

Pump Wet-cup Flush Kits

309911 Rev.B

COMPLETE KITS CONVERT ELECTRIC REACTOR™ TO WET-CUP FLUSH DESIGN

Kits include reservoir, pump wet-cup, tubes, and fittings

Part No. 248061, for Reactor Models E-20 and E-XP1

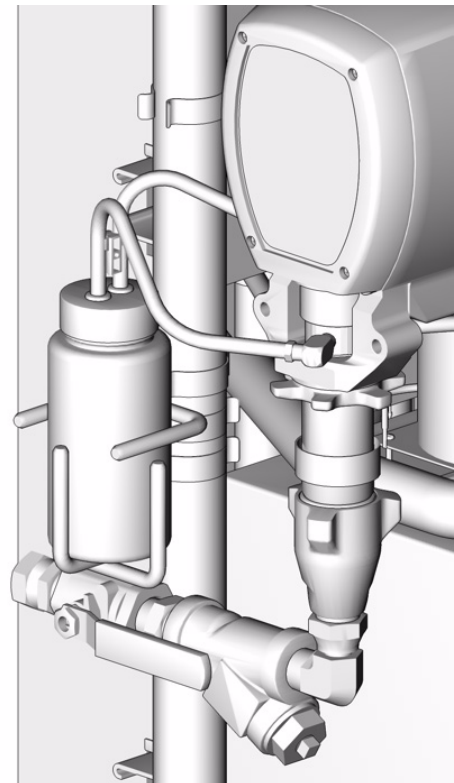
Part No. 248062, for Reactor Model E-XP2

Part No. 248063, for Reactor Model E-30

RESERVOIR KIT MODIFIES ELECTRIC REACTOR TO USE WET-CUP FLUSH DESIGN

Kit includes reservoir, tubes, and fittings (pump not included)


Part No. 246928





TI3765a-2

PROVEN QUALITY. LEADING TECHNOLOGY.

Flush Pump Before Installing Kit

**WARNING**



Read warnings in Reactor operation manual. Flush equipment only in a well-ventilated area. Do not spray flammable fluids. Do not turn on heaters while flushing with flammable solvents.

See FIG. 1. Flush component A (ISO) side from pump A inlet (C) to PRESSURE RELIEF/SPRAY valve (SA) on Reactor fluid manifold. See Reactor operation manual for details.

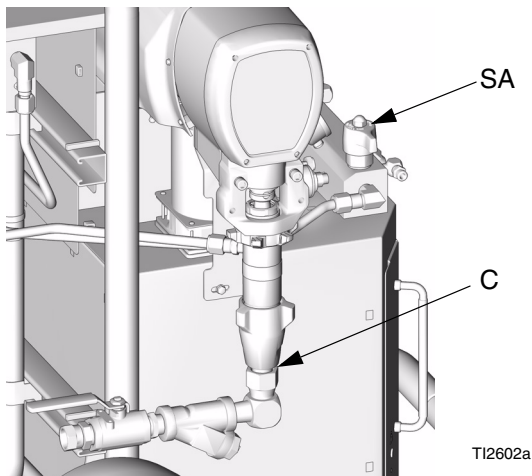




FIG. 1

Tools Required

- 12 in. adjustable wrench
- 1/4 in. open end wrench
- 7/16 in. open end wrench
- 13/16 in. open end wrench
- 7/8 in. open end wrench
- non-sparking hammer
- channel locks
- dropcloth and rags
- vise with soft jaws
- thread sealant

Disassembly

 Numbers and letters in parentheses refer to the figures and the parts list and drawing on page 9.

1. If pumps are not parked, press . Trigger gun until pumps stop. After fluid pressure drops below 700 psi (4.9 MPa, 49 bar), motor will run until pumps are at bottom of strokes, then shut off. Pump rod pins will be showing.

