

INSTRUCTIONS-PARTS LIST



308-689

Rev. C
Supersedes B



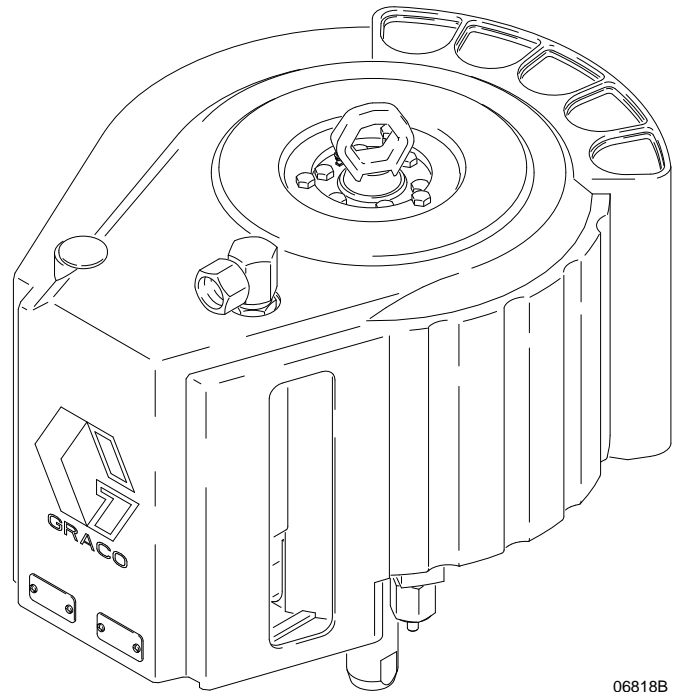
This manual contains important
warnings and information.
READ AND KEEP FOR REFERENCE.

INSTRUCTIONS

*First choice when
quality counts.™*

FOR PREMIER™ AIR MOTOR

239-003 Shield Conversion Kit



06818B

GRACO INC. P.O. BOX 1441 MINNEAPOLIS, MN 55440-1441

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Installation

Pressure Relief Procedure

WARNING



INJECTION HAZARD

The system pressure must be manually relieved to prevent the system from starting or spraying accidentally. Fluid under high pressure can be injected through the skin and cause serious injury. To reduce the risk of an injury from injection, splashing fluid, or moving parts, follow the **Pressure Relief Procedure** whenever you:

- are instructed to relieve the pressure,
- stop spraying,
- check or service any of the system equipment,
- or install or clean the spray tips.

1. Lock the gun trigger safety.
2. Close the red-handled bleed-type master air valve (required in your system).
3. Unlock the gun trigger safety.
4. Hold a metal part of the gun firmly to the side of a grounded metal pail, and trigger the gun to relieve pressure.
5. Lock the gun trigger safety.
6. Open the drain valve (required in your system), having a container ready to catch the drainage.
7. Leave the drain valve open until you are ready to spray again.

*If you suspect that the spray tip or hose is completely clogged, or that pressure has not been fully relieved after following the steps above, **very slowly** loosen the tip guard retaining nut or hose end coupling and relieve pressure gradually, then loosen completely. Now clear the tip or hose.*

Disassembly

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

1. Relieve the pressure, as explained at left.
2. Disconnect the air supply and the ground wire.
3. Disconnect the displacement pump from the air motor, as explained in your separate pump manual.
4. Remove and discard the screws (A) and air valve shield (B). Refer to Fig. 1. Record the pump Model No. and Series letter from the designation plate attached to the air valve shield and write it onto the new plate (7) in the kit. Refer to Fig. 2.
5. Remove the screws (S) around the top edge of the side shield (C). Refer to Fig. 1.
6. Using a 13 mm socket wrench, remove the six screws (D) in the center of the top shield (E). Unscrew the air inlet fitting (F). Keep the screws for reassembly.
7. Lift the top shield (E) and pad (G) off the motor. Remove the lift ring (H) and the o-ring (J). Discard these parts.
8. Remove the screws around the bottom edge of the side shield (C), and remove the shield. Leave the cylinder pad (K) affixed to the cylinder. Remove and discard the air valve pad (L).
9. Unscrew the three mounts (N) and keep them for reassembly. Remove and discard the six screws (M), bottom shield (P), and bottom pad (R).
10. Remove the bottom rocker arm cover (T) by holding the stud (U) with a wrench while unscrewing the nut (V). Pull the stud out. Discard the bottom rocker arm cover (T). Keep the stud (U), nut (V), rocker arm (W), sleeve (X), and bearings (Y) for reassembly.

