

Instructions – Parts List



Elevators and Pump Supports

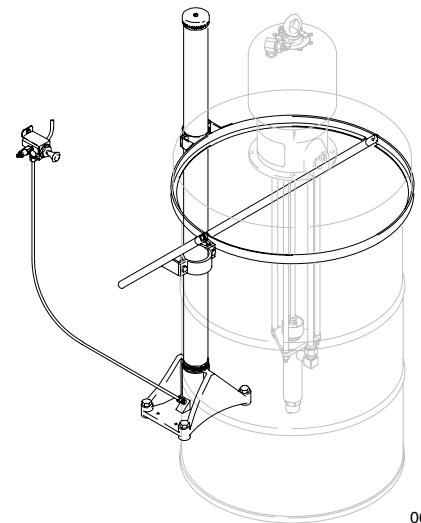
306287 rev.T

200 psi (1.4 MPa, 14 bar) Maximum Air Input Pressure



Important Safety Instructions.

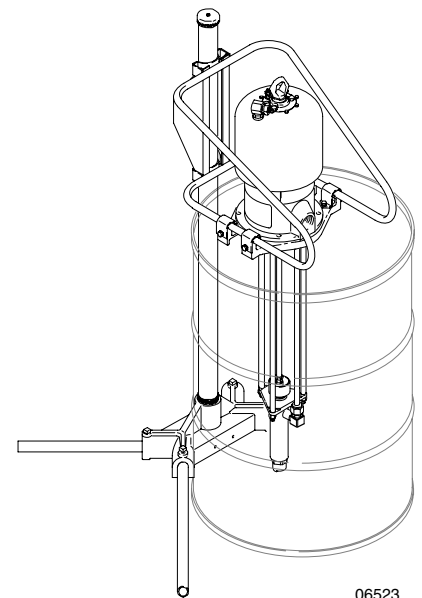
Read all warnings and instructions in this manual.
Save these instructions.
See page 2 for a list of models.



06529

Table of Contents

List of Models	2
Warnings	3
Installation	4
Operation	6
Service	7
Parts	8
Dimensions	15
Graco Warranty	16
Graco Information	16



06523

PROVEN QUALITY. LEADING TECHNOLOGY.



List of Models

ELEVATORS

Part Number	Series	Description	Parts List page
204385	C	Standard Elevator with Fixed Mounting	8
206231	B	Standard Elevator with Movable Mounting	8
207408	B	Heavy Duty Elevator with Fixed Mounting	8
205332	A	Bare Elevator	9
237746	A	Elevator Assembly, includes 204385 Elevator, 237578 Cover Support, and 237579 Air Control Kit	12
237747	A	Elevator Assembly, includes 206231 Elevator, 237578 Cover Support, and 237579 Air Control Kit	12
241663	A	Elevator Assembly, includes 204385 Elevator, 207562 Cover Support, and 207561 Air Control Kit	12

PUMP SUPPORTS

Part Number	Series	Description	Parts List page
206232	A	Frame Support (open mounting)	10
207562	A	Ring Support (cover mounting)	10
237578	A	Ring Support (cover mounting)	12

AIR CONTROL KITS

Part Number	Series	Description	Parts List page
207561	A	For use with Supports 206232 or 207562	10
237579	A	For use with Support 237578	12

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 uncertain about usage, call your Graco distributor.
- Do not alter or modify this equipment. Use only genuine Graco parts and accessories.
- Check equipment daily. Repair or replace worn or damaged parts immediately.
- Do not exceed the maximum working pressure stated on the equipment or in the **Technical Data** for your equipment. Do not exceed the maximum working pressure of the lowest rated component in your system.
- Always wear protective eyewear, gloves, clothing and respirator as recommended by the fluid and solvent manufacturer.
- Wear hearing protection when operating this equipment.
- Comply with all applicable local, state, and national fire, electrical, and safety regulations.



MOVING PARTS HAZARD

Moving parts, such as the air motor piston and elevator, can pinch or amputate your fingers.

- Keep clear of all moving parts when starting or operating the pump.
- Keep hands and fingers away from the elevator, pump support, drum cover, and the lip of the drum during operation and whenever the pump or elevator is charged with air.
- Before servicing the equipment, relieve the air pressure to the elevator and follow the **Pressure Relief Procedure** in your separate pump manual to prevent the equipment from starting unexpectedly.

Installation

General Information

NOTE: Reference numbers and letters in parentheses in the text refer to the callouts in the figures and the parts drawing.

NOTE: Always use Genuine Graco Parts and Accessories, available from your Graco distributor. If you supply your own accessories, be sure they are adequately sized and pressure rated for your system.

WARNING

To reduce the risk of serious injury, including fluid injection, splashing in the eyes or on the skin, or injury from moving parts:

1. Always relieve air and fluid pressure in the pump before raising the elevator.
2. Keep your fingers and hands away from moving parts when raising or lowering the elevator to prevent pinching or amputating them including between the drum and pump mounting assembly.
3. When the pump is in the raised elevator position, do not leave it unattended. Keep air supplied to the elevator. Block the pump, drum cover or pump support bracket before working on the pump.
4. Before working on the elevator, remove the pump and relieve air pressure to the elevator.

Moveable Stand Mount Elevator

Locate the elevator where there is at least a 9 ft (2.75 m) overhead clearance. Install the four stabilizers (23) as shown in Fig. 1. Secure in place with the setscrews (1).

Fixed Mount Elevator

Locate the elevator where there is at least 9 ft (2.75 m) overhead clearance. Mark and drill holes for 0.5 in. (13 mm) mounting bolts. See Fig. 2 and the dimensional drawing on page 15. Level the base (17), using shims if necessary. Secure the base to the floor using four 1/2 in. (13 mm) mounting bolts which are long enough to prevent the elevator from tipping.

