



Pump Replacement Procedure for Hydraulic Leveling Systems with Plastic Tanks

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WARNING

Keep people clear of the coach prior to turning the leveling system on and while leveling system is in use. Never expose hands or other parts of the body near hydraulic leaks. High-pressure oil leaks may cut and penetrate the skin causing serious injury.



Figure 1 Float switch connector



Figure 2 Mounting hardware

NOTE

Labor Time

Diagnostic time = .5 Hour

Repair time = .75 Hour

Total time = 1.25 Hours



Read, understand, and follow all instructions in this document before starting.

This document provides the procedures to remove and replace a Power Gear hydraulic pump equipped with vertical and horizontal plastic tanks.

Pump kit #1010002366 includes the following:

- Pump
- 4 Bolts – 1/4-20 x 2.25" GR5
- This Tip Sheet #82-L0519



Instructions

- 1) Fluid in the tank will need to be drained before removing a horizontal tank. This can be done by a siphon pump, or by tipping the pump assembly over if removed from the coach. **NOTE: In some situations, vertical tanks may be carefully removed with the fluid still in the tank (Step #3)**
- 2) If the tank has a float switch installed, disconnect the wire connector to the float switch. (See Figure 1)
- 3) Loosen and remove the 4 bolts and mounting clamps around the neck of the tank. (See Figure 2) **NOTE: Extra help may be required to support and lower tank.**
- 4) Pull the tank assembly away from the pump port plate.
- 5) Use pliers to squeeze the spring hose clamp and move it toward the middle of the hose. (See Figure 3 & 4) Then pull the hose off the black fitting on the end of the pump body.
- 6) Use a 7/16" wrench or socket to loosen and remove the four bolts. Pull the old pump away from the port plate and set aside. (See Figure 4 & 5)

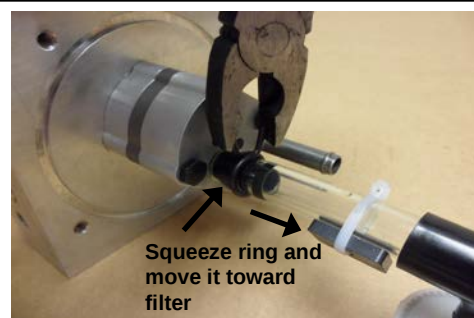


Figure 3 Pickup tube with spring hose clamp

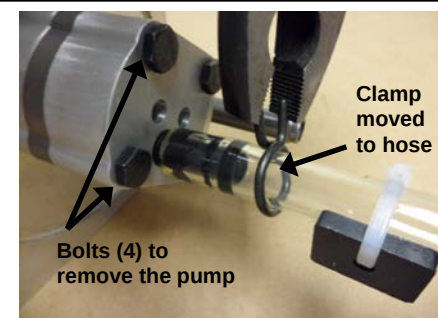


Figure 4 Pump bolts and spring clamp

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- 7) Install new pump assembly. Use caution when pushing shaft through the shaft seal assembly so as to not damage the shaft seal. Tighten the new bolts to 5-7 foot pounds using a torque wrench. (See Figure 6)
- 8) Inspect and clean any debris from the fluid filter, and insert the pickup tube over the black fitting at the end of the pump, making sure the filter is toward the bottom of the tank. Squeeze the spring clamp and move it up and over the rib at the end of the fitting to secure the tube.
- 9) Check the O-Ring (part #3510000266) installed in the port plate recess and make certain it sits inside the recess. (See Figure 6)
- 10) Hold tank to the pump port plate, install and finger tighten the bolts thru the mounting clamps. Tighten the bolts to 3-4 foot pounds using a torque wrench.
- 11) Connect the float switch (See Figure 1) to the harness connector. If float switch sits in vertical tank, make sure to follow Tip Sheet 81 (81-1298) for proper orientation.
- 12) Fill the tank with fresh fluid (see info below) and run jacks down to the ground, wait 30 seconds, then retract. Check fluid level and fill as needed. Repeat 5 times to bleed system of air, and confirm the pump is working properly. Confirm fluid level is full.

Recommended Hydraulic Fluids for Your Hydraulic Pump

The fluids listed here are acceptable to use in your pump assembly. Contact coach manufacturer or selling dealer for information about what specific fluid was installed in your system.

- It is not recommended that hydraulic fluid and automatic transmission fluids be mixed in the reservoir.
- In most applications, Type A automatic transmission fluid (ATF, Dexron III, etc.) will work satisfactorily. Mercon V is also recommended as an alternative fluid for Power Gear hydraulic systems.
- If operating in cold temperatures (less than -10° F), the jacks may extend and retract slowly.
- For cold weather operation, fluid specially-formulated for low temperatures may be desirable. Mobil DTE 11M, Texaco Rando HDZ-15HVI, Kendall Hyden Glacial Blu, or any Mil. Spec. H5606 hydraulic fluids are recommended for cold weather operation.

- 13) Check the tank for leaks around the tank neck and the port plate.
- 14) Re-check that the fluid level is full, and make sure the "Jacks Down" light is off when the jacks are retracted.

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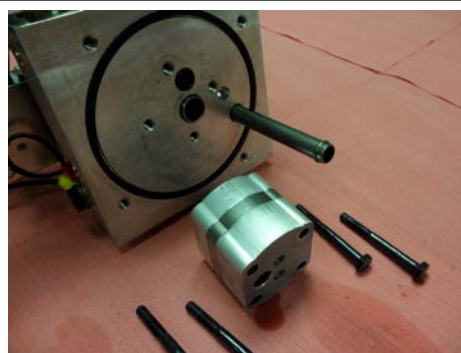


Figure 5 Old Pump & bolts removed

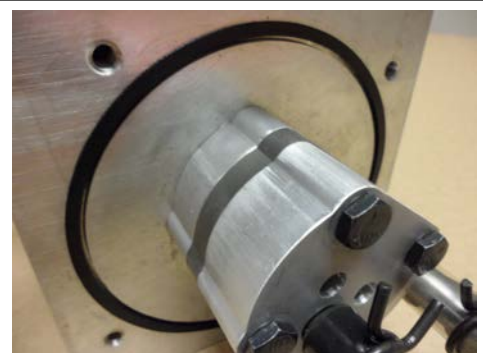


Figure 6 New pump installed, O-Ring in recess.



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RELATED DOCUMENTS FOR PUMPS WITH PLASTIC TANKS

<u>Document #</u>	<u>Tip Sheet #</u>	<u>Description</u>
81-1298	#81	Float Switch Replacement Procedure (For Vertical Tanks)
82-L0508	NA	Float Switch Replacement Procedure (For Horizontal Tanks)
82-L0509	NA	Testing float switches #14-1085, 14-1101, & 14-1106 without resistor in vertical tanks
82-L0510	NA	Testing float switches 14-1136 & 14-1137 with resistor in vertical tanks.
82-L0511	NA	Testing float switches 140-1146, 3510000030, & 3510000070 in horizontal tanks
82-L0512	NA	Float switch ID Chart
82-L0516	NA	Magnet Proximity to Float Switch
82-L0518	NA	Plastic Tank Procedure for Systems with Plastic Tanks
82-L0521	#216	Hydraulic Pump Motor Diagnosis

ADDITIONAL REFERENCE PUBLICATIONS LOCATIONS AT
WWW.lci1.COM

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