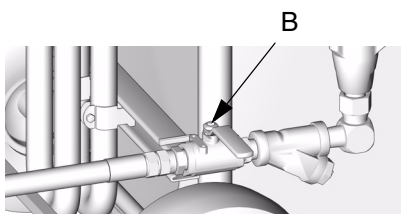
2. Turn main power OFF . Disconnect power supply.

WARNING



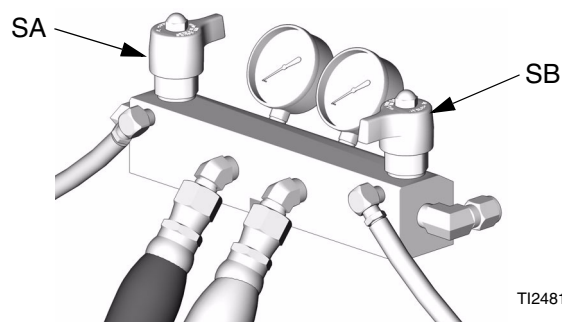
Pump rod and connecting rod move during operation. Moving parts can cause serious injury such as pinching or amputation. Keep hands and fingers away from connecting rod during operation. Read warnings in Reactor operation manual.

3. Shut off both feed pumps. Close both fluid inlet ball valves (B).




TI4174a

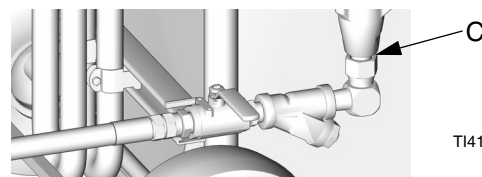
4. Turn both PRESSURE RELIEF/SPRAY valves (SA, SB) to PRESSURE RELIEF. Route fluid to waste containers or supply tanks. Ensure gauges drop to 0. Refer to Reactor operation manual.



TI2481a

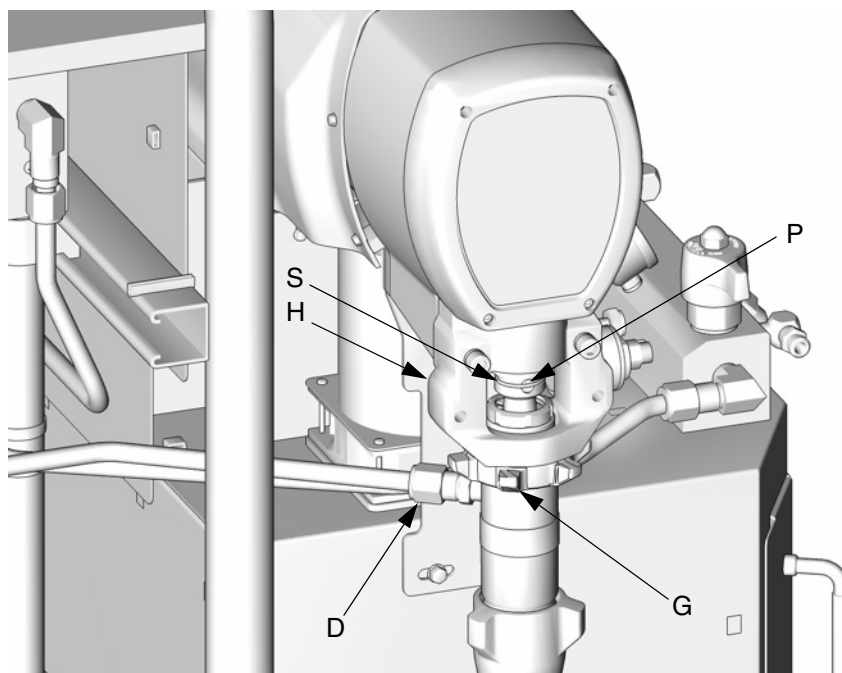
 Use dropcloth or rags to protect Reactor and surrounding area from spills.

5. Disconnect swivel elbow from pump A fluid inlet (C).



TI4174a

6. See FIG. 2. Disconnect outlet tube (D) from pump A outlet and from heater inlet.
7. Push retaining wire clip (S) up. Push pin (P) out. Loosen star-shaped locknut (G) by hitting firmly with a non-sparking hammer. Unscrew pump from bearing housing (H).