Installation

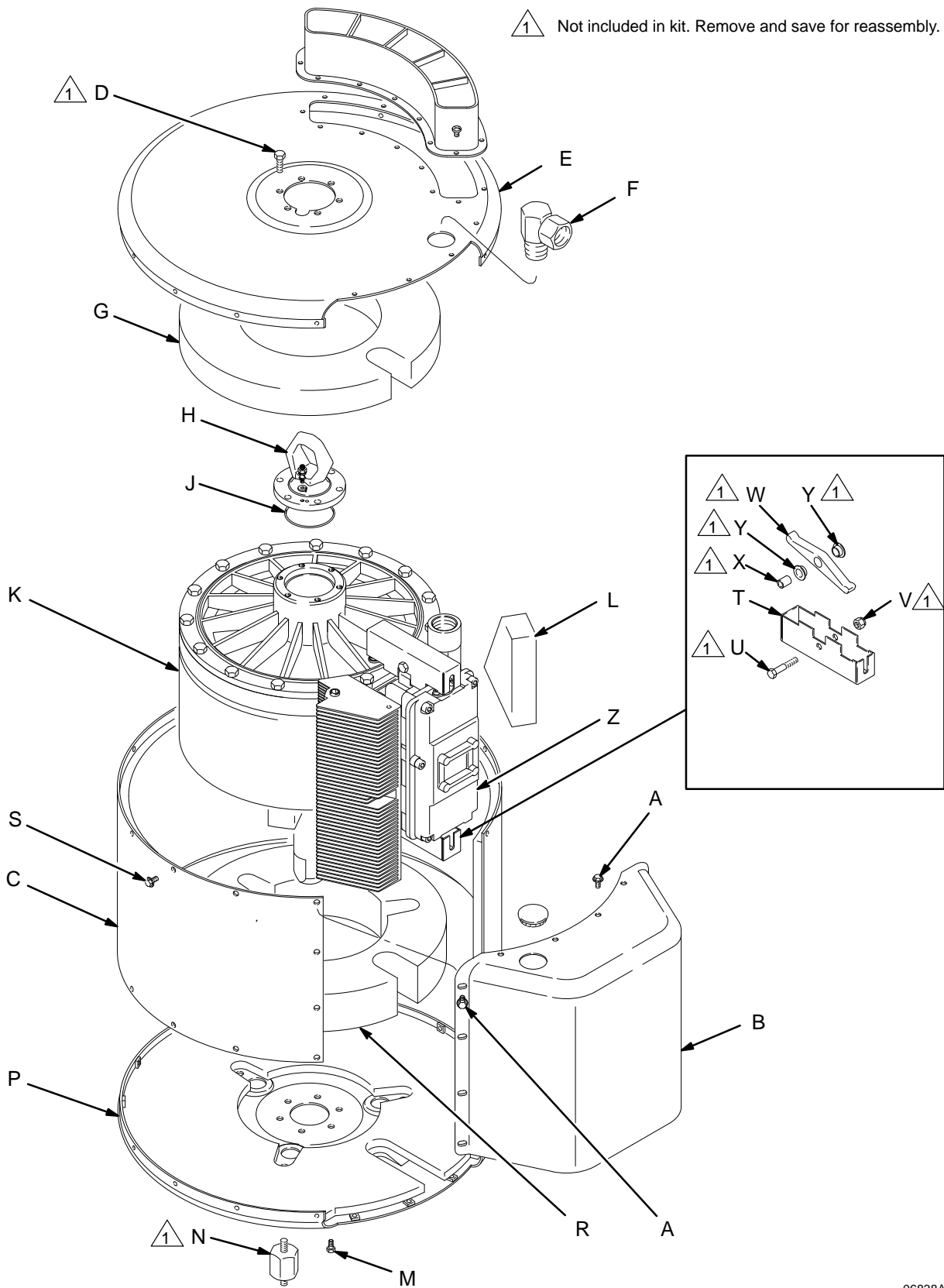


Fig. 1

06838A

Installation


Installing the Kit (see Fig. 2)


NOTE: The exhaust manifold (AA) helps reduce icing of the air motor. If it was previously removed and discarded, a new one should be installed. Order Part No. 186–264. Refer to manual 308–213 for the installation procedure.

1. **IMPORTANT:** Install the grounding lug (9) and washer (8) on the lift ring (4) as shown in Fig. 2.
2. Install the support bracket (12) with the six screws (13).
3. Install the three mounts (N) removed in step 9 under **Disassembly**.
4. Lubricate the o-ring (11) with multipurpose grease and install it on the underside of the lift ring (4). Align the lift ring with the six inner holes in the motor cap, and orient the grounding lug (9) as shown. Attach with the six screws (D) removed in step 6 under **Disassembly**.
5. Lubricate the sleeve (X) and two bearings (Y) and install them in the rocker arm (W). Position the rocker arm between the bottom flanges of the air valve (Z) subplate.
6. Note that the new rocker arm cover (17) has two tabs that are off-center. Place the cover over the rocker arm (W) so the end with the two tabs is toward the air valve (Z). Insert the stud (U) through the cover and rocker arm, then install the nut (V). Torque to 22–23 N•m (195–205 in–lb).
7. Screw the nipple (18) into the air inlet port.
8. Lower the shield (1) over the motor so the three notches in the top align with the outer holes in the lift ring (4). Attach the shield to the lift ring with three screws (5) and washers (16).
9. Screw the air inlet swivel (19) onto the nipple (18). Install the plug (10) as shown.
10. Position the bottom cover (2) and attach it to the tabs of the rocker arm cover (17) with two screws (5) and washers (16).
11. Write the Model No. and Series letter of your pump on the designation plate (7) as explained in step 4 under **Disassembly**. Attach the plate to the shield (1) with the two self-tapping screws (6).

