

Agitator Air Motor Rebuild Kits

3A5050F
EN

For rebuilding rotary piston agitator air motor 25C765.
For professional use only.

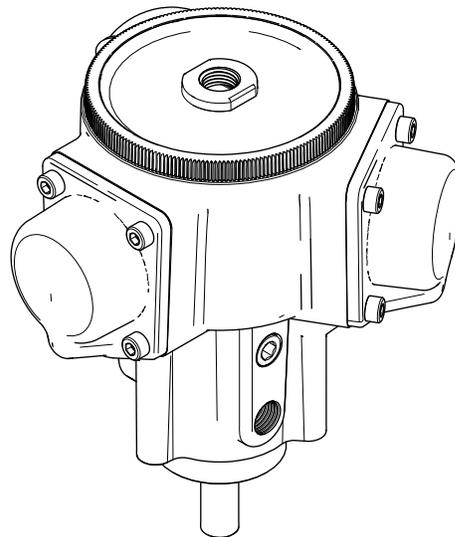


Important Safety Instructions

Read all warnings and instructions in this manual and in your agitator manual before using the equipment. **Save these instructions.**

*Kits: 25M535, 25P860, 25P720,
25P721, 19Y509, 25U443, 25U444,
25U445*

*See pages 4 and 6 for parts included in
each kit.*



ti40209a

Related Manuals

Manual in English	Description
3A4792	Air-Driven Agitators
3A4800	Twistork® Helix Agitator
3A4797	Pressure Tank Agitators

Rebuild Procedure

 **WARNING**





PRESSURIZED FLUID HAZARD
 This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from splashing fluid and moving parts, follow the **Pressure Relief Procedure** before disassembling the equipment.

ENTANGLEMENT HAZARD
 Moving parts, such as an impeller blade, can cut or amputate fingers. To reduce the risk of serious injury, always shut off the agitator and disconnect the air line before checking or repairing the agitator.

PERSONAL PROTECTIVE EQUIPMENT
 Wear appropriate protective equipment when in the work area to help prevent serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and burns.

Disassembling the Air Motor

1. Follow the [Pressure Relief Procedure, page 2](#) .
2. Remove the air motor from the agitator assembly. Follow the removal instructions contained in your agitator manual.
3. Put the air motor in a vice and clamp on the output shaft.
4. Unscrew the air motor top cap (3) to remove it. (See [Parts, page 4](#) .)
5. Remove the needle bearing shaft assembly (10, 20) using a 20mm socket.
6. Remove spacers (8), washers (9), and the needle bearing (17).
7. Remove the three cylinder end caps (2) by removing the twelve socket head cap screws (26) with a 4mm hex key.
8. Remove cylinders (6), piston assemblies (4, 5, 7, 13), and sleeves (14).
9. Verify that the shaft assembly turns freely. If the shaft assembly is damaged or does not turn freely, check for debris wedged between the counterweight and the air motor body. If the shaft does not turn freely, remove the crankshaft and inspect. Removing the crankshaft requires a press. If the crankshaft (12) is damaged, order the Crankshaft kit (25U444) and the Body kit (25U445), if needed.

Pressure Relief Procedure

1. Close the bleed-type air shutoff valve to relieve pressure to the air regulator.
2. Disconnect the air line.

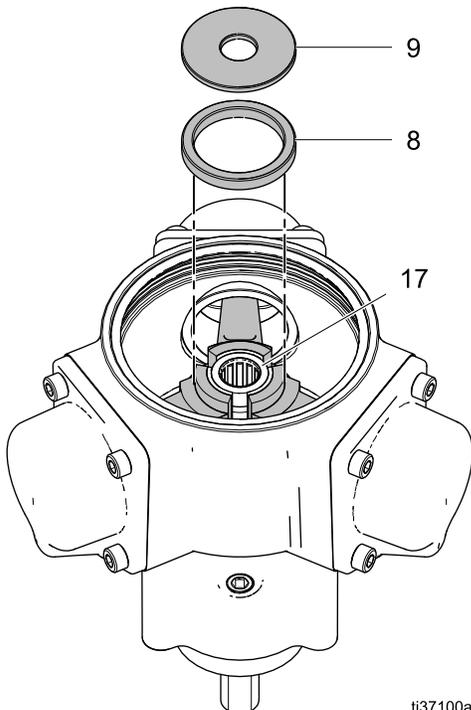
Reassembling the Air Motor (Kits 25M535, 25P720, 25P721)

1. With the air motor shaft in the vice, place the lower washer (9) and spacer (8) in the counterweight pocket.
2. Assemble the piston assembly (4, 5, 7, 13, 14). Lightly lubricate the pistons with grease before inserting the piston assemblies in the cylinder (6). Place the o-ring (23) around the cylinder and install the piston and cylinder assembly in the air motor body (1) as shown. Rotate the piston arm to locate the piston arm inside the lower spacer (8). Install the remaining two piston and cylinder assemblies in a similar manner.
3. If it is not already installed, install the o-ring (24) in the cylinder end cap (2). Install the cylinder end caps (2) with screws (26). Tighten the screws to 60-70 in-lbs (7-8 N•m).

