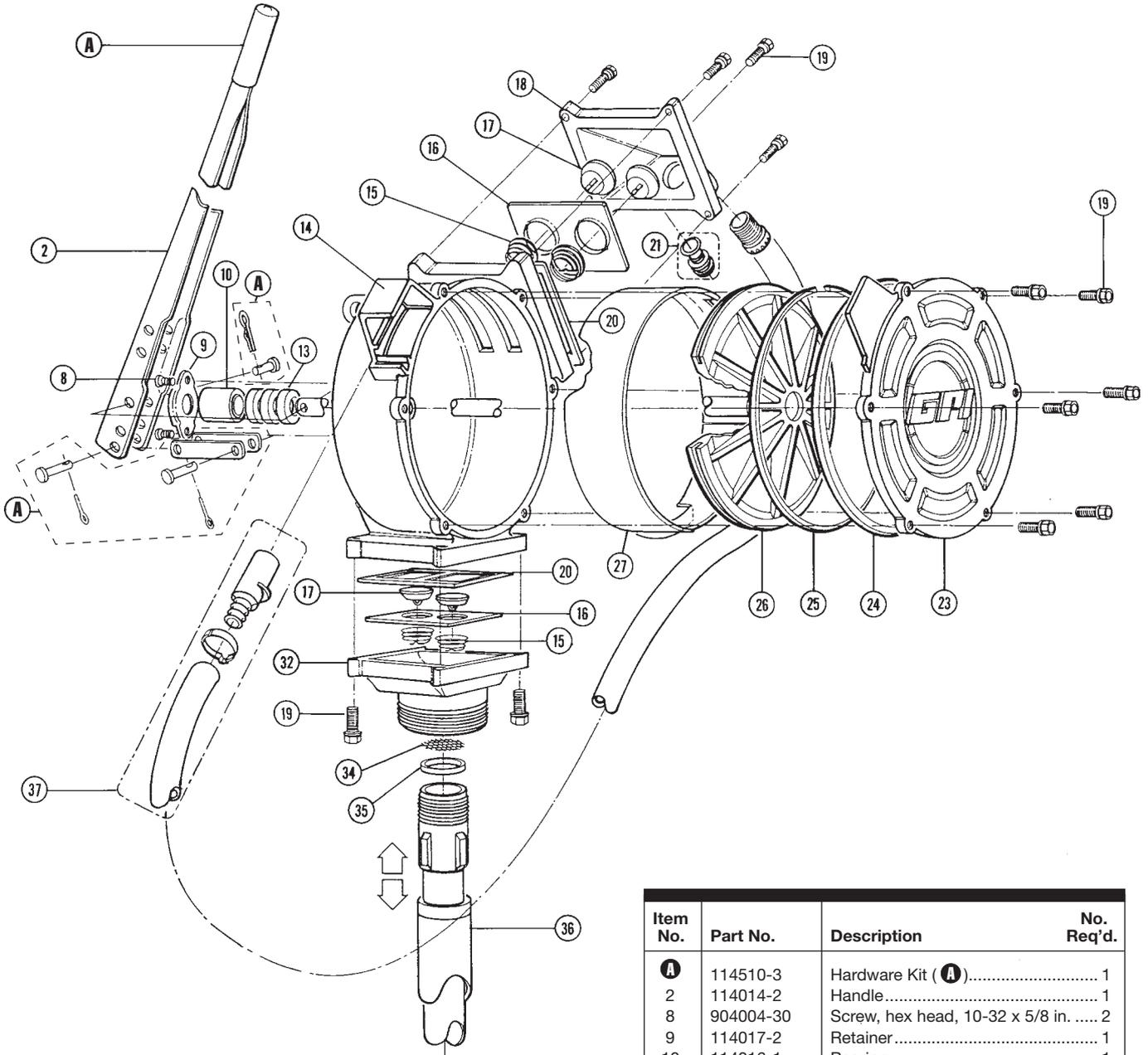
1. Remove the nozzle from its holder and insert into the receiving tank of the equipment or vehicle.
2. Choose a handle setting for the desired flowrate:
  - 1/4-gal. setting for low-volume, low-resistance pumping
  - 1/2-gal. setting for high-volume, high-resistance pumping
3. To operate pump, manually move the handle in a push/pull motion.
4. After dispensing the desired amount of fluid, drain the hose and nozzle. Place the nozzle in its holder and return the handle to its upright storage position.

