



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

INSTRUCTIONS

Texture Pump

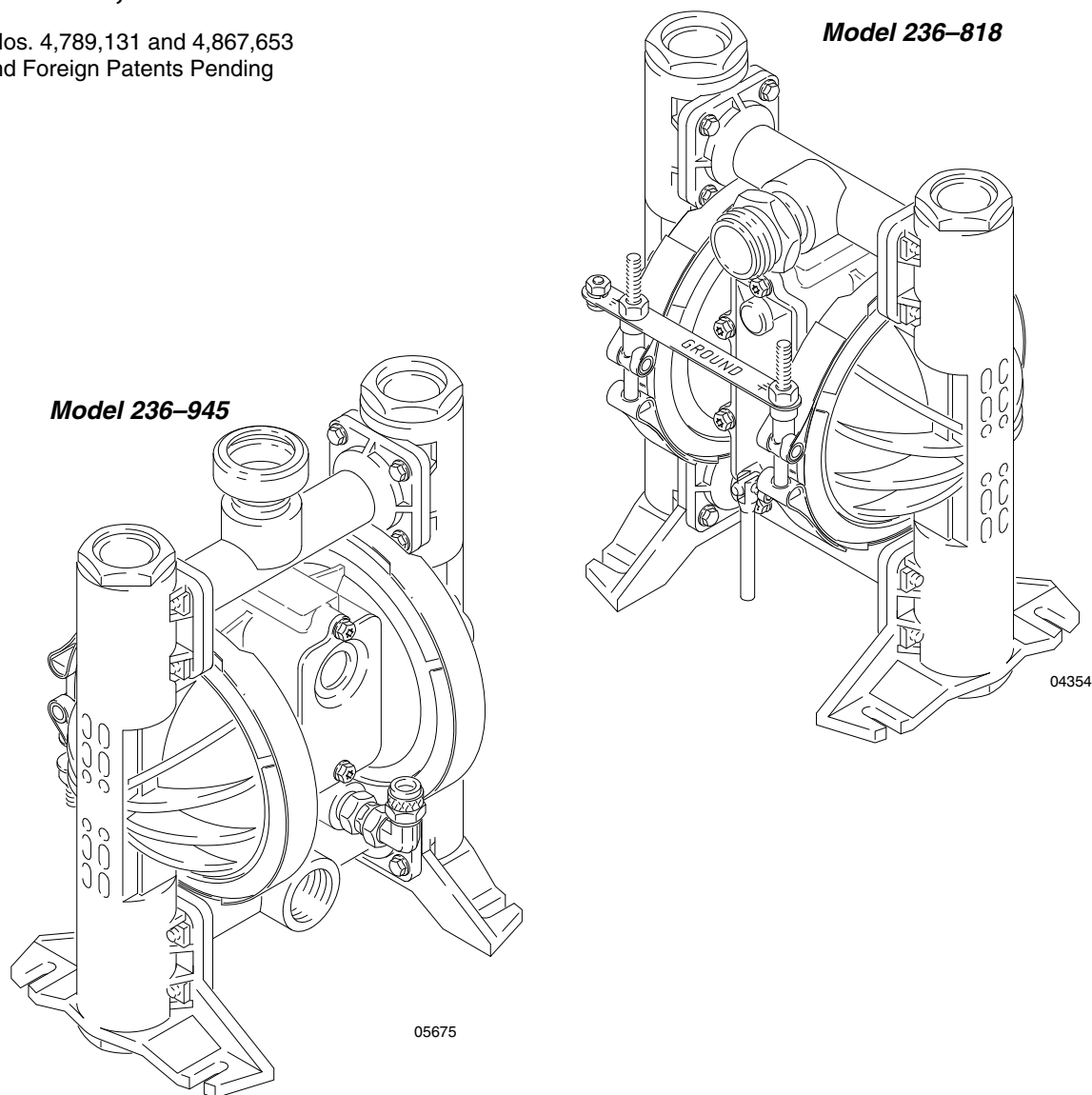
100 psi (7 bar) Maximum Air and Fluid Working Pressure

Model 236-818, Series C

Model 236-945, Series C

Model 237-826, Series B

U.S. Patent Nos. 4,789,131 and 4,867,653
Other U.S. and Foreign Patents Pending



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Table of Contents

Warnings	2
Setup/Operation	4
Pump Maintenance	5
Troubleshooting	7
Pump Repair – Air Valve	8
Pump Repair – Ball Check Valves (236–818)	13
Pump Repair – Ball Check Valves (236–945 & 237–826)	14
Pump Repair – Diaphragm	15
Parts – Pump 236–818	18
Repair Kits	18
Parts – Pump 236–945	20
Repair Kits	20
Parts – Pump 237–826	22
Repair Kits	22
Parts – Air Valve	24
Technical Data	25
The Graco Warranty and Disclaimers	28
Graco Phone Number	28

Symbols

Warning Symbol



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

Caution Symbol



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

! WARNING



INSTRUCTIONS

EQUIPMENT MISUSE HAZARD

Equipment misuse can cause the equipment to rupture or malfunction and result in serious injury.

- This equipment is for professional use only.
- Read all instruction manuals, tags, and labels before operating the 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 (7 bar) maximum working pressure at 100 psi (7 bar) maximum air pressure.**
- **The system is for use only with water-based simulated acoustic and wall texture materials.** Use fluids and solvents which are compatible with the equipment wetted parts. Refer to the **Technical Data** section of all equipment manuals. 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.

WARNING



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.

- Ground the equipment. Refer to **Grounding** on page 4.
- If there is any static sparking or you feel an electric shock while using this equipment, **stop pumping immediately**. Do not use the equipment until you identify and correct the problem.
- Provide fresh air ventilation to avoid the buildup of flammable fumes from solvents or the fluid being pumped.
- Keep the work area free of debris, including solvent, rags, and gasoline.
- Electrically disconnect all equipment in the work area.
- Extinguish all open flames or pilot lights in the work area.
- Do not smoke in the work area.
- Do not turn on or off any light switch in the work area while operating or if fumes are present.
- Do not operate a gasoline engine in the work area.

Setup/Operation

Refer to your system manual.

Grounding

⚠ WARNING

FIRE AND EXPLOSION HAZARD
This pump must be grounded. Before operating the pump, ground the system as explained below. Also read the section **FIRE OR EXPLOSION HAZARD** on page 3.

To reduce the risk of static sparking, ground the pump and all other equipment used or located in the pumping area. Check your local electrical code for detailed grounding instructions for your area and type of equipment. **Ground all of this equipment.**

1. *Texture sprayer:* Be sure the ground wire from the unit's frame to the pump's grounding strip is attached. Refer to the sprayer manual.
2. *Pump:* The Texture Pump is polypropylene, which is not conductive. Attaching the ground wire to the grounding strip will ground only the air motor. If the pump is being used in an application other than texture spraying, contact your Graco distributor for instruction on properly grounding the pump.

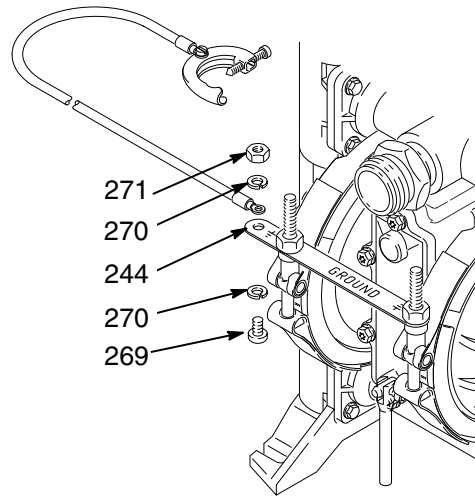


Fig. 1

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3. *Air and fluid hoses:* use only electrically conductive hoses.
4. *Air compressor:* follow the manufacturer's recommendations.
5. *Solvent pails used when flushing:* follow your local code. Use only metal pails, which are conductive. Do not place the pail on a non-conductive surface, such as paper or cardboard, which interrupts the grounding continuity.
6. *Fluid supply container:* follow your local code.

Pump 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,
- or 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 leak-free.

Pump lubrication

After every 500 hours of fluid pumped, remove the hose from the pump air inlet (A). Add two drops of machine oil into the air inlet. Refer to Fig. 2.


Tighten pump's threaded connections every six months


Remove the pump from the cart and thoroughly check and tighten all threaded connections.

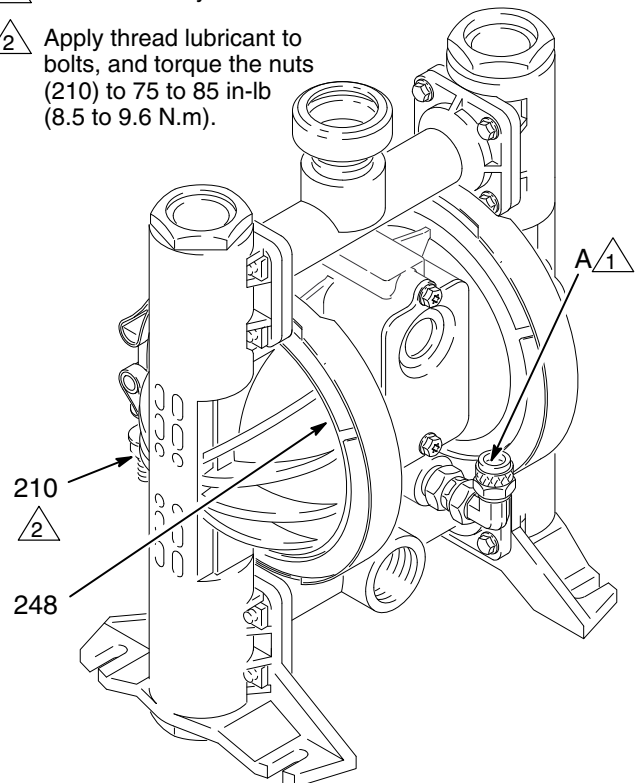
When tightening the clamps (248), apply thread lubricant to the bolts, and **be sure** to torque the nuts (210) to 75 to 85 in-lb (8.5 to 9.6 N.m). See Fig. 2.