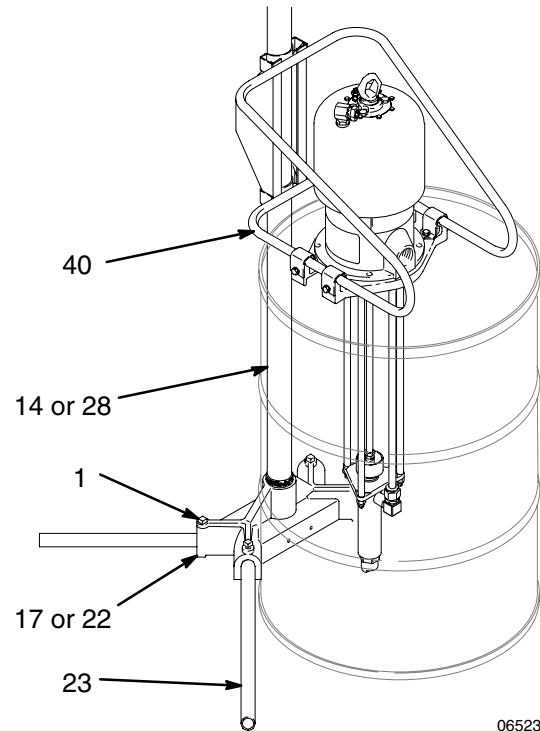


Fig. 1

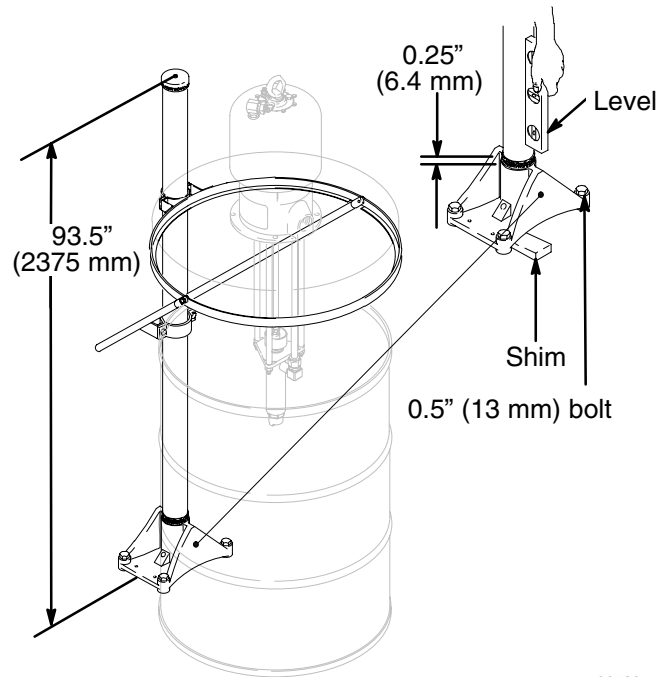


Fig. 2

Installation

Pump Support Bracket

Set an open drum against the elevator base (17 or 22). Position the bracket (40) on top of the drum so that the clamp (34) recesses are tight against the elevator riser tube (14 or 28). See Fig. 1 and Fig. 3. Raise the riser tube up about 0.25 in. (6.4 mm), install the clamps (34) and tighten securely. Attach the pump mounting brackets (38).

Pump Support Ref. No. 31

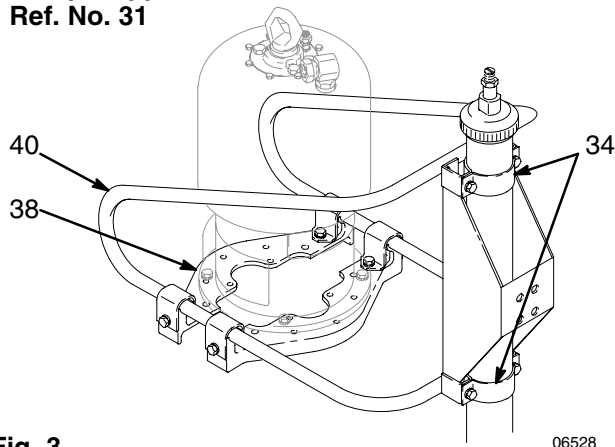


Fig. 3

Cover Support

Place the cover in its proper position in the support ring (49) and tighten the capscrews (45). Set an open drum against the elevator base (17 or 22) and put the cover on the drum so the support clamp (44) recesses are tight against the elevator riser tube (14 or 28). Raise the tube 0.25 in. (6.4 mm), then tighten the clamp screws (42). See Fig. 4.

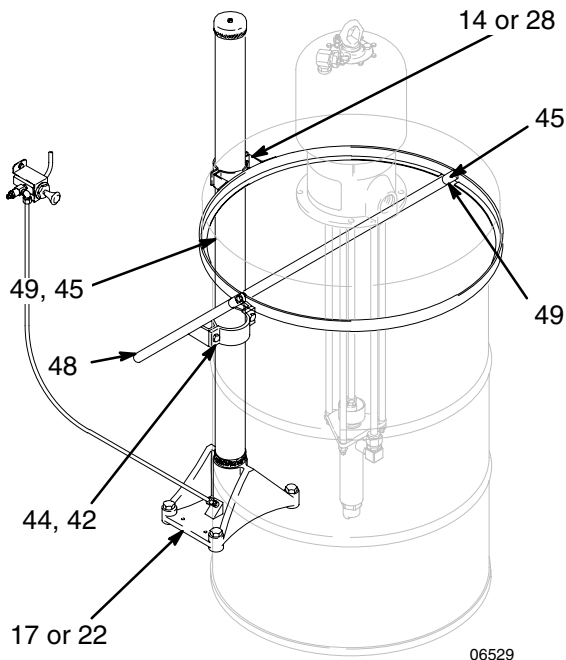


Fig. 4

Air Connection

Screw the restrictor valve (55) into the push-pull valve (60) as shown in Fig. 5. Mount the valve on the wall at a convenient height, using the mounting bracket (54). Connect the master air supply to the valve. Screw the elbow fitting (52) into the 1/8 npt(f) inlet of the restrictor valve. Push one end of the copper tube (51) into the elbow and tighten the fitting. Screw the straight fitting (53) into the base (17 or 22) of the elevator. Push the other end of the copper tube (51) into this fitting and tighten the fitting.

