

Replacing the Transducer

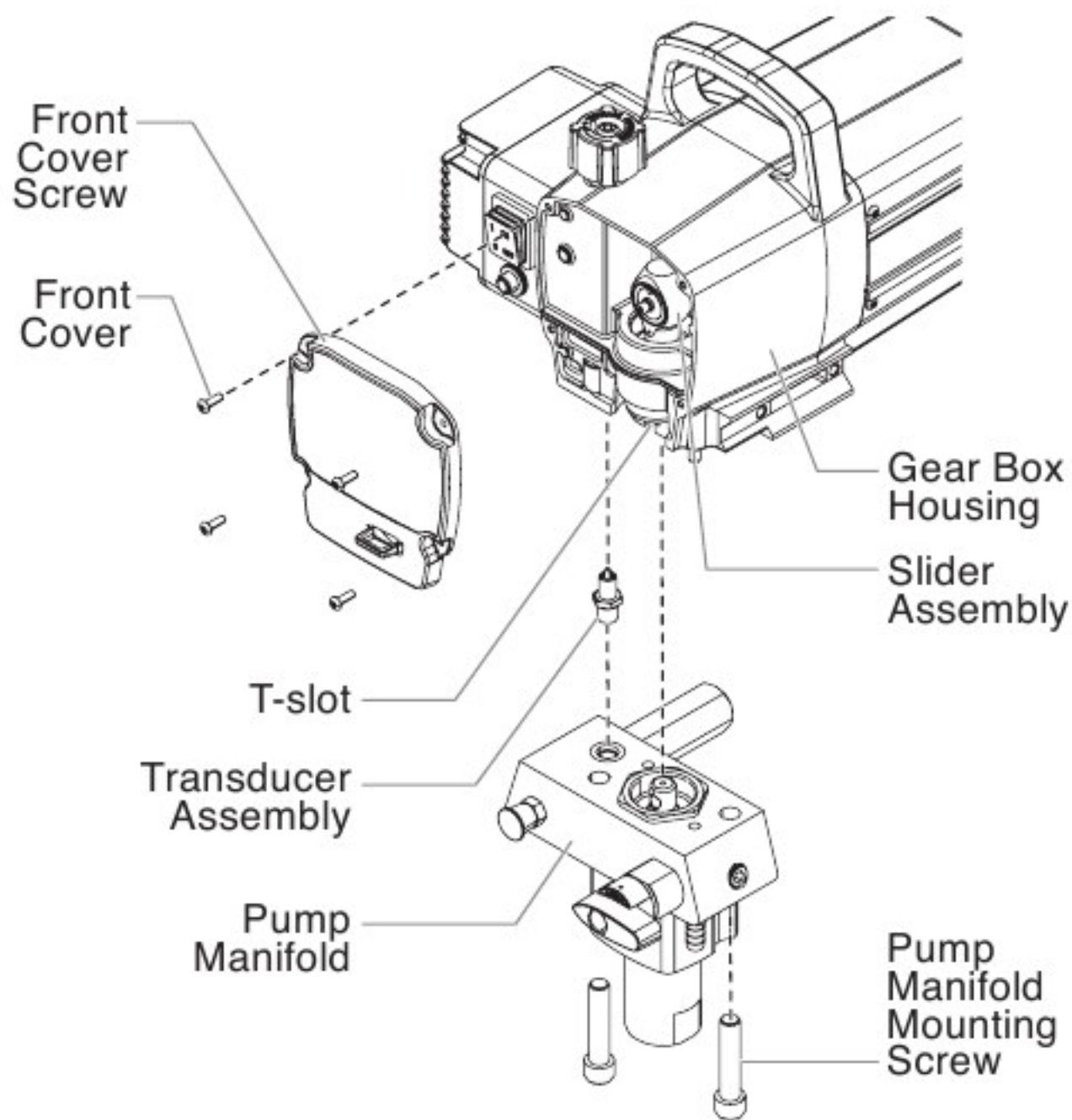
1. Loosen and remove the four front cover screws. Remove the front cover.
2. Stop the sprayer at the bottom of its stroke so that the piston is in its lowest position.
3. Perform the Pressure Relief Procedure and unplug the sprayer.



Before proceeding, follow the Pressure Relief Procedure outlined previously in this manual. Additionally, follow all other warnings to reduce the risk of an injection injury, injury from moving parts or electric shock. Always unplug the sprayer before servicing!

