

# Air Controls

312374G

EN

***Integrated and 2-Button Interlock Air Controls for use with Supply Systems. For professional use only.***



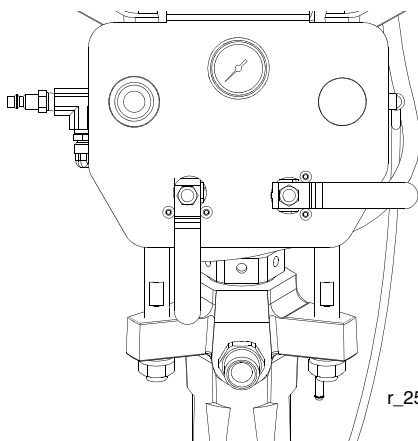
**Important Safety Instructions**

Read all warnings and instructions in this manual.  
Save these instructions.

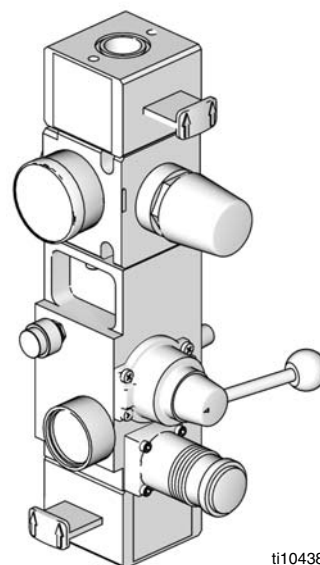
See page 2 for Model information.

## Integrated Air Controls

L20c Air Controls



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ti10438a

# Contents

<b>Contents</b> .....	<b>2</b>	<b>L20c Air Controls</b> .....	<b>9</b>
<b>Models</b> .....	<b>2</b>	Pressure Relief Procedure .....	9
<b>Integrated Air Controls</b> .....	<b>3</b>	Disassembly .....	9
Pressure Relief Procedure .....	3	Replace Air Motor Regulator .....	9
Disassembly .....	3	Replace Air Motor Shutoff Valve and Ram Shutoff Valve .....	9
Replace Director Valve .....	4	Remove Blowoff Push Button .....	9
Replace Air Motor Regulator .....	4	Reassembly .....	9
Replace Ram Air Regulator .....	5	<b>Parts</b> .....	<b>10</b>
Reassembly .....	5	L20c Air Controls, 257613 .....	10
<b>2-Button Interlock</b> .....	<b>6</b>	Integrated Air Controls .....	11
Attach Roller Switch and Actuator .....	6	Integrated Air Controls .....	12
Attach 2-Button Interlock Assembly .....	7	2-Button Interlock Kit .....	13
		<b>Pneumatic Schematic</b> .....	<b>14</b>
		Integrated Air Control Module .....	14
		Integrated Air Control Module with Optional 2-Button Interlock .....	15
		<b>Graco Standard Warranty</b> .....	<b>16</b>
		<b>Graco Information</b> .....	<b>16</b>

## Models



### Air Controls

Model No.	Description	Maximum Regulated Working Pressure psi (MPa, bar)	Air Inlet Size	Compatible 2-Button Interlock Model
255650	Integrated Air Controls for D60, D200, and D200s	150 (0.69, 6.9)	3/4 npt(f)	255719 255720
24C824	Integrated Air Controls for D200 and D200s (Ram only, no pump control)	150 (0.69, 6.9)	3/4 npt(f)	255719 255720
257612	Air Controls, For S20 3 in., 5 Gallon (20 Liter) Supply Systems	150 (0.69, 6.9)	1/2 npt(f)	NA
257613	Air Controls, For L20c 3 in., 5 Gallon (20 Liter) Supply Systems	100 (0.7, 7)	1/2 npsm(f)	255615

### 2-Button Interlock

Model No.	Description
257615	Two-Button Interlock, For D60 3 in., 16 Gallon (60 Liter) Supply Systems
255719	Two-Button Interlock, For D200 3 in., 55 Gallon (200 Liter) Supply Systems
255720	Two-Button Interlock, For D200s 6.5 in., 55 Gallon (200 Liter) Supply Systems

# Integrated Air Controls

						
To reduce the risk of serious injury whenever you are instructed to relieve the pressure, follow the <b>Pressure Relief Procedure</b> .						

## Pressure Relief Procedure

1. Close the air motor slider valve (E) and the main air slider valve (F).
2. Set the ram director valve to DOWN. The ram will slowly drop.
3. Jog the director valve up and down to bleed air from ram cylinders.

## Disassembly

1. **For Supply Systems with Shrouds:** Remove shrouds. Loosen six captive screws (A) and disassemble shrouds (B) from supply system.

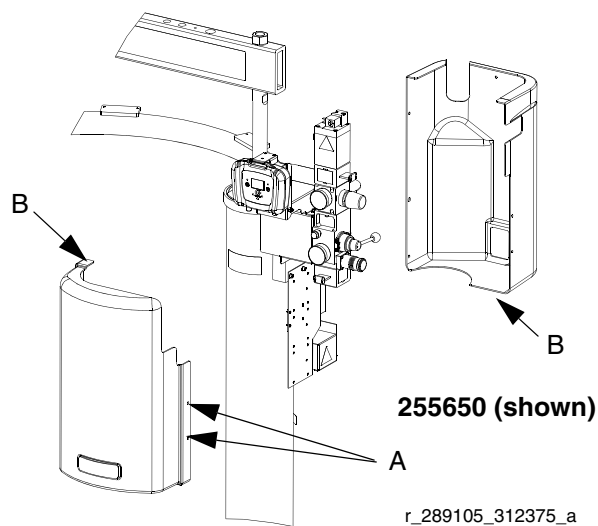


FIG. 1

2. Disconnect all hoses and tubing from existing air control.
3. Remove four screws (C) from the mounting bracket (D) and remove the integrated air controls from the supply system.