NOTE: With the moveable stand mount elevator, the air control valve must exhaust air to enable the elevator to lower.

Push-Pull Valve Ref. No. 60

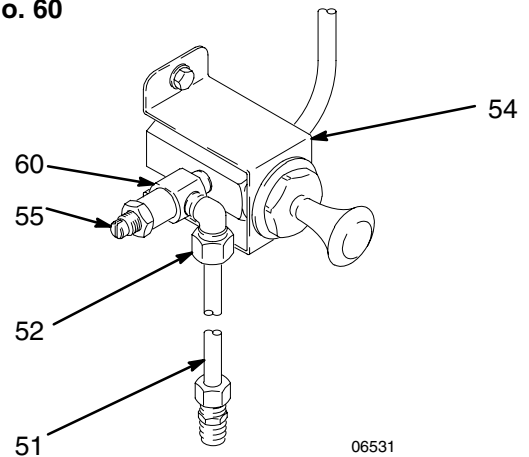


Fig. 5

Operation

Starting and Adjusting the Elevator

You must adjust the elevator to ensure that the cover is supported by the drum.

1. Close all air regulators and air valves.
2. Open the main air bleed valve. Pull up on the air control valve and let the elevator rise to its full height. Normal operation requires only a few seconds for air pressure to build up or exhaust, and to start raising or lowering the elevator.
3. Set a full 200 liter (55 gal.) drum against the elevator base.

WARNING



MOVING PARTS HAZARD

Moving parts can pinch or amputate your fingers. When the pump is operating and when raising or lowering the elevator, keep your fingers and hands away from the elevator, pump support, drum cover, and lip of the drum.

4. With your hands away from the drum and the cover, push down on the air control valve and lower the elevator until the cover rests on the lip of the drum. The support clamp recesses must be tight against the elevator riser tube.
5. Raise the elevator 1/4 in. (6.4 mm), then tighten the support clamp screws. This ensures that the cover rests on the drum lip when the elevator is in the lowered position.

6. Before operation, ensure that all fasteners and tube connections are tightened securely.

NOTE: To increase or decrease the operating speed of the elevator, loosen the hex nut of the restrictor valve and turn the valve needle either in or out.

Changing Drums

WARNING



MOVING PARTS HAZARD

Moving parts can pinch or amputate your fingers. When the pump is operating and when raising or lowering the elevator, keep your fingers and hands away from the elevator, pump support, drum cover, and lip of the drum.

CAUTION

Shortened or recycled drums may cause the pump or agitator to bottom out in the drum, causing damage. Contact your fluid supplier to order a standard size drum.

1. Stop the pump. Close the pump air bleed valve.
2. Pull up on the air control valve to raise the elevator.
3. Remove the empty drum and place the full drum against the elevator base.
4. Lower the elevator as explained at left.

Service

Lubrication

Every two to six weeks, take the cap (20) off the riser tube (14 or 28) and put a few drops of light, high grade motor oil on the inside surface of the tube to lubricate the leather packing (10). See Fig. 6. When replacing the cap, torque to 20–40 ft-lb (37–54 N•m).

⚠ CAUTION

Be careful not to dent or damage the riser tube (14 or 28). Dents may cause the elevator to bind, making operation impossible.

- 1 Torque to 20–40 ft-lb (27–54 N•m)
- 2 Torque to 15–20 ft-lb (20–27 N•m)
- 3 Torque to 90–130 ft-lb (122–175 N•m)
- 4 Torque to 30–60 ft-lb (40–80 N•m)
- 5 Apply lubricant to inside surface
- 6 Apply tape
- 7 Apply Loctite® 542 Sealant to threads

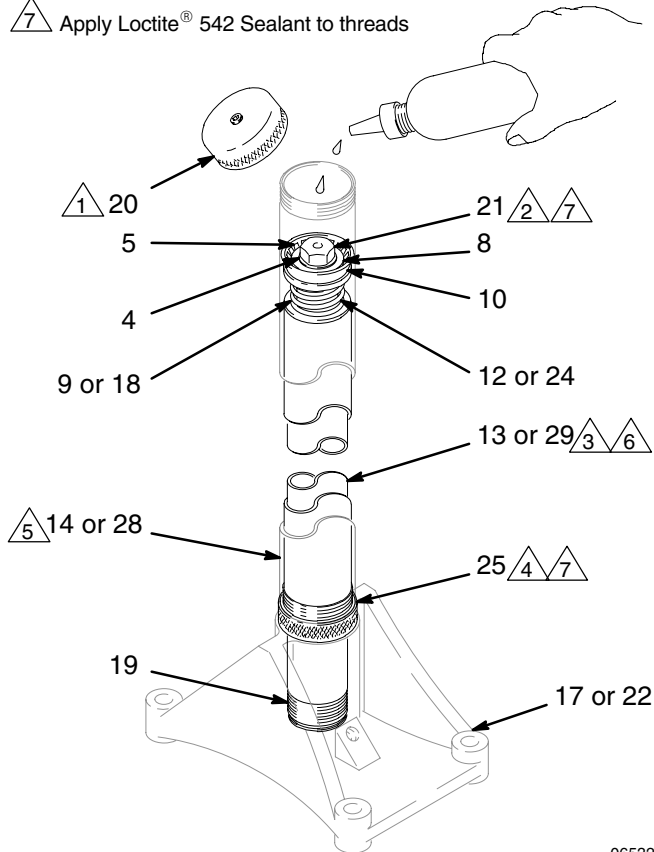


Fig. 6

06532

Seals and Gaskets

To replace the leather cup packings (10), screw the bearing housing (25) out of the riser tube (14 or 28) and slide the tube up off the piston (11). See Fig. 6. Screw the piston retainer capscrew (21) out of the piston body and remove the parts. Inspect parts for wear and damage and replace as necessary.