4. Tilt the sprayer back for easy access to the fluid section.
5. Using 3/8" a hex wrench, loosen and remove the two pump manifold mounting screws.
6. Pull the pump block down approximately 1/2" from the pump housing to clear the transducer.
7. Slide the pump block and piston rod forward until the piston rod is out of the T-slot on the slider assembly.
8. Using a wrench, remove the transducer assembly from the pump manifold.
9. Thread the new transducer assembly into the pump manifold. Tighten securely with a wrench.
10. Reassemble the pump by reversing steps 1–7.

IMPORTANT: Make sure the transducer is aligned properly with the hole in the pump manifold during reassembly. Improper alignment may cause damage to the transducer o-ring.



Servicing the Fluid Section

Use the following procedures to service the valves and repack the fluid section. Perform the following steps before performing any maintenance on the fluid section.

1. Loosen and remove the four front cover screws. Remove the front cover.
2. Position the slider assembly at the bottom, dead-center of its stroke so that the connecting pin and retaining ring are visible below the slider assembly. This is done by turning the sprayer on and off in short bursts until the connecting pin is visible below the slider housing.
3. Perform the Pressure Relief Procedure and unplug the sprayer.



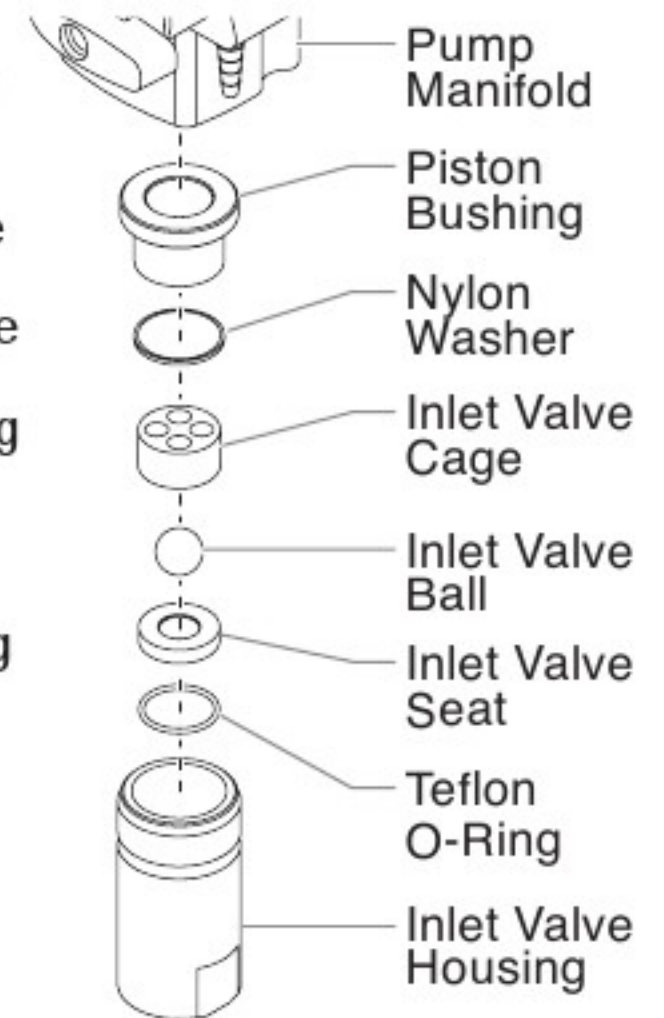
Before proceeding, follow the Pressure Relief Procedure outlined previously in this manual. Additionally, follow all other warnings to reduce the risk of an injection injury, injury from moving parts or electric shock. Always unplug the sprayer before servicing!

4. For Upright Cart units, remove the return hose from the hose clip on the siphon tube. Unscrew the siphon tube from the inlet valve housing.
5. For Low Boy cart units, remove the retaining ring from the bottom of the inlet valve housing using a snap ring pliers. Remove the return hose clamp and pull the return hose from its fitting on the pump manifold. Remove the suction set assembly.
6. Loosen and remove the high-pressure hose from the outlet fitting on pump manifold.