Key

A	Air inlet
210	Clamp Nuts
248	Clamps

 1 Lubricate every 500 hours.

 2 Apply thread lubricant to bolts, and torque the nuts (210) to 75 to 85 in-lb (8.5 to 9.6 N.m).



Model 236-945 Shown

Fig. 2

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Troubleshooting

⚠ WARNING

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 5.

See the **Troubleshooting** section of instruction manuals 308–342 and 308–161 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 (215) is stuck or dirty.	Disassemble, clean, and lube air valve. <i>See pages 10 to 12.</i>
	Broken or damaged springs (109, 112) and/or valve cup (110) and plate (228).	Repair or replace components, or replace complete air valve (kit 237–683). <i>See pages 10 to 12.</i>
	Worn or broken detent link (113).	Replace detent link and ball (107) or complete air valve (kit 237–683).
Pump cycles at stall, or fails to hold pressure at stall.	Leaky check valves or o-rings (245).	Repair or replace. <i>See pages 13 and 14.</i> NOTE: Match pump part number with the correct pump parts breakdown (Fig. 10 through Fig. 13). Not all texture pumps have the same assembly order.
	Worn check balls (233) or seat (232).	Repair or replace. <i>See pages 13 and 14.</i>
Excessive air leakage from exhaust port, or air exhausts at stall.	Worn air valve cup (110) or plate (228).	Repair or replace. <i>See pages 10 to 12.</i>
	Worn shaft seals (239).	Repair or replace. <i>See pages 15 to 17.</i>
Pump operates erratically.	Sticky or leaking check valve balls (233).	Clean or repair. <i>See pages 13 and 14.</i>
Air bubbles in fluid.	Suction line is loose.	Tighten.
	Diaphragm (235) ruptured.	Replace. <i>See pages 15 to 17.</i>
	Loose manifolds (202).	Tighten manifold bolts (207). <i>See pages 15 to 17.</i>
	Manifold o-rings (208) are leaking.	Replace. <i>See pages 15 to 17.</i>
	Loose outer diaphragm plates (236).	Tighten. <i>See pages 15 to 17.</i>
Fluid in exhaust air.	Diaphragm (235) ruptured or diaphragm plate (236) loose or cracked.	Replace. <i>See pages 15 to 17.</i>
Pump exhausts air from clamps.	Loose clamps (248).	Tighten clamps. <i>See page 5.</i>
Pump exhausts air near air valve.	Air valve screws (211) are loose.	Tighten screws. <i>See pages 8 and 9.</i>
	Air valve o-ring (101) is damaged.	Inspect; replace. <i>See pages 10 to 12.</i>
Pump leaks fluid from check valves.	Worn or damaged o-rings (245).	Inspect; replace. <i>See pages 13 and 14.</i>
	Check valve plug (205) is loose.	Tighten. <i>See pages 13 and 14.</i>

Pump Repair – Air Valve

⚠ WARNING

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 5.

Replacing the Air Valve

NOTE: An Air Valve Kit, Part No. 237–683, is available. Parts included in the kit are marked with a symbol, for example (101‡). A tube of general purpose grease (121‡) is supplied in the kit. Install the kit as follows.

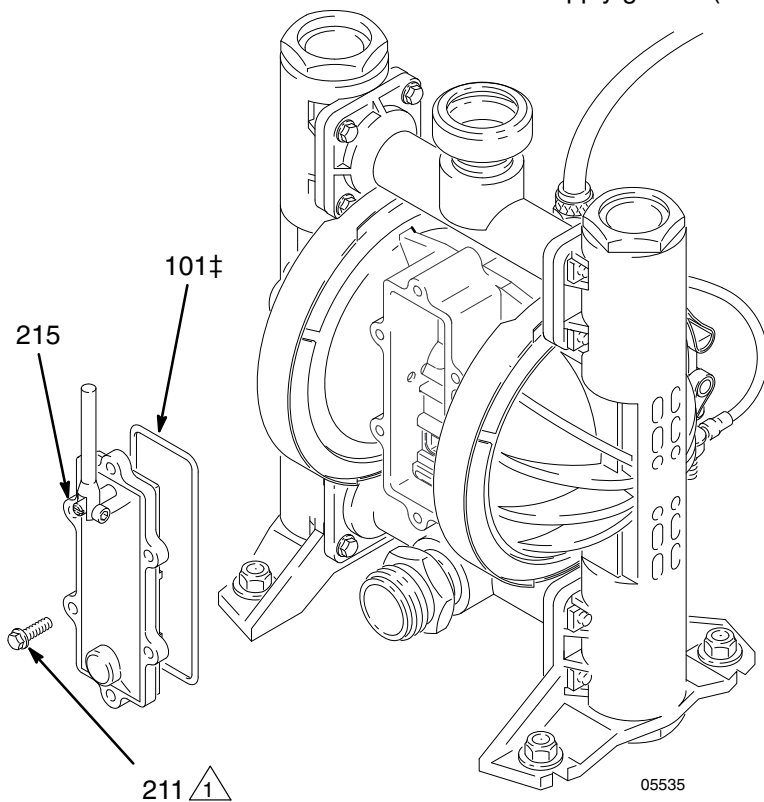
1. Relieve the pressure.
2. Unscrew the six mounting screws (211) and remove the air valve (215). See Fig. 3.
3. Use an o-ring pick to remove the bearing (105‡). Remove the lower link bearing (225). See Fig. 4.

4. Remove the two screws (253) holding the valve plate (228) to the pump. Use an o-ring pick to remove the valve plate and seal (227). Clean and inspect the parts. Replace any worn ones. See Fig. 4.
5. If the pilot pins (241) are accessible from the inside of the pump housing (203), pull them out. See Fig. 5. If not accessible, disassemble the fluid section as explained on pages 15–17.

NOTE: Inspect the pilot pin o-rings (242) and bearings (243) in place. Removal will destroy the bearings and is not required unless they are damaged. To service the bearings, first perform steps 3 and 4 on page 15.

6. Use a 1/8 in. EZY-OUT to remove the bearings (243) from the housing (203). See Fig. 15 on page 16 for an illustration of how to use an EZY-OUT. Remove the o-rings (242). Clean and inspect the parts. Replace any worn parts.

- 1 ⚠ Torque oppositely and evenly to 20 to 25 in-lb (2.3 to 2.8 N.m).
2 ⚠ Apply grease (121‡).



GREASE APPLICATION

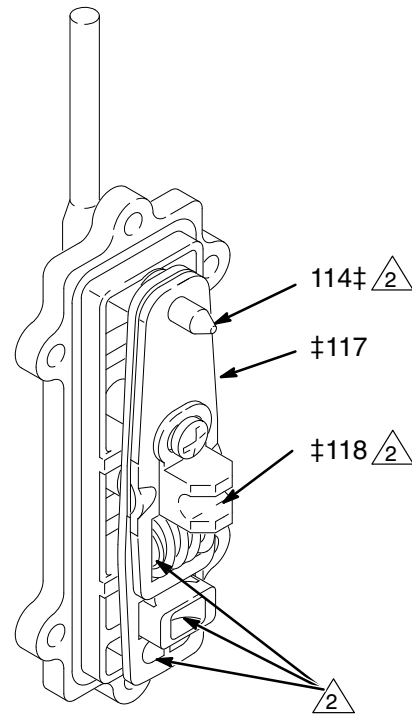


Fig. 3

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Pump Repair – Air Valve

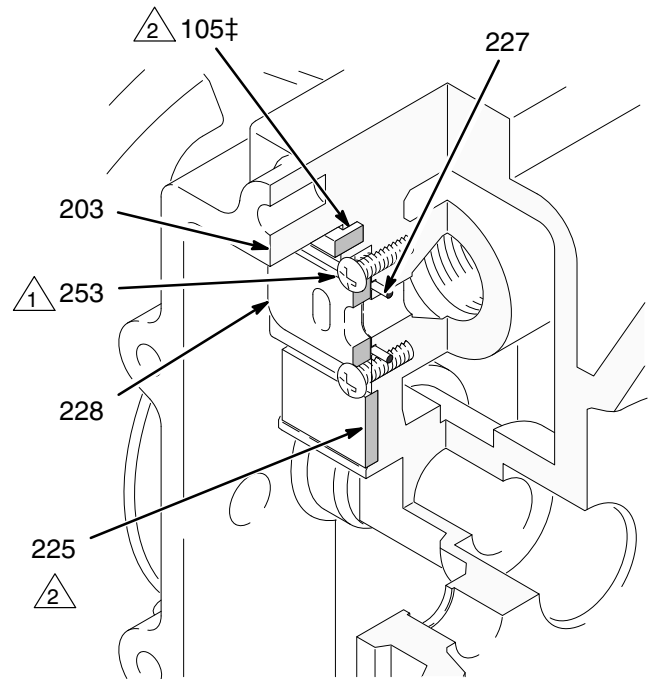
NOTE: If the pilot pin o-rings (242) and bearings (243) were not removed, go to step 8.

7. Grease the o-rings (242) and install them in the bearings (243). Press the bearings and o-rings in place so the bearings are flush with the surface of the housing (203). See Fig. 5.
8. Grease the pilot pins (241) and install them from the inside of the housing (203). See Fig. 5.
9. Install the seal (227) in the pump housing (203). Install the valve plate (228) and secure with the two screws (253). Torque the screws to 5 to 7 in-lb (0.6 to 0.8 N.m). See Fig. 4.
10. Apply grease (121†) to the bearings (105† and 225). Install the bearing (105†) in the pump housing (203). Reinstall the lower bearing (225). See Fig. 4.
11. Make certain the o-ring (101†) is in place on the air valve (215).
12. Apply grease (121†) where shown in Fig. 3.
13. Align the new air valve assembly so the reset screw (114†) is at the bottom. Check that the pilot pins (241) inside the pump housing (203) give clearance for the actuator link (117†). Install the six screws (211) and torque oppositely and evenly to 20 to 25 in-lb (2.3 to 2.8 N.m).