NOTE: When replacing packings, install a new spreader (5). This will increase the life of the packings.

Soak new leather packing (10) in light oil, and put lithium grease on the inside surface of the tube. Re-assemble in the reverse order. Apply Loctite® 542 thread sealant to the internal threads of the piston body (11) and the threads of the capscrew (21). Torque the capscrew to 15–20 ft-lb (20–27 N•m).

To replace the guide tube gasket (19), screw the guide tube (13 or 29) out of the elevator base (17 or 22). Take the gasket out. See Fig. 6. Be careful not to damage the outside bearing surface of the guide tube. Put a new gasket into the base. Put PTFE tape on the threads of the guide tube and screw it into the base. Torque to 90–130 ft-lb (122–175 N•m).

Push-Pull Valve

Remove the valve guide (71), washer (64), o-ring (66*) and seal (67*). Pull the assembled valve parts out of the valve body (70). See the Parts Drawing on page 8. Disassemble parts, clean and inspect. Re-assemble the valve, using new parts as necessary.

Elevator Parts

△1 Torque to 90–130 ft-lb (122–175 N•m)

△2 Torque to 30–60 ft-lb (40–80 N•m)

△3 Torque to 20–40 ft-lb (37–54 N•m)

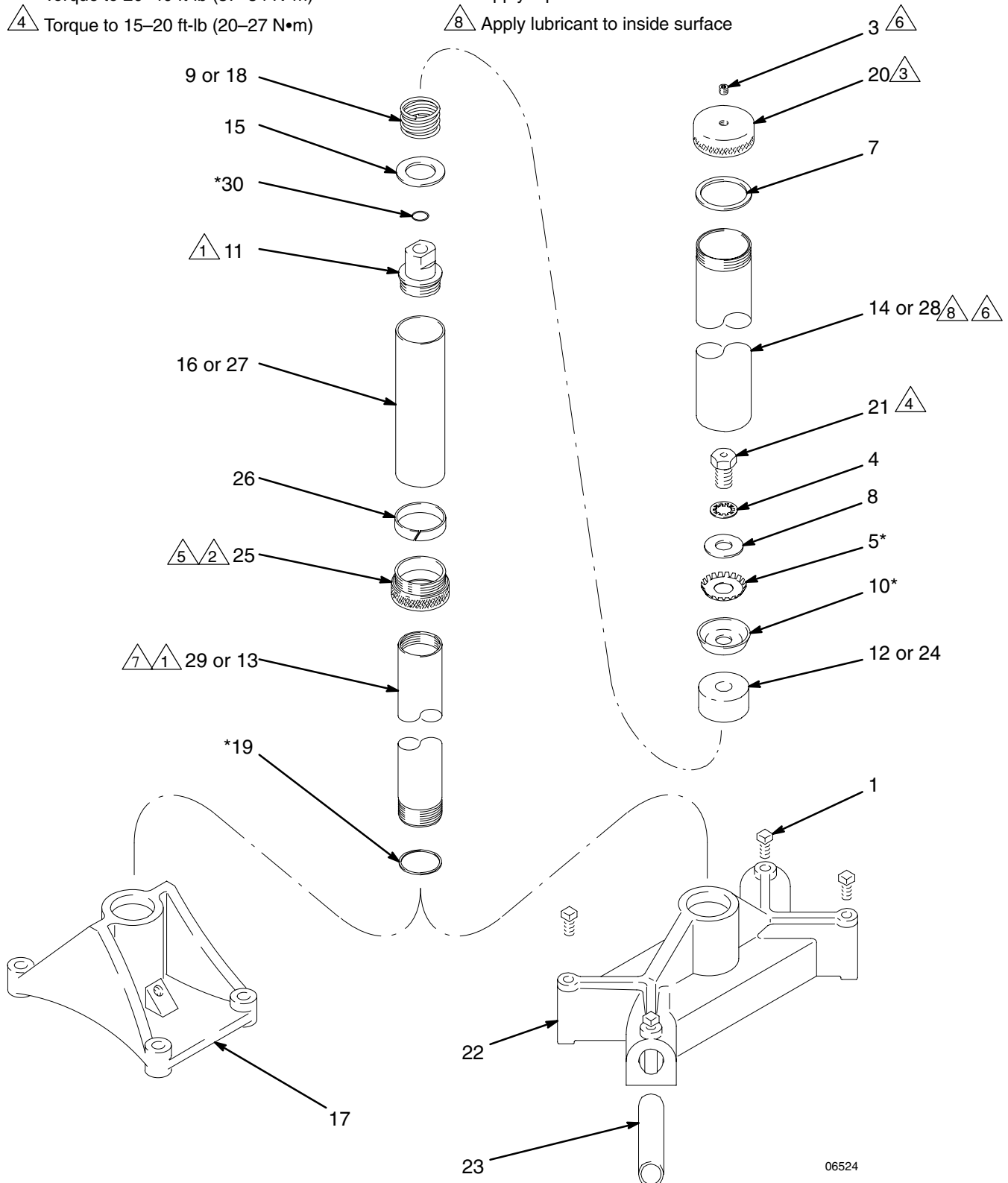
△4 Torque to 15–20 ft-lb (20–27 N•m)