During daily use, the GPI HP-100 Hand Pump is essentially maintenance free. However, the pump should be inspected periodically for signs of leakage. If leaks are present, make appropriate repairs. Refer to the Troubleshooting section.

## TROUBLESHOOTING

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
A. FLUID LEAKS AROUND SHAFT SEAL	1. Packing seals settled	Tighten two screws on the retainer and torque to approximately 20 lb. in. (or hand tighten then another half turn until leak stops)
	2. Seals worn	Remove the two screws on the retainer and remove the retainer and bearing. Remove all three seals and replace.
B. FLUID LEAKS AT ANTI-SIPHON VALVE	1. Anti-siphon valve or O-ring damaged	Replace vent plug assembly. Remove the black cap. Remove old vent plug assembly by turning counterclockwise. Install new vent plug assembly. Replace cap.
C. LOW FLOWRATE	1. Inlet screen clogged	Remove the pump from the tank. Remove the suction pipe, spacer, and inlet screen from the bottom of the pump. Clean the inlet screen and assemble. Place the pump on the tank using installation instructions.
	2. Suction pipe leak	Remove the pump from the tank. Inspect the spacer and suction pipe to ensure they are not worn or damaged. Replace as necessary and install the suction pipe and pump again using installation instructions.
	3. Piston ring or liner worn	Remove the piston cover and inspect the piston ring and liner. Scoring and severe scuffing on the liner indicates wear. If necessary, install an Overhaul Kit.
	4. Piston cracked	Remove the piston cover and inspect the piston. Install an Overhaul Kit, if necessary.
D. PUMP SEIZED	1. Debris in piston or liner	Disassemble and clean the piston and liner. Check for debris lodged in the piston ring or behind the liner. Small dimples in the liner indicate dirt, debris or welding slag contaminants in the tank. Replace the piston ring and liner. If appropriate, flush the tank of all contaminants.

# ILLUSTRATED PARTS DRAWING



## Kits and Accessories

- A** 114510-3 Hardware Kit includes handle grip, links, pins, and screen.
- B** 114505-2 Overhaul Kit includes piston ring, three seals, packing seals, and liner.
- C** 114509-1 Inlet Cover Kit includes inlet cover, spacer, and screen.
- 115527-2 Suction Pipe Extension, 15 inches.

Item No.	Part No.	Description	No. Req'd.
<b>A</b>	114510-3	Hardware Kit ( <b>A</b> ).....	1
2	114014-2	Handle.....	1
8	904004-30	Screw, hex head, 10-32 x 5/8 in. ....	2
9	114017-2	Retainer.....	1
10	114016-1	Bearing.....	1
13	114034-1	Packing Seal or (Kit <b>B</b> ).....	3
14	114042-1	Body.....	1
15	114009-1	Spring.....	2
16	114007-1	Plate.....	4
17	114008-1	Valve.....	4
18	114043-4	Outlet Cover, 3/4 in. ....	1
19	904002-23	Screw, sems, 1/4-20 x 3/4 in. ....	14
20	114006-1	Seal or (Kit <b>B</b> ).....	2
21	123504-1	Anti Siphon Vent Kit.....	1
23	114041-1	Piston Cover.....	1
24	901001-51	Cover Seal or (Kit <b>B</b> ).....	1
25	906005-58	Piston Ring or (Kit <b>B</b> ).....	1
26	114021-1	Piston Assembly.....	1
27	114011-1	Liner or (Kit <b>B</b> ).....	1
32	114509-1	Inlet Cover Kit ( <b>C</b> ).....	1
34	114037-1	Inlet Screen or (Kit <b>C</b> ).....	1
35	114038-1	Spacer or (Kit <b>C</b> ).....	1
36	110100-1	Adjustable Suction Pipe, 22-40 in....	1
37	114504-3	Hose and Nozzle Assembly Kit (Non-UL model).....	1