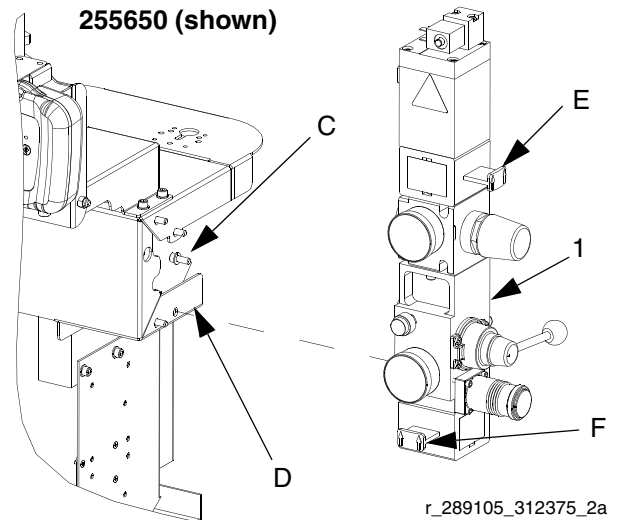


FIG. 2

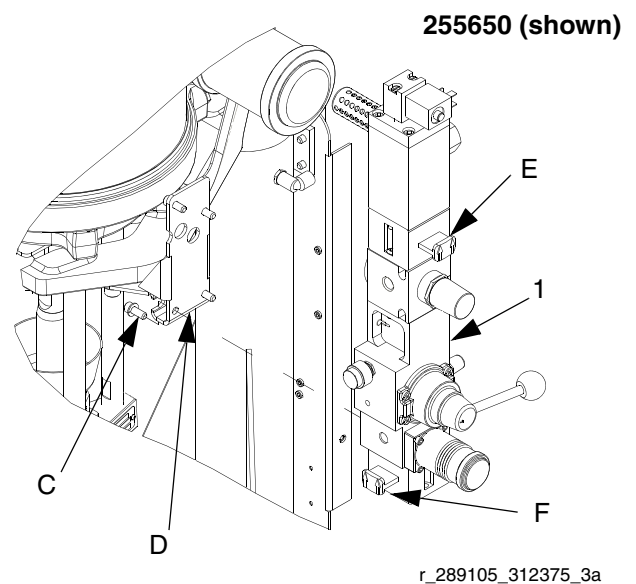



FIG. 3

 If you are not replacing the manifold (1), you may prefer to remove the bracket from the ram and leave it attached to the integrated air controls because the screws are easier to reach. See FIG. 4.

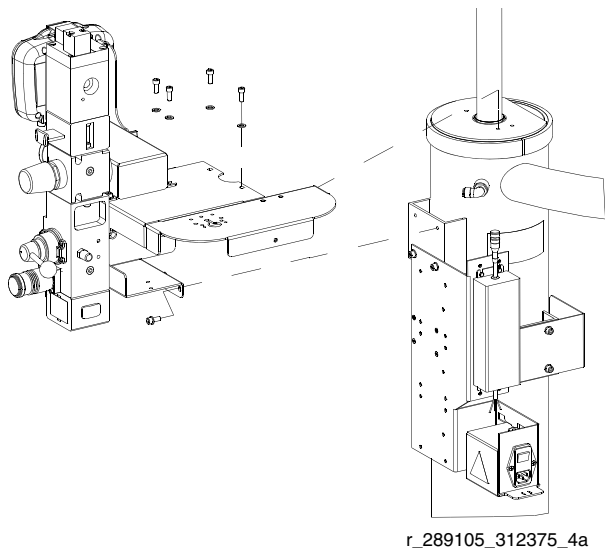



FIG. 4

## Replace Director Valve

Numbers in parentheses refer to FIG. 5.

1. Relieve pressure.
  2. Remove screws (4a) and take off director valve.
  3. Remove spring (4c), valve plate (4d), and o-ring (4b).
-  Note the orientation of the director valve plate when you remove it. The opening should be on the opposite side (left) of the lever.
4. Remove and discard pin (4g) and four valve seats (4e) with o-rings (4f).
  5. Insert new valve seats (4e) with o-rings (4f) and new pin.
  6. Insert new director valve plate (4d, see Note above) spring (4c), and o-ring (4b).
  7. Attach new director valve with screws (4a). Tighten screws until snug.

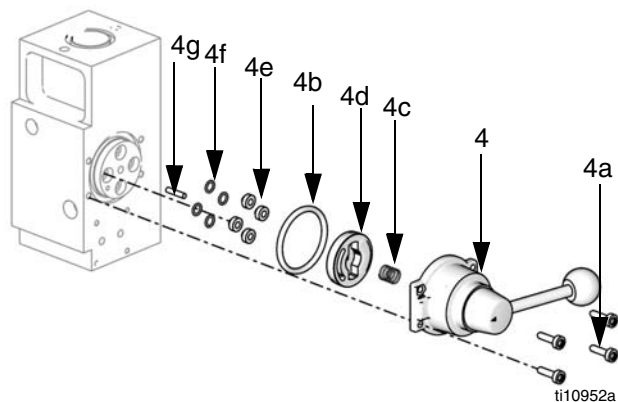


FIG. 5

## Replace Air Motor Regulator

Numbers in parentheses refer to **Parts**, page 11. Air motor regulator not included with 24C824 integrated air controls.

1. Relieve pressure.
2. Disconnect air motor hosing and fittings.
3. Remove two screws (9) and take off the shutoff valve (3) at top of module. If your supply system has an air solenoid, it can remain attached to the shutoff valve.
4. Remove two screws (9) and take off the air motor regulator (6).
5. Attach new regulator to manifold. Orient so the gauge lines up with the gauge on the ram air regulator and the direction of flow arrow points up. Tighten screws until snug. Recommend using thread locker Loctite 220 or equivalent.
6. Reattach shutoff valve (3) at top of regulator. Make sure that o-ring (5) is in place on valve (3).