△5 Add Loctite® TL-222 to threads

△6 Apply Loctite® 542 Sealant to threads

△7 Apply tape

△8 Apply lubricant to inside surface



06524

Elevator Parts

Model 204385, Series C (see page 8)

Standard Elevator with Fixed Mounting

Includes items 3–17, 19–21, 25–26, 30 below

Model 206231, Series B (see page 8)

Standard Elevator with Movable Mounting

Includes items 1, 3–16, 19–23, 25–26, 30 below

Model 207408, Series A (see page 8)

Heavy Duty Elevator with Fixed Mounting

Includes items 3–8, 10–11, 15, 17–21, 24–30 below

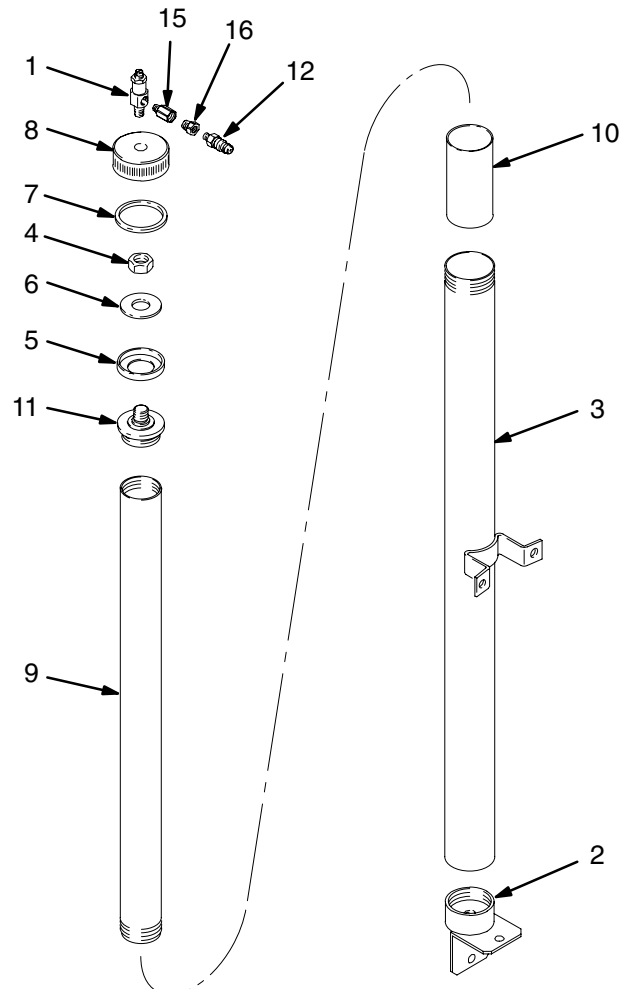
Ref. No.	Part No.	Description	Qty.
1	100005	SCREW, sq hds cup pt set; 1/2–13 x 1" (Model 206231)	4
3	100139	PLUG, pipe; 1/8 npt	1
4	100422	LOCKWASHER, int shkprf; 3/4"	1
5*	150230	SPREADER, packing	1
7*	155899	GASKET, rubber	1
8	156306	WASHER, back-up	1
9	157633	SPRING, helical compression (Models 204385 and 206231)	1
10*	158260	PACKING, cup; leather	1
11	192198	BODY, piston	1
12	158262	BEARING, piston (Models 204385 and 206231)	1
13	158263	TUBE, guide (Models 204385 and 206231)	1
14	158264	TUBE, riser (Models 204385 and 206231)	1
15	158265	WASHER, special plain	1
16	158267	TUBE, stop (Models 204385 and 206231)	1
17	158270	BASE, stationary (Models 204385 and 207408)	1
18	158388	SPRING, helical compression (Model 207408)	1
19*	158429	GASKET, copper	1
20	161320	CAP, tube	1
21	192199	SCREW, special cap	1
22	165730	BASE, portable (Model 206231)	1
23	165731	STABILIZER (Model 206231)	4
24	167870	GUIDE, riser tube (Model 207408)	1
25	167871	HOUSING, elevator bearing	1
26	167872	BEARING, PTFE tape	1
27	167873	TUBE, stop (Model 207408)	1
28	167874	TUBE, riser (Model 207408)	1
29	167875	TUBE, guide (Model 207408)	1
30*	722834	PACKING, o-ring	1

Model 205332, Series A (see below)

Bare Elevator

Includes items 1–16 below

Ref. No.	Part No.	Description	Qty.
1	203743	VALVE, restrictor; includes items 56–59 on page 11	1
2	205333	CAP, elevator mounting	1
3	205334	TUBE, elevator riser	1
4	100155	NUT	1
5	150179	PACKING, cup; leather	1
6	156306	WASHER, flat	1
7	158109	GASKET, rubber	1
8	164246	CAP, tube air	1
9	164247	TUBE, guide, elevator	1
10	164248	SPACER	1
11	164249	PISTON	1
12	169969	FITTING, quick disconnect; 1/8 npt(m)	1
15	159840	ADAPTER; 1/4 npt(f) x 1/8 npt(m)	1
16	100030	BUSHING; 1/4 npt(m) x 1/8 npt(f)	1

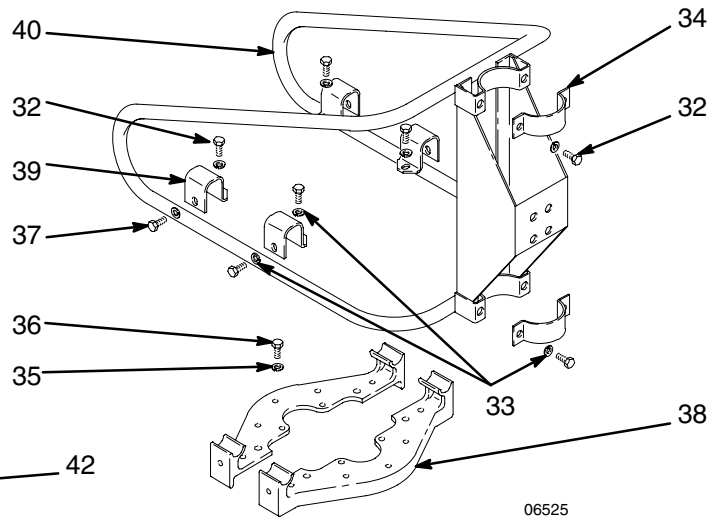


* Recommended spare parts. Keep on hand to reduce down time.

