Instructions

T2
2:1 Ratio Transfer Pump

311882R
EN

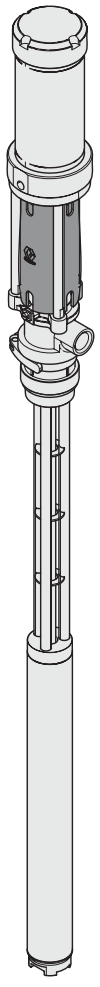
For use with polyurethane foam, polyurea, and similar non-flammable materials. For professional use only.

Not for use in explosive atmospheres.

Model 295616 (55-gallon drum)

180 psi (1.2 MPa, 12 bar) Maximum Air Working Pressure
405 psi (2.7 MPa, 27 bar) Maximum Fluid Working Pressure

Important Safety Instructions
Read all warnings and instructions in this manual. Save these instructions.



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PROVEN QUALITY. LEADING TECHNOLOGY.

Contents

Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbol refers to procedure-specific risk. Refer back to these warnings. Additional, product-specific warnings may be found throughout the body of this manual where applicable.

⚠ WARNING

TOXIC FLUID OR FUMES HAZARD

Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.

- Read MSDS's to know the specific hazards of the fluids you are using.
- Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.
- Always wear impervious gloves when spraying or cleaning equipment.

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, inhalation of toxic fumes, burns, and hearing loss. This equipment includes but is not limited to:

- Protective eyewear
- Clothing and respirator as recommended by the fluid and solvent manufacturer
- Gloves
- Hearing protection

⚠ 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 forms from distributor or retailer.
- 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.

PRESSURIZED EQUIPMENT HAZARD

Fluid from the gun/dispense valve, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.

- Follow **Pressure Relief Procedure** in this manual, 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.

MOVING PARTS HAZARD

Moving parts can pinch or amputate fingers and other body parts.

- Keep clear of moving parts.
- Do not operate equipment with protective guards or covers removed.
- Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the **Pressure Relief Procedure** in this manual. Disconnect power or air supply.

Moisture Sensitivity of Isocyanates

Isocyanates (ISO) are catalysts used in two component foam and polyurea coatings. ISO will react with moisture (such as humidity) to form small, hard, abrasive crystals, which become suspended in the fluid. Eventually a film will form on the surface and the ISO will begin to gel, increasing in viscosity. If used, this partially cured ISO will reduce performance and the life of all wetted parts.

The amount of film formation and rate of crystallization varies depending on the blend of ISO, the humidity, and the temperature.

To prevent exposing ISO to moisture:

- Always use a sealed container with a desiccant dryer in the vent, or a nitrogen atmosphere. **Never** store ISO in an open container.
- Use moisture-proof hoses specifically designed for ISO, such as those supplied with your system.
- Never use reclaimed solvents, which may contain moisture. Always keep solvent containers closed when not in use.
- Never use solvent on one side if it has been contaminated from the other side.
- Always lubricate threaded parts with Part 217374 ISO pump oil or grease when reassembling.

Isocyanate Hazard

Read material manufacturer's warnings and material MSDS to know the specific hazards of isocyanates. Use equipment in a well-ventilated area. Wear respirator, gloves, and protective clothing when using isocyanates.

Foam Self-Ignition

Some materials may become self-igniting if applied too thick. Read material manufacturer's warnings and material MSDS.

Keep Components A and B Separate

CAUTION
To prevent cross-contamination of the equipment's wetted parts, **never** interchange component A and component B.