NOTICE

To prevent stripping the threads in the air motor body, do not overtighten the screws.

4. Make sure that the threads on top of the crankshaft (12) are clean. Install the needle bearing (17) by positioning it inside the sleeves between each piston arm assembly.



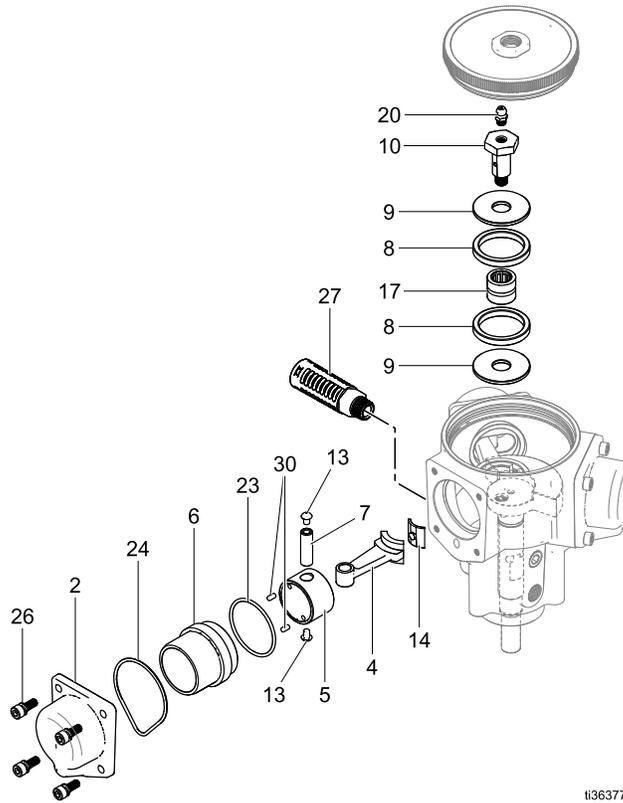
5. Install the upper spacer (8) and washer (9). Install and thread the needle bearing shaft assembly (10) through the washers and needle bearing into the crankshaft (12). Tighten the shaft assembly (10) using the 20mm socket to 15 ft-lbs (20 N•m).
6. Grease the needle bearing in the grease fitting (20) with non-silicone grease such as MOBILGREASE XHP 222 SPECIAL or equivalent with a minimum flash point temperature of 399.2°F (204°C). Add grease until you see it extruding from the lower washer (9).
7. Install the top cap (3).
8. Install mufflers (27) as needed.
9. Remove the air motor from the vice. Install a temporary air line to verify that the air motor starts and runs at low air pressures (<5 psi, 0.3 bar) before reinstalling the air motor on the agitator.

Reassembling the Air Motor (Kit 25U444)

1. Install shaft seal (22), spring clip (19), and press fit lower bearing (16) into motor body (1).
2. Apply green Loctite 680 to upper bearing (15) outer rim before press fitting into motor body (1).
3. Press in the crankshaft (12 and 15; 15 is preinstalled) from the top of the motor until the bearing (15) is seated inside the motor body (1).
4. Install spring clip (18) onto crankshaft (12).
5. Install remainder of kit parts as desired. See [Reassembling the Air Motor \(Kits 25M535, 25P720, 25P721\), page 3](#).