12. Reconnect the displacement pump as explained in your separate pump manual.

13. Reconnect the air supply and the ground wire.

**WARNING**

**FIRE AND EXPLOSION HAZARD**
Before operating the pump, ground the system as explained in manual 308–213.

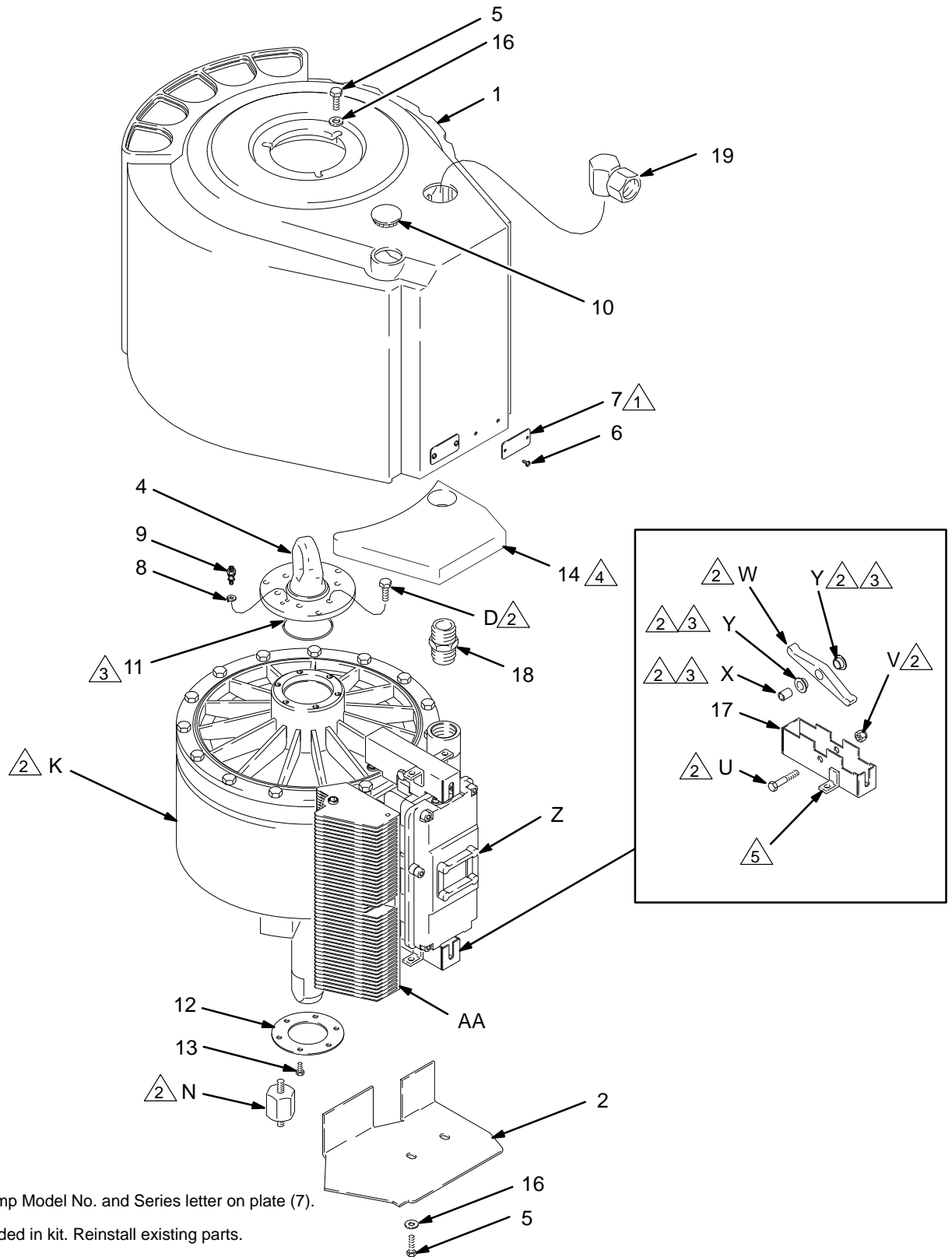
Parts

Ref. No.	Part No.	Description	Qty.
1	276–457	SHIELD, motor	1
2	192–265	COVER, bottom	1
4	184–353	RING, lift	1
5	107–558	SCREW, cap, hex hd; M8 x 1.25; 25 mm (0.98 in.) long	5
6	101–845	SCREW, self-tapping	2
7	290–389	PLATE, designation	1
8	104–582	WASHER, grounding	1
9	104–029	LUG, grounding	1
10	111–909	PLUG, button	1
11	109–484	O-RING; buna-N	1
12	191–989	BRACKET, support	1
13	105–468	SCREW, cap, hex hd; M6 x 1; 12 mm (0.47 in.) long	6
14	113–918	PAD, top	1
16	108–788	WASHER, flat; 8 mm	5
17	192–686	COVER, rocker arm	1
18	158–585	NIPPLE; 1" npt	1
19	114–356	SWIVEL, air inlet, 90°; 1" npt(f) x 1" npsm(f)	1

Manual Change Summary

Assembly Changed	Part Status	Ref. No.	Part No.	Name
239–003 Kit	Old	7	290–017	Plate
	New	7	290–389	Plate
	Old	12	192–120	Bracket
	New	12	191–989	Bracket
	Old	17	184–604	Cover
	New	17	192–686	Cover
	New	18	158–585	Nipple
	New	19	114–356	Swivel

Installation



- 1 Write pump Model No. and Series letter on plate (7).
- 2 Not included in kit. Reinstall existing parts.
- 3 Lubricate with multipurpose grease.
- 4 Pads shipped with the kit are glued in place. Replacement pads are available separately.
- 5 End with tabs must be toward the air valve (Z).