⚠ CAUTION

If you are replacing the diaphragms (235), you **must** reinstall the air valve before installing the diaphragms, as the diaphragms will force the pilot pins into the air valve area.

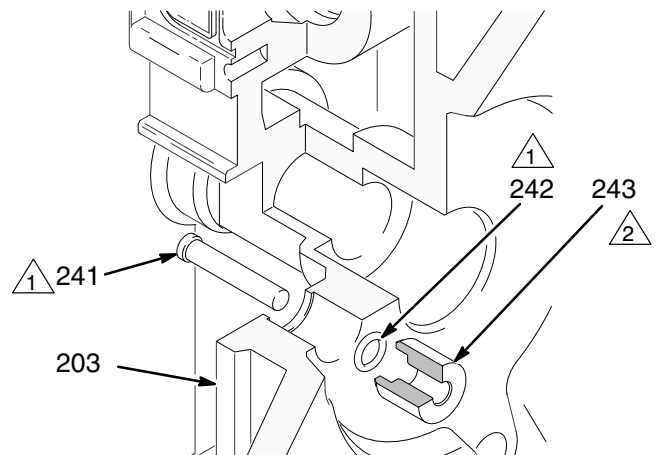
1. Torque to 5 to 7 in-lb (0.6 to 0.8 N.m).
2. Apply grease (121†).



03417

Fig. 4

1. Grease.
2. Press-fit flush with surface of housing (203).



03424

Fig. 5

Pump Repair – Air Valve

⚠ WARNING

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 5.

Disassembly

NOTE: All parts shown are included in the air valve kit, part no. 237–683.

1. Relieve the pressure.
2. Remove the air valve (215) as explained on page 8.
3. Remove the screw (123) and the reset shaft handle (122).
4. Remove the screw (119) and shift saddle (118). See Fig. 6.
5. Disassemble the link assembly, consisting of the actuator link (117), spacer (120), detent link (113), spring (112), stop (111), and valve cup (110).
6. Remove the detent ball (107) and spring (109). The detent collar (108) is a press-fit and should not need removal; if it does require replacement, you should also replace the cover (106).
7. Remove the reset shaft (114), o-ring (115) and washer (116).
8. Clean all parts and inspect for wear or damage. Replace as needed. See **Reassembly** on page 11.

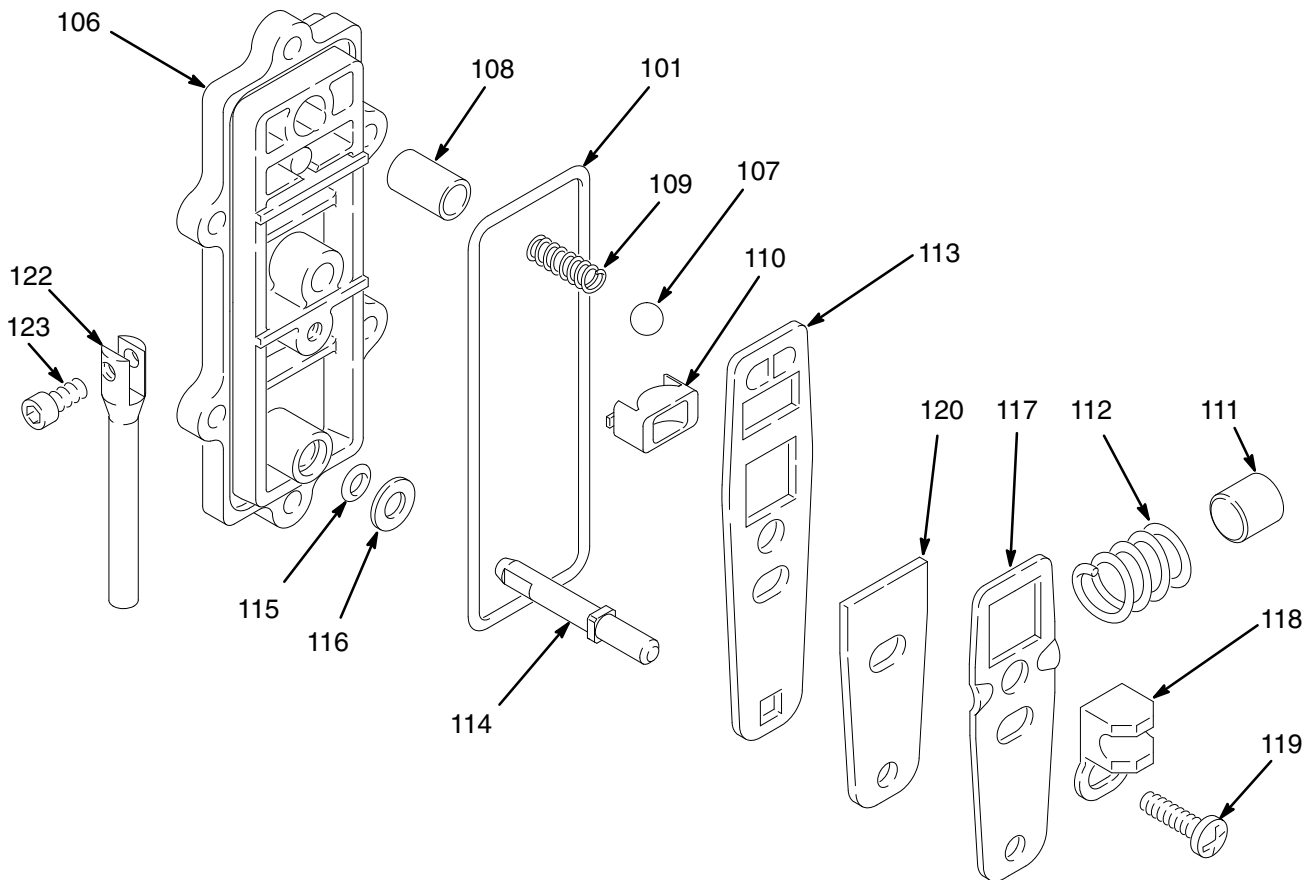


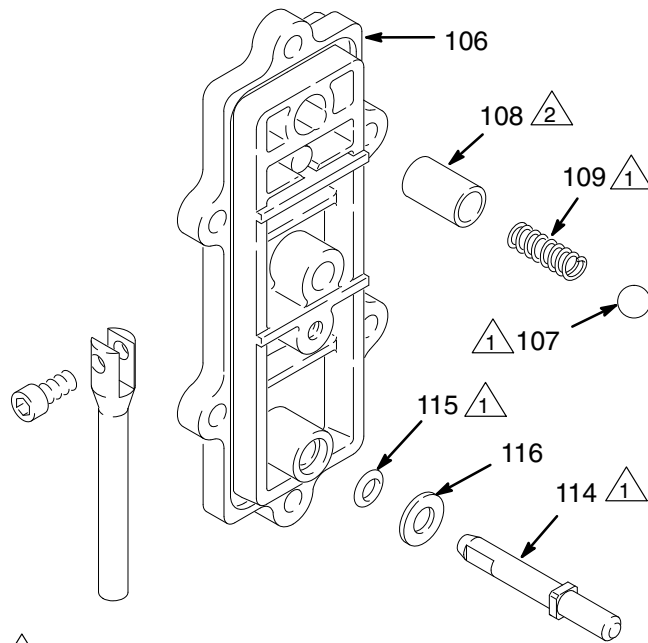
Fig. 6

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Pump Repair – Air Valve

Reassembly

1. If the detent collar (108) was removed, install a new collar in a new cover (106). Using a rubber mallet, carefully press fit the detent collar (108) into the cover (106). See Fig. 7.
2. Grease the detent spring (109) and place it in the collar (108). Grease the ball (107) and set it on the spring. See Fig. 7.
3. Apply grease (121) to the o-ring (115) and install it in the hole in the air valve cover (106), as shown in Fig. 7. Slide the washer (116) onto the blunt end of the reset shaft (114). Insert the shaft through the air valve cover (106) until it seats.



- 1 Apply grease (121).
- 2 Press fit.

Fig. 7 05526

4. Grease the spring (112). Place the link stop (111) inside the spring.

5. Grease the detent link (113) and link spacer (120). Assemble the detent link, link spacer, and actuator link (117) as shown in Fig. 8. The raised bumps on the links (113 and 117) must face up.
6. Squeeze the spring (112) and install it and the stop (111) in the link assembly. See Fig. 8. The spring tension will hold all these parts together. Grease the valve cup (110) and install it in the link assembly as shown.
7. Install the link assembly onto the air valve cover (106) so the pointed end of the reset shaft (114) fits through the holes in the links and the square part of the reset shaft engages the square hole in the detent link (113). Make certain the bumps on the detent link (113) engage the detent ball (107). See Fig. 8.

- 1 Apply grease (121).
- 2 Bumps face up.
- 3 Reset shaft square must engage with square hole.

