

Diesel Exhaust Fluid (DEF) System

3A1189G

EN

For pumping diesel exhaust fluid. Not approved for use in European explosive atmosphere locations. For professional use only.

50 psi (0.3 MPa, 3.4 bar) Maximum Fluid Working Pressure

50 psi (0.3 MPa, 3.4 bar) Maximum Air Input Pressure



Important Safety Instructions

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

Model No. 24F531

Wall mounted with meter

Model No. 24F878

Wall mounted without meter

Model No. 24F947

Drum mounted without meter

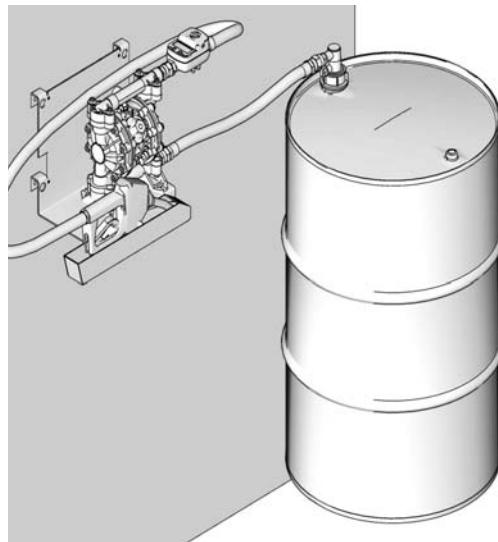
Model No. 24M499

Drum mounted with meter

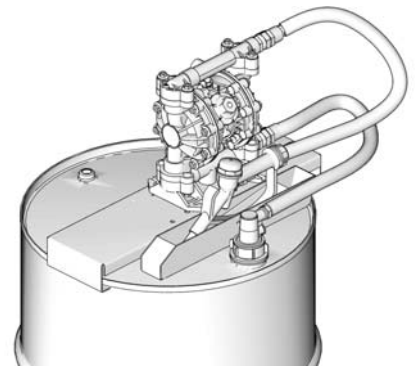
Related Manuals:

313048 Meter

308981 Husky Pump







Model 24F531



Model 24F947

Warnings

The following general warnings are for the setup, use, grounding, maintenance, and repair of this equipment. Additional, more specific warnings may be found throughout the body of this manual where applicable. *Symbols appearing in the body of the manual refer to these general warnings. When these symbols appear throughout the manual, refer back to these pages for a description of the specific hazard.*

 WARNING	
	<p>FIRE AND EXPLOSION HAZARD</p> <p>When flammable fluids are present in the work area, such as gasoline and windshield wiper fluid, be aware that flammable fumes can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> • Use equipment only in well ventilated area. • Eliminate all ignition sources, such as cigarettes and portable electric lamps. • Keep work area free of debris, including rags and spilled or open containers of solvent and gasoline. • Do not plug or unplug power cords or turn lights on or off when flammable fumes are present. • Ground all equipment in the work area. • Use only grounded hoses. • If there is static sparking or you feel a shock, stop operation immediately. Do not use equipment until you identify and correct the problem. • Keep a working fire extinguisher in the work area.
	<p>PRESSURIZED EQUIPMENT HAZARD</p> <p>Fluid from the gun/dispense valve, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.</p> <ul style="list-style-type: none"> • Follow the Pressure Relief Procedure when you stop spraying and before cleaning, checking, or servicing equipment. • Tighten all fluid connections before operating the equipment. • Check hoses, tubes, and couplings daily. Replace worn or damaged parts immediately.
	<p>TOXIC FLUID OR FUMES HAZARD</p> <p>Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.</p> <ul style="list-style-type: none"> • Read MSDSs to know the specific hazards of the fluids you are using. • Route exhaust away from work area. If diaphragm ruptures, fluid may be exhausted into the air. • Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.


WARNING
**EQUIPMENT MISUSE HAZARD**

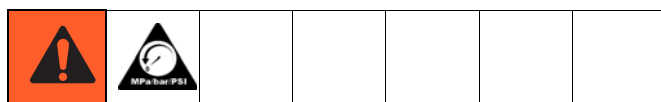
Misuse can cause death or serious injury.

- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See **Technical Data** in all equipment manuals.
- Use fluids and solvents that are compatible with equipment wetted parts. See **Technical Data** in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request MSDS from distributor or retailer.
- Do not leave the work area while equipment is energized or under pressure. Turn off all equipment and follow the **Pressure Relief Procedure** when equipment is not in use.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.
- Do not alter or modify equipment.
- Use equipment only for its intended purpose. Call your distributor for information.
- Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.
- Do not kink or over bend hoses or use hoses to pull equipment.
- Keep children and animals away from work area.
- Comply with all applicable safety regulations.

**PERSONAL PROTECTIVE EQUIPMENT**

You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and burns. This equipment includes but is not limited to:

- Protective eye wear, and hearing protection.
- Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer.