Fig. 2

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Technical Data

Category	Data
Maximum air input pressure (motor)	100 psi (0.7 MPa, 7 bar)
Air inlet size	1" npsm(f)
Weight of retrofitted motor	108 lb (48.9 kg)

Sound Pressure (at 1 meter from unit)

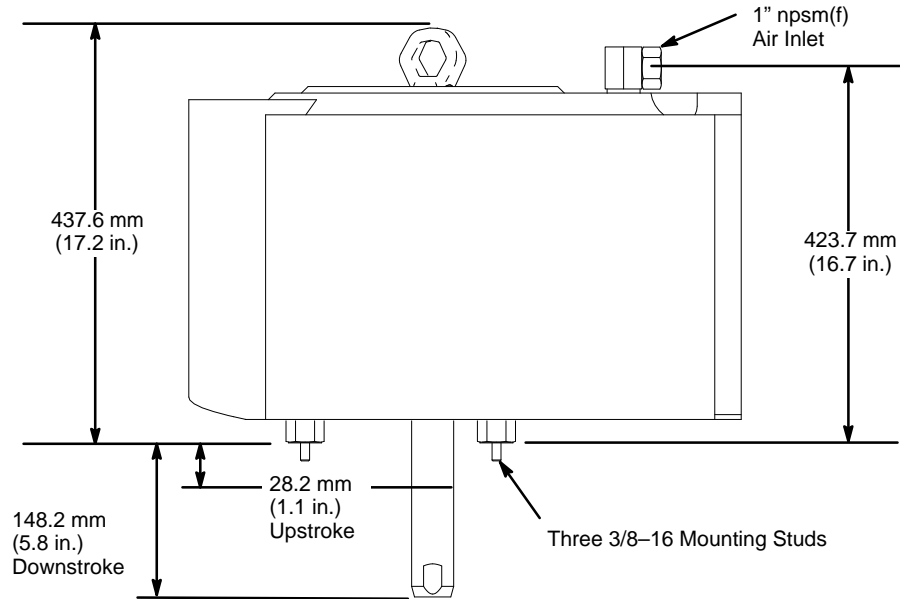
Inlet Air Pressure	Pump Speed			
	5 cycles per min	15 cycles per min	25 cycles per min	60 cycles per min
40 psi (0.28 MPa, 2.8 bar)	76.8 dB(A)	82.5 dB(A)	83.8 dB(A)	89.1 dB(A)
70 psi (0.49 MPa, 4.9 bar)	81.5 dB(A)	85.9 dB(A)	87.0 dB(A)	90.8 dB(A)
90 psi (0.63 MPa, 6.3 bar)	84.6 dB(A)	88.5 dB(A)	90.0 dB(A)	91.9 dB(A)
100 psi (0.7 MPa, 7 bar)	86.8 dB(A)	90.0 dB(A)	91.1 dB(A)	93.0 dB(A)

Sound Power (measured per ISO 9614–2)

Inlet Air Pressure	Pump Speed			
	5 cycles per min	15 cycles per min	25 cycles per min	60 cycles per min
40 psi (0.28 MPa, 2.8 bar)	84.4 dB(A)	89.6 dB(A)	90.8 dB(A)	96.3 dB(A)
70 psi (0.49 MPa, 4.9 bar)	90.2 dB(A)	93.2 dB(A)	94.1 dB(A)	97.2 dB(A)
90 psi (0.63 MPa, 6.3 bar)	92.5 dB(A)	96.9 dB(A)	97.2 dB(A)	99.4 dB(A)
100 psi (0.7 MPa, 7 bar)	94.5 dB(A)	97.4 dB(A)	99.2 dB(A)	100.6 dB(A)

