INSTRUCTIONS-PARTS LIST



309009

Rev. C



This manual contains important warnings and information. READ AND KEEP FOR REFERENCE.

Husky[™] 716 Texture Pump

100 psi (0.7 MPa, 7 bar) Maximum Air and Fluid Working Pressure

Model 239753, Series A

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Symbols

Warning Symbol

WARNING

This symbol alerts you to the possibility of serious injury or death if you do not follow the instructions.

Caution Symbol

A CAUTION

This symbol alerts you to the possibility of damage to or destruction of equipment if you do not follow the instructions.

	EQUIPMENT MISUSE HAZARD
	Equipment misuse can cause the equipment to rupture or malfunction and result in serious injury.
INSTRUCTIONS	This equipment is for professional use only.
	• Read all instruction manuals, tags, and labels before you operate this equipment.
	• Use the equipment only for its intended purpose. If you are not sure, call your Graco distributor.
	• Do not expose the system to rain. Always store the system indoors.
	• Do not alter or modify this equipment.
	Check equipment daily. Repair or replace worn or damaged parts immediately.
	• Do not exceed the maximum working pressure of the lowest rated component in your system. This equipment has a 100 psi (0.7 MPa, 7 bar) maximum working pressure at 100 psi (0.7 MPa, 7 bar) maximum air pressure.
	• The system is for use only with water-based simulated acoustic and wall texture materials. Use fluids and solvents that are compatible with the equipment wetted part. See Technical Data section on page 13 and in all other equipment manual. Read the fluid and solvent manufacturer's warnings.
	• Do not use hoses to pull equipment.
	 Route hoses away from traffic areas, sharp edges, moving parts, and hot surfaces. Do not expose Graco hoses to temperatures above 82°C (180°F) or below –40°C (–40°F).
	Do not lift pressurized equipment.
	• Comply with all applicable local, state, and national fire, electrical, and safety regulations.
	• Do not use 1.1.1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in pressurized aluminum equipment. Such use could result in a chemical reaction, with the possibility of explosion.



TOXIC FLUID HAZARD

Hazardous fluid or toxic fumes can cause serious injury or death if splashed in the eyes or on the skin, inhaled, or swallowed.

- Know the specific hazards of the fluid you are using.
- Store hazardous fluid in an approved container. Dispose of hazardous fluid according to all local, state, and national guidelines.
- Always wear protective eyewear, gloves, clothing, and respirator as recommended by the fluid and solvent manufacturer.
- Pipe and dispose of the exhaust air safely, away from people, animals, and food handling areas. If the diaphragm fails, the fluid is exhausted along with the air.



FIRE AND EXPLOSION HAZARD

Improper grounding, poor ventilation, open flames, or sparks can cause a hazardous condition and result in a fire or explosion and serious injury.

- The system is for use only with water-based materials. Use fluids compatible with the equipment wetted parts. See **Technical Data** section on page 13 and in all other equipment manuals. Read the fluid and solvent manufacturer's warnings.
- Ground the equipment. See **Grounding** in instruction manual 308718.
- If there is any static sparking or you feel an electric shock while using this equipment, **stop spraying immediately.** Do not use the equipment until you identify and correct the problem.
- Provide fresh air ventilation to avoid the buildup of fumes from fluid being sprayed.
- Keep the work area free of debris, including solvent, rags, and gasoline.
- Locate the sprayer at least 20 ft (6.1 m) away from any explosive vapors, due to arcing parts.
- Comply with all applicable local, state, and national fire, electrical, and safety regulations.



CLEANING SOLVENT HAZARD WITH PLASTIC PARTS

Use only compatible solvents to clean plastic structural or pressure-containing parts. Many solvents can degrade plastic parts to the point where they could fail. Such failure could cause serious injury or property damage. See the **Technical Data** section on page 13 in this instruction manual and in all other equipment manuals. Read the fluid and solvent manufacturer's warnings.

Operation

See your system manual for operating instructions.

Maintenance

WARNING

PRESSURIZED EQUIPMENT HAZARD

The equipment stays pressurized until pressure is manually relieved. To reduce the risk of serious injury from pressurized fluid, accidental spray from the gun or splashing fluid, follow this procedure whenever you

- Are instructed to relieve the pressure
- Stop pumping
- Check or service any system equipment
- Install or clean the spray nozzle

Pressure Relief Procedure

- 1. Shut off the system.
- 2. Trigger the gun.
- 3. Open the gun air valve, if so equipped.
- 4. Disconnect the power source.