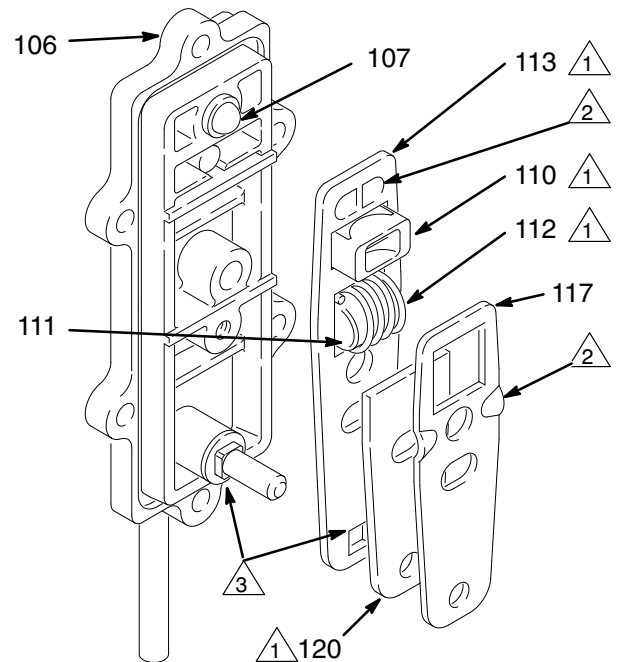
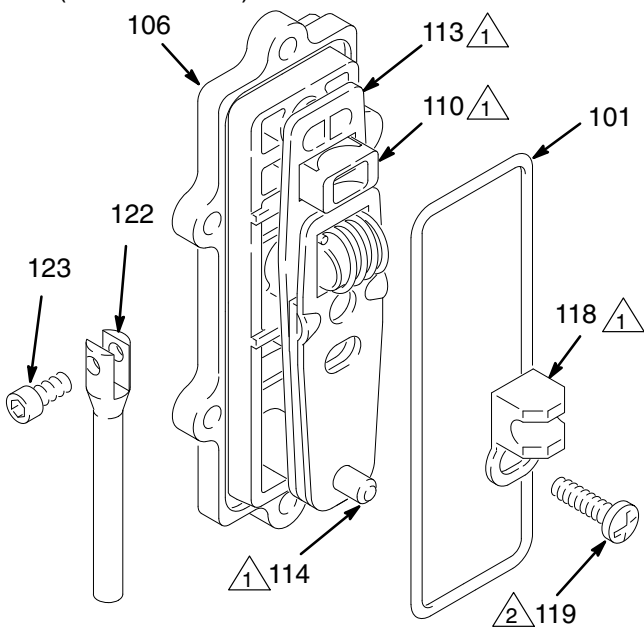


Fig. 8 05527

Pump Repair – Air Valve

1 Apply grease (121).

2 Torque to 8 to 14 in-lb
(0.9 to 1.6 N.m).



8. Grease the inside surfaces of the shift saddle (118) and install it as shown in Fig. 9. Hold the link assembly firmly in place and install the screw (119). Torque to 8 to 14 in-lb (0.9 to 1.6 N.m). Install the o-ring (101) on the cover (106).

9. Install the screw (123) and the reset shaft handle (122) on the reset shaft (114).

10. Reinstall the air valve as explained on page 9.

Fig. 9

05528

Pump Repair – Ball Check Valves (236–818)

⚠ WARNING

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 5.

NOTE: Repair Kit 224–970 is available. Kit parts are shown with a * after the Ref No. Use all the parts in the kit.

NOTE: For proper ball seating, replace the guides (232*) when replacing the balls. Use new o-rings (245*) if the old ones are removed for any reason.

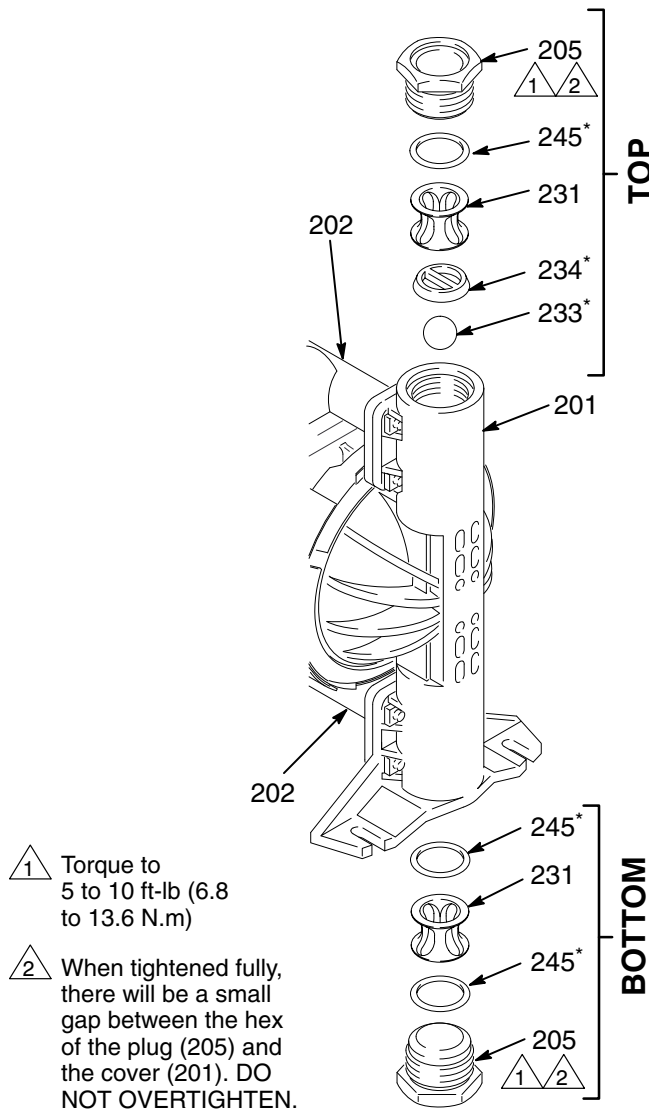
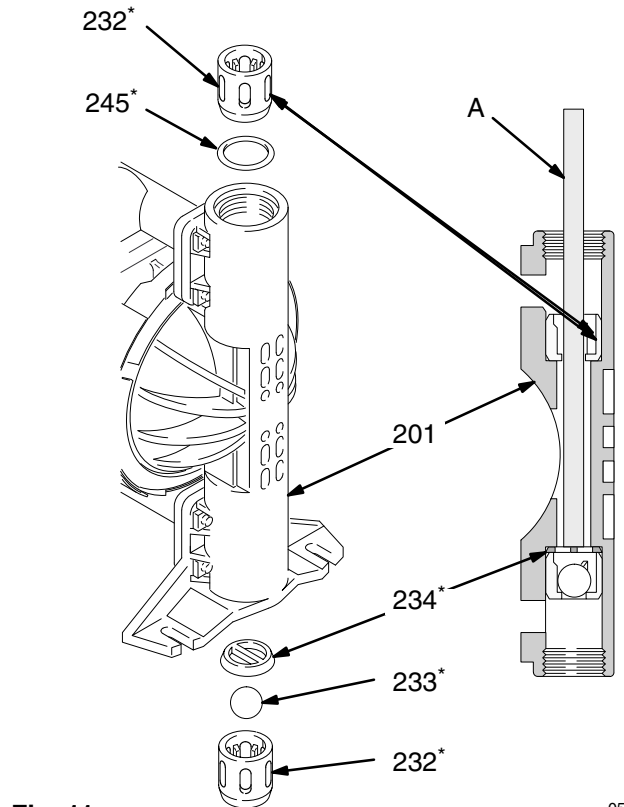


Fig. 10

1. Relieve the pressure.
2. Disassemble the top ball checks. Turn the pump over. Remove the plug (205), o-rings (245*), and spacer (231). See Fig. 10.
3. Insert a 3/8" dia. x 8" dowel (A) through the top ball guide (232*). Press on the bottom ball stop (234*) to push out the ball guide (232*), ball (233*), and ball stop. See Fig. 11.
4. Turn the pump over. Insert the dowel at an angle so it contacts the edge of the top ball guide (232*), and push out the guide. Remove the o-ring (245*).
5. Clean all parts. Inspect parts and replace worn or damaged ones.
6. Reassemble. Follow all notes in Fig. 10.



Pump Repair

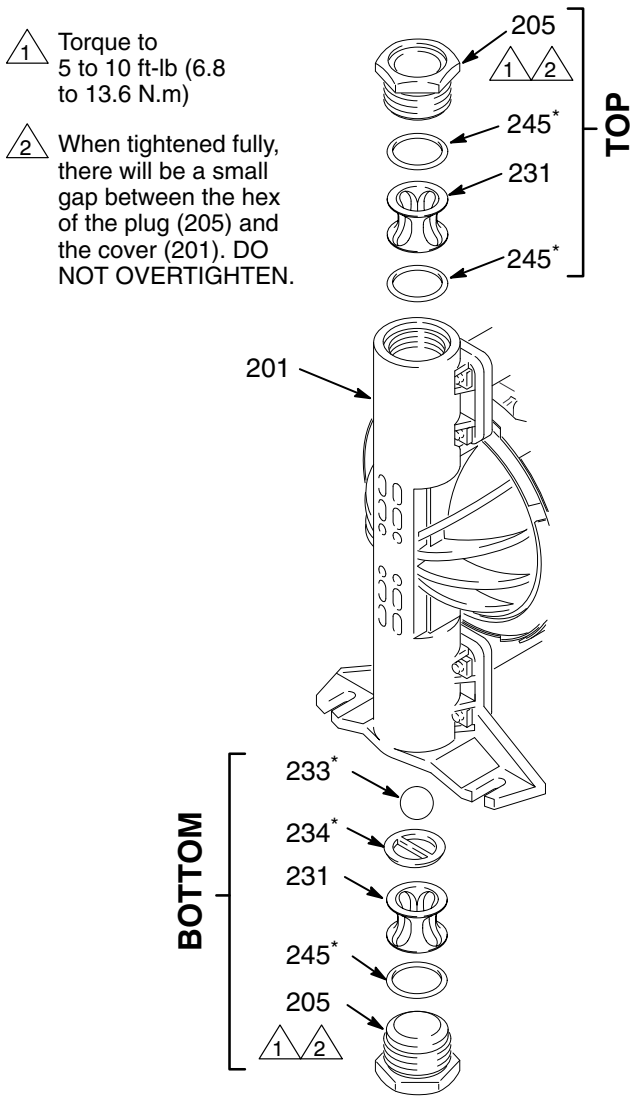
Ball Check Valves (236–945 and 237–826)

⚠ WARNING

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 5.

NOTE: Repair Kit 224–970 is available. Kit parts are shown with a * after the Ref No. Use all the parts in the kit.

NOTE: For proper ball seating, replace the guides (232*) when replacing the balls. Use new o-rings (245*) if the old ones are removed for any reason.