## SPECIFICATIONS

The HP-100 DUAL-FLO® Petroleum Hand Pump is compatible with a wide variety of petroleum products and fits any container with a 2-inch NPT bung. Use with diesel fuel (biodiesel blends B20), gasoline (alcohol blends E15), hydraulic fluid, kerosene and oil (up to 30 wt.). This equipment should not be used to pump chemicals.

- Construction:** Lightweight, die-cast aluminum housing. Stainless steel piston shaft and liner. Buna-N seals. Built-in air valve to prevent leakage at the nozzle.
- Pumping Capacity:** 1/2 gallon (1.9 litres) per stroke cycle.
- Pumping Settings:** 1/2 gallon setting for high volume, high resistance.  
1/4 gallon setting for low volume, low resistance.
- Inlet:** Standard 1-inch NPT pipe.
- Outlet:** Standard 3/4-inch NPT pipe.
- Shipping Weight:** 14 lbs.
- Hose and Nozzle:** Non-UL Model:  
3/4 inch x 8 foot Buna-N hose.  
Thermoplastic unleaded nozzle.  
Built-in nozzle holder.  
UL Model:  
3/4 inch x 8 foot Electrically Conductive hose (UL Listed) with metal nozzle.
- Suction Pipe:** Plastic, adjustable 22 to 40 inches.

## PARTS AND SERVICE

For warranty consideration, parts or other service information, please contact your local distributor or the GPI Customer Service Department in Wichita, Kansas, during normal business hours.

**1-800-835-0113**

To obtain prompt, efficient service, be prepared with the following information:

- The model number of your pump.
- The manufacturing date of your pump.
- Part descriptions and numbers.

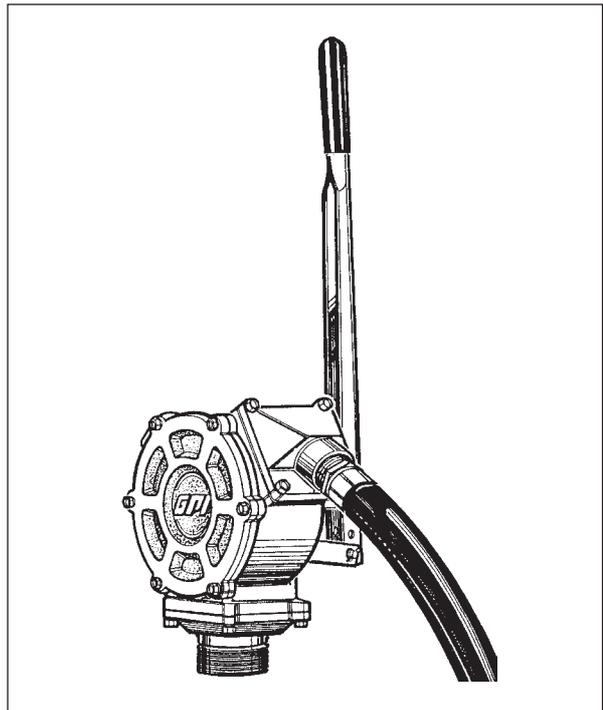
Part descriptions and numbers can be obtained from the Illustrated Parts Drawing.

For warranty service, be prepared with your original sales slip or other evidence of purchase date.



# HP-100 Dual-Flo® Petroleum Hand Pump

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### GENERAL INFORMATION

The GPI HP-100 DUAL-FLO® Petroleum Hand Pump is designed to manually pump petroleum products compatible with aluminum and Buna-N. The user has the flexibility of operating the pump at two flowrates. A setting of 1/2-gallon provides faster high-capacity flow. A 1/4-gallon setting allows for easier pumping of fluids. The HP-100 Hand Pump is designed for use on a tank with a 2-inch bung.

