

# INSTRUCTIONS-PARTS LIST



307-961

Rev A

This manual contains **IMPORTANT INSTRUCTIONS and WARNINGS.**  
READ AND RETAIN FOR REFERENCE.

## PUMP PACKING KIT 222-687

For Use In Displacement Pump 222-688

### WARNING

#### Pressure Relief Procedure

To reduce the risk of serious bodily injury, including fluid injection, splashing fluid or solvent in the eyes or on the skin, or injury from moving parts or electric shock, always follow this procedure whenever you shut off the sprayer, when checking or servicing any part of the spray system, when installing, cleaning or changing spray tips, and whenever you stop spraying.

1. Engage the gun safety latch.
2. Turn the ON/OFF switch to OFF.
3. Unplug the power supply cord.
4. Disengage the gun safety latch. Hold a metal part of the gun firmly to the side of a grounded metal pail, and trigger the gun to relieve pressure.
5. Engage the gun safety latch.
6. Open the pressure drain valve, having a container ready to catch the drainage. Leave the valve open until you are ready to spray again.

*If you suspect that the spray tip or hose is completely clogged, or that pressure has not been fully relieved after following the steps above, wrap a rag around the tip guard retaining nut or hose end coupling and VERY SLOWLY loosen the part to relieve pressure gradually, then loosen completely. Now clear the tip or hose.*

1. Flush the pump, if possible. Follow the **Pressure Relief Procedure Warning**, above.
2. Disassemble the pump. Clean and inspect all parts for wear or damage and replace parts as needed. Coat the rod and the inside of the cylinder with oil before reassembling.

**NOTE: All sprayers with DC/Brush-Type Motors:**  
When replacing the pump packings, also inspect the motor brushes and replace them, if necessary.

3. Stack the backup washer (19), seal (5), female gland (20), packings (17) and male gland (13) onto the piston valve (24). Tighten the nut (B) onto the valve to 10.5 in-lb (1.2 N.m) to seat the packings, and then back off and tighten finger tight.

**Note the alignment** of the piston valve (D) to the nut (B) and maintain this alignment through Steps 3, 4 and 5. This helps ensure that the nut (B) does not overcompress and swell the packings, which can cause them to be damaged when the piston assembly is installed in the cylinder.