## Replace Ram Air Regulator

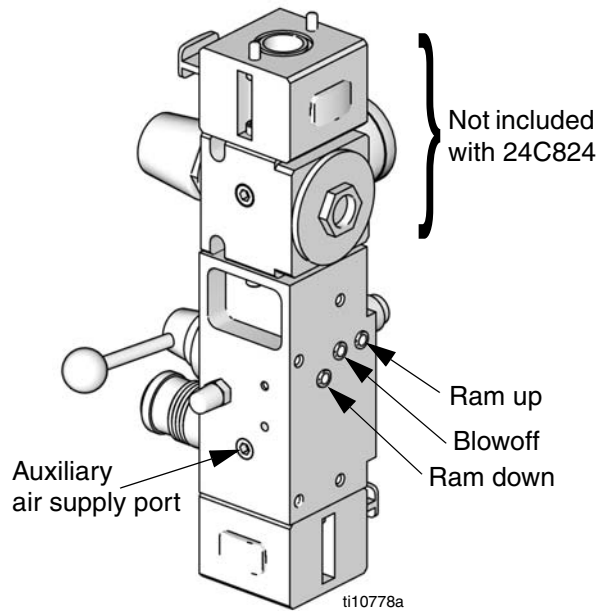
Numbers in parentheses refer to **Parts**, page 10.

1. Relieve pressure.
2. Remove four screws (7a) and take off the ram air regulator (7).
3. Replace o-rings (7b) on back side of regulator.
4. Attach new air regulator to manifold. Use index pin for correct orientation. Tighten screws until snug.

## Reassembly

1. Using four screws, attach the integrated air controls to the mounting bracket. See FIG. 2.
2. Attach the ram up, ram down, and blowoff air lines as shown in Figure FIG. 6.




**255650 (shown)**



**FIG. 6**

3. Attach all other hoses and replace shrouds.

## 2-Button Interlock

						
<p>To reduce the risk of serious injury whenever you are instructed to relieve the pressure, follow the <b>Pressure Relief Procedure</b>, page 3.</p>						

### Attach Roller Switch and Actuator

1. Attach roller switch (133) to bracket (132). Position roller switch to far back position on the bracket and leave mounting screws (144) loose.
2. Attach bracket (132) to ram with screws (105) and washers (106). Leave screws loose. See FIG. 7 and FIG. 8.

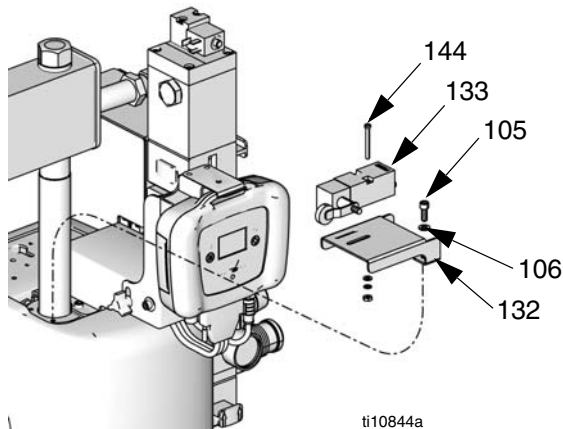


FIG. 7: D200 and D200s Bracket

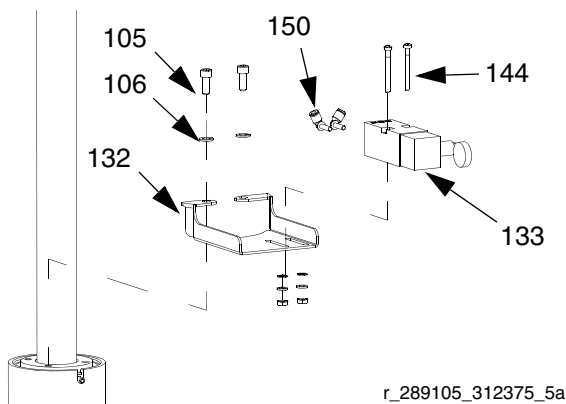


FIG. 8: D60 Bracket

3. Raise platen to top of drum.
4. Attach actuator bracket.
  - a. *For D200 and D200s supply systems:* Attach actuator bracket (138) near bottom of lift rod so it engages the roller switch when the platen reaches the top of the drum.

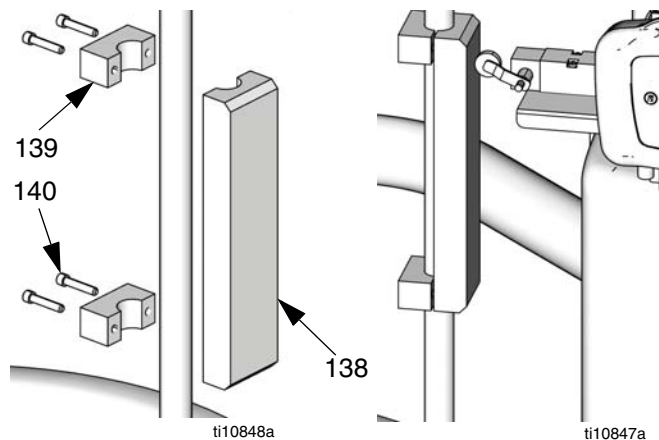


FIG. 9

- b. *For D60 supply systems:* Loosen one screw (151a) and remove one screw (152b). Align actuator rod (151) on piston rod so it touches the air motor mounting bracket. Tighten actuator rod to piston rod with four screws (140).

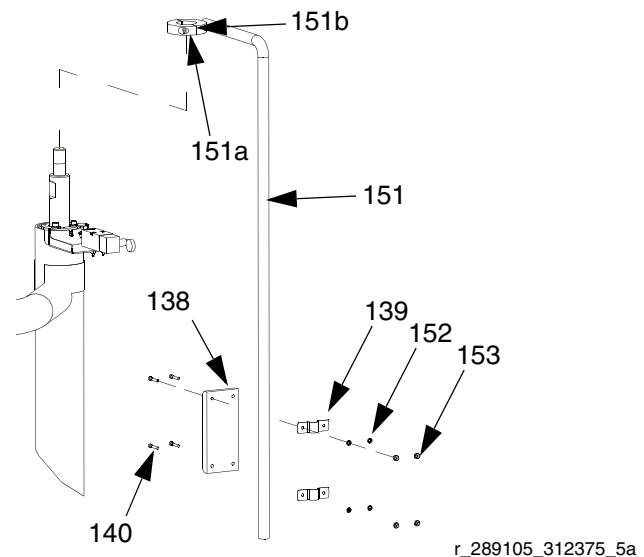


FIG. 10

5. Tighten actuator bracket to rod using 4 screws (140) and bracket clamps (139).
6. Adjust the roller switch (133) out so it contacts actuator bracket (138), then tighten screws (144).
7. Tighten bracket (132) to ram with screws (105) and washers (106).
8. Connect main air (S1) to port (S1) on roller switch (133) with 15 in. of tubing (146).
9. Connect switch signal air (S2) to port (S2) on roller switch (133) with 15 in. of tubing (146).
10. *For D60 supply systems:* Install two fittings (150) into (S1) and (S2).