#### Read Me!

- Observe standard precautions when handling fuel.
- Keep fuel away from open flame or spark.
  - Do not refuel vehicles or equipment with engines running or while equipment engine is hot.
  - Do not smoke while refueling.

Use the HP-100 Hand Pump only with diesel fuel (biodiesel blends B20), gasoline (alcohol blends E15), hydraulic fluid, kerosene and oil (up to 30 wt.). This equipment should not be used to pump chemicals.



**WARNING**  
This product shall not be used for pumping fuel or other liquids into aircraft.

## INSTALLATION

Use the following procedures to install the HP-100 Hand Pump on a tank with a 2-inch bung.

### Install Suction Pipe

1. Remove the two protective plugs from the pump inlet and outlet ports.
2. Wrap the threaded end of the suction pipe with 3 to 4 turns of Teflon® tape.
3. Insert the suction screen into the inlet cover.
4. Place the spacer in the inlet cover to secure the inlet screen.
5. Install the suction pipe into the inlet cover and tighten firmly with a pipe wrench.

### Install Pump on Tank

1. Before installing the pump, clean the tank interior of all dirt and foreign material.
2. Lubricate the threads of the inlet cover with Teflon® tape or a thread-sealing compound approved for use with petroleum fuels.
3. Extend the adjustable suction pipe to its full length and carefully insert it into tank opening. The suction pipe will adjust to the length needed and rest on the bottom of tank.

NOTE: The suction pipe supplied has a variable length of 22 to 40 inches. If additional length is needed, order the 15-inch Suction Pipe Extension Kit.

4. Thread the inlet fitting of the pump onto the tank and turn the pump to tighten snugly.

NOTE: To prevent the buildup of pressure and possible fuel leakage through the nozzle, make sure the tank is vented.

### Install Hose and Nozzle Assembly

Apply 3 to 4 wraps of Teflon® tape to the threaded end of the hose and hand-tighten into the outlet cover until snug.

### Install Handle

The HP-100 Hand Pump gives the operator a choice of two flow settings:

- 1/4 gallon setting has low resistance and pumps 1/4 gallon per stroke cycle.
- 1/2 gallon setting has higher resistance and pumps 1/2 gallon per stroke cycle.

Volume per stroke is determined by connecting the piston shaft to the appropriate handle setting as outlined below.

NOTE: Clevis pins may be installed from either side of handle.

1. Slide the handle grip onto the pump handle.
2. To install the links on the pump, insert a long clevis pin through the link ends and the pump's link holes. Secure with a small cotter pin. (Figure 1)



Figure 1

3. Attach the free ends of the links to the bottom, outer surfaces of the handle. Insert a long clevis pin through the holes on both links and the lowest hole on the handle. Secure with a small cotter pin. (Figure 2)

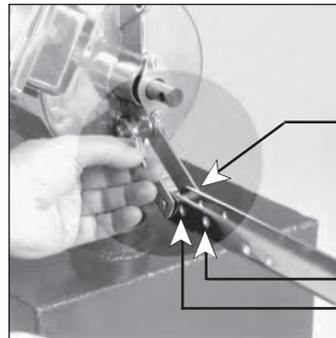


Figure 2

4. Insert a screwdriver in the piston shaft of the pump and pull the piston out. Install the shaft on the handle at either piston hole by placing a short clevis pin through the handle and the piston shaft end and securing with the hitch clip pin.

NOTE: Select the upper piston hole on the handle for the 1/2-gallon setting (Figure 3) or the lower piston hole for the 1/4-gallon setting. Flow settings can be changed at any time by repositioning the piston shaft on the handle.