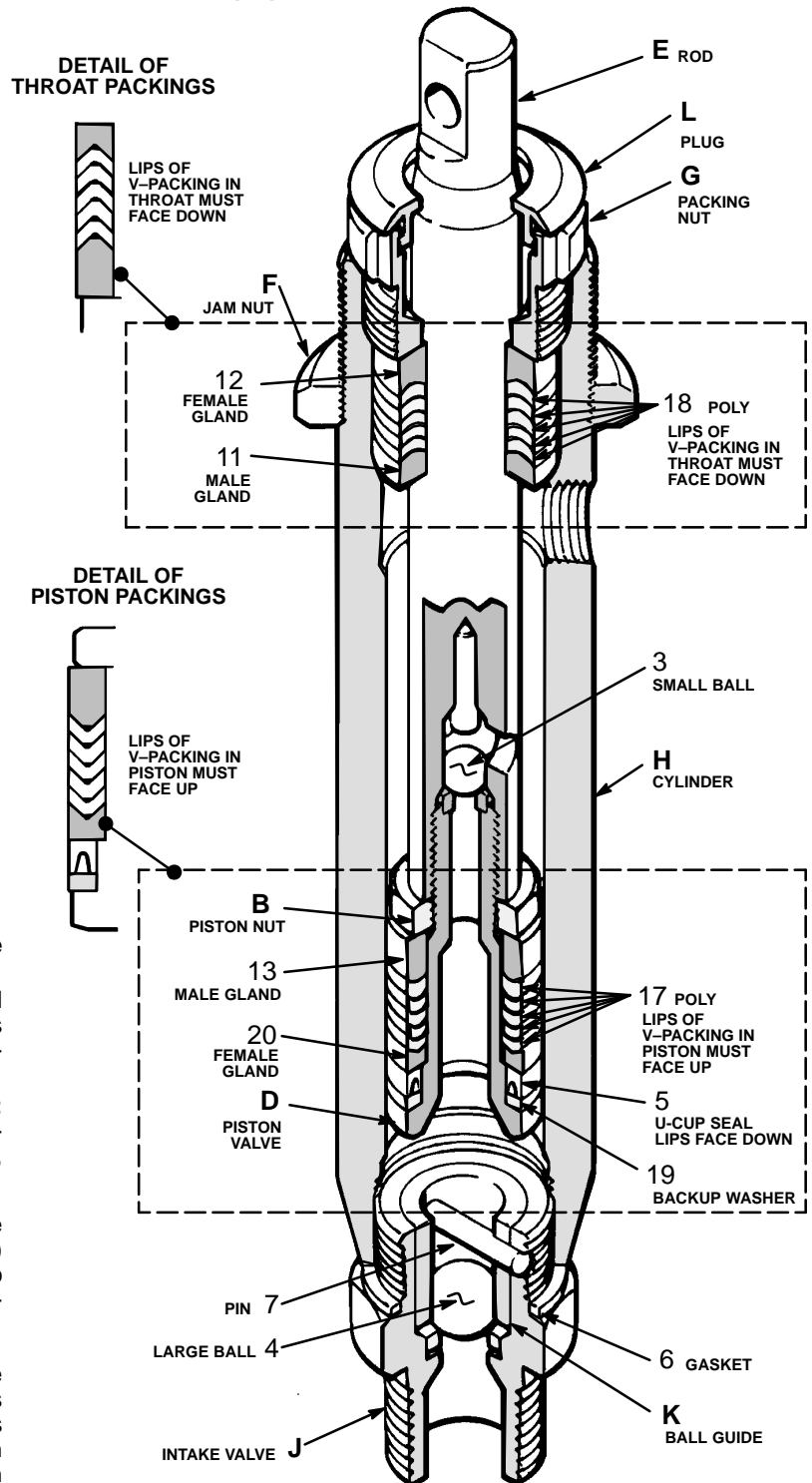


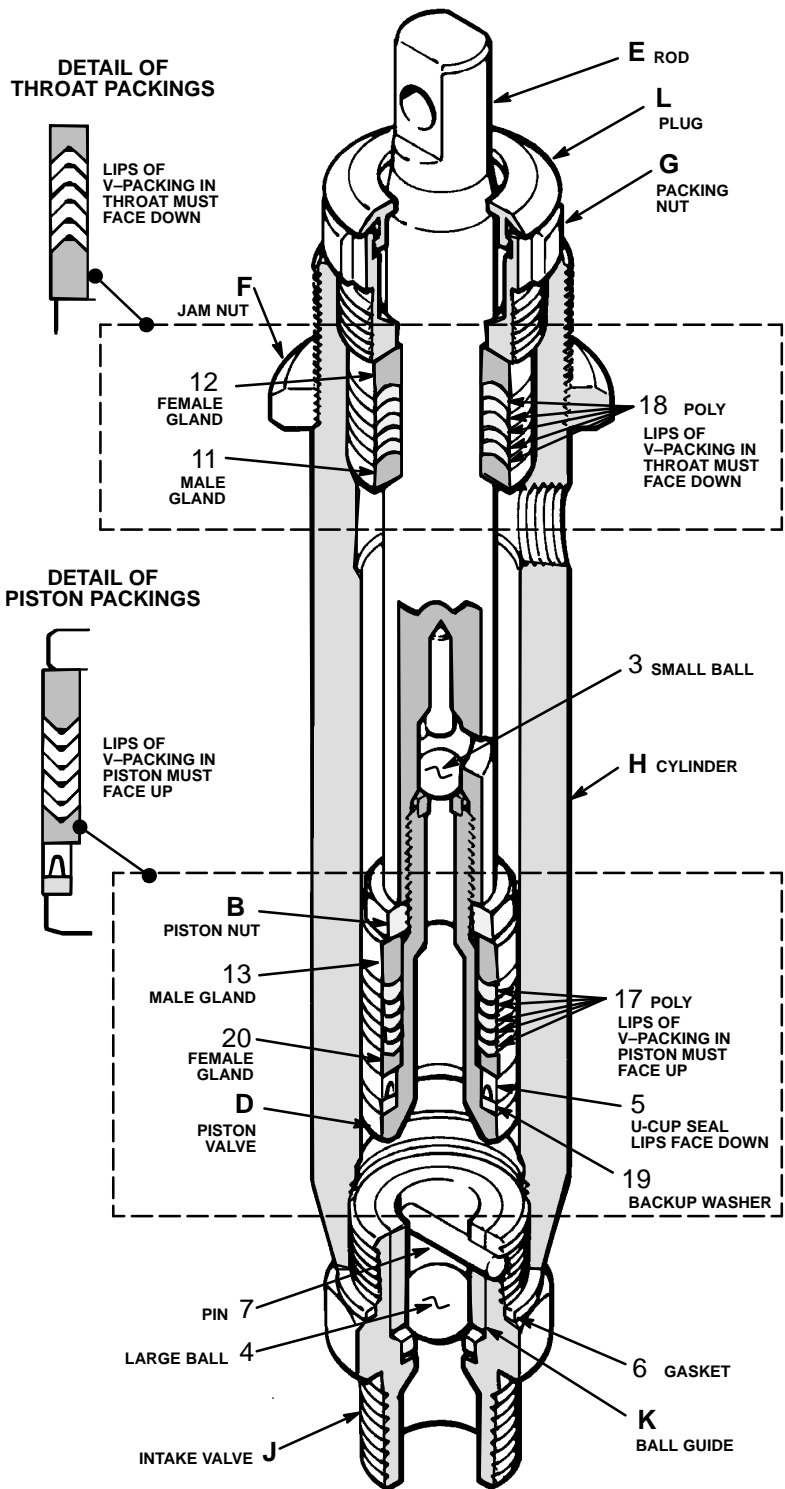
Fig 1

4. Apply *one drop* of adhesive, supplied, on the threads of the piston valve. Place the small ball (3) on the piston valve (D). Hand tighten the valve into the rod (E) just until the nut contacts the rod. Place the flats of the rod in a vise.
5. Tighten the piston nut (B) onto the piston rod (E) to 19 ft-lb (25 N.m). Use two wrenches to maintain the alignment as mentioned in Step 3, page 1.
6. Stack the male gland (11), packings (18) and female gland (12), one at a time into the top of the cylinder (H). Install the packing nut (G) and plug (L). Leave the packing nut loose for now.
7. Insert the piston rod (23) through the *bottom* of the oiled pump cylinder.
8. Assemble the intake valve (J) with a **new** gasket (6), the large ball (4), ball guide (K), and pin (7). Screw the assembly into the pump cylinder. Tighten to 80 ft-lb (109 N.m)
9. Install the jam nut (F) on the cylinder, if it was removed. Connect the pump to the sprayer as described in your separate pump instruction manual.
10. Tighten the packing nut (G) just enough to stop leakage, but no tighter. Fill the wet-cup/packing nut 1/3 full with Graco TSL.

## PARTS LIST

### Repair Kit 222-687

REF NO.	PART NO.	DESCRIPTION	QTY
3	105-444	BALL, sst; 0.3125"	1
4	105-445	BALL, sst; 0.50"	1
5	108-995	SEAL, u-cup	1
6	176-761	GASKET, copper	1
7	176-759	PIN, ball stop	1
11	183-556	GLAND, male,	1
12	183-237	GLAND, female, brass	1
13	183-236	GLAND, male, brass	1
17	176-882	V-PACKING, polyethylene	5
18	176-997	V-PACKING, polyethylene	5
19	183-557	WASHER, backup	1
20	183-558	GLAND, packing, female	1
25		ADHESIVE	1



**Fig 2**