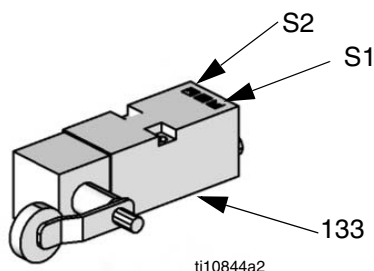


FIG. 11:

## Attach 2-Button Interlock Assembly

See FIG. 12.

1. Relieve pressure.
2. Remove shrouds. See FIG. 1.
3. Disconnect air lines.
4. Remove integrated air controls from bracket. See **Disassembly**, page 3.
5. Remove back cover from 2-button interlock assembly (130).
6. Position 2-button interlock assembly between air control bracket and air controls. The screws that attach the integrated air controls to the supply system also attach the 2-button interlock assembly.

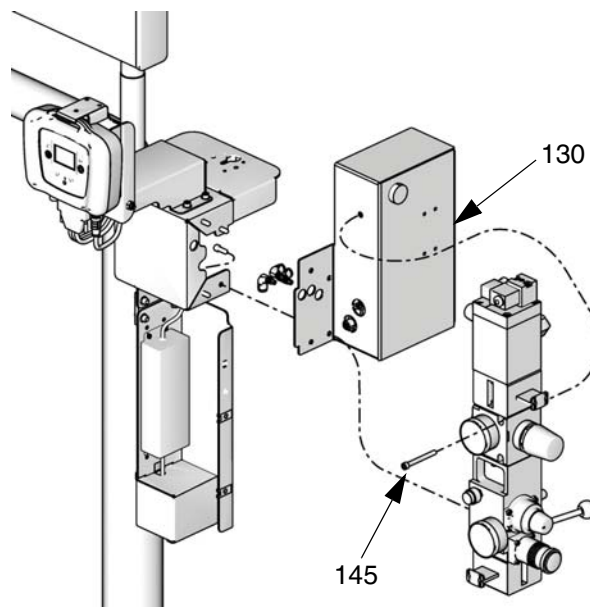



FIG. 12

7. Reattach integrated air controls. See **Reassembly**, page 5.
8. Insert cap screw (145) through integrated air controls into 2-button interlock module. See FIG. 12.

See FIG. 13 for steps 9 - 14.

9. Inside 2-button interlock module, disconnect elbow fitting (6) and push fittings (7) from tee fitting (5). Remove plug (8) from auxiliary air supply port on back of integrated air controls. Install tee fitting (5) through into the port and through the opening in the bracket. Reconnect elbow fitting (6) and push fittings (7). Reinstall plug (8) at top of tee fitting (5).
10. Connect tubing (147) from ram down fitting on back of air controls to fitting (D1) on right side of bottom pilot valve. See FIG. 13.
11. Connect tubing from ram down fitting near top of ram cylinder to fitting (D2) on left side of bottom pilot valve. See FIG. 13.

12. Connect tubing (147) from ram up fitting on back of air controls to fitting (U1) on right side of top pilot valve. See FIG. 13.
13. Connect tubing from ram up fitting near bottom of ram cylinder to fitting (U2) on left side of top sole-noid.
14. Connect blowoff air (B1) to blowoff air connector on platen.
15. Replace cover on 2-button interlock assembly.

 It may be necessary to rearrange tubing so cover will fit back on assembly.

16. Attach all other hoses and replace shrouds.

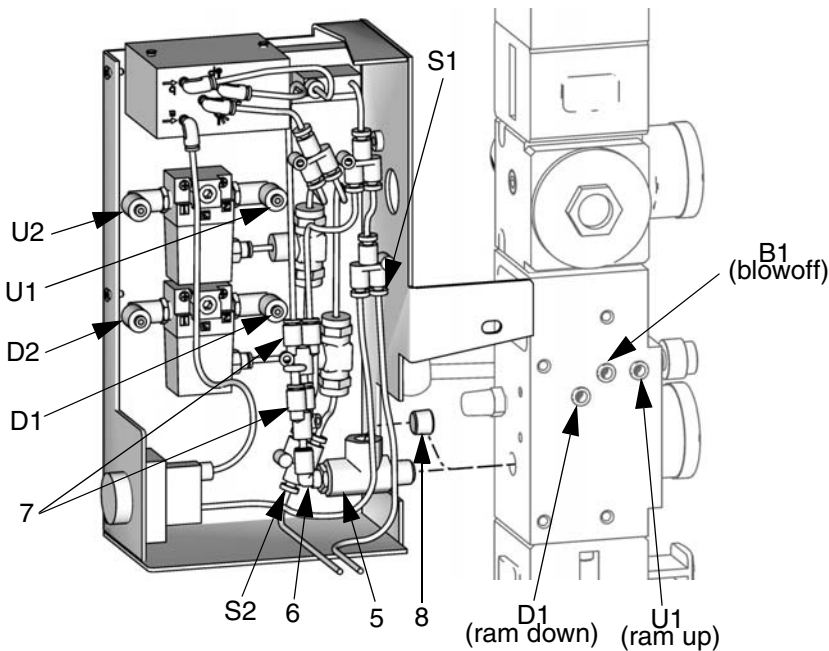


FIG. 13



# L20c Air Controls

To reduce the risk of serious injury whenever you are instructed to relieve the pressure, follow the <b>Pressure Relief Procedure</b> .						