TI2602a

FIG. 2

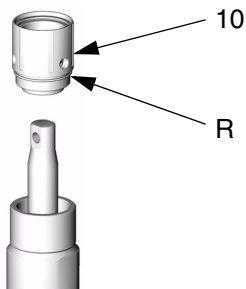
Installation

1. Place pump in vise with soft jaws. Remove brass packing nut assembly.



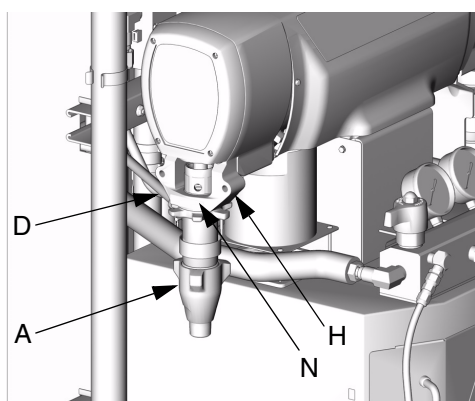
TI4093a

2. Install new wet-cup assembly (10). Screw it all the way down, so external o-ring (R) seats on top of pump housing. Wrap base of wet-cup with a rag and tighten securely with channel locks.



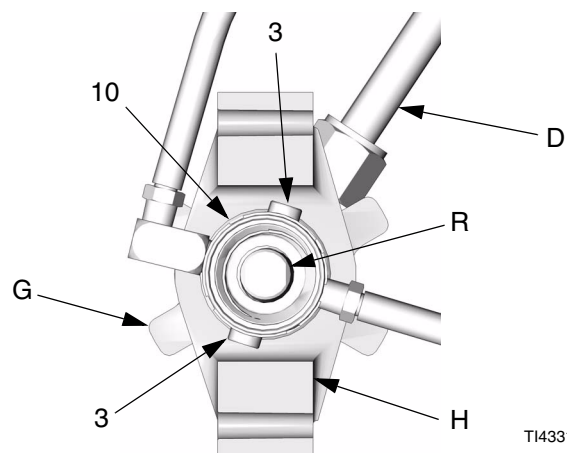
TI4094a

3. Screw pump (A) into bearing housing (H) until top threads are level with bearing face (N). Rotate pump to align pump outlet fitting to outlet tube (D).



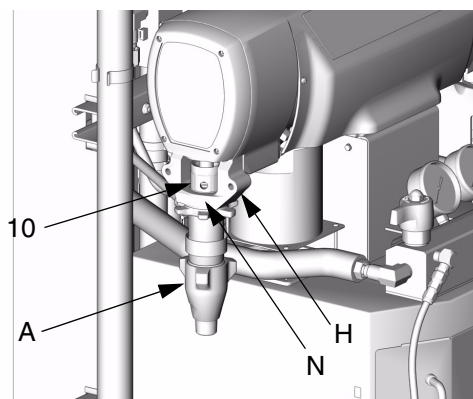
TI4171a

4. Wet-cup (10) has four 1/8 npt ports. Two will be obstructed by bearing housing (H) when pump is installed. Note or mark these ports. Remove pump. Apply thread sealant and install plugs (3) in the two obstructed ports. Torque plugs to 10-15 ft-lb (14-20 N•m). **Do not overtighten.**



TI4331a

5. Ensure star-shaped locknut (G) is screwed on pump with flat side up. Carefully twist and extend the rod (R) 2 in. (51 mm) above the wet-cup assembly (10).
6. Start threading pump (A) into bearing housing (H). Place finger guard (9) over rod when it is accessible through window of bearing housing (H). When pin holes align, insert pin. Pull retaining wire clip down.



TI4171a



Finger guard is not used on Model E-30.