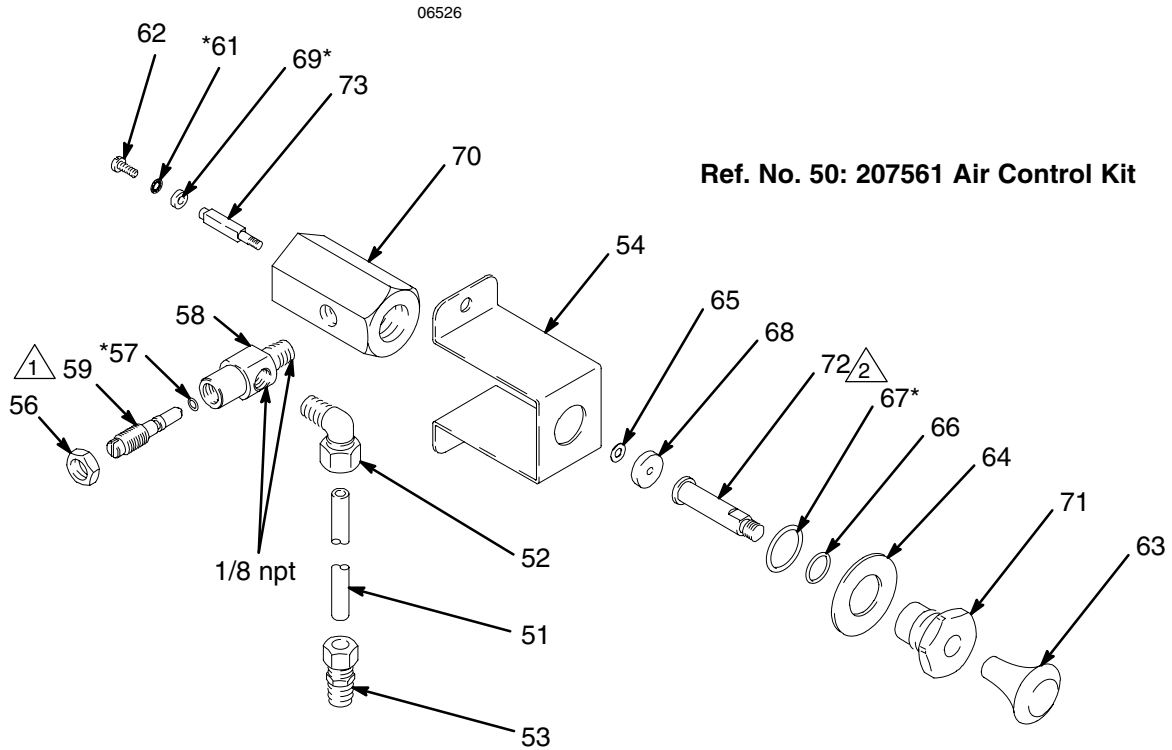
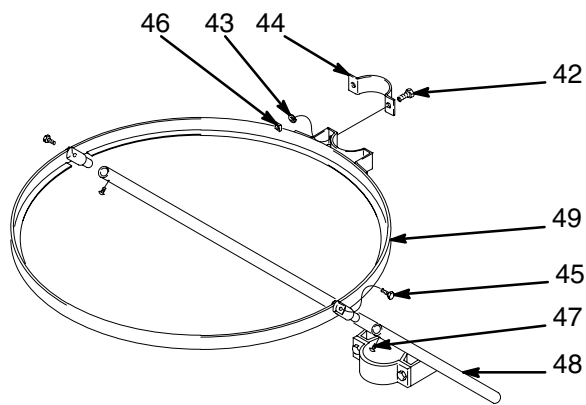
Support and Control Parts