Pressure Relief Procedure

Follow this **Pressure Relief Procedure** whenever you:

- Are instructed to relieve pressure.
 - Stop dispensing.
 - Check, clean or service any system equipment.
 - Install or clean fluid nozzles.
1. Turn OFF air supply to pump (FIG. 1).
 2. Open the nozzle.
 3. Be sure you have a container ready to catch drainage.

Installation

Typical Installations

Model 24F531 - Wall Mounted, with Meter

Model 24F878 - Wall Mounted, no Meter

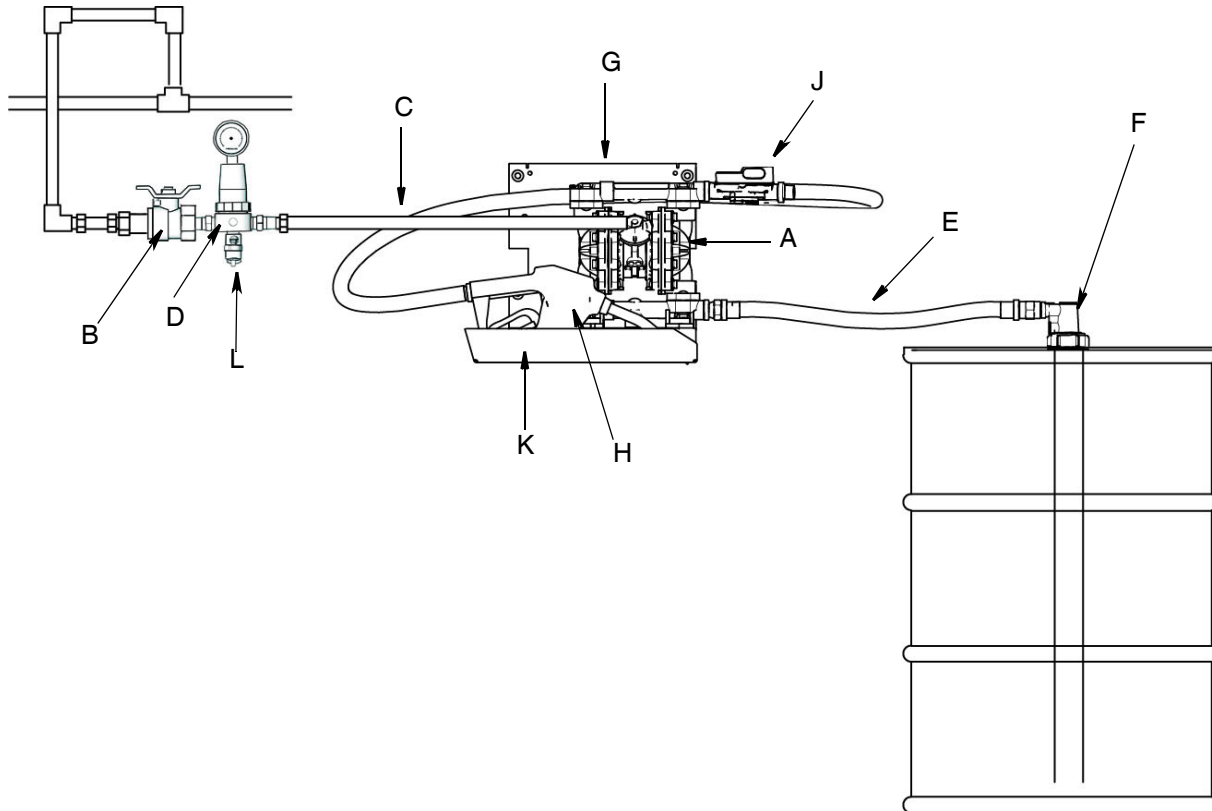


FIG. 1

Key

- A Pump
- B Bleed-type master air valve (required for pump)
- C Air supply line
- D Pump air regulator
- E Fluid supply hose
- F Suction kit
- G Wall mounting bracket
- H Fluid nozzle
- J Meter
- K Nozzle bracket and bath
- L Safety valve - set to 50 psi (3.4 bar, 0.34 MPa)