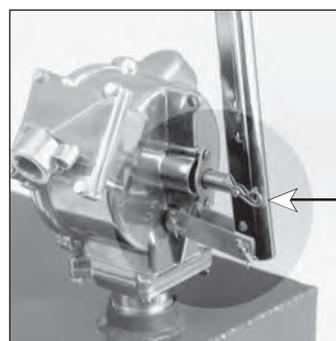


Figure 3

NOTE: Lock the handle to the pump by pushing the handle against the pump and inserting a padlock through either of the top holes in the handle and through the pump's lock hole. (Figure 4)



Figure 4

## OPERATION & MAINTENANCE

### To Dispense Fluid

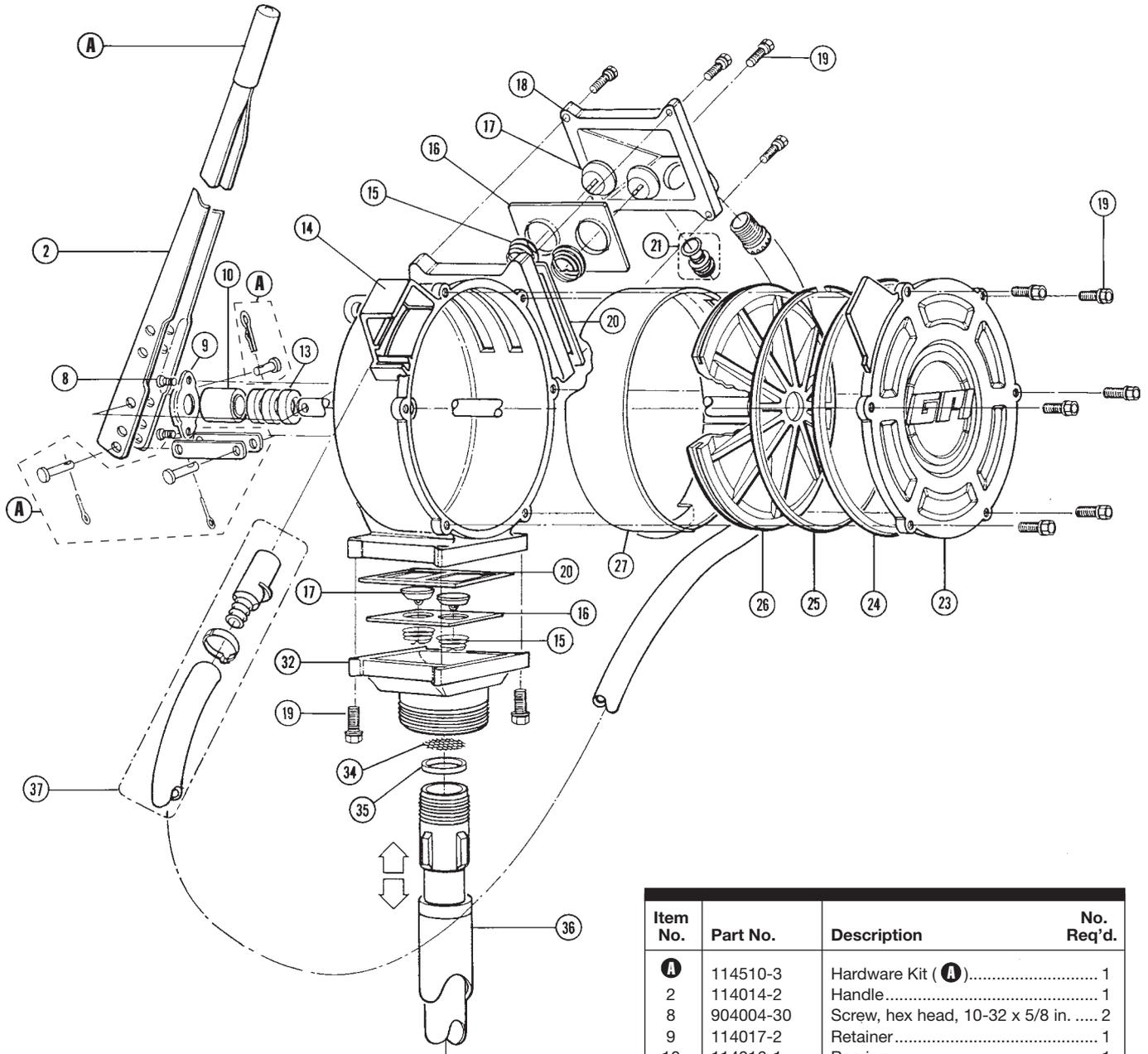
1. Remove the nozzle from its holder and insert into the receiving tank of the equipment or vehicle.
2. Choose a handle setting for the desired flowrate:
  - 1/4-gal. setting for low-volume, low-resistance pumping
  - 1/2-gal. setting for high-volume, high-resistance pumping
3. To operate pump, manually move the handle in a push/pull motion.
4. After dispensing the desired amount of fluid, drain the hose and nozzle. Place the nozzle in its holder and return the handle to its upright storage position.