Daily Checks

Before each use, check all hoses for wear or damage, and replace as necessary. Be sure hose connections are tight and free of leaks.

Lubrication

The air valve is lubricated at the factory to operate without additional lubrication. You may provide additional lubrication after every 50 hours of operation or every month as follows: Remove the quickdisconnect hose from the air inlet fitting (81), and add two drops of machine oil into the air inlet. See Fig. 1.

Do not over-lubricate the pump. Oil is exhausted through the muffler (72), which could contaminate your fluid supply or other equipment. Excessive lubrication could also cause the pump to malfunction.

Threaded Connections

Every six months of use, remove the pump from the cart, and thoroughly check and tighten all threaded connections.

- When tightening the vee clamps (48), apply thread lubricant to the bolts, and **be sure** to torque the nuts (49) to 80 to 90 in-lb (9 to 10 N-m). See Fig. 1.
- Torque the manifold bolts (60) and the adapter bolts (62) to 80 to 90 in-lb (9 to 10 N-m).
- Torque the valve chamber cover (15) to 80 to 100 in-lb (9.0 to 13.6 N-m).
- Add two drops of machine oil into air inlet every 50 hours of operation.



- 3 Torque to 80 to 90 in-lb (9 to 10 N-m).
- A Torque to 80 to 100 in-lb (9.0 to 13.6 N-m).



Troubleshooting



See **Pressure Relief Procedure** on page 4.

See the **Troubleshooting** section of instruction manual 308718 before you proceed with the table below. Check all possible problems and causes before you disassemble the pump.

PROBLEM	CAUSE	SOLUTION
Pump will not cycle, or cycles once and stops.	Air valve is stuck or dirty.	Clean / service air valve. See page 6.
		Use filtered air.
Pump cycles at stall or fails to hold pressure at stall.	Duckbill valves (8) are leaking.	Replace. See page 7.
	U-cup diaphragm shaft seals (71) are worn.	Replace. See page 8.
Pump operates erratically.	Fluid inlet is clogged.	Inspect; clear.
	Duckbill valves (8) are sticking or leaking.	Clean or replace. See page 7.
	Diaphragm (36) is ruptured.	Replace. See page 8.
Fluid coming out of pump has air bubbles.	Manifold bolts (60) or adapter bolts (62) are loose.	Torque to 80 to 90 in-lb (9 to 10 N-m).
	Diaphragm (36) is ruptured.	Replace. See page 8.
	Manifold O-rings (6) are damaged.	Replace. See page 7.
	Fluid-side diaphragm plates (34) are loose.	Torque diaphragm shaft screws (35) to 80 to 90 in-lb (9 to 10 N-m) at 100 rpm maximum. See page 8 .
Exhaust air contains fluid.	Diaphragm (36) is ruptured.	Replace. See page 8.
	Fluid-side diaphragm plates (34) are loose.	Torque diaphragm shaft screws (35) to 80 to 90 in-lb (9 to 10 N-m) at 100 rpm maximum. See page 8 .
	U-cup diaphragm shaft seals (71) are worn.	Replace. See page 8.
Pump exhausts air from vee clamps.	Vee clamps (48) are loose.	Torque vee clamp nuts (49) to 80 to 90 in-lb (9 to 10 N-m).
Pump leaks fluid from manifold or adapters.	Manifold O-rings (6) are worn or damaged.	Replace. See page 7.
	Manifold bolts (60) or adapter bolts (62) are loose.	Torque to 80 to 90 in-lb (9 to 10 N-m).

Service — Air Valve

Air Valve Repair Kit 241657 is available. Parts included in the kit are marked with a dagger (†) in Fig. 2 and in the **Parts Drawing** and **Parts List** on pages 10 and 11. A tube of general purpose grease 111920 is supplied in the kit. Service the air valve as follows. See Fig. 2.

Disassembly



Relieve the pressure. See Pressure Relief Procedure on page 4.