## Pressure Relief Procedure

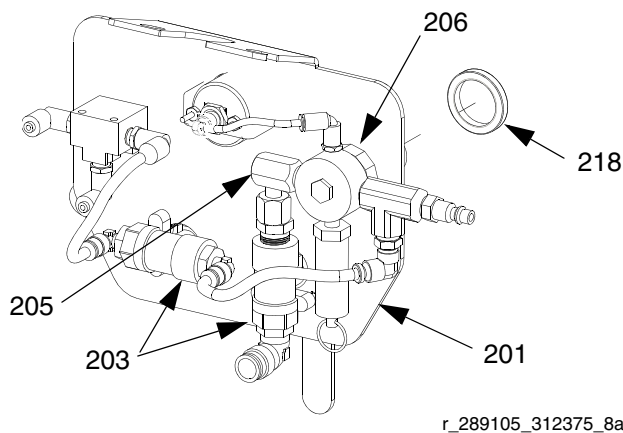
1. Close the air motor shutoff valve (E) and remove air line from air control coupling (x).
2. Set the elevator director valve to DOWN. The ram will slowly drop.

## Disassembly

1. Remove two screws that attach air control panel to elevator.
2. Disconnect all hoses and tubing from existing air control.

## Replace Air Motor Regulator

1. Loosen swivel fitting (205) between regulator (206) and air motor shutoff valve (203).
2. Remove nut (218) from front of regulator and pull regulator out of panel (201).



**FIG. 14**

## Replace Air Motor Shutoff Valve and Ram Shutoff Valve

See parts illustration on page 10.

1. Remove two screws (211) from air motor shutoff valve and two screws (209) from ram shutoff valve.
2. Remove valve assemblies from panel.

## Remove Blowoff Push Button

See parts illustration on page 10.

1. Hold button in place and remove screw.
2. Remove nut underneath button and push button from panel (201).

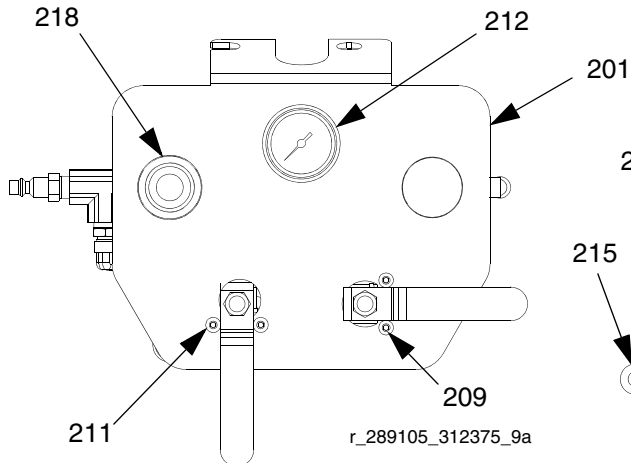
## Reassembly

1. Replace parts as needed and reassemble them in the reverse order of disassembly.
2. Connect all hoses and tubing.
3. Install air controls on elevator with two screws and lockwashers from kit 257613. See manual 313527.