1. Relieve the pressure.
2. Disassemble the bottom ball checks. See Fig. 12. Turn the pump over. Remove the top plug (205), o-rings (245*), and spacer (231).
3. Insert a 3/8" dia. x 8" dowel (A) through the bottom ball guide (232*). Press on the top ball stop (234*) to push out the ball guide (232*), ball (233*), and ball stop. See Fig. 13.
4. Turn the pump over. Insert the dowel at an angle so it contacts the edge of the bottom ball guide (232*), and push out the guide. Remove the o-ring (245*).
5. Clean all parts. Inspect parts and replace worn or damaged ones.
6. Reassemble. Follow all notes in Fig. 12.

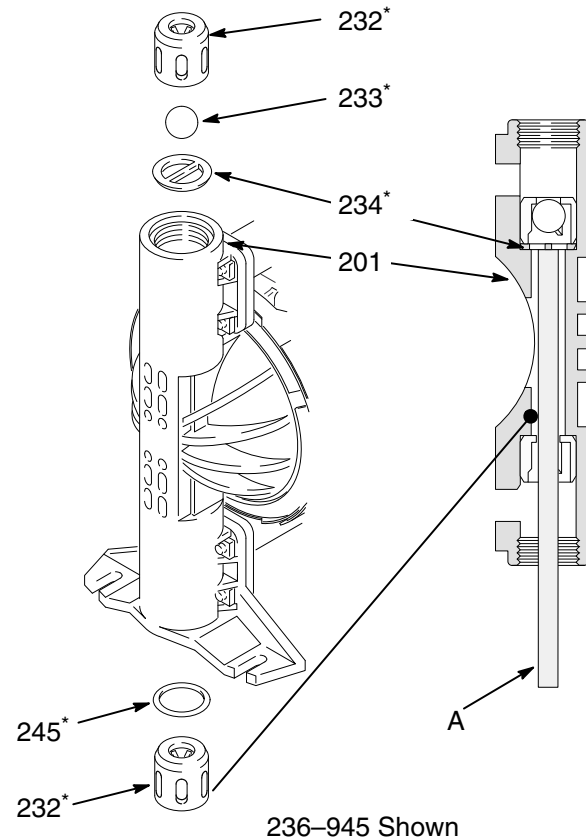


Fig. 12

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Fig. 13

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Pump Repair – Diaphragm

WARNING

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 5.

Disassembly

NOTE: Repair Kit D05–007 is available. Kit parts have a † behind the Ref No. Use all the parts in the kit.

NOTE: Diaphragm Shaft Kit 239–016 is available. Kit parts have a ● behind the Ref No. Use all parts in the kit.

NOTE: In Step 5, use a 13/32 in. EZY-OUT (B) screw extractor to remove the bearings (238). Other removal methods may damage the pump housing (203).

NOTE: Inspect the pilot pin o-rings (242) and bearings (243) in place. Removal will destroy the bearings and is not required unless they are damaged. To service the bearings, see step 6 on page 8.

1. Relieve the pressure.
2. Remove the clamp nuts (210) and the grounding strip (244). See Fig. 14. Push the threaded end of the clamps between the upper manifold (202) and the housing (203). Rotate the clamps 90° so they are parallel to the bottom manifold, slip the other end between the bottom manifold and housing, and remove them from the pump.
3. Remove the screws (207) and nuts (206) holding the manifolds (202) to the covers (201). Remove the manifolds and o-rings (208). Pull the covers (201) off the pump. See Fig. 14.
4. Unscrew one outer plate (236) from the diaphragm shaft (240). Remove one diaphragm (235) and inner plate (237). Pull the opposite diaphragm assembly and the shaft out of the pump housing (203). See Fig. 14. Clamp the shaft in a vise with soft jaws (or grip the flats with a wrench) and unscrew the outer plate (236), then disassemble the remaining diaphragm assembly.
5. Inspect the shaft (240) for wear or scratches. If it is damaged, check the bearings (238) also. Replace parts as needed. To remove the bearings, place a 13/32 EZY-OUT (B) in a vise (C). Position the pump housing (203) over the EZY-OUT (see Fig. 15). Turn the housing in the direction shown by the arrows to remove the bearing.
6. Hook the shaft seals (239) with an o-ring pick and pull them out of the housing (203).
7. Clean all parts and inspect for wear or damage. Replace parts as needed.

Pump Repair – Diaphragm

1 Grease

2 Apply thread lubricant.

3 Apply medium-strength (blue) Loctite® or equivalent. Torque to 75 to 85 in lb (8.5 to 9.6 N.m). Do not over-torque.

4 Torque to 75 to 85 in-lb (8.5 to 9.6 N.m).

5 Torque to 20 to 25 in lb (2.3 to 2.8 N.m)

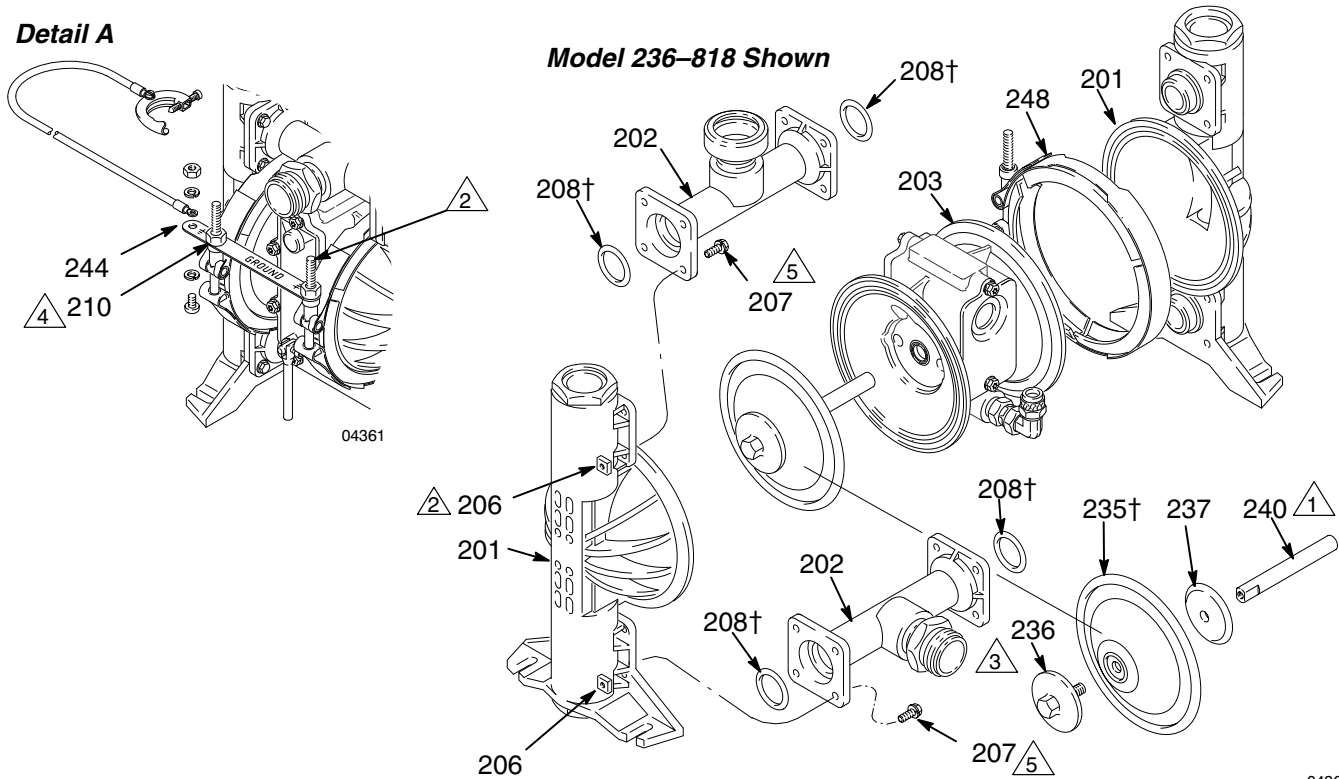


Fig. 14

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Reassembly

CAUTION

If you have removed the air valve (215), you **must** reinstall it before reinstalling the diaphragms. See pages 8 and 9.

- Grease the shaft seals (239●) and install them in the housing (203). Using a rubber mallet, carefully drive the bearings (238●) flush into the housing so the holes face out. See Fig. 15.

1 Holes face out of housing (203).

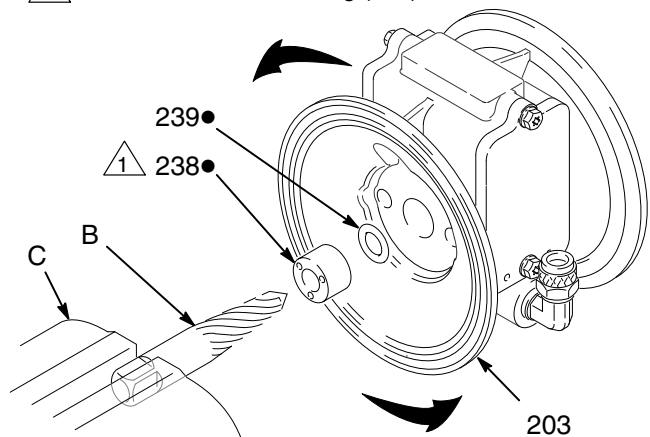


Fig. 15

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



Pump Repair – Diaphragm

- Grease the diaphragm shaft (240) and slide it into the housing (203). See Fig. 16.
- Assemble the inner diaphragm plates (237), diaphragms (235†), and outer diaphragm plates (236) *exactly* as shown in Fig. 16. Apply medium-strength (blue) Loctite® or equivalent to the outer diaphragm plate threads, and torque to 75 to 85 in-lb (8.5 to 9.6 N.m) at 100 rpm maximum. **Do not over-torque.** These parts **must** be assembled correctly.

CAUTION

Do not over-torque the outer diaphragm plates (236), which will damage the hex head screws.