- 2. Remove the hopper from the cart to gain access to the pump air valve.
- 3. Remove the quick-disconnect hose from the air inlet fitting (81), and remove the valve chamber cover (15) and O-ring (14).
- 4. Remove the carriages (77), carriage plungers (76), carriage pins (75), and valve plate (28) from the center housing (3).
- 5. Clean all the parts, and inspect them for wear or damage.

NOTE: If you are installing the new Air Valve Repair Kit 241657, use all the parts in the kit.

Reassembly

- 1. Grease the lapped surface of the valve plate (28), and install the valve plate with the lapped surface facing up.
- 2. Grease the bores of the center housing (3), install the U-cups (71) onto the carriage plungers (76), and slide the carriage plungers into the carriage plunger bores.
 - When you install the U-cups (71) on the carriage plungers (76), make sure the lips of the U-cups face toward the clip end (the smaller end) of the carriage plunger.
 - When you slide the carriage plungers (76) into the bores, slide them in with the clip ends (the smaller ends) facing toward the center of the center housing (3).
- 3. Grease the carriage pins (75), and slide the carriage pins into the carriage pin bores.
- 4. Install the carriages (77). Make sure the carriages engage the clip ends of the carriage plungers (76) and carriage pins (75).
- 5. Grease the O-ring (14), and seat it in the groove around the cover opening of the center housing (3).
- 6. Screw the cover (15) into the center housing, and torque the cover to 80 to 100 in-lb (9.0 to 13.6 N-m).
- 7. Install the air hose on the air inlet fitting (81), and install the hopper on the cart.

- † Included in Air Valve Repair Kit 241657
- Torque to 80 to 100 in-lb (9.0 to 13.6 N-m).
- Apply grease.
- $\cancel{3}$ Apply grease to lapped face.
- 4 Apply grease to bores of center housing (3) before installing.
- 5 Seal lips face clip end (the smaller end) of carriage plunger (76).
- 6 Install with the clip ends (the smaller ends) facing toward center of center housing (3).





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Service — Duckbill Valves

Duckbill Valve Repair Kit 239754 is available. Parts included in the kit are marked with a double dagger (‡) in Fig. 3 and in the **Parts Drawing** and **Parts List** on pages 10 and 11. Service duckbill valves as follows. See Fig. 3.

Disassembly



Relieve the pressure. See Pressure Relief Procedure on page 4.

- 2. Remove the pump from the cart.
- 3. Stand the pump upright on the floor or workbench.
- 4. Remove the bolts (62), washers (63), and nuts (61). Remove the two adapters (47).
- 5. Remove the exposed duckbill valves (8), spacers (7), and O-rings (6).
- 6. Turn the pump so it is standing upside down on the floor or workbench.
- 7. Remove the manifold bolts (60) and nuts (61), and remove the feet (45) and manifold (2).
- 8. Remove the exposed O-rings (6), spacers (7), and duckbill valves (8).

Reassembly

 With the pump standing upside down on the floor or workbench, install the lower duckbill valve assembly by inserting the new duckbill valves (8), spacers (7), and O-rings (6).

NOTE: Make sure the duckbill valves are oriented as shown in Fig. 3.

- Apply lubricant to the threads of the bolts (60), and reassemble the manifold (2), feet (45), bolts (60), and nuts (61). Torque the bolts to 80 to 90 in-lb (9 to 10 N-m).
- 3. Turn the pump so it is standing upright on the floor or workbench.
- 4. Install the upper duckbill valve assembly by inserting the new O-rings (6), spacers (7), and duckbill valves (8).

NOTE: Make sure the duckbill valves are oriented as shown in Fig. 3.

- Apply lubricant to the threads of the bolts (62), and install the two adapters (47), bolts (62), washers (63), and nuts (61). Torque the bolts to 80 to 90 in-lb (9 to 10 N-m).
- 6. Install the pump on the cart.



‡ Included in Duckbill Valve Repair Kit 239754

 $\frac{1}{1}$ Apply lubricant, and torque to 80 to 90 in-lb (9 to 10 N-m).

Service — Diaphragms

Fluid Section Repair Kit D05007 is available. Parts included in the kit are marked with a star (\star) in Fig. 4 and in the **Parts Drawing** and **Parts List** on pages 10 and 11. General-purpose grease 111920 and Adhesive 113500 are supplied in the kit. Service the diaphragms as follows. See Fig. 4.