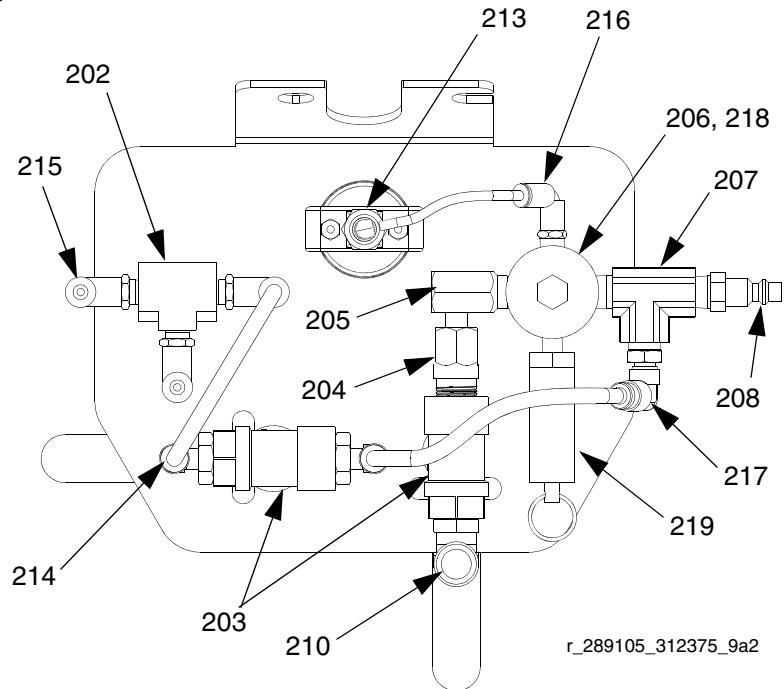
# Parts

## L20c Air Controls, 257613

Front View



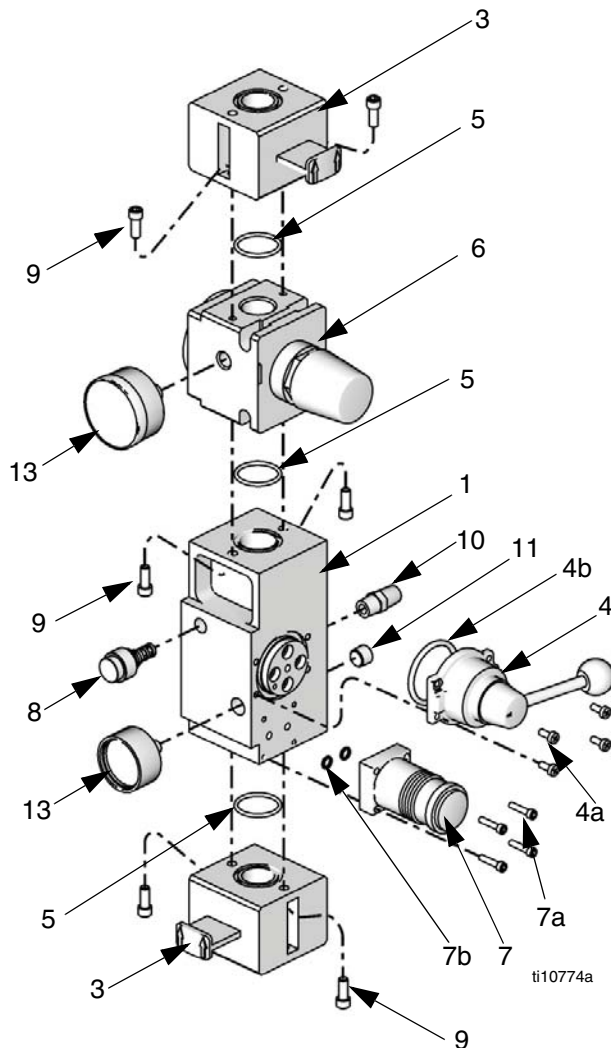
Back View



Ref.	Part	Description	Qty.
201		PANEL	1
202	517313	VALVE, 3 way	1
203	114362	VALVE, ball, air	2
204		FITTING, adapter	1
205		FITTING, 90° swivel	1
206	110318	REGULATOR	1
207		FITTING, tee	1
208		FITTING, line, air	1
209		SCREW, cap; 10-24 x 0.375 in.	2
210		FITTING, elbow	1
211		SCREW, cap; 10-24 x 0.625 in.	2
212	15T500	GAUGE	1
213		FITTING, 90° swivel	1
214		FITTING, elbow	2
215		FITTING, elbow	3
216		FITTING, elbow	1
217		FITTING, swivel	1
218		NUT, regulator	1
219		SAFETY, valve	1

Mounting screws and lockwashers are included with kit 257613. See manual 313527.

# Integrated Air Controls



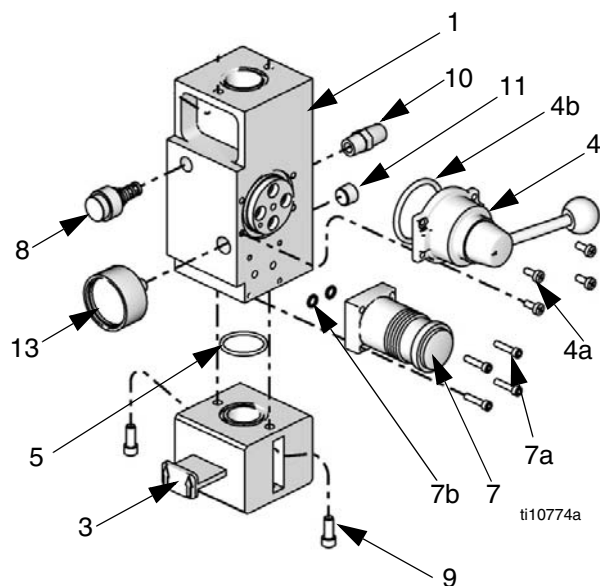
## Model 255650; D200s, D200, and D60 Model 257612; S20

Ref.	Part	Description	Qty.
1		MANIFOLD	1
3	★ 121108	VALVE, shutoff (includes o-rings and screws)	2
	◆ 121793	VALVE, shutoff (includes o-rings and screws)	2
4	121107	VALVE, director (includes 4a and 4b, plus all parts shown in FIG. 5)	1
4a		SCREW	4
4b		O-RING	1
5	★ 121110	O-RING, buna	3
	◆ 102620	O-RING	3
6	★ 255651	REGULATOR, air motor (includes regulator, o-ring, and screws)	1
	◆ 257614	REGULATOR, air motor (includes regulator, o-ring, and screws)	1
7	121106	REGULATOR, ram (includes 7a and 7b)	1
7a		SCREWS	4
7b		O-RING	2
8	121109	VALVE, blowoff (includes valve and push button)	1
9	★ 121112	SCREW, cap, socket head 1/4-20 x 5/8	6
	◆ 121803	SCREW, cap, button head 10-32 x 1/2	6
10	517449	MUFFLER	1
11	100721	PLUG, pipe, auxiliary air supply	1
13	★ 101689	GAUGE, air pressure, 0-200 psi (0-1.4 MPa, 0-14 bar)	2
	◆ 113911	GAUGE, air pressure, 0-160 psi (0-1.1 MPa, 0-11 bar)	2

★ For D200s, D200, and D60 supply systems only.

◆ For S20 supply systems only.

## Integrated Air Controls



## Model 24C824; D200s and D200

Ref.	Part	Description	Qty.
1		MANIFOLD	1
3	121108	VALVE, shutoff (includes o-rings and screws)	2
4	121107	VALVE, director (includes 4a and 4b, plus all parts shown in FIG. 5)	1
4a		SCREW	4
4b		O-RING	1
5	121110	O-RING, buna	3
7	121106	REGULATOR, ram (includes 7a and 7b)	1
7a		SCREWS	4
7b		O-RING	2
8	121109	VALVE, blowoff (includes valve and push button)	1
9	121112	SCREW, cap, socket head 1/4-20 x 5/8	2
10	517449	MUFFLER	1
11	100721	PLUG, pipe, auxiliary air supply	1
13	101689	GAUGE, air pressure, 0-200 psi (0-1.4 MPa, 0-14 bar)	1

# 2-Button Interlock Kit

## Model 255719

(For D200 3-in., 55 gallon (200 liter) supply systems)

## Model 255720

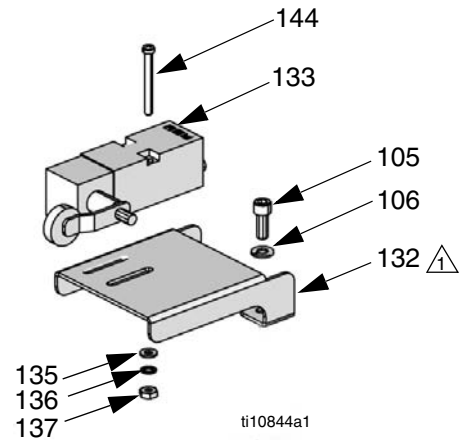
(For D200s 6.5-in., 55 gallon (200 liter) supply systems)