- Install the o-rings (208†) in the manifolds (202). Position the manifolds (202) as desired and install on **one** of the covers (201). Secure with the screws (207) and nuts (206). Torque to 20 to 25 in-lb (2.3 to 2.8 N.m).
- Place the pump housing (203) on this cover, oriented as shown in Fig. 14. Then place the other cover on the housing and secure to the manifolds with the screws (207) and nuts (206). Torque to 20 to 25 in-lb (2.3 to 2.8 N.m).
- Install the clamps in the reverse order of step 2 on page 15. The clamp bolts should be on the air valve side of the housing, and pointing up toward the top of the pump (Model 236–818 only). Install the grounding strip (244) on the bolts. Apply thread lubricant to the bolts. Torque the clamp nuts (210) to 75 to 85 in-lb (8.5 to 9.6 N.m). See Fig. 14.

-  The words “AIR SIDE” on diaphragm (235) must face into the pump housing (203).
-  Flat side of plates (237) must face center of pump.
-  Apply medium-strength (blue) Loctite® or equivalent. Torque to 75 to 85 in-lb (8.5 to 9.6 N.m) at 100 rpm maximum. **Do not over-torque.**
-  Grease

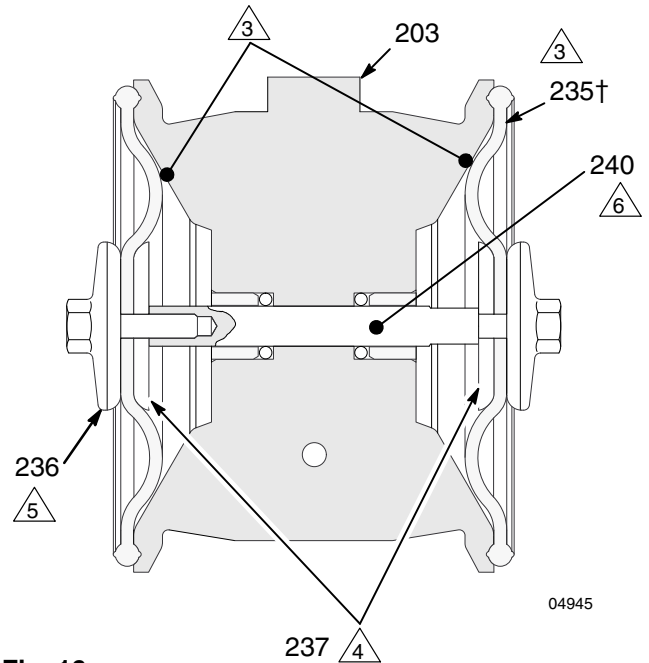


Fig. 16

Parts – Pump 236–818

Model 236–818, Series C

Includes items 201 to 271

Ref No	Part No.	Description	Qty	Ref. No.	Part No.	Description	Qty.
201	189–637	COVER	2	253	111–631	SCREW, pan hd, thread-forming; 4–20 size; 0.375 in. (9.5 mm) long	2
202	237–039	MANIFOLD	2	258▲	189–220	LABEL, warning	1
203	189–531	HOUSING, pump	1	267	187–632	ADAPTER	1
205	189–639	PLUG	4	268	101–959	ELBOW	1
206	108–947	NUT, hex, no. 10–24	16	269	100–264	SCREW, machine, pan hd; 10–24 x 5/16"	1
207	108–630	SCREW, hex washer hd; 10–24 x 5/8"	16	270	100–718	LOCKWASHER; no. 10	2
208†	109–197	O-RING	4	271	100–179	NUT, hex; 10–24	1
210	112–499	NUT, hex; 1/4–28	2				
211	112–545	SCREW	8				
215	237–683	VALVE, air <i>See parts list on page 24</i>	1				
225	190–244	BEARING, link, lower	1	▲		<i>Replacement Danger and Warning labels, tags and cards are available at no cost.</i>	
227	187–719	SEAL, plate, valve; buna-N	1	✓		<i>Keep these spare parts on hand to reduce down time.</i>	
228	187–720	PLATE, valve; stainless steel	1				
231✓	187–647	SPACER	4				
232*	187–449	GUIDE, ball	4				
233*	108–944	BALL, 3/4 in. dia.	4				
234*	186–692	STOP, ball	4				
235†	190–148	DIAPHRAGM	2				
236✓	187–712	PLATE, diaphragm, outer	2				
237	186–265	PLATE, diaphragm, inner	2				
238●	191–779	BEARING	2				
239●	113–704	PACKING, o-ring; Viton®	2				
240●	191–780	ROD, diaphragm	1				
241	188–849	PIN, pilot	2				
242	157–628	O-RING	2				
243	188–850	BEARING, pin	2				
244	191–079	STRIP, grounding	1				
245*	110–782	O-RING	8				
248	189–540	CLAMP	2				

Repair Kits

Keep a repair kit on hand to reduce down time.
Purchase kits separately.

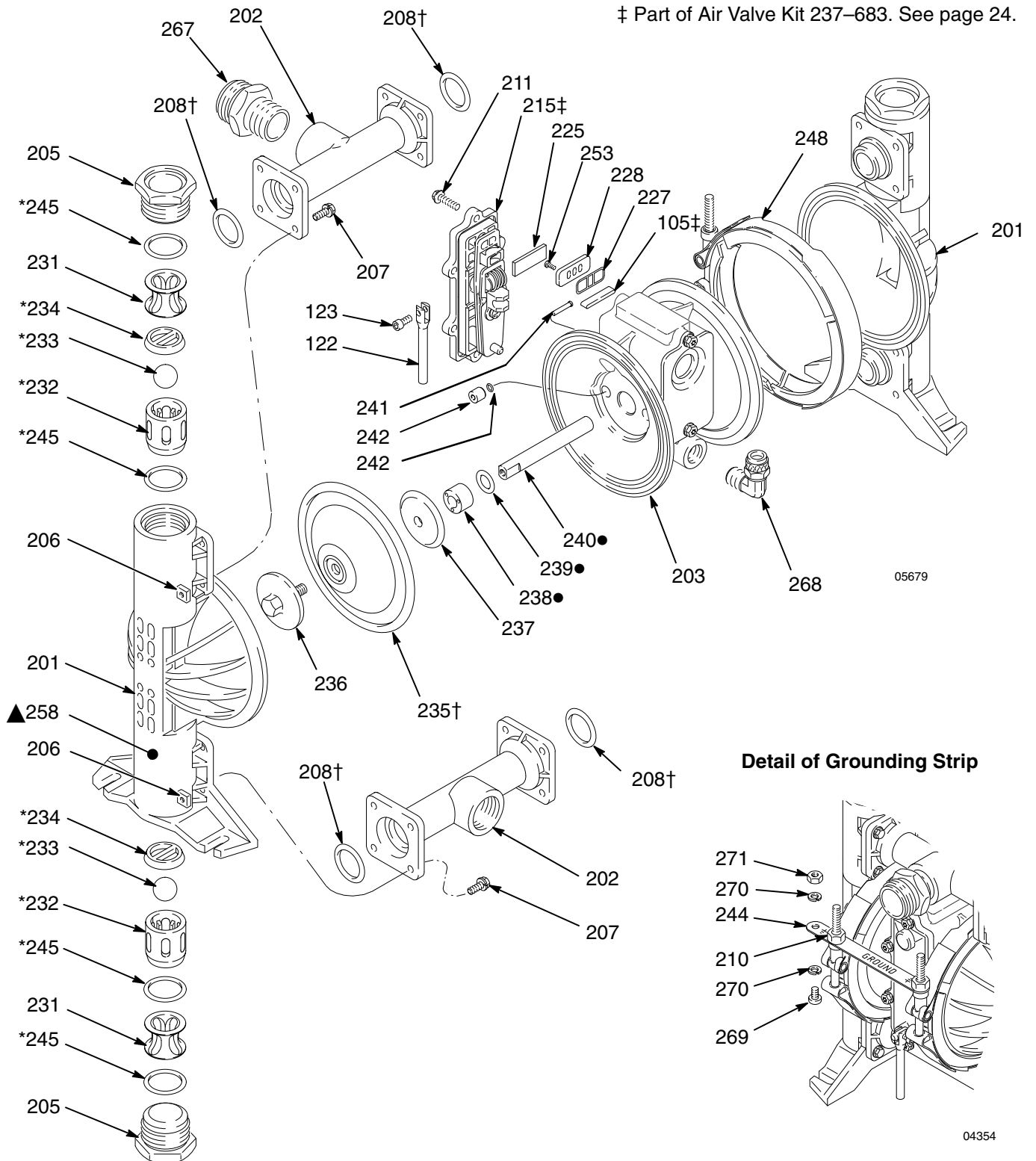
† *These parts are also included in Diaphragm Repair Kit D05–007, which may be purchased separately.*

* *These parts are also included in Ball Check Repair Kit 224–970, which may be purchased separately.*

● *These parts are included in Diaphragm Shaft Kit 239–016, which may be purchased separately.*

Parts – Pump 236–818

‡ Part of Air Valve Kit 237–683. See page 24.