Disassembly



Relieve the pressure. See Pressure Relief Procedure on page 4.

- 2. Remove the pump from the cart.
- 3. Remove the vee clamps (48).
- 4. Remove the manifold (2) and fluid covers (1).

NOTE: Do not lose the manifold O-rings (6), and make sure all the check valve parts stay in place. See Fig. 3 on page 7.

- Remove one of the fluid-side diaphragm plates (34) (whichever one comes loose first when you use a wrench on the hex of each), and pull the diaphragm shaft out of the center housing (3).
- Use a wrench on the flats of the diaphragm shaft (74) to remove the other fluid-side diaphragm plate (34) from the diaphragm shaft.
- Remove the screws (65) and air covers (66). Remove all old gasket (70) material from the ends of the center housing (3) and the surfaces of the air covers.
- 8. Remove the diaphragm shaft U-cups (71) and pilot pin O-rings (12).
- 9. Inspect all parts for wear or damage, and replace as necessary.

Reassembly

 Insert a diaphragm shaft U-cup (71) and a pilot pin O-ring (12) into their bores in one end of the center housing (3).

NOTE: Make sure the lips of the U-cup face **out** of the center housing.

- 2. Line up the holes in the gasket (70) with the holes in the end of the center housing (3), and use six screws (65) to fasten an air cover (66) to the end of the center housing. Torque the screws to 40 to 50 in-lb (4.5 to 5.6 N-m).
- 3. Position the exhaust cover (73) and O-ring (14) on the center housing (3).
- 4. Repeat steps 1 and 2 for the other end of the center housing and the remaining air cover.

 Apply medium-strength (blue) Loctite (supplied with Kit D05007) or equivalent to the threads of the diaphragm shaft screws (35). Install on one end of the diaphragm shaft (74) the following parts (see proper order in Fig. 4): air-side diaphragm plate (37), diaphragm (36), fluid-side diaphragm plate (34), O-ring (33), and screw (35).

NOTE: The words AIR SIDE on the diaphragm (36) and the flat side of the air-side diaphragm plate (37) must face toward the diaphragm shaft (74).

- 6. Put grease (supplied with Kit D05007) on the diaphragm shaft (74), and carefully (do not damage the diaphragm shaft U-cups) run the diaphragm shaft through the center housing (3) bore.
- Repeat step 5 for the other end of the diaphragm shaft (74). Torque the diaphragm shaft screws (35) to 80 to 90 in-lb (9 to 10 N-m) at 100 rpm maximum.
- 8. Install the muffler (72).
- 9. Apply a thin, even film of grease to the insides of the vee clamps (48).

When you install the vee clamps in step 10, orient the center housing (3) so the valve chamber cover (15) is straight up.

- Position the fluid covers (1), install the vee clamps (48) around the fluid and air covers, and torque the vee clamp nuts to 80 to 90 in-lb (9 to 10 N-m).
- 11. Make sure all the check valve parts are in place. See Fig. 3 on page 7.
- Put grease (supplied with Kit D05007) on the manifold bolts (60), install the manifold (2), and torque the manifold bolts to 80 to 90 in-lb (9 to 10 N-m).
- 13. Install the pump on the cart, and reconnect the air line to the air inlet fitting (81).

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Service — Diaphragms





Parts List

Texture Pump, Model 239753, Series A

Ref. No.	Part No.	Description	Qty
1	185622	COVER, fluid; aluminum	2
2	185624	MANIFOLD; aluminum; npt	1
3	192602	HOUSING, center	1
6‡	110782	O-RING; buna–N	4
7‡	192138	SPACER; Delrin®	4
8‡	192137	VALVE, duckbill; buna-N	4
9‡	154662	PACKING, O-ring; buna-N	2
12★	114866	PACKING, O-ring; Viton®	2
14†	162942	PACKING, O-ring; buna–N	2
15	192597	COVER, valve chamber	1
28†	194269	PLATE, valve	1
33	110004	O-RING; PTF ®	2
34	191837	PLATE, diaphragm, fluid-side; sst	2
35	113747	SCREW, flange; hex head	2
36★	190148	DIAPHRAGM; buna-N	2
37	195025	PLATE, diaphragm, air-side	2
44	102726	PLUG, steel; npt	1
45	186207	BASE, feet; epoxy-coated steel	2
47	192140	ADAPTER; aluminum	2
48	189540	CLAMP, vee; sst	2
49	112499	NUT, clamp; 1/4–28 Shown in Fig. 1 on page 4.	2
58	189220	LABEL, warning	1
59▲	186205	LABEL, warning	1
60	112912	SCREW; 3/8–16; 2.25" (57.2 mm)	4
61	112913	NUT, hex; 3/8–16; sst	8
62	113976	SCREW, HHCS; 3/8–16 x 1.5" (38 mm)	4