Model 24F947 - Drum Mounted without Meter
Model 24M499 - Drum Mounted with Meter

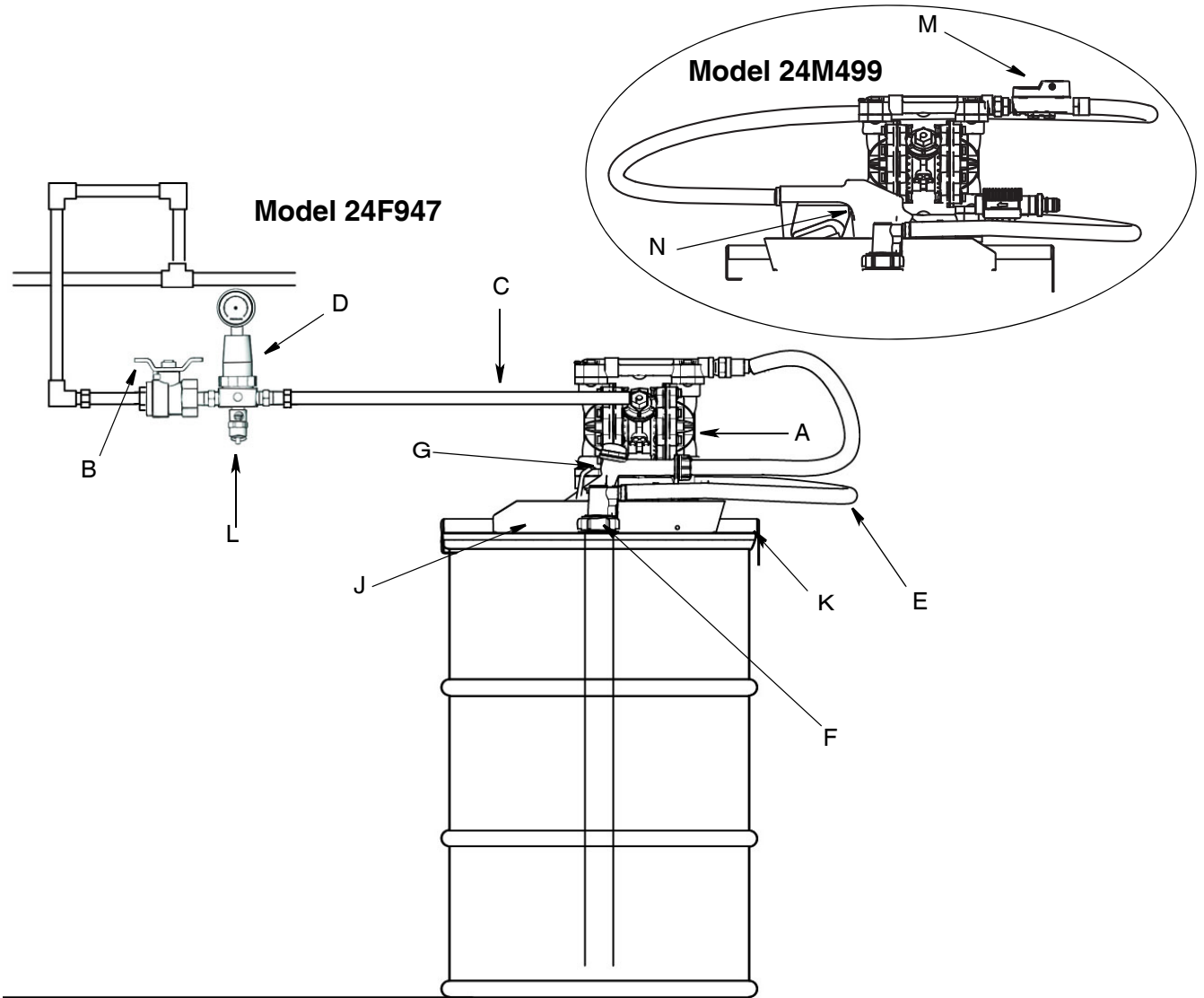


FIG. 2

Key

- | | |
|---|--|
| A Pump | G Fluid nozzle |
| B Bleed-type master air valve (required for pump) | J Nozzle tray and bath |
| C Air supply line | K Drum bracket |
| D Pump air regulator | L Safety valve - set to 50 psi (3.4 bar, 0.34 MPa) |
| E Fluid supply hose | M Meter |
| F Suction kit | N Fluid Nozzle |

General Installation Information

- The Typical Installation illustrations provided on pages 4 - 5 are only guidelines for installing system components. Contact your Graco distributor for assistance in planning a system to suit your needs.
- To ensure your system is compatible with fluids being pumped, always use genuine Graco replacement parts and accessories.
- Tighten all connections firmly to avoid air and/or fluid leaks.
- Storage tanks should be securely anchored to prevent shifting or tipping when empty or full.

NOTICE

To maintain the integrity and purity of the AUS32 (Aqueous Urea Solution 32.5%) and ensure proper operation of equipment:

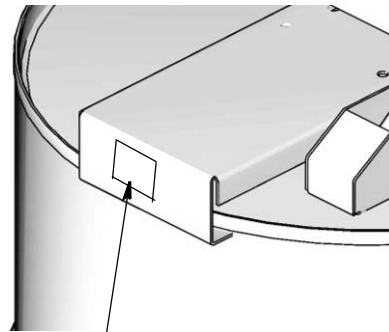
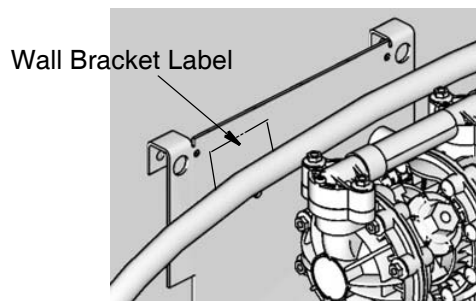
- Once the system is assembled it must remain sealed to insure the integrity of the fluid. Breaking the seal on the system can lead to fluid contamination.
- After dispensing DEF, drain all the fluid from the nozzle, making sure it is pointing downward when stored in the nozzle holder. DEF remaining in the nozzle tip and exposed to air will crystallize and can plug the nozzle.
- DO NOT lay the dispensing nozzle on the ground or on any surface that may contaminate the nozzle tip and compromise the purity of the DEF.