- 1 Screw firmly against seat,
back off 1/4 turn
- 2 Apply adhesive

Ref. No. 31: 206232 Pump Support Assembly



**Ref. No. 41: 207562
Cover Support Assembly**



Ref. No. 50: 207561 Air Control Kit

06527

Support and Control Parts

Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
31	206232	PUMP SUPPORT ASSEMBLY		53	100113	. FITTING, straight; 0.25" (6.4 mm) tube, 1/8 npt	1
		Includes items 32–40	1	54	154634	. BRACKET, mounting	1
32	100057	. SCREW, hex hd cap; 5/16–18 x 3/4"	8	55	203743	. VALVE, restrictor	
33	100214	. LOCKWASHER, spring; 5/16"	12			Includes items 56–59	1
34	158271	. CLAMP, tube; support ring and bracket	2	56	101448	.. NUT, hex jam; 3/8–24	1
35	100133	. LOCKWASHER, spring; 3/8"	4	57*	157628	.. PACKING, o-ring	1
36	100469	. SCREW, hex hd cap; 3/8–16 x 3/4"	4	58	160162	.. BODY, valve	1
37	100538	. SCREW, hex hd cap; 5/16–18 x 1/2"	4	59	160163	.. NEEDLE, valve	1
38	166573	. BRACKET, pump mounting	2	60	202295	. VALVE, push-pull	
39	166574	. STRAP, support bracket	4			Includes items 61–73	1
40	206762	. FRAME, support, pump	1	61*	100272	.. LOCKWASHER, int shkprf, no. 6	1
41	207562	COVER SUPPORT ASSEMBLY		62*	104560	.. SCREW, pan hd mach; 6–32 x 3/8"	1
		Includes items 42–49	1	63	154519	.. KNOB	1
42	100057	. SCREW, hex hd cap; 5/16–18 x 3/4"	4	64	154526	.. WASHER, special plain	1
43	100214	. LOCKWASHER, spring; 5/16"	4	65*	154570	.. WASHER, special plain	1
44	158271	. CLAMP, tube; support ring and bracket	2	66*	154594	.. PACKING, o-ring	1
45	100022	. SCREW, hex hd cap; 1/4–20 x 3/4"	2	67*	155500	.. SEAL, o-ring	1
46	100181	. NUT, square; 5/16–18	4	68*	155811	.. SEAL, flat cup; air intake	1
47	100268	. SCREW, rd hd mach; 10–24 x 3/8"	2	69*	155921	.. SEAL, flat cup; air exhaust	1
48	202776	. BRACE, support	1	70	157160	.. BODY, valve	1
49	202777	. RING, support	1	71	157161	.. GUIDE, valve	1
50	207561	KIT, control, air		72	161129	.. STEM, large round; air intake	1
		Includes items 51–73	1	73	161132	.. STEM, small square	1
51	057024	. TUBE, copper; 0.25" (6.4 mm) tube, 5 ft (1.52 m)	1	* Recommended spare parts. Keep on hand to reduce down time.			
52	100112	. FITTING, 90° male elbow; 0.25" (6.4 mm) tube, 1/8 npt	1				

Support and Control Parts

Model 237746, Series A

Standard Elevator with Fixed Mounting

Includes 204385 Elevator (see page 8), 237579 Air Control Kit, and 237578 Cover Support Assembly

Model 237747, Series A

Standard Elevator with Movable Mounting

Includes 206231 Elevator (see page 8), 237579 Air Control Kit, and 237578 Cover Support Assembly

Model 241663, Series A

Standard Elevator with Fixed Mounting

Includes 204385 Elevator (see page 8), 207561 Air Control Kit (see page 11), and 207562 Cover Support Assembly (see page 11)

237579 Air Control Kit

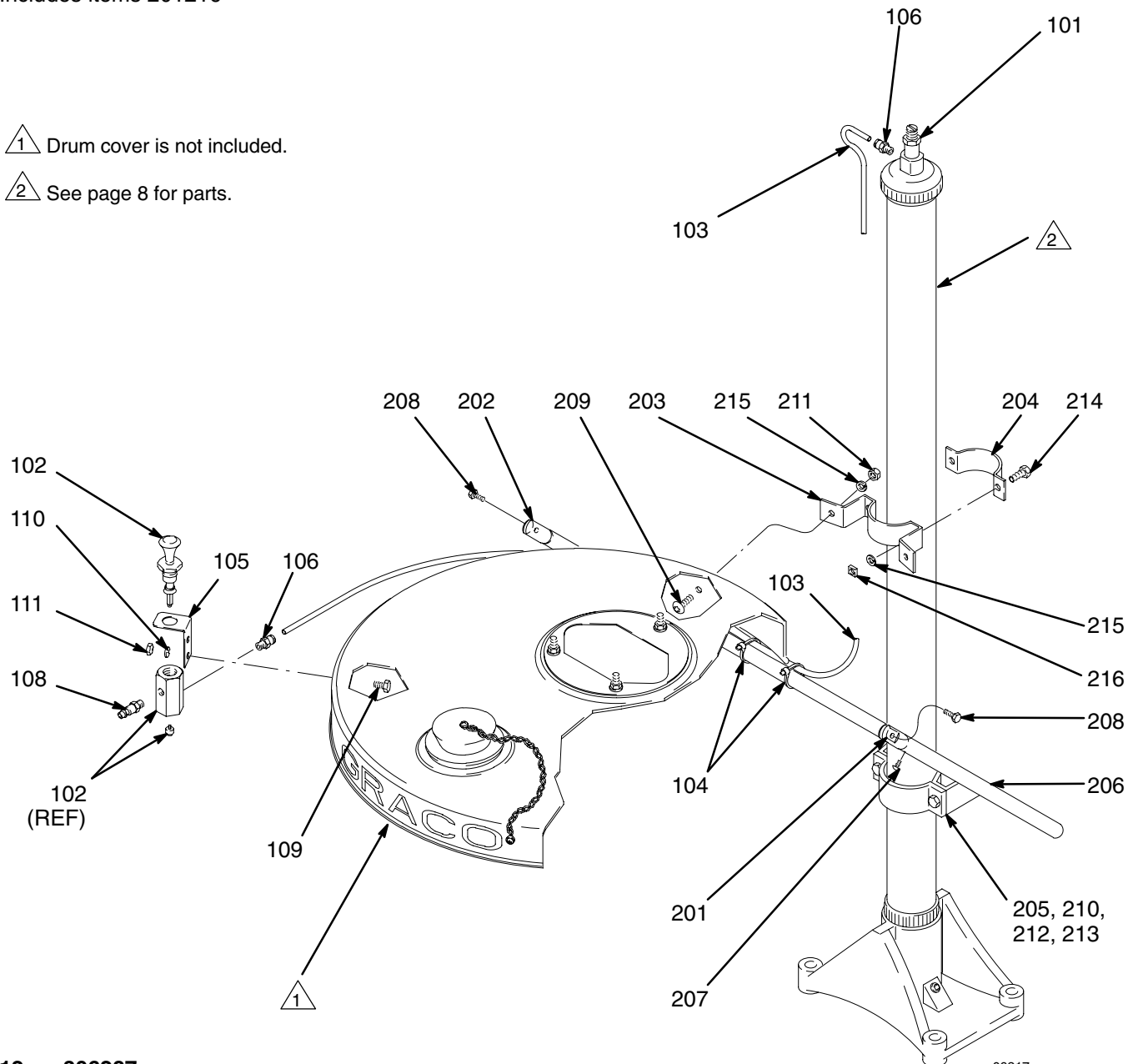
Includes items 101–111

237578 Cover Support Assembly

Includes items 201216

△ 1 Drum cover is not included.