Changing Materials

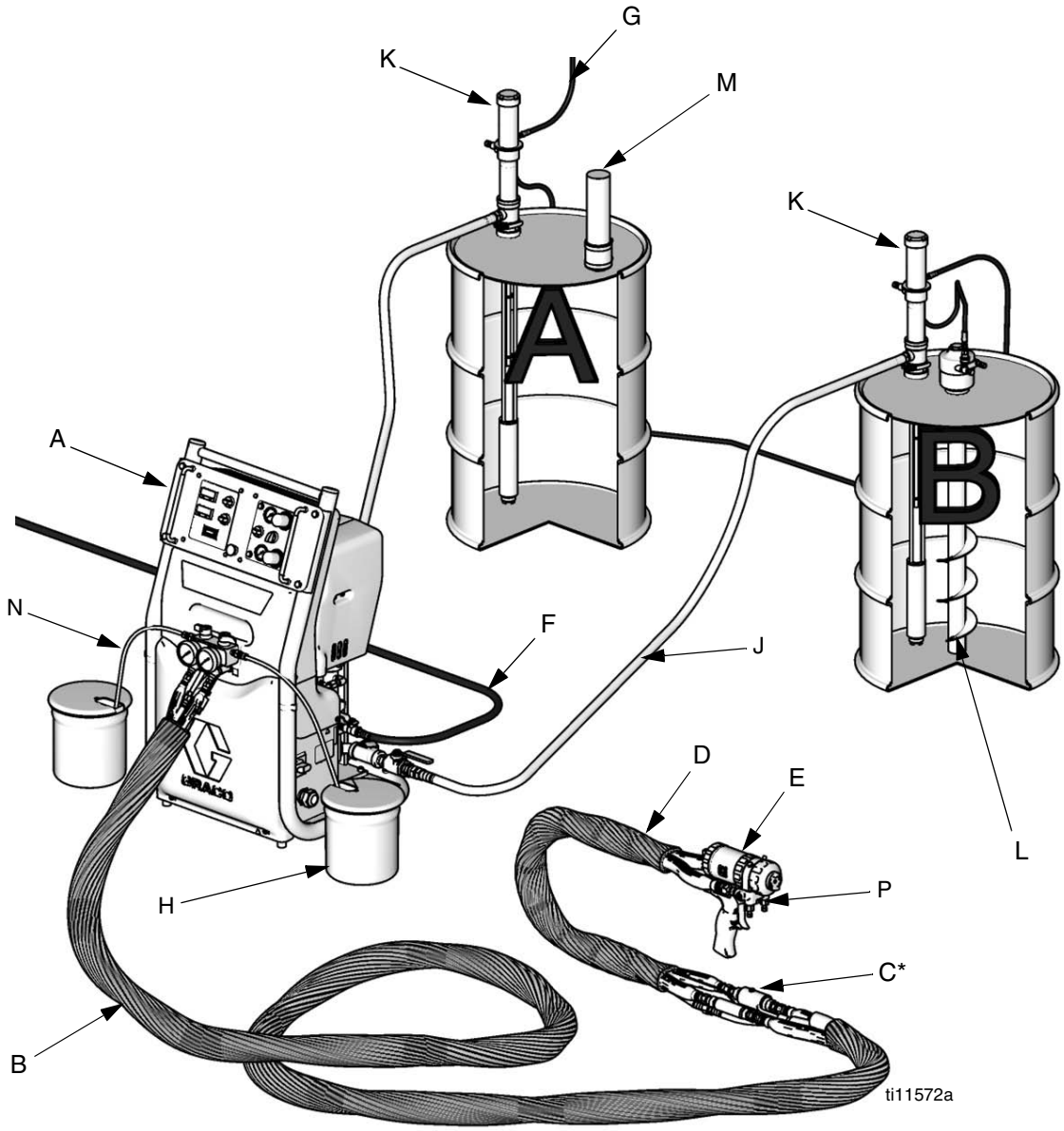
- When changing materials, flush the equipment multiple times to ensure it is thoroughly clean.
- Check with your material manufacturer for chemical compatibility.
- Some materials use catalyst on the A side, but some applications may use catalyst on the B side.
- Epoxies often have amines on the B (catalyst) side. Polyurethanes often have amines on the B (resin) side.

Typical Installation

Typical Installation, without Circulation

Key for FIG. 1

A Reactor Proportioner
B Heated Hose
C Fluid Temperature Sensor (FTS)
D Heated Whip Hose
E Fusion Spray Gun
F Proportioner and Gun Air Supply Hose
G Feed Pump Air Supply Lines (3/8 in. (76 mm) ID min.
H Waste Containers
J Fluid Supply Lines (217382)
K Feed Pumps
L Agitator
M Desiccant Dryer
N Bleed Lines/Over Pressure Relief
P Gun Fluid Manifold