Identification Label for CE Mark

Locate the Diesel Exhaust Fluid (DEF) System identification label adhered to the mounting bracket.

Use a permanent marker or ink pen to write the installation date in the space provided and circle the Part Number for the model you ordered.

FIG. 3 is provided to assist you in finding the location of this label on the bracket and the Date Code field on the label.



Diesel Exhaust Fluid (DEF) System

Graco Inc. P.O. Box 1441 Minneapolis, MN 55413

Max. WPR 0.3 MPa (3.4 bar)(50 PSI)

Date Code ← **Installation Date**

Part Numbers:

24F531, Series A

24F878, Series A

24F947, Series A

24M499, Series A



P/N: 293850 rev. C

FIG. 3



Pump

For complete pump instructions refer to the pump instruction manual included with your system.

- If necessary, change the orientation of the fluid inlet and outlet ports on the pump. See pump instruction manual for this procedure.
- Retorque bolts per specifications.

Air Line

Alpha letters included in the following instructions refer to letters shown in Typical Installation examples (FIG. 1 - FIG. 2, pages 4 - 5).

						
<p>A bleed-type master air valve (B) is required in your system to relieve trapped air between the valve and the pump. Trapped air can cause the pump to cycle unexpectedly, which could result in serious injury from fluid splashing in the eyes or on skin, injury from moving parts or contamination from hazardous fluids.</p>						

Locate one bleed-type master air valve (B) close to the pump and use it to relieve trapped air (FIG. 4). For drum mounted installations only, also locate a second master air valve upstream from all air line accessories and use it to isolate them during cleaning and repair.

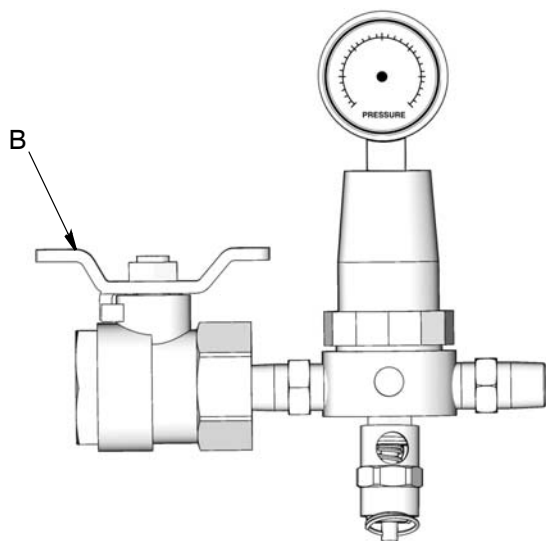


FIG. 4

1. Using the hardware provided install the air controls to the air inlet of the pump as shown in FIG. 4. Use a minimum 1/4 in. (6.3 mm) ID air hose.
2. Install an air line quick disconnect coupler onto the end of the air supply line (C) and screw the matting fitting into the pump air inlet snugly. Do not connect the coupler to the fitting yet.

Fluid Supply Hose

Numerals used in the following instructions refer to reference numbers used in the Parts Lists provided on pages 10 - 11.

1. Screw the fluid supply hose (9) fluid fitting into the pump inlet snugly. **Do not overtighten.**

NOTE: At the inlet, if the fluid pressure is greater than 15 psi (0.1 MPa, 1 bar) the diaphragm life will be shortened.

Fluid Suction Kit (6) - 24F532

Numerals used in the following instructions refer to reference numbers used in the Parts Lists provided on pages 10 - 11.

The DEF System includes a Fluid Suction Kit containing the following parts - Drum Coupler (6a), Drum Insert (6b) and Suction Line (6c).

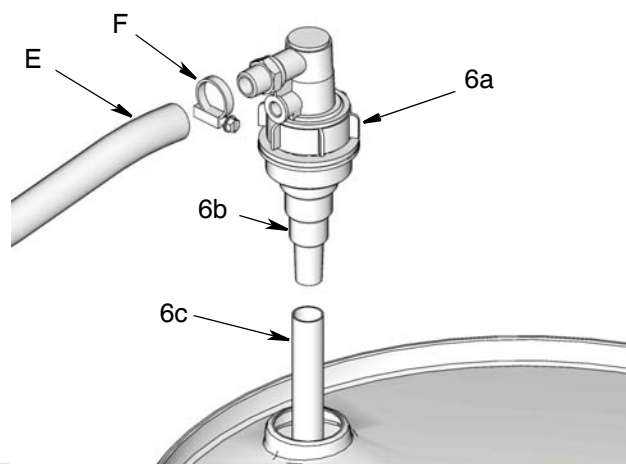


FIG. 5

NOTE: The suction line (6c) can be used with either a 55 gallon drum or larger totes.

- If using with a large tote: Do **NOT** trim the suction line.
- If using with a 55 gallon drum: **Trim** the suction line to 39 inches (991 mm). Remove all burrs.