Servicing the Valves

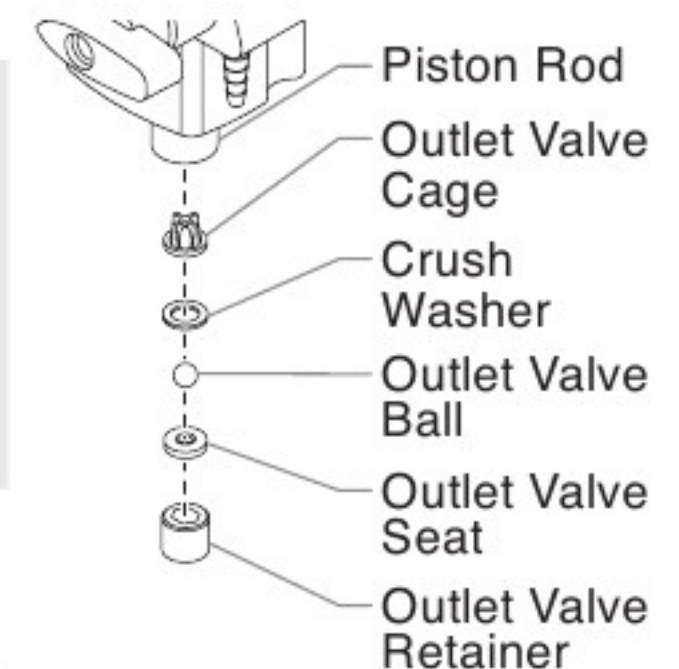
The design of the fluid section allows access to the inlet valve and seat as well as the outlet valve and seat without completely disassembling the fluid section. It is possible that the valves may not seat properly because of debris stuck in the foot valve seat or outlet valve seat. Use the following instructions to clean the valves and reverse or replace the seats.

1. Using a wrench, loosen and remove the inlet valve housing from the pump manifold.
2. Clean out any debris in the inlet valve housing and examine the valve housing and seat. If the seat is damaged, reverse or replace the seat.
3. Using a 5/16" hex wrench, loosen and remove the outlet valve retainer from the piston rod.



NOTE: Always service the outlet valve with the piston rod attached to the pump. This will prevent the piston rod from rotating during disassembly of the outlet valve.

4. Clean out any debris and examine the valve retainer and seat. If the seat is damaged, reverse or replace the seat.
5. Remove, clean, and inspect the outlet valve cage, crush washer, and outlet valve ball. Replace if they are worn or damaged.



NOTE: The outlet cage always must be used with the crush washer. They are included together in the repacking kit as assembly P/N 704-642.

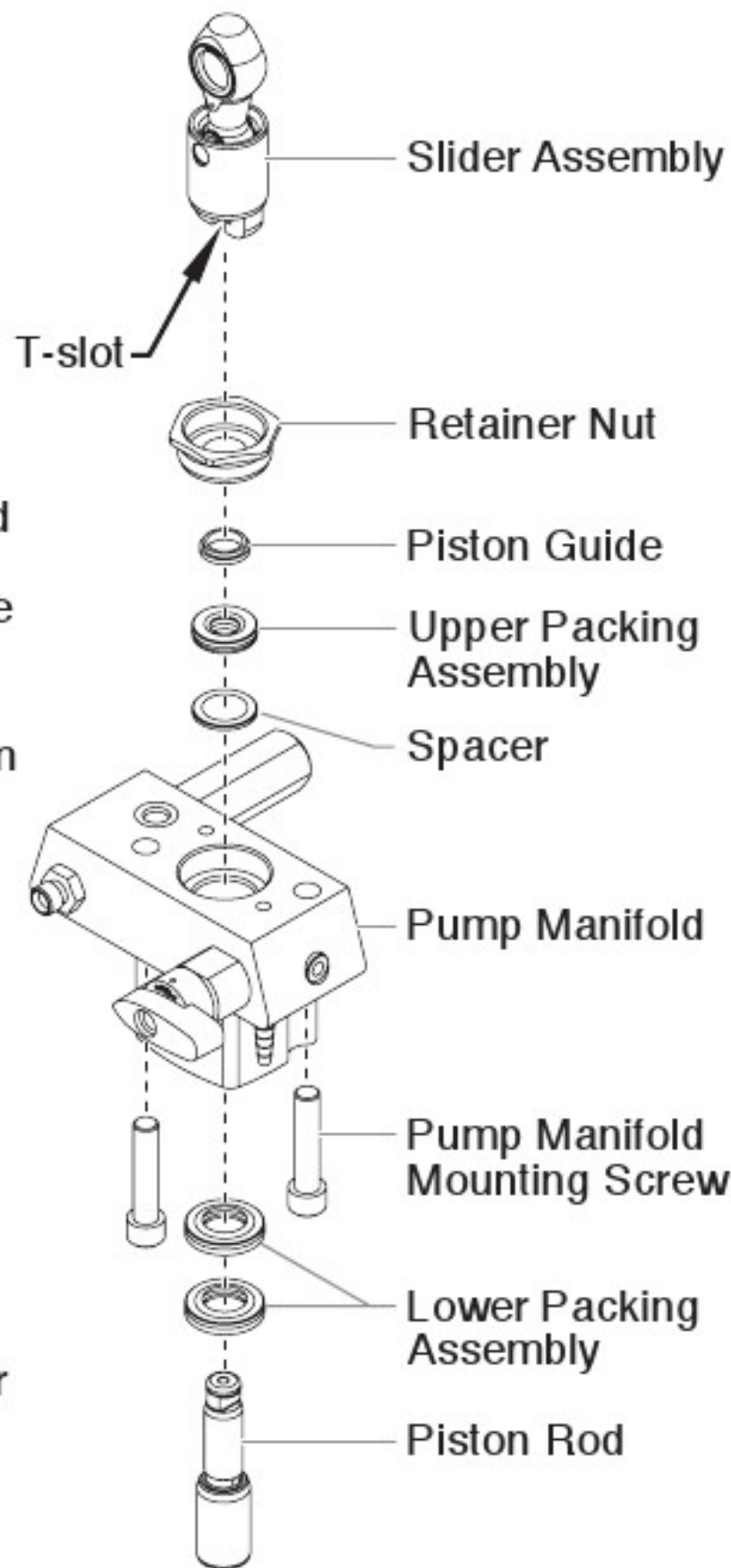
6. Reassemble the valves by reversing the steps above.