Detail of Grounding Strip

Parts – Pump 236–945

Model 236–945, Series C

Includes items 201 to 272

Ref No	Part No.	Description	Qty	Ref No	Part No.	Description	Qty
201	189–637	COVER	2	258▲	189–220	LABEL, warning	1
202	237–039	MANIFOLD	2	265	189–124	FLUID INLET FITTING	1
203	189–531	HOUSING, pump	1	266	112–391	O-RING	1
204	189–805	COVER, exhaust	1	267	187–632	ADAPTER	1
205	189–639	PLUG	4	268	101–959	ELBOW	1
206	108–947	NUT, hex, no. 10–24	16	269	100–264	SCREW, machine, pan hd; 10–24 x 5/16"	1
207	108–630	SCREW, hex washer hd; 10–24 x 5/8"	16	270	100–718	LOCKWASHER; no. 10	2
208†	109–197	O-RING	4	271	100–179	NUT, hex; 10–24	1
210	112–499	NUT, hex; 1/4–28	2	272	156–823	SWIVEL UNION, 1/4 npt(m) x 1/4 npt swivel	1
211	112–545	SCREW	8				
215	237–683	VALVE, air <i>See parts list on page 24</i>	1				
225	190–244	BEARING, link, lower	1				
227	187–719	SEAL, plate, valve; buna-N	1				
228	187–720	PLATE, valve; stainless steel	1				
231✓	187–647	SPACER	4				
232*	187–449	GUIDE, ball	4				
233*	108–944	BALL, 3/4 in. dia.	4				
234*	186–692	STOP, ball	4				
235†	190–148	DIAPHRAGM	2				
236✓	187–712	PLATE, diaphragm, outer	2				
237	186–265	PLATE, diaphragm, inner	2				
238●	191–779	BEARING	2				
239●	113–704	PACKING, o-ring; Viton®	2				
240●	191–780	ROD, diaphragm	1				
241	188–849	PIN, pilot	2				
242	157–628	O-RING	2				
243	188–850	BEARING, pin	2				
244	191–079	STRIP, grounding	1				
245*	110–782	O-RING	8				
248	189–540	CLAMP	2				
253	111–631	SCREW, pan hd, thread-forming; 4–20 size; 0.375 in. (9.5 mm) long	2				

▲ *Replacement Danger and Warning labels, tags and cards are available at no cost.*

✓ *Keep these spare parts on hand to reduce down time.*

Repair Kits

Keep a repair kit on hand to reduce down time.
Purchase kits separately.

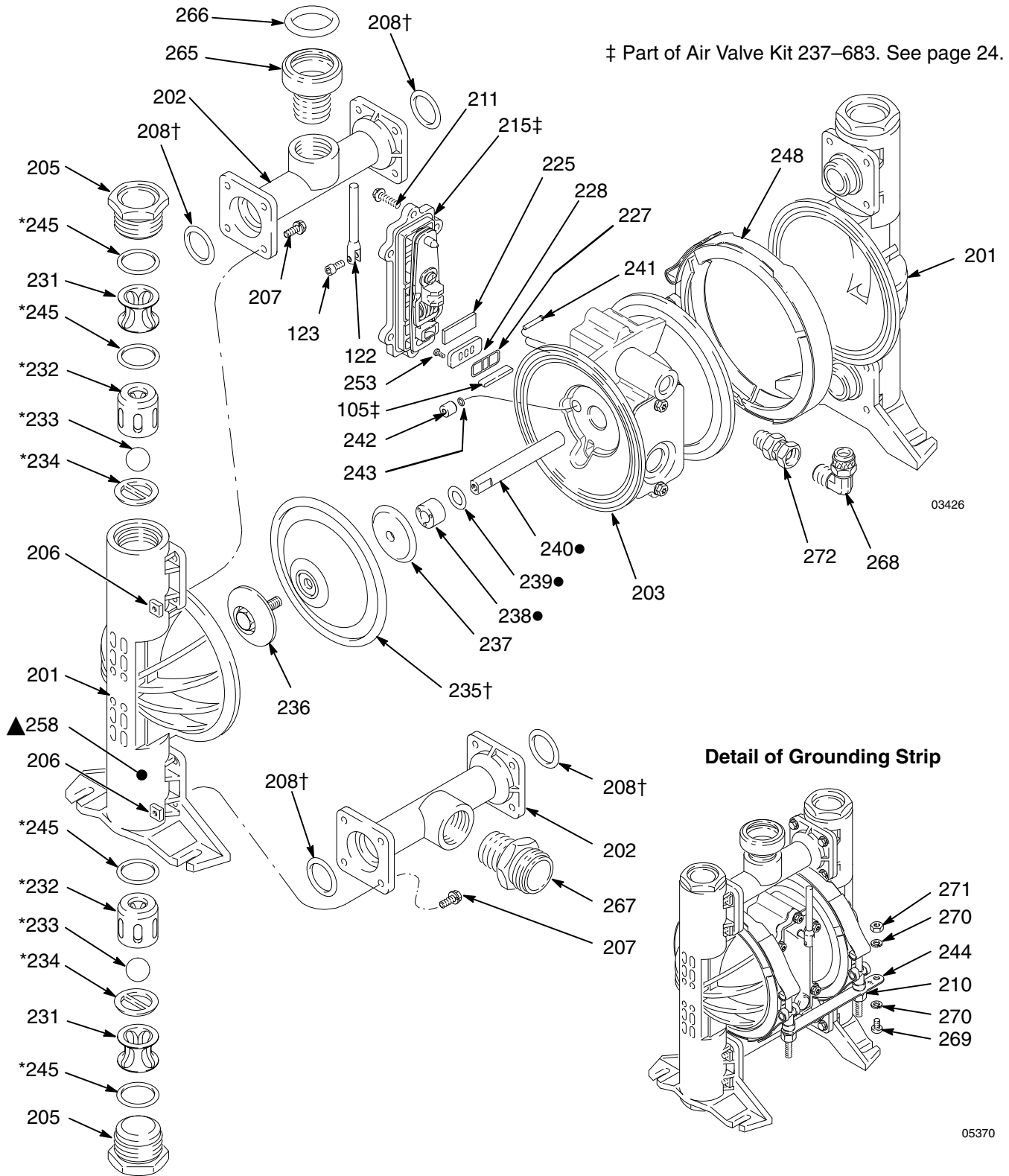
† *These parts are also included in Diaphragm Repair Kit D05–007, which may be purchased separately.*

* *These parts are also included in Ball Check Repair Kit 224–970, which may be purchased separately.*

● *These parts are included in Diaphragm Shaft Kit 239–016, which may be purchased separately.*

Parts – Pump 236–945

‡ Part of Air Valve Kit 237–683. See page 24.



03426

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Parts – Pump 237–826

Model 237–826, Series B

Includes items 201 to 272

Ref No	Part No.	Description	Qty	Ref No	Part No.	Description	Qty
201	189–637	COVER	2	248	189–540	CLAMP	2
202	237–039	MANIFOLD	2	253	111–631	SCREW, pan hd, thread-forming; 4–20 size; 0.375 in. (9.5 mm) long	2
203	189–531	HOUSING, pump	1	258▲	189–220	LABEL, warning	1
204	189–805	COVER, exhaust	1	265	189–124	FLUID INLET FITTING	1
205	189–639	PLUG	4	266	112–391	O-RING	1
206	108–947	NUT, hex, no. 10–24	16	267	191–658	ADAPTER	1
207	108–630	SCREW, hex washer hd; 10–24 x 5/8"	16	268	101–959	ELBOW	1
208†	109–197	O-RING	4	269	100–264	SCREW, machine, pan hd; 10–24 x 5/16"	1
210	112–499	NUT, hex; 1/4–28	2	270	100–718	LOCKWASHER; no. 10	2
211	112–545	SCREW	8	271	100–179	NUT, hex; 10–24	1
215	237–683	VALVE, air <i>See parts list on page 24</i>	1				
225	190–244	BEARING, link, lower	1				
227	187–719	SEAL, plate, valve; buna-N	1				
228	187–720	PLATE, valve; stainless steel	1				
231✓	187–647	SPACER	4				
232*	187–449	GUIDE, ball	4				
233*	108–944	BALL, 3/4 in. dia.	4				
234*	186–692	STOP, ball	4				
235†	190–148	DIAPHRAGM	2				
236✓	187–712	PLATE, diaphragm, outer	2				
237	186–265	PLATE, diaphragm, inner	2				
238●	191–779	BEARING	2				
239●	113–704	PACKING, o-ring; Viton®	2				
240●	191–780	ROD, diaphragm	1				
241	188–849	PIN, pilot	2				
242	157–628	O-RING	2				
243	188–850	BEARING, pin	2				
244	191–079	STRIP, grounding	1				
245*	110–782	O-RING	8				

▲ Replacement Danger and Warning labels, tags and cards are available at no cost.

✓ Keep these spare parts on hand to reduce down time.

Repair Kits

Keep a repair kit on hand to reduce down time. Purchase kits separately.