△ 2 See page 8 for parts.



Support and Control Parts

Model 237746, Series A

Standard Elevator with Fixed Mounting

Includes 204385 Elevator (see page 8), 237579 Air Control Kit, and 237578 Cover Support Assembly

Model 237747, Series A

Standard Elevator with Movable Mounting

Includes 206231 Elevator (see page 8), 237579 Air Control Kit, and 237578 Cover Support Assembly

Model 241663, Series A

Standard Elevator with Fixed Mounting

Includes 204385 Elevator (see page 8), 207561 Air Control Kit (see page 11), and 207562 Cover Support Assembly (see page 11)

237579 Air Control Kit

Ref. No.	Part No.	Description	Qty.
101	203743	VALVE, restrictor	
		Includes items 56–59 (See page 11)	1
102	202295	VALVE, push-pull	
		Includes items 61–72 (See page 11)	1
103		TUBE; nylon; 7 ft; purchase locally	1
104	103473	STRAP, tie wire	2
105	190231	BRACKET, valve	1
106	113208	FITTING, tube	2
108	169969	FITTING, air, quick disconnect	1
109	112896	SCREW, cap, hex hd; 1/4–20; 1/2" (13 mm) long	2
110	104123	WASHER, lock, spring; 1/4" size	2
111	104121	NUT, hex; 1/4–20	2

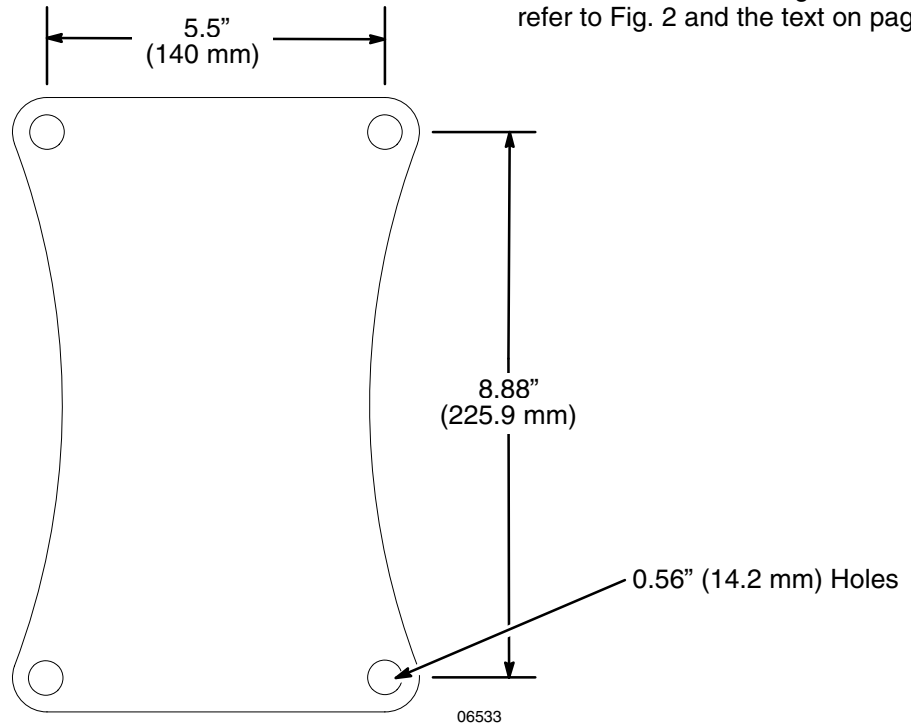
237578 Cover Support Assembly

Ref. No.	Part No.	Description	Qty.
201	190272	STUD, brace, left side	1
202	190273	STUD, brace, left side	1
203	190187	BRACKET, support, rear	1
204	190181	BRACKET, riser tube	1
205	158271	CLAMP, support	1
206	202776	BRACE, support	1
207	100268	SCREW, rd hd machine; 10–24 x 3/8" (10 mm) long	2
208	112895	SCREW, cap, hex hd; 1/4–20; 3/4" (19 mm) long	2
209	112944	SCREW, cap, button hd; 5/16–18; 3/4" (19 mm)	2
210	100057	SCREW, cap, hex hd; 5/16–18; 3/4" (19 mm)	2
211	108946	NUT, hex; 5/16–18	2
212	100181	NUT, square; 5/16–18	2
213	100214	WASHER, lock, spring; 5/16" size	2
214	112894	SCREW, cap, hex hd; 5/16–18; SST	2
215	112904	WASHER, lock, spring; 5/16; SST	4
216	112900	NUT, square; 5/16–18; SST	2

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Dimensions

NOTE: For elevator height dimensions, refer to Fig. 2 and the text on page 4.



Graco Standard 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 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.

FOR GRACO CANADA CUSTOMERS

The parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English. Les parties reconnaissent avoir convenu que la rédaction du présente document sera en Anglais, ainsi que tous documents, avis et procédures judiciaires exécutés, donnés ou intentés à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées.

Graco Information

TO PLACE AN ORDER, contact your Graco distributor, or call one of the following numbers to identify the distributor closest to you:

1-800-328-0211 Toll Free

612-623-6921

612-378-3505 Fax

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