Ref. No.	Part No.	Description	Qty
63	112914	WASHER, flat; 3/8"; sst	4
64	290045	PLATE, designation	1
65	113341	SCREW, torx	12
66	194246	COVER air	2
67	111183	RIVET	2
69	194356	LABEL, identification Not shown. Affixed to the fluid cover (1) that is not shown.	1
70★	192765	GASKET, air cover	2
71 †★	108808	PACKING, U-cup; Viton®	4
72	112933	MUFFLER; porous polyethylene	1
73	194247	COVER, exhaust	1
74	192601	SHAFT, diaphragm	1
75†	192596	PIN, carriage	2
76†	192594	PLUNGER, carriage	2
77†	192595	CARRIAGE	2
78	113668	COUPLER, female; aluminum; 1"	1
79	192139	NIPPLE, pipe, hex; aluminum; 3/4 npt(m) x 3/4 npt(m)	1
80	100840	ELBOW, street; zinc-plated steel; 1/4 npt(m) x 1/4 npt(f)	1
81	169970	FITTING, air line; male; zinc- plated steel; 1/4"	1

- † Included in Air Valve Repair Kit 241657, which may be purchased separately.
- [‡] Included in Duckbill Valve Repair Kit 239754, which may be purchased separately.
- \bigstar Included in Fluid Section Repair Kit D05007, which may be purchased separately.
- ▲ Replacement Danger and Warning labels, tags, and cards are available at no cost.

Notes

Technical Data

Technical Data based on tests with water. Data varies with different materials and operating conditions.

Maximum air and fluid working pressure	100 psi (0.7 MPa, 7 bar)
Air pressure operating range 25	5 to 100 psi (0.17 to 0.7 MPa, 1.7 to 7 bar)
Maximum air consumption	
Maximum free flow delivery	16 gpm (61 lpm)
Maximum pump speed	
Gallons (liters) per cycle	0.04 (0.15)
Maximum suction lift	16 ft (4.8 m) dry; 25 ft (7.6 m) wet
Maximum size pumpable solids	1/4 in. (6.4 mm)
Sound power level (measured per ISO standard 9614–2)	
At 70 psig (0.48 MPa, 4.8 bar) at 50 cycles per minute	
At 100 psig (0.7 MPa, 7 bar) at maximum cycles per minute	
Sound pressure level (measured 1 meter from pump)	
At 70 psig (0.48 MPa, 4.8 bar) at 50 cycles per minute	67 dBa
At 100 psig (0.7 MPa, 7 bar) at maximum cycles per minute	85 dBa
Wetted parts aluminum, sst, buna-N, PTFE,	Fluoroelastomer, acetal, zinc-plated steel
Non-wetted external parts polypropylene, sst, polyester (labels), nic	kel-plated brass, epoxy-coated steel (feet)
Weight (approximate)	8.5 lb (3.9 kg)
Maximum operating temperature	100° F (37° C)
Air inlet size	1/4 npt(f)
Fluid outlet size	3/4 npt(f)
Air exhaust port size	3/8 npt(f)

Loctite® is a registered trademark of the Loctite Corporation.

Graco Warranty

Graco warrants all equipment manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized Graco distributor to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

Graco makes no warranty, and disclaims all implied warranties of merchantability and fitness for a particular purpose in connection with accessories, equipment, materials or components sold but not manufactured by Graco. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

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ADDITIONAL WARRANTY COVERAGE

Graco does provide extended warranty and wear warranty for products described in the "Graco Contractor Equipment Warranty Program".

Graco Phone Number

TO PLACE AN ORDER, contact your Graco distributor, or call this number to identify the distributor closest to you: 1–800–690–2894 Toll Free

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