The suction line is designed to allow for full evacuation of the container so it will bend slightly when installed.

1. Connect suction tube (6c) to drum insert (6b) to pump.
2. Insert suction line (6c) into drum.
3. Install drum coupler (6a) into drum insert (6b)
4. Connect hose (E) to pump fitting. Use a flat-blade screw driver to tighten hose clamp (F).
5. Connect the air supply line (C) to the air controls.

Nozzle (3) Installation: Models 24F878 and 24F947

Numerals used in the following instructions refer to reference numbers used in the Parts Lists provided on pages 10 - 11.

Wall Mount Model: 24F878

1. Install hose (9) into back of nozzle (3). Wrench tighten.
2. Install other end of hose (9) into pump outlet fitting.

Drum Mount Model: 24F947

1. Install clamp over end of fluid supply hose (9).
2. Push end of fluid supply hose (9) over end of nozzle (3) fitting.
3. Position clamp over fitting and hose end. Use a flat blade screw driver to tighten screw and secure clamp to the end of hose over barbed fitting.
4. Install other end of hose (9) into pump outlet fitting.

Meter (10) Installation: Models 24F531 and 24M499

Uses Meter Kit 24H293 that includes the following parts: -Meter (10a), Swivel (10b), Fitting (10c) and Seal (10d) and Fitting (10e).

1. Install hose (9) into back of nozzle (3). Wrench tighten.
2. Install pipe swivel fitting (10b) into pump outlet. Wrench tighten.
3. Install fitting (10c) into swivel (10b). Wrench tighten.

4. Install meter (10a) to fitting (10c). Wrench tighten.
5. Install fitting (10e) into meter. Wrench tighten.
6. Install hose (9) into fitting (10e).

Mounting Bracket (2) Installation

- When installing bracket, be sure the mounting surface can support the weight of the pump, hoses and all accessories, as well as the stress caused during operation.
- On all installations mount the pump using screws and nuts provided.
- Always keep nozzle bath tray filled with water.

Wall Mounting Kit 24F870 (2): Models 24F531 and 24F878 only

Wall mounted DEF System Models 24F531 and 24F878 include a Mounting Bracket Kit containing the following parts - Screws (2a), Screws (2b), Washers (2c), Plain Washers (2d), Hex Nuts (2e), Mounting Plate (2f), Nozzle Bath Holder (2g), Nozzle Holder Bracket (2h) and screws (2j). The Mounting Bracket and Nozzle Holder are also identified as items J and M on the Typical Installation Diagram provided on page 4.

1. Determine location to install mounting plate (2f).
2. Use holes the plate (2f) as a template. Mark mounting hole locations. Use a drill to predrill mounting holes in mounting surface.
3. Use screws (2a) (provided) to install plate (2f).
4. Align holes in nozzle holder bracket (2h) with holes in plate (2f). Use screws (2b), nuts (2e) and washers (2d)(provided) to install meter tray plate.
5. Place nozzle bath (2g) in nozzle holder bracket (2h). Fill bath with water. Keep meter bath filled with water at all times.

Drum Mounting Bracket (2): Model 24F947 or 24M499

Drum mounted DEF System Models 24F947 or 24M499 include a Mounting Bracket Kit containing the following parts - Screws (2a), Screws (2b), Washers (2d), Hex Nuts (2e), Mounting Plate (2f), Nozzle Bath Holder (2g), Nozzle Holder Bracket (2h) and screws (2j). The Mounting Bracket and Nozzle Holder are also identified as item M on the Typical Installation Diagram provided on page 5.

1. Assemble pump to bracket.
2. Position drum mounting plate (2f) on top of drum.
3. Use screws (2b), nuts (2e) and washers (2d) (provided) to install mounting plate to pump.
4. Align holes in nozzle holder bracket (2h) with holes in plate (2f). Use screws (2b), nuts (2e) and washers (2d)(provided) to install meter tray plate.
5. Place nozzle bath tray (2g) in nozzle holder bracket (2h). Fill bath with water. Keep nozzle bath tray filled with water at all times.

Flushing

After initial assembly and installation, flush the entire dispensing system by pumping 5-10 gallons of DEF through it. This purges the system of air and insures any impurities that may have been in the system are washed out.

Dispose of the DEF used to flush the system using approved DEF handling procedures. Do not return the fluid to the drum or tote or use it in a vehicle.

Operation

Alpha letters included in the following instructions refer to letters shown in Typical Installation examples (FIG. 1 - FIG. 2, pages 4 - 5).

Priming

1. Hold dispensing nozzle (G) open while at the same time slowly opening the pump air regulator (D) until the pump (A) starts to cycle.
2. Allow the pump to cycle slowly until all the air has been pushed out of the lines and the pump is primed.
3. If the pump doesn't prime crack the pump outlet fitting and slowly run the pump until you see fluid filling the pump.
4. Then tighten the connection.