Repacking the Fluid Section

1. Remove the foot valve assembly using the steps in the "Servicing the Valves" procedure above.

NOTE: The outlet valve does not need to be disassembled from the piston rod for this procedure.

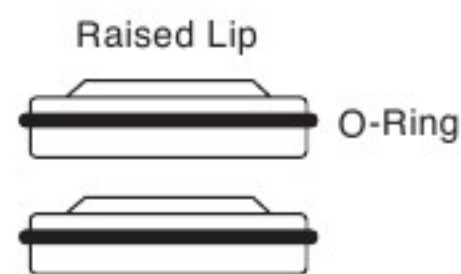
2. Using 3/8" a hex wrench, loosen and remove the two pump manifold mounting screws.
3. Pull the pump block down approximately 1/2" from the pump housing.
4. Slide the pump block and piston rod forward until the piston rod is out of the T-slot on the slider assembly.
5. Slide the piston rod out through the bottom of the pump block.
6. Loosen and remove the retainer nut and piston guide from the pump manifold.
7. Remove the upper and lower packings from the pump manifold.
8. Clean the pump manifold and install the new upper and lower packings. Refer to the illustration below for proper packing orientation.



Install upper packing with raised lip and O-ring facing down.



Install lower packings with raised lip and O-ring facing up.



9. Inspect the piston rod for wear and replace if necessary.
10. Insert the piston guide into the retainer nut. Thread the retainer nut into the pump manifold until it is hand tight.
11. Slide the piston guide tool (included in the repacking kit) over the top of the piston rod and insert the piston rod through the bottom of the pump manifold. Using a rubber mallet, tap the bottom of the piston rod lightly until the piston rod is in position in the pump manifold.

NOTE: Coat the piston guide tool and the piston rod with grease before inserting them into the pump manifold.

12. Using a wrench, tighten the retainer nut securely.
13. Slide the top of the piston rod into the T-slot on the slider assembly.
14. Position the pump block underneath the pump housing and push up until it rests against the pump housing.

IMPORTANT: Make sure the transducer is aligned properly with the hole in the pump manifold during reassembly. Improper alignment may cause damage to the transducer gasket.

15. Thread the pump manifold mounting screws through the pump manifold and into the gear box housing. Tighten securely.
16. Reassemble the inlet valve assembly into the pump manifold.
17. For Upright Cart units, thread the siphon tube into the inlet valve and tighten securely. Make sure to wrap the threads on the down tube with Teflon tape before assembly. Replace the return hose into the hose clip on the siphon tube.
18. For Stand / Low Boy cart units, insert the elbow on the suction set assembly into the bottom of the inlet valve housing. Push the retaining ring up into the groove inside the inlet valve housing to secure the suction set assembly in position. Push the return hose onto the return hose fitting on the pump manifold and secure in position with the return hose clamp.
19. Place the front cover on the gear box housing and secure in position using the four front cover screws.
20. Turn on the sprayer by following the procedure in the "Operation" section of this manual and check for leaks.