7. Seat finger guard on wet-cup (10). Continue threading pump into bearing housing (H) until top threads are +/- 1/16 in. (2 mm) of bearing face (N).

8. Apply thread sealant and screw barbed fitting (2) into motor side of wet-cup (10). Torque to 10-15 ft-lb (14-20 N•m). **Do not overtighten.**
9. Apply thread sealant and screw elbow (8) into remaining wet-cup port. Torque to 10-15 ft-lb (14-20 N•m). **Do not overtighten.**
10. Apply thread sealant and screw barbed fitting (2) into elbow (8). Torque to 10-15 ft-lb (14-20 N•m). **Do not overtighten.**
11. Connect component A outlet tube (D) loosely at pump and at heater. Line up tube, then tighten fittings securely.
12. Tighten star-shaped locknut (G) by hitting firmly with a non-sparking hammer.
13. Position holder (4) on Reactor frame upright and secure with two spring clips (5).
14. Fill reservoir (1) 3/4 full with TSL (6). Place in holder (4).
15. Apply thin film of TSL to barbed fittings (2). Using two hands, support tubing (1a) while pushing it straight onto barbed fittings (2). **Do not let tubing kink or buckle.** Secure each tube with a wire tie (7) between two barbs.
16. Connect swivel elbow (C) to pump fluid inlet.
17. **Purge Air and Prime Flush Kit**, page 7.

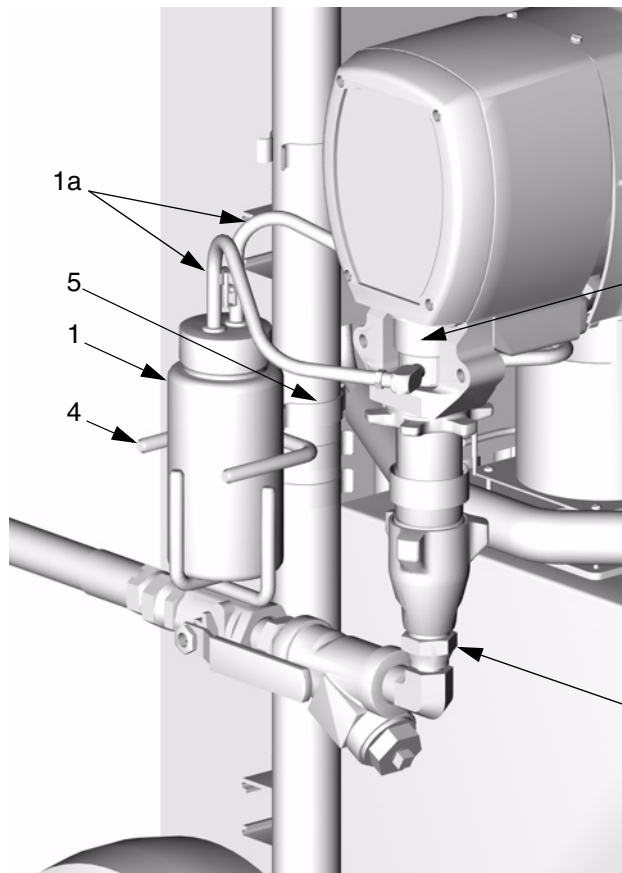
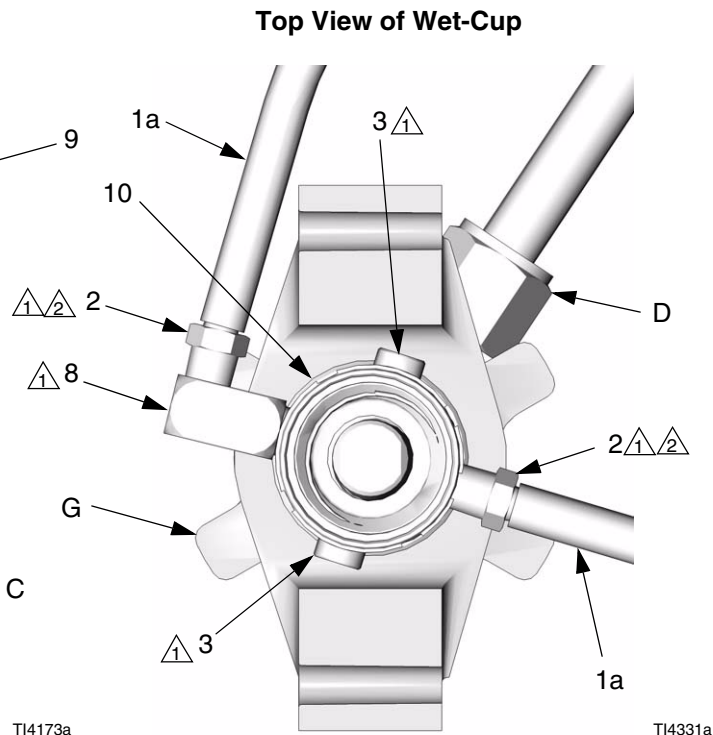