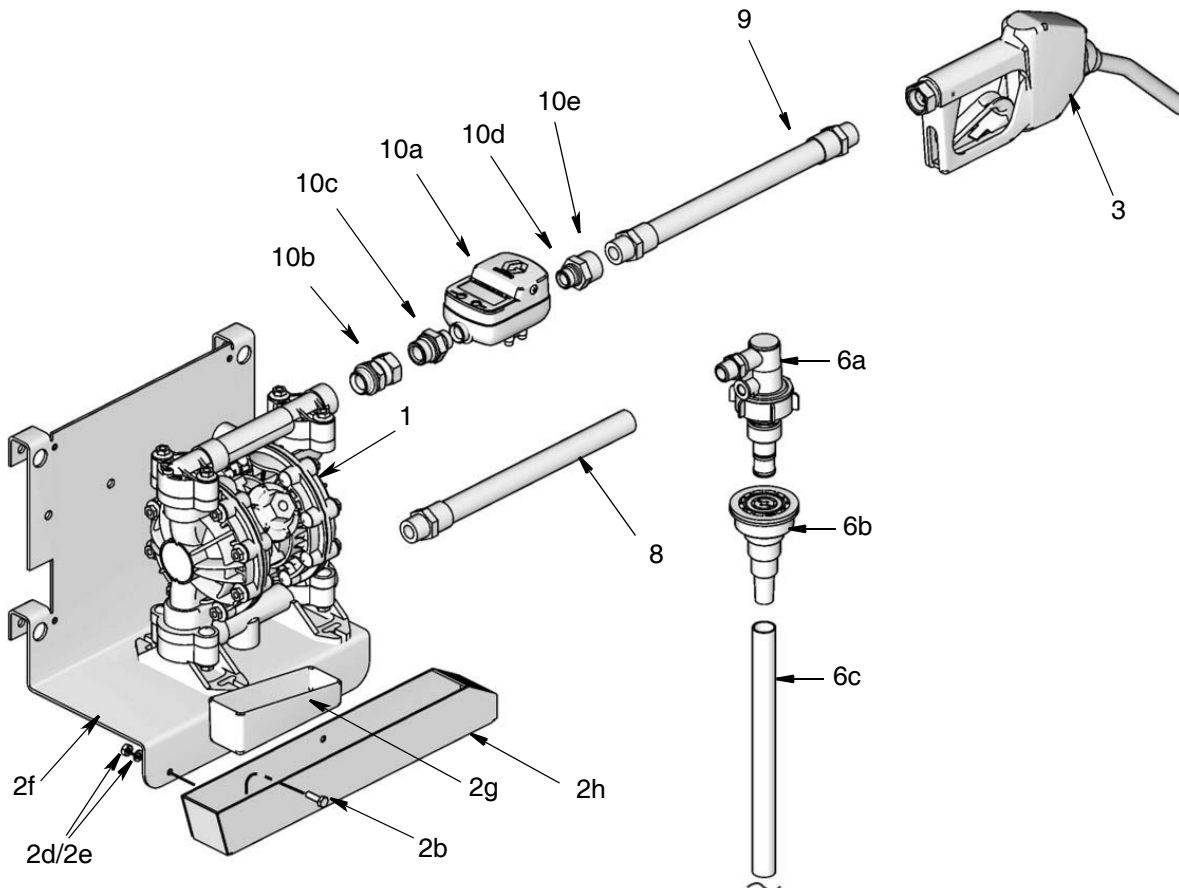
NOTICE
<p>To maintain the integrity and purity of the AUS32 (Aqueous Urea Solution 32.5%) and ensure proper operation of equipment:</p> <ul style="list-style-type: none"> • Once the system is assembled it must remain sealed to insure the integrity of the fluid. Breaking the seal on the system can lead to fluid contamination. • After dispensing DEF, drain all the fluid from the nozzle, making sure it is pointing downward when stored in the nozzle holder. DEF remaining in the nozzle tip and exposed to air will crystallize and can plug the nozzle. • DO NOT lay the dispensing nozzle on the ground or on any surface that may contaminate the nozzle tip and compromise the purity of the DEF.

Parts

Wall Mounted with Meter: Model 24F531
Wall Mounted without Meter: Model 24F878

Ref	Part No.	Description	Qty	Ref	Part No.	Description	Qty
1	24G745	PUMP, diaphragm, 515, plastic, bsp	1	8	124581	HOSE, cpld, 6', 3/4bspp x cut	1
2	24F870	KIT, pump bracket, 3 in 1 (See Kits, page 12)	1	9	124603	HOSE, 20', 3/4 bspp x 3/4 bspp	1
3	24F529	NOZZLE, w/swivel (model 24F878)	1	10	24H293	KIT, meter, auto nozzle (model 24F531 only)	1
4	110147	REGULATOR, air, 1/4"npt & gauge (not shown)	1	10a	24G738	METER, flow	1
5	110223	VALVE, vented 2 way (not shown)	1	10b†	124964	SWIVEL, pipe, 3/4 x 3/4 bspp	1
6	24F532	KIT, suction	1	10c†	24H292	FITTING, nipple, 3/4 x 1/2 bspp	1
6a†	124548	COUPLER, quick connect	1	10d†	124965	SEAL, elastomeric, 1/2 bspp	1
6b†	124549	INSERT	1	10e†	16G760	FITTING, adapter, 3/4 (f) x 1/2 (m) bspp	1
6c†	124550	TUBE, down, 47 inch (119.4 cm)	1	11	103927	CLAMP, hose (not shown)	2
7	156971	FITTING, nipple, short (not shown)	2	12	124963	VALVE, safety, air, 50 psi, 1/8 npt (not shown)	1