During daily use, the GPI HP-100 Hand Pump is essentially maintenance free. However, the pump should be inspected periodically for signs of leakage. If leaks are present, make appropriate repairs. Refer to the Troubleshooting section.

## TROUBLESHOOTING

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
A. FLUID LEAKS AROUND SHAFT SEAL	1. Packing seals settled	Tighten two screws on the retainer and torque to approximately 20 lb. in. (or hand tighten then another half turn until leak stops)
	2. Seals worn	Remove the two screws on the retainer and remove the retainer and bearing. Remove all three seals and replace.
B. FLUID LEAKS AT ANTI-SIPHON VALVE	1. Anti-siphon valve or O-ring damaged	Replace vent plug assembly. Remove the black cap. Remove old vent plug assembly by turning counterclockwise. Install new vent plug assembly. Replace cap.
C. LOW FLOWRATE	1. Inlet screen clogged	Remove the pump from the tank. Remove the suction pipe, spacer, and inlet screen from the bottom of the pump. Clean the inlet screen and assemble. Place the pump on the tank using installation instructions.
	2. Suction pipe leak	Remove the pump from the tank. Inspect the spacer and suction pipe to ensure they are not worn or damaged. Replace as necessary and install the suction pipe and pump again using installation instructions.
	3. Piston ring or liner worn	Remove the piston cover and inspect the piston ring and liner. Scoring and severe scuffing on the liner indicates wear. If necessary, install an Overhaul Kit.
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D. PUMP SEIZED	1. Debris in piston or liner	Disassemble and clean the piston and liner. Check for debris lodged in the piston ring or behind the liner. Small dimples in the liner indicate dirt, debris or welding slag contaminants in the tank. Replace the piston ring and liner. If appropriate, flush the tank of all contaminants.

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<b>Construction:</b>	Lightweight, die-cast aluminum housing. Stainless steel piston shaft and liner. Buna-N seals. Built-in air valve to prevent leakage at the nozzle.
<b>Pumping Capacity:</b>	1/2 gallon (1.9 litres) per stroke cycle.
<b>Pumping Settings:</b>	1/2 gallon setting for high volume, high resistance. 1/4 gallon setting for low volume, low resistance.
<b>Inlet:</b>	Standard 1-inch NPT pipe.
<b>Outlet:</b>	Standard 3/4-inch NPT pipe.
<b>Shipping Weight:</b>	14 lbs.
<b>Hose and Nozzle:</b>	<u>Non-UL Model:</u> 3/4 inch x 8 foot Buna-N hose. Thermoplastic unleaded nozzle. Built-in nozzle holder. <u>UL Model:</u> 3/4 inch x 8 foot Electrically Conductive hose (UL Listed) with metal nozzle.
<b>Suction Pipe:</b>	Plastic, adjustable 22 to 40 inches.

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To obtain prompt, efficient service, be prepared with the following information:

- The model number of your pump.
- The manufacturing date of your pump.
- Part descriptions and numbers.

Part descriptions and numbers can be obtained from the Illustrated Parts Drawing.

For warranty service, be prepared with your original sales slip or other evidence of purchase date.