## Model 257615

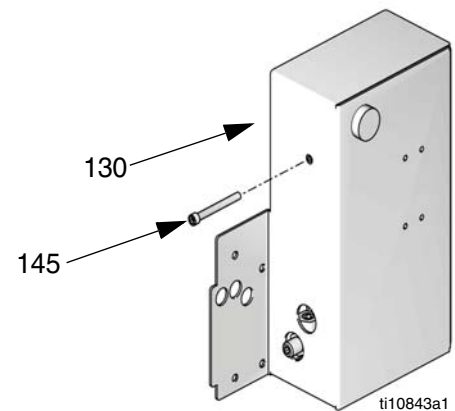
(For D60 3-in., 16 gallon (60 liter) supply systems)

Ref.	Part	Description	Qty.
105		SCREW, cap, 1/4-20 x 5/8	2
106		WASHER, lock, 1/4	2
130		AIR CONTROL, 2-button interlock	1
132		BRACKET, switch, mounting	1
	✱	BRACKET, switch, mounting	1
133		VALVE, roller operated	1
135		WASHER, no. 8	2
136		WASHER, lock, no. 8	2
137		NUT, hex, 8-32	2
138		BRACKET, actuator	1
139		BRACKET, actuator, mounting	2
140		SCREW, cap, 1/4-20 x 1 1/4	4
	✱	SCREW, cap, 8/32 x 1	4
144		SCREW, panhead, 8-32 x 1 1/2	2
145		SCREW, cap, 1/4-20 x 2 1/2	1
146		TUBING, nylon, 5/32 in. (not shown)	30
147		TUBING, nylon, 1/4 in. (not shown)	30
150✱		ELBOW, 90°; 5/32 tube x 5/32 OD	2
151✱		ACTUATOR, weldment	1
152✱		WASHER, plain-	4
153✱		NUT, hex; 8/32	4

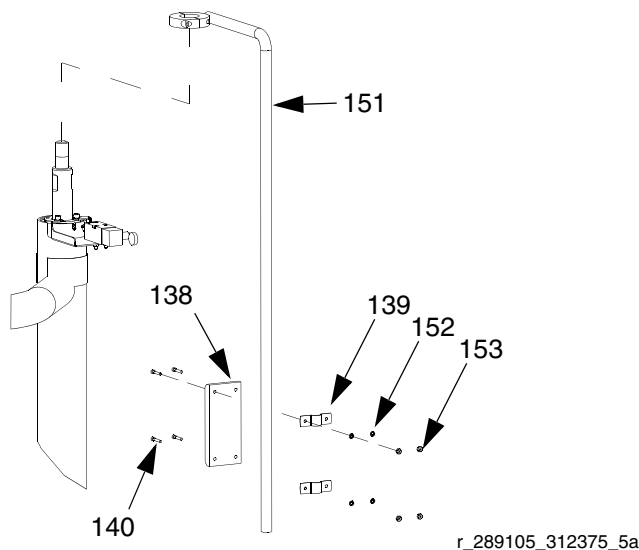
✱ For D60 2-button interlock kit 257615 only.



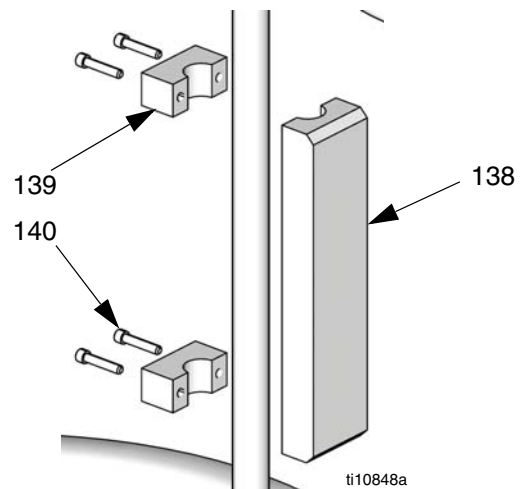
⚠ Flip mounting bracket 132 on D60 supply systems.