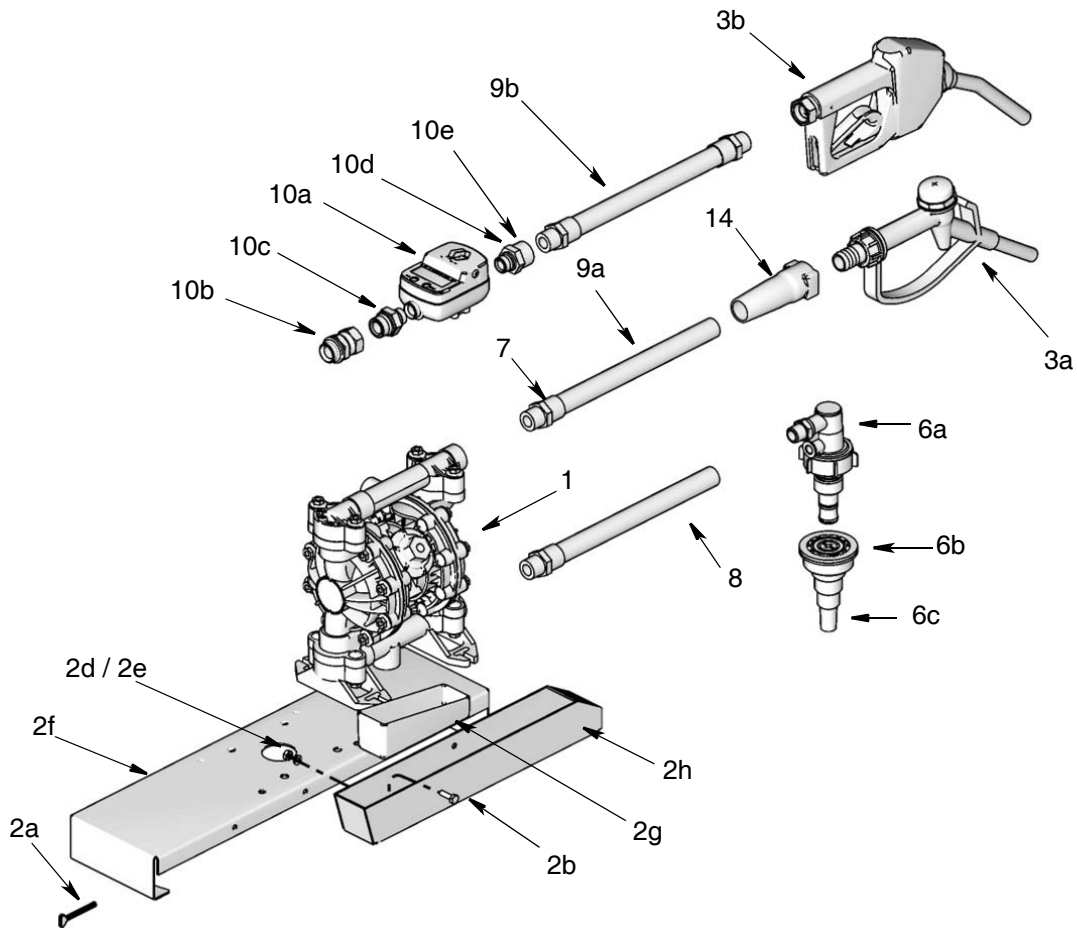
† Parts are included in kit or may be purchased separately.



Drum Mounted without Meter: Model 24F947
Drum Mounted with Meter: Model 24M499

Ref	Part No.	Description	Qty	Ref	Part No.	Description	Qty
1	24G745	PUMP, diaphragm, 515, plastic, bsp	1	10	24H293	KIT, meter, auto nozzle (model 24M499 only)	1
2	24F679	KIT, pump bracket, drum mount (See Kits, page 12)	1	10a	24G738	METER, flow	1
3a	125078	NOZZLE, manual (model 24F947)	1	10b†	124964	SWIVEL, pipe, 3/4 x 3/4 bspp	1
3b	24F529	NOZZLE, w/swivel (model 24F499)	1	10c†	24H292	FITTING, nipple, 3/4 x 1/2 bspp	1
4	110147	REGULATOR, air, 1/4" npt & gauge (not shown)	1	10d†	124965	SEAL, elastomeric, 1/2 bspp	1
5	110223	VALVE, vented 2 way (not shown)	1	10e†	16G760	FITTING, adapter, 3/4 (f) x 1/2 (m) bspp	1
6	24F532	KIT, suction (See Kits, page 12)	1	11	103927	CLAMP, hose (not shown)	2
6a†	124548	COUPLER, quick connect	1	12	124963	VALVE, safety, air, 50 psi, 1/8 npt (not shown)	1
6b†	124549	INSERT	1	14	15T366	BOOT, swivel 3/4 black	1
6c†	124550	TUBE, down	1				
8	124875	HOSE, 2', 3/4 bsp x cut, inlet	1				
9a	125079	HOSE, 12", 3/4 bspp x cut end (model 24F947)	1				
9b	124671	HOSE, 12', 3/4 bspp x 3/4 bspp (model 24M499)	1				

† Parts are included in kit or may be purchased separately.