FIG. 3

⚠ 1 Torque to 10-15 ft-lb (14-20 N•m). Do not overtighten.

⚠ 2 Apply thin film of TSL to barbs.

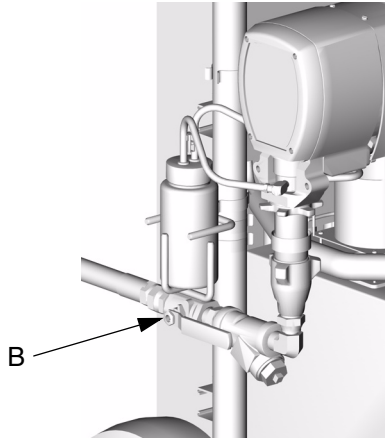


TI4173a

TI4331a

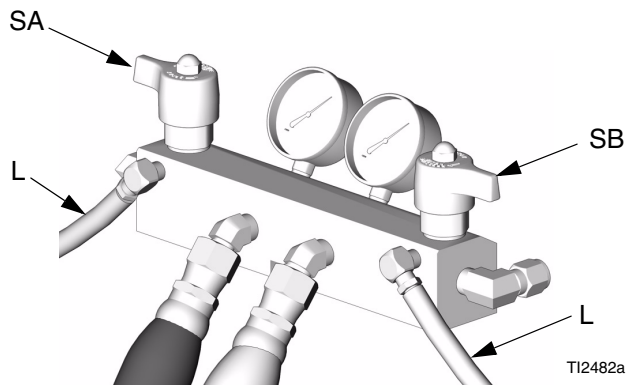
Purge Air and Prime Flush Kit

1. Open fluid inlet ball valves (B).



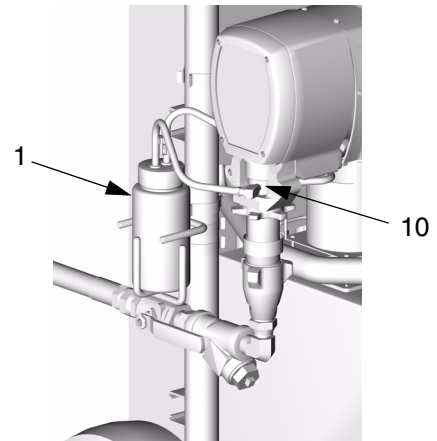
TI4173a

2. Turn on feed pumps.
3. Secure bleed lines (L) in grounded, sealed waste containers.
4. Slowly turn both PRESSURE RELIEF/SPRAY valves (SA, SB) to SPRAY.



TI2482a

5. Run motor in jog mode.
6. Each time pump A rod reaches bottom of stroke, check that some TSL is pumped from reservoir (1), through wet-cup (10), and back to reservoir.



TI4173a

7. When system is fully loaded, check that reservoir is 3/4 full of TSL. Be sure all air is purged from pumps, lines, and heaters through PRESSURE RELIEF/SPRAY valves (SA, SB). Trapped air can cause mix problems at gun.
8. Return Reactor to service.