### Actuator Bracket (138) for 257615

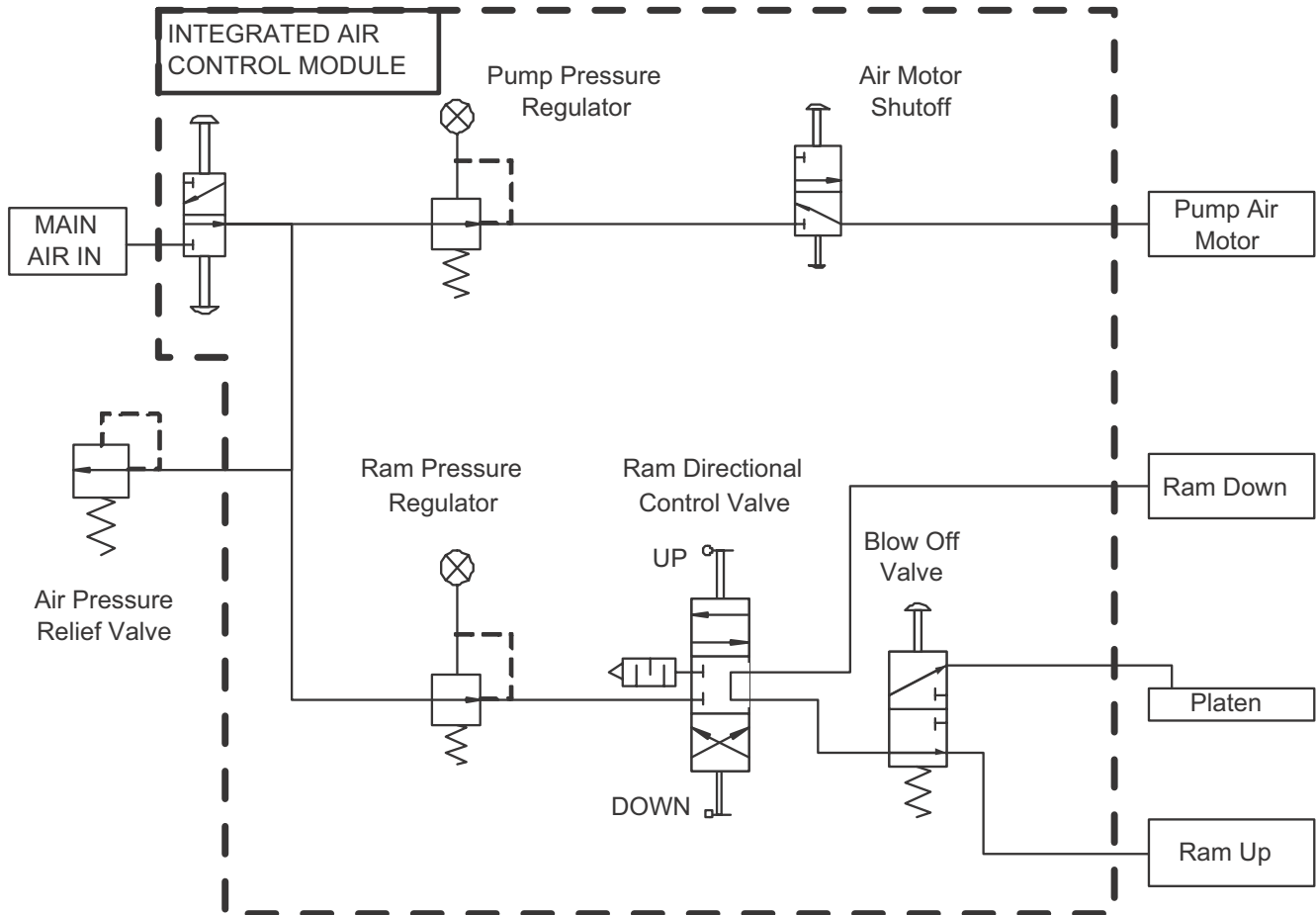


### Actuator Bracket (138) for 255719 and 255720

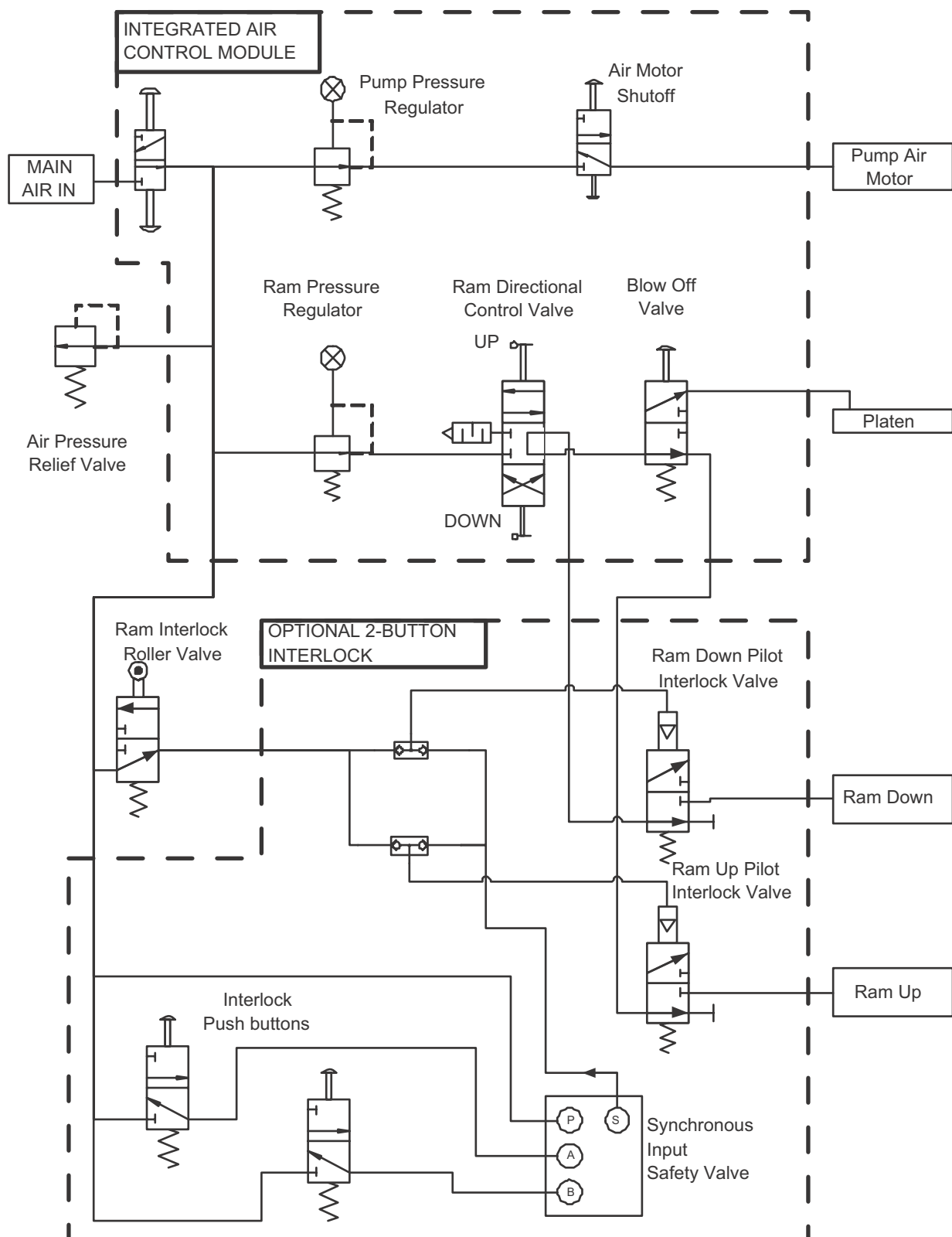


# Pneumatic Schematic

## Integrated Air Control Module



# Integrated Air Control Module with Optional 2-Button Interlock



# Graco Standard Warranty

Graco warrants all equipment referenced in this document which is 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.

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*For patent information, see [www.graco.com/patents](http://www.graco.com/patents).*

Original instructions. This manual contains English. MM 312374

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