



# INSTRUCTION BULLETIN

No. 340780  
Machine: Sentinel  
Published: 07-2005  
Rev. 00

**NOTE: DO NOT DISCARD the Parts List from the Instruction Bulletin. Place the Parts List in the appropriate place in the machine manual for future reference. Retaining the Parts List will make it easier to reorder individual parts and will save the cost of ordering an entire kit.**

*NOTE: Numbers in parenthesis ( ) are reference numbers for parts listed in Bill of Materials.*

Installation instructions for **kit number 9001442**

## SYNOPSIS:

This kit contains the parts needed to replace the hydraulic gear pump on Sentinel sweepers.  
Please follow step-by-step instructions.

## SPECIAL TOOLS / CONSIDERATIONS: NONE

(Estimated time to complete: 1.5 hours)

## PREPARATION:

1. Park the machine on a clean level surface.
2. Turn off the machine, remove the key, and set the parking brake.

**FOR SAFETY: Before leaving or servicing machine, stop on level surface, turn off machine, set parking brake, and remove key.**

3. Open the right side panel.
4. Thoroughly clean all dirt, grease, and debris from the area surrounding the hydraulic gear pump and the hoses and connections attached to the hydraulic gear pump.
5. Drain the hydraulic tank until the fluid level in the tank is below the suction lines.
6. Discard drained hydraulic fluid. Use only new approved hydraulic fluid to refill hydraulic tank.

## INSTALLATION:

1. Mark, remove, and cap all hoses attached to the existing double gear accessory pump.
2. Remove the two hex screws and washers securing the double gear accessory pump to the piston pump and pull the double gear accessory pump straight out from the piston pump. Set hex screws and washers aside since they are needed to install the new double gear accessory pump (1).

*NOTE: The intermediate plate between the double gear accessory pump and the piston pump must be pulled out so the o-ring behind it can be replaced.*

3. Remove the o-ring located directly behind the intermediate plate from inside the piston pump.
4. Apply a light coat of grease to new o-rings (2) and (3). Grease helps hold the o-rings in place when the double gear accessory pump is installed onto the piston pump.
5. Insert o-ring (2) into the piston pump, where the old o-ring was previously located.
6. Insert o-ring (3) into the notch inside the intermediate plate.
7. Carefully insert the intermediate plate into the piston pump. Be sure both o-rings (2) and (3) remain in place.
8. Remove fittings (A) and (B) from the double gear accessory pump. Note port and rotation of fittings on the double gear accessory pump.
9. Install fittings (A) and (B) removed from the old pump in the previous step onto the new double gear accessory pump (1). Position the fittings as they were previously positioned.
10. Apply a light coat of grease onto the shaft of the new double gear accessory pump (1).
11. Apply a light coat of adhesive to the hex screws removed in Step 2.

12. Carefully, so the intermediate plate does not move from position, insert the shaft end of the new double gear accessory pump (1) into the piston pump.

*NOTE: If the intermediate plate moves when the double gear accessory pump is installed, remove the intermediate plate from the piston pump and inspect the o-ring (2). It is very easy for this o-ring to move from the notch.*

13. Use the hex screws and washers removed in Step 3 to secure the double gear accessory pump (1) to the piston pump. Tighten to 90–117 Nm (65–85 ft. lbs.). Refer to Fig. 1.

14. Connect the hydraulic hoses to the correct ports on the new double gear accessory pump (1).

15. Use new approved hydraulic fluid to refill the hydraulic system to the appropriate level.

16. Start the machine and check the hydraulic system for proper operation. Also, check around the hydraulic hoses/fittings (A) and (B) for leaks.

17. Close the right side panel.

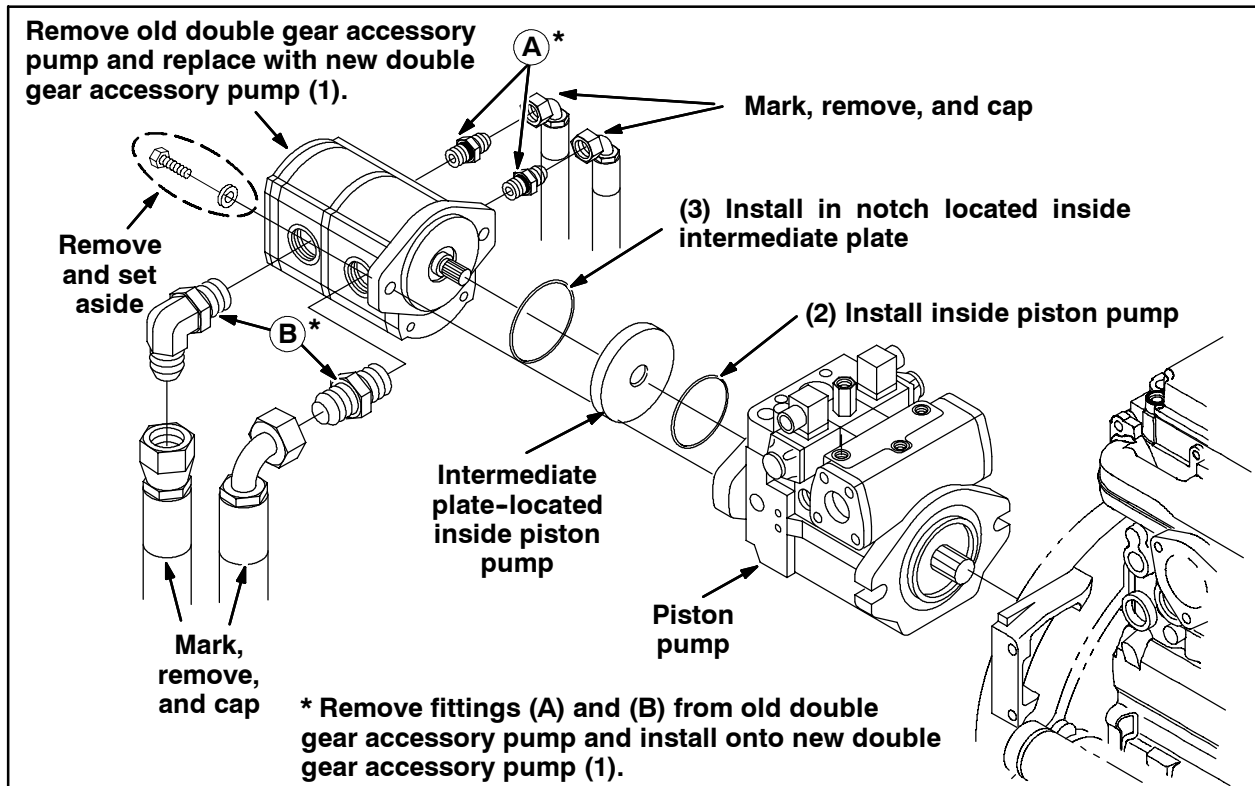


FIG. 1

#### Bill of Materials for Replmt Kit, Pump, Hyd, Gear [Sentinel]-9001442

Ref.	Tennant Part No.	Description	Qty.
▽	9001442	Replmt Kit, Pump, Hyd, Gear [Sentinel]	1
▲	1 1010859	Pump, Hyd, Gear [EX2] 1.77 [R] 3500	1
▲	2 769004	Seal, Org, .103 X 3.00 ID	1
▲	3 769005	Seal, Org, .103 X 4.00 ID	1

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