Maintenance

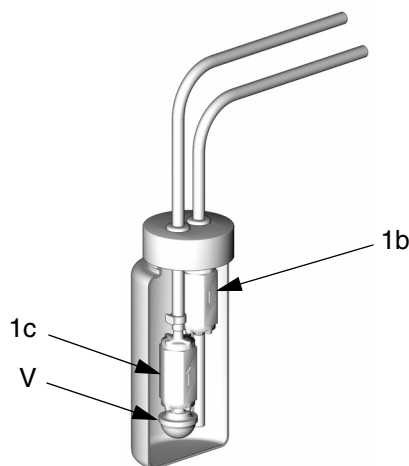
Changing the TSL

Part No. 206995 Throat Seal Liquid (TSL) carries isocyanate from the pump rod into the reservoir. After some time the TSL will thicken and darken, and must be replaced. Thick, dirty TSL will not pump through the lines and will harden in the pump wet-cup.

How long TSL lasts depends on which chemicals are used, how much is used, what pressure, and condition of the pump seal and rod. Check the condition of the TSL every week, minimum, and change when needed.

To change TSL:

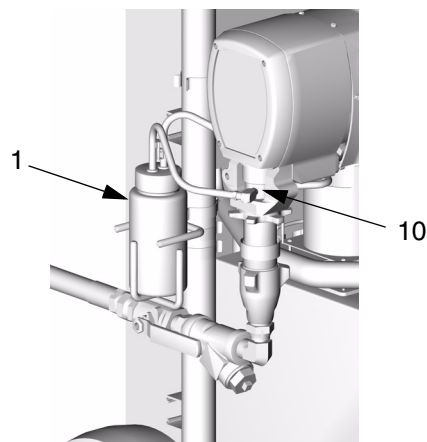
1. Turn main power OFF . Disconnect power supply.
2. Relieve pressure, see Reactor operation manual.
3. Remove reservoir cap. Empty reservoir (1). Clean any residue.
4. Clean screen (V) of inlet check valve (1c). If check valves are not sealing and dirty TSL is getting into the wet-cup, replace the check valves (1b, 1c).



TI4170a

5. Fill reservoir 3/4 full with TSL (6).

6. Run pump. Each time pump A rod reaches bottom of stroke, check that some TSL is pumped from reservoir (1), through wet-cup (10), and back to reservoir.



TI4173a

Converting to a New Component A (ISO) Pump

Part No. 246928 includes reservoir, tubing, and fittings necessary to modify the Reactor to use the wet-cup flush design. Order the pump separately, see below. Refer to displacement pump manual 309577 for further information.