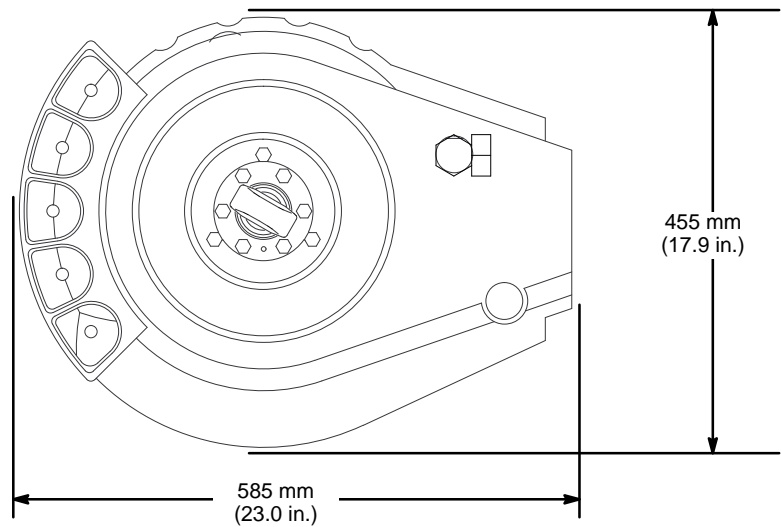
Dimensions

Side View



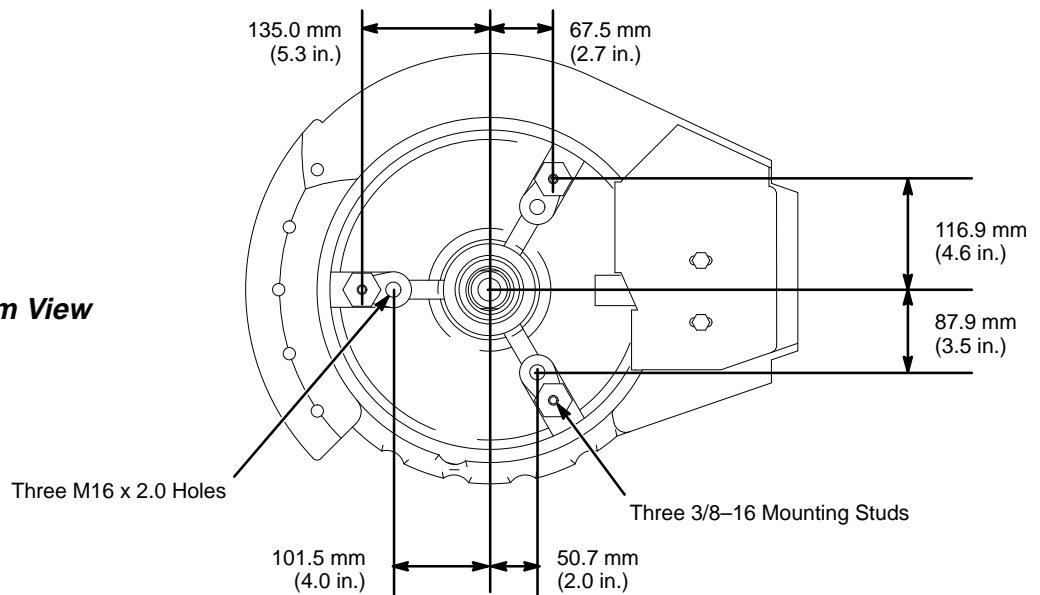
06553A

Top View



06554A

Bottom View



06555B

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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 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.

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