Parts

Kits 25M535, 25P860, 25P720, 25P721, 19Y509



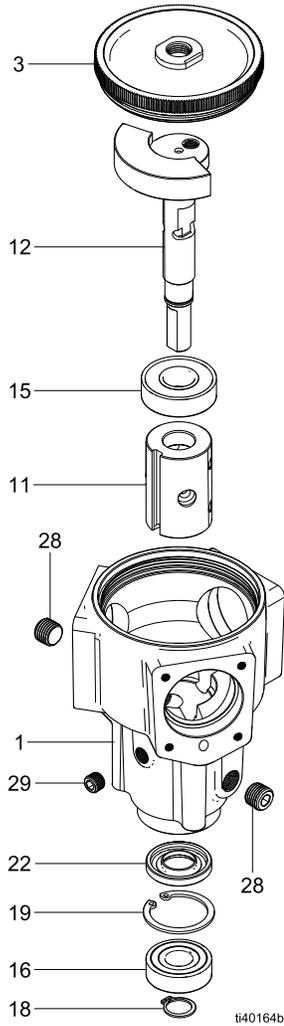
i136377c

Kit Contents		25M535: Full air motor rebuild kit		25P860: End cap kit		25P720: Needle bearing rebuild kit		25P721: Single piston assembly rebuild kit		19Y509: Muffler kit	
Ref.	Description		Qty.		Qty.		Qty.		Qty.		Qty.
2	CAP, cylinder	—	—	✓	1	—	—	—	—	—	—
4	ROD, piston	✓	3	—	—	—	—	✓	1	—	—
5	PISTON	✓	3	—	—	—	—	✓	1	—	—
6	CYLINDER	✓	3	—	—	—	—	✓	1	—	—
7	PIN, piston rod	✓	3	—	—	—	—	✓	1	—	—
8	SPACER	✓	2	—	—	✓	2	—	—	—	—
9	WASHER	✓	2	—	—	✓	2	—	—	—	—
10	SHAFT, needle bearing	✓	1	—	—	✓	1	—	—	—	—
13	CAP, piston pin	✓	6	—	—	—	—	✓	2	—	—
14	SLEEVE	✓	3	—	—	—	—	✓	1	—	—
17	BEARING, needle	✓	1	—	—	✓	1	—	—	—	—
20	FITTING (preinstalled in item 10)	✓	1	—	—	✓	1	—	—	—	—
23	O-RING, cylinder	✓	3	—	—	—	—	✓	1	—	—
24	O-RING, end cap	✓	3	✓	1	—	—	✓	1	—	—

Kit Contents		25M535: Full air motor rebuild kit		25P860: End cap kit		25P720: Needle bearing rebuild kit		25P721: Single piston assembly rebuild kit		19Y509: Muffler kit	
Ref.	Description		Qty.		Qty.		Qty.		Qty.		Qty.
26	SCREW, cap, socket head	—	—	—	—	—	—	—	—	—	—
27	MUFFLER	✓	3	—	—	✓	3	✓	3	✓	3
30	MAGNET, Preinstalled in piston	✓	6	—	—	—	—	✓	2	—	—
31 [▲]	TAG, Safety (not shown)	✓	1	✓	1	✓	1	✓	1	—	—

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

Kits 25U443, 25U444, 25U445



Kit Contents		25U443: Top cap kit		25U444: Crank shaft kit		25U445: Body kit	
Ref.	Description		Qty.		Qty.		Qty.
1	HOUSING, body					✓	1
3	CAP, top	✓	1				
11	BUSHING, valve					✓	1
12	CRANK- SHAFT			✓	1		
15	BEARING, UPPER SHAFT			✓	1		
16	BEARING, LOWER SHAFT			✓	1		
18	CLIP, SPRING			✓	1		
19	CLIP, SPRING			✓	1		
22	SEAL, SHAFT			✓	1		
28	PLUG, inlet and exhaust					✓	1
29	PLUG, valve bushing					✓	1
31▲	TAG, Safety (not shown)	✓	1	✓	1	✓	1
32▲	LABEL, Safety (not shown)	✓	1	✓	1	✓	1

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

California Proposition 65

CALIFORNIA RESIDENTS

 **WARNING:** Cancer and reproductive harm — www.P65warnings.ca.gov.

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. However, any deficiency in the barrel, handle, trigger, hook, internal power supply, and alternator (excluding turbine bearings) will be repaired or replaced for thirty-six months from the date of sale. 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

For the latest information about Graco products, visit www.graco.com. For patent information, see www.graco.com/patents.

To place an order, contact your Graco Distributor or call to identify the nearest distributor.

Phone: 612-623-6921 **or Toll Free:** 1-800-328-0211 **Fax:** 612-378-3505

All written and visual data contained in this document reflects the latest product information available at the time of publication.

Graco reserves the right to make changes at any time without notice.

For patent information, see www.graco.com/patents.

Original Instructions. This manual contains English. MM 3A5050

Graco Headquarters: Minneapolis

International Offices: Belgium, China, Japan, Korea

GRACO INC. AND SUBSIDIARIES • P.O. BOX 1441 • MINNEAPOLIS, MN 55440-1441 • USA

Copyright 2019, Graco Inc. All Graco manufacturing locations are registered to ISO 9001.

www.graco.com

Revision E, May 2022