Reactor Model	Order Pump No.
E-20, E-XP1	246830
E-XP2	246831
E-30	246832

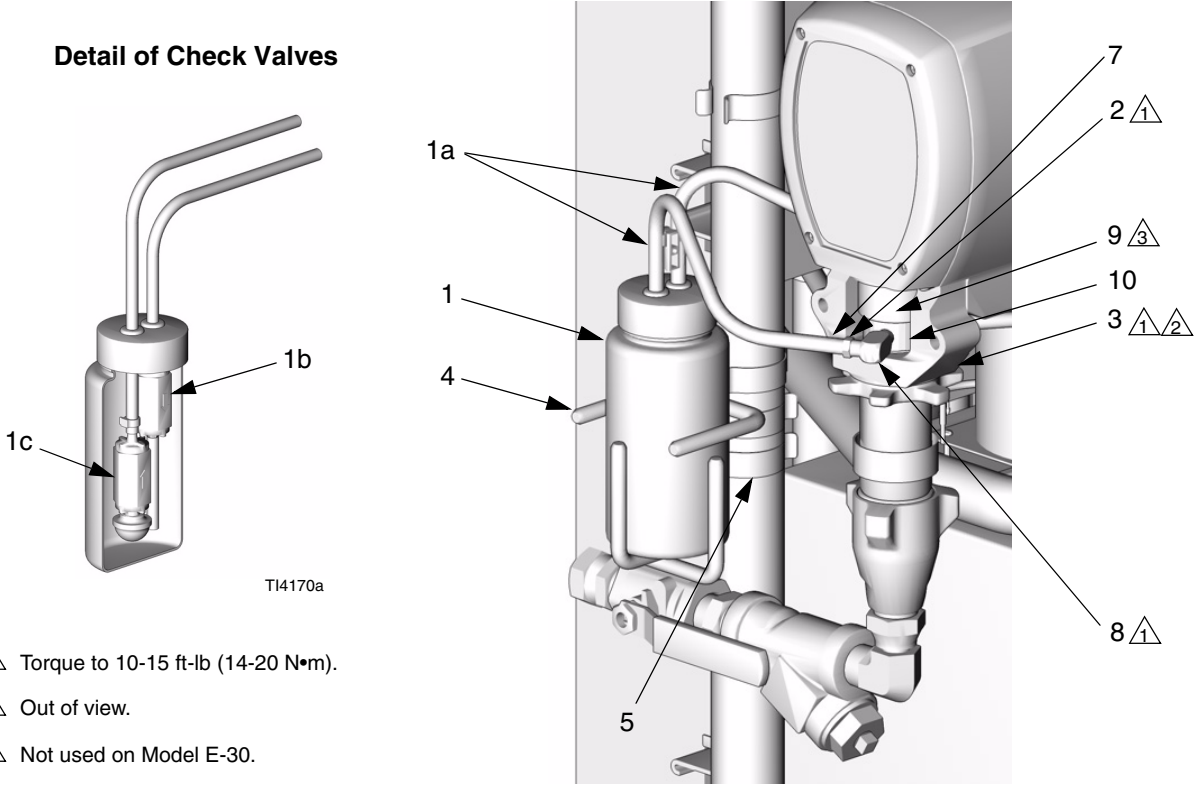
Parts


248061 Complete Kit, Models E-20 and E-XP1; includes items 1-10


248062 Complete Kit, Model E-XP2; includes items 1-10


248063 Complete Kit, Model E-XP2; includes items 1-8, 10

246928 Reservoir Kit, All Models; includes items 1-8



 Torque to 10-15 ft-lb (14-20 N•m).

 Out of view.

 Not used on Model E-30.

Ref. No.	Part No.	Description	Qty	Ref. No.	Part No.	Description	Qty
1	246995	ASSEMBLY, reservoir; includes 1a-1c	1	8	191892	ELBOW; 1/8 npt (m x f)	1
1a	054826	. TUBE; PTFE; 1/4 in. (6 mm) ID; 2 ft (0.6 m)	2	9	15C587	GUARD, finger; E-20 and E-XP1; used on Kit 248061	1
1b	118433	. VALVE, check, outlet	1		15C588	GUARD, finger; E-XP2; used on Kit 248062	1
1c	118432	. VALVE, check, inlet	1	10	246962	KIT, wet-cup conversion; E-20 and E-XP1; used in Kit 248061; see 309577 for parts	1
2	116746	FITTING, barbed	2		246963	KIT, wet-cup conversion; E-XP2; used in Kit 248062; see 309577 for parts	1
3	C19263	PLUG, pipe; 1/8 npt	2		246964	KIT, wet-cup conversion; E-30; used in Kit 248063; see 309577 for parts	1
4	15C568	HOLDER, reservoir	1				
5	186494	CLIP, spring	2				
6	206995	THROAT SEAL LIQUID; 1 qt (1 liter)	1				
7	103473	WIRE TIE	2				

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.

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 this number to identify the distributor closest to you:

1-800-367-4023 Toll Free

612-623-6921

612-378-3505 Fax

*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.*

Sales Office: Minneapolis

International Offices: Belgium, Korea, Hong Kong, Japan

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

www.graco.com

Printed in USA 309911B

12/2003