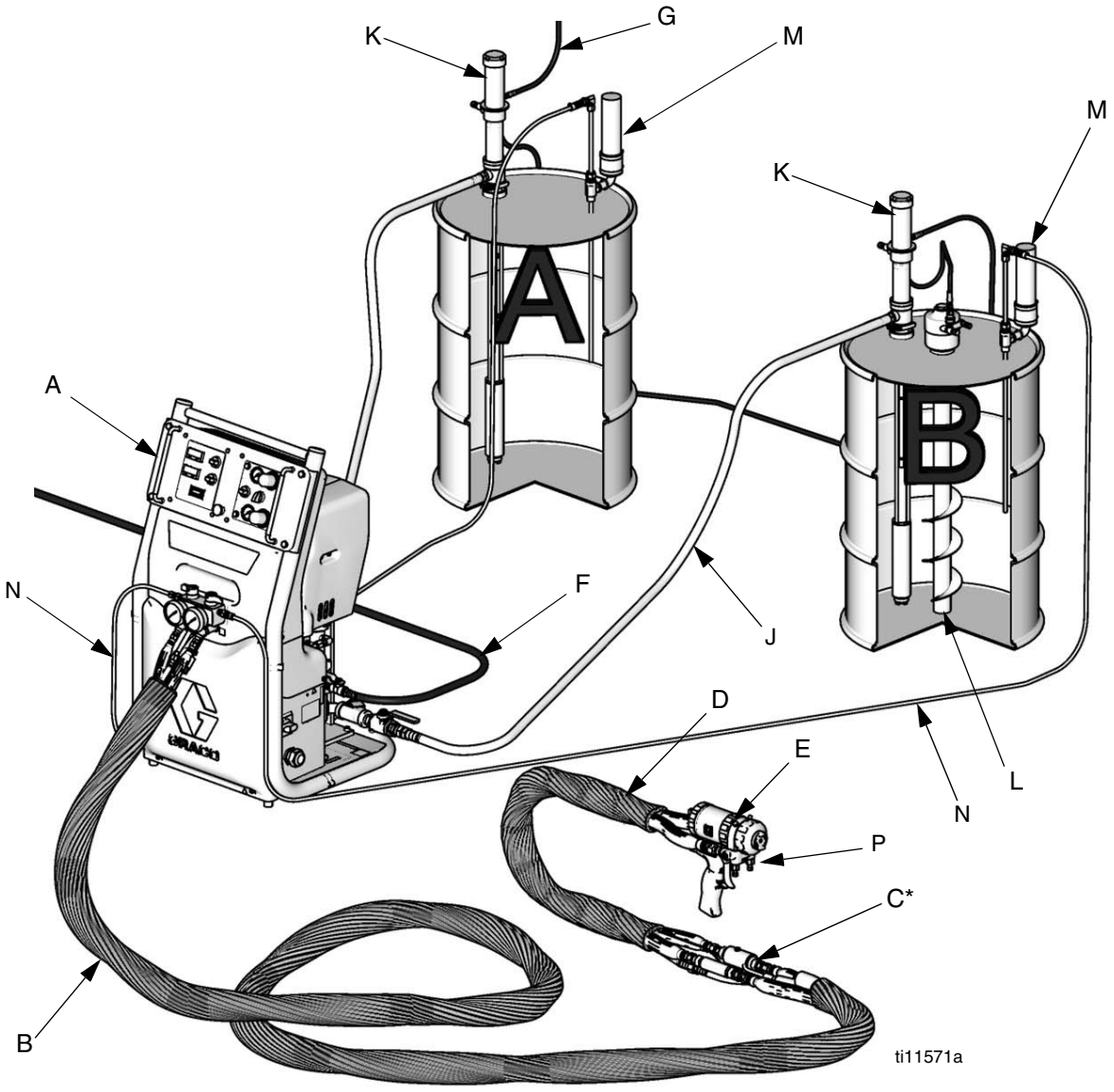
* Shown exposed for clarity. Wrap with tape during operation.

FIG. 1: Typical Installation, without Circulation

Typical Installation, with Circulation

Key for FIG. 2

A Reactor Proportioner
B Heated Hose
C Fluid Temperature Sensor (FTS)
D Heated Whip Hose
E Fusion Spray Gun
F Proportioner and Gun Air Supply Hose
G Feed Pump Air Supply Lines (3/8 in. (76 mm) ID min)
J Fluid Supply Lines
K Feed Pumps
L Agitator
M Desiccant Dryer
N Recirculation/Over Pressure Relief Return Hoses
P Gun Fluid Manifold



* Shown exposed for clarity. Wrap with tape during operation.

FIG. 2: Typical Installation, with Circulation

Typical Installation for Lubrication Applications

Key for FIG. 3

A Pump Air Regulator
B Air Line Lubricator
C Air Line Filter
D Bleed-Type Master Air Valve (required, for pump)
E Fluid Drain Valve (required)
F Bung Adapter
G Grounded Air Hose
H Grounded Fluid Hose
J Pump Fluid Inlet
K 1/4 npt(f) Pump Air Inlet
L 3/4 npt(f) Pump Fluid Outlet