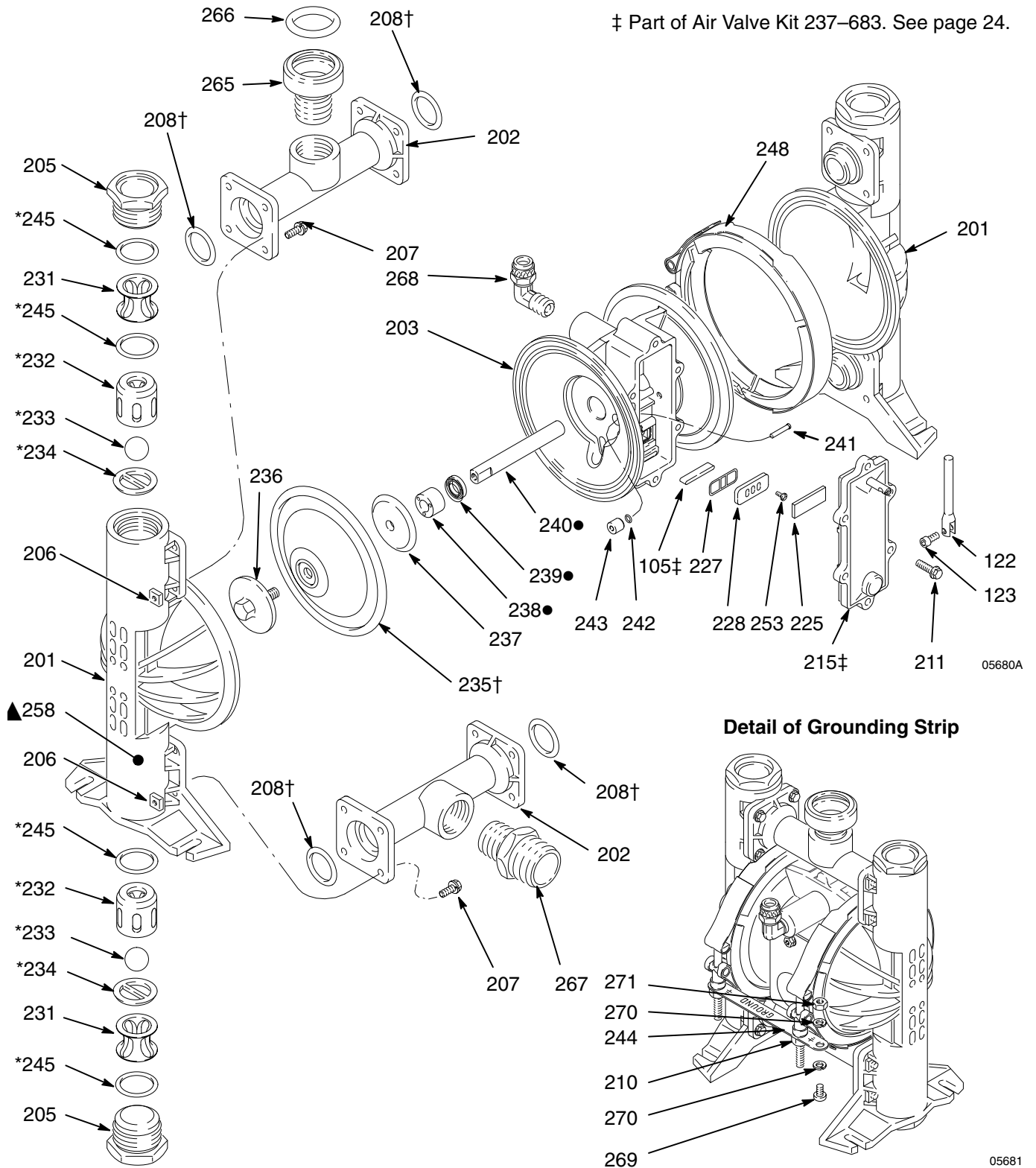
† These parts are also included in Diaphragm Repair Kit D05–007, which may be purchased separately.

* These parts are also included in Ball Check Repair Kit 224–970, which may be purchased separately.

● These parts are included in Diaphragm Shaft Kit 239–016, which may be purchased separately.

Parts – Pump 237–826

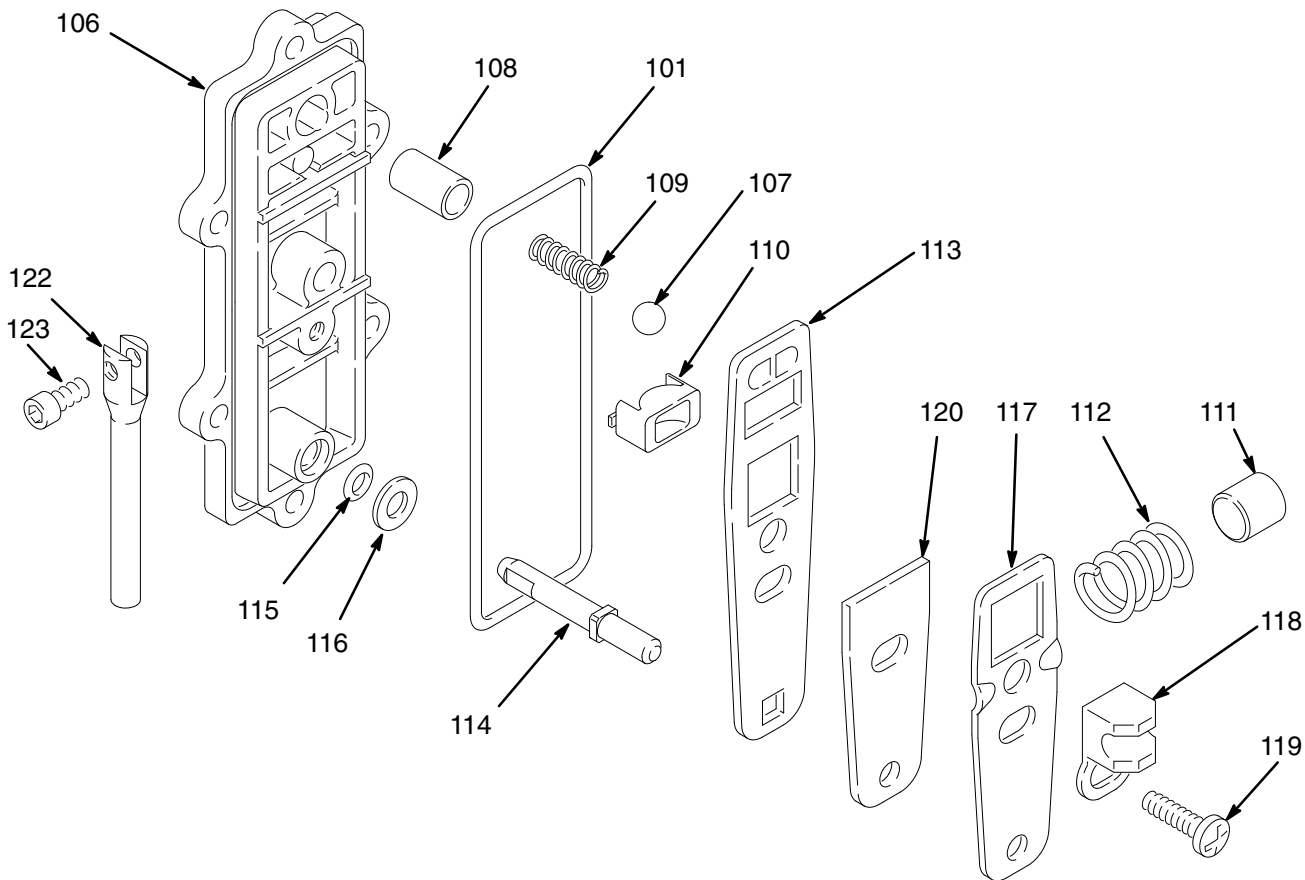
‡ Part of Air Valve Kit 237–683. See page 24.



Parts – Air Valve

Part No. 237–683, Series A Air Valve Assembly

Ref No.	Part No.	Description	Qty	Ref No.	Part No.	Description	Qty
101	111–624	O-RING; buna-N	1	114	190–332	SHAFT, reset; stainless steel	1
105	187–726	BEARING, link; acetal; <i>see pages 19–23</i>	1	115	111–625	O-RING; buna-N	1
106	187–706	COVER, valve; polypropylene	1	116	111–750	WASHER, plain; stainless steel	1
107	111–629	BALL, detent; tungsten carbide	1	117	187–724	LINK, actuator; stainless steel	1
108	187–730	COLLAR, detent; stainless steel	1	118	187–718	SADDLE, shift; acetal	1
109	191–887	SPRING, compression; stainless steel	1	119	111–630	SCREW, pan hd, thread-forming; 10–14 size; 0.75 in. (19 mm) long	1
110	187–725	CUP, valve; acetal	1	120	188–175	SPACER, link; acetal	1
111	187–853	STOP, link; acetal	1	121	111–920	GREASE, general purpose; 0.375 oz (10.5 g); (not shown)	1
112	187–722	SPRING, compression; stainless steel	1	122	190–333	RESET HANDLE	1
113	190–692	LINK, detent; stainless steel	1	123	112–788	CAPSCREW	1



05525

Technical Data

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

Maximum air and fluid working pressure	100 psi (6.9 bar)
Air pressure operating range	25 to 100 psi (1.75 to 7 bar)
Maximum air consumption	19 SCFM (0.523 m ³ /min)
Maximum free flow delivery	16 gpm (60 lpm)
Maximum pump speed	200 cpm
Maximum suction lift	16 ft (4.8 m) dry; 25 ft (7.6 m) wet
GPM loss at 5 ft (1.5 m) suction lift	2 gpm (7 lpm)
at 10 ft (3.1 m) suction lift	3 gpm (11 lpm)
at 15 ft (4.6 m) suction lift	4.5 gpm (17 lpm)
Maximum noise level	85 dBa
Maximum operating temperature	90 to 100°F (32 to 37°C)
Air inlet size	1/4 npt(f)
Fluid inlet size	3/4 npt(f)
Fluid outlet size	3/4 npt(f)
Weight	7 lb (3.1 kg)
Wetted parts	polypropylene, buna-N
Non-wetted external parts	acetal, polyethylene, polyester (labels), 303 stainless steel, zinc-plated stainless steel

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Viton®

Manual Change Summary

Assembly No.	Part That Changed	Ref No.	Part Description	Description of Change
237-683, Series A Air Valve Assembly	187-728	109	SPRING, compression, stainless steel	Changed to 191-877, SPRING, compression, stainless steel
237-826, Series B Pump	187-632	267	ADAPTER	Changed to 191-658, ADAPTER

The Graco Warranty and Disclaimers

WARRANTY

Graco warrants all equipment manufactured by it 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. As purchaser's sole remedy for breach of this warranty, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment proven 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, 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 with Graco equipment of 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 claim. 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.

DISCLAIMERS AND LIMITATIONS

The terms of this warranty constitute purchaser's sole and exclusive remedy and are in lieu of any other warranties (express or implied), **including warranty of merchantability or warranty of fitness for a particular purpose**, and of any non-contractual liabilities, including product liabilities, based on negligence or strict liability. Every form of liability for direct, special or consequential damages or loss is expressly excluded and denied. In no case shall Graco's liability exceed the amount of the purchase price. Any action for breach of warranty must be brought within two (2) years of the date of sale.

EQUIPMENT NOT COVERED BY GRACO WARRANTY

Graco makes no warranty, and disclaims all implied **warranties of merchantability and fitness for a particular purpose**, with respect to accessories, equipment, materials, or components sold but not manufactured by Graco. These items sold, but not manufactured by Graco (such as electric motor, 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.

Graco Phone Number

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1-800-367-4023 Toll Free

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