Bracket (2) Kits

2 - Bracket 24F870: Models 24F531 / 24F878

2a	SCREW, cap, hex head (not shown)	4
2b	SCREW, cap, hex head	4
2c	WASHER (not shown)	4
2d	WASHER, plain	14
2e	NUT, hex	7
2f	PLATE, pump mount	1
2g	HOLDER, nozzle bath	1
2h	BRACKET, nozzle holder	1
2j	SCREW, HH, 1/4 x 20 x 0.75" (not shown)	3

2 - Bracket 24F679: Model 24F947 / 24M499

2a	SCREW, cap, hex head	4
2b	SCREW, thumb, 1/4-20 x 2"	2
2d	WASHER, plain	12
2e	NUT, hex	6
2f	PLATE, pump mount	1
2g	HOLDER, nozzle bath	1
2h	BRACKET, nozzle holder	1
2j	SCREW, HH, 1/4 x 20 x 0.75" (not shown)	2

Technical Data

Pump	US	Metric
Maximum fluid working pressure	50 psi	0.3 MPA, 3.4 bar
Air pressure operating range	30 to 50 psi	0.2 to 0.3 MPA, 2.1 to 3.4 bar
Operating temperature <i>(based on mechanical stress only and may be altered significantly by pumping certain chemicals. Consult engineering guides for chemical compatibilities and temperature limits or contact your Graco distributor.)</i>		
Minimum	40°F	4.4°C
Maximum	88°F	31.0°C
Maximum air consumption	28 scfm	0.672 cubic meters/min.
Maximum free flow delivery	6.5 gpm	25 lpm
Maximum pump speed	163 cpm	
Gallons (Liters) per cycle	0.04 gallons	0.15 liters
Sound power level (measured per ISO standard 9614-2)		
At 70 psig (0.48 MPa, 4.8 bar) at 50 cycles per minute	77 dBa	
At 100 psig (0.7 MPa, 4 bar) at maximum cycles per minute	95 dBa	
Sound pressure level (measured 1 meter from pump)		
At 70 psig (0.48 MPa, 4.8 bar) at 50 cycles per minute	67 dBa	
At 100 psig (0.7 MPa, 4 bar) at maximum cycles per minute	85 dBa	
Air inlet size	1/4 npt(f)	
Air exhaust port size	3/8 npt(f)	
Fluid inlet size	1/2 and 3/4 in. bspp (f)	
Fluid outlet size	1/2 and 3/4 in. bspp (f)	
Wetted parts (in addition to ball, seat and diaphragm materials)	polypropylene, PTFE, fluoroelastomer, SST	
Pump Weight (approximate)	6.5 lbs	2.9 kg
System Weight (approximate)	35 lbs	15.8 kg

Meter	US	Metric
Flow range	0.5 to 15 gpm	1.9 to 57 lpm
Maximum working pressure	50 psi	0.3 MPa, 3.4 bar
Minimum working pressure	5 psi	34 MPa, 0.3 bar
Weight	1.8 lb	0.82 kg
Unit of measurement (<i>Display shows quantity in 0.01 increments up to 999.99 gallons, quarts, pints or liters. Totalizes in gallons or liters up to 99,999 units.</i>)	Factory-set in quarts	
Accuracy (<i>At 2.5 gpm (9.5 lpm) at 70°F (21°C), with water and 1 gallon dispensed. May require calibration; out-of-box accuracy is +/- 5%</i>)	+/- 2.5% after calibration	
Repeatability (<i>At 2.5 gpm (9.5 lpm), at 70°F (21°C), with water and 1 gallon dispensed.</i>)	+/- 0.15%	
Inlet and outlet	1/2 bspp	
Operating temperature range	-4°F to 122°F	-25°C to 50°C
Storage temperature range	-13°F to 122°F	-25°C to 50°C
Wetted parts	SST, nickel, fluoroelastomer	
Batteries (<i>Recommended batteries: Duracell®, Energizer®, Eveready®, EN22®</i>)	2 AA Alkaline	

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Eveready® and Energizer® are registered trademarks of Eveready Battery Co., Inc.

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 to identify the nearest distributor.

Phone: 612-623-6928 **or Toll Free:** 1-800-533-9655, **Fax:** 612-378-3590

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Original instructions. This manual contains English. MM3A1189
For patent information, see www.graco.com/patents.

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