NOTE: Repacking kit P/N 0552951 is available. For best results use all parts supplied in this kit.

Troubleshooting

Problem	Cause	Solution
A. The unit will not run.	<ol style="list-style-type: none"> 1. The unit is not plugged in. 2. Tripped breaker. 3. The pressure is set too low (pressure control knob set at minimum setting does not supply power to unit). 4. Faulty or loose wiring. 5. Excessive motor temperature. 	<ol style="list-style-type: none"> 1. Plug the unit in. 2. Reset the breaker. 3. Turn the pressure control knob clockwise to supply power to the unit and increase the pressure setting. 4. Inspect or take to a Titan authorized service center. 5. Allow motor to cool.
B. The unit will not prime.	<ol style="list-style-type: none"> 1. The PRIME/SPRAY valve is in the SPRAY position. 2. Air leak in the siphon tube/suction set. 3. The pump filter and/or inlet screen is clogged. 4. The siphon tube/suction set is clogged. 	<ol style="list-style-type: none"> 1. Rotate the PRIME/SPRAY valve clockwise to the PRIME position. 2. Check the siphon tube/suction set connection and tighten or re-tape the connection with Teflon tape. 3. Remove the pump filter element and clean. Remove the inlet screen and clean. 4. Remove the siphon tube/suction set and clean.
C. The unit will not build or maintain pressure.	<ol style="list-style-type: none"> 1. The spray tip is worn. 2. The spray tip is too large. 3. The pressure control knob is not set properly. 4. The pump filter, gun filter, or inlet screen is clogged. 5. Material flows from the return hose when the PRIME/SPRAY valve is in the SPRAY position. 6. Air leak in the siphon tube/suction set. 7. There is external fluid leak. 8. There is an internal fluid section leak (packings are worn and/or dirty, valve balls are worn). 9. Worn valve seats 10. Motor powers but fails to rotate 	<ol style="list-style-type: none"> 1. Replace the spray tip following the instructions that came with the spray gun. 2. Replace the spray tip with a tip that has a smaller orifice following the instructions that came with the spray gun. 3. Turn the pressure control knob clockwise to increase the pressure setting. 4. Remove the pump filter element and clean. Remove the gun filter and clean. Remove the inlet screen and clean. 5. Clean or replace the PRIME/SPRAY valve. 6. Check the siphon tube/suction set connection and tighten or re-tape the connection with Teflon tape. 7. Check for external leaks at all connections. Tighten connections, if necessary. 8. Clean the valves and service the fluid section following the "Servicing the Fluid Section" procedure in the Maintenance section of this manual. 9. Reverse or replace the valve seats following the "Servicing the Fluid Section" procedure in the Maintenance section of this manual. 10. Take unit to a Titan authorized service center.
D. Fluid leakage at the upper end of the fluid section.	<ol style="list-style-type: none"> 1. The upper packings are worn. 2. The piston rod is worn. 	<ol style="list-style-type: none"> 1. Repack the pump following the "Servicing the Fluid Section" procedure in the Maintenance section of this manual. 2. Replace the piston rod following the "Servicing the Fluid Section" procedure in the Maintenance section of this manual.
E. Excessive surge at the spray gun.	<ol style="list-style-type: none"> 1. Wrong type of airless spray hose. 2. The spray tip worn or too large. 3. Excessive pressure. 	<ol style="list-style-type: none"> 1. Replace hose with a minimum of 50' of 1/4" grounded textile braid airless paint spray hose. 2. Replace the spray tip following the instructions that came with the spray gun. 3. Rotate the pressure control knob counterclockwise to decrease spray pressure.
F. Poor spray pattern.	<ol style="list-style-type: none"> 1. The spray tip is too large for the material being used. 2. Incorrect pressure setting. 3. Insufficient fluid delivery. 4. The material being sprayed is too viscous. 	<ol style="list-style-type: none"> 1. Replace the spray tip with a new or smaller spray tip following the instructions that came with the spray gun. 2. Rotate the pressure control knob to adjust the pressure for a proper spray pattern. 3. Clean all screens and filters. 4. Add solvent to the material according to the manufacturer's recommendations.
G. The unit lacks power.	<ol style="list-style-type: none"> 1. The pressure adjustment is too low. 2. Improper voltage supply. 	<ol style="list-style-type: none"> 1. Rotate the pressure control knob clockwise to increase the pressure setting. 2. Reconnect the input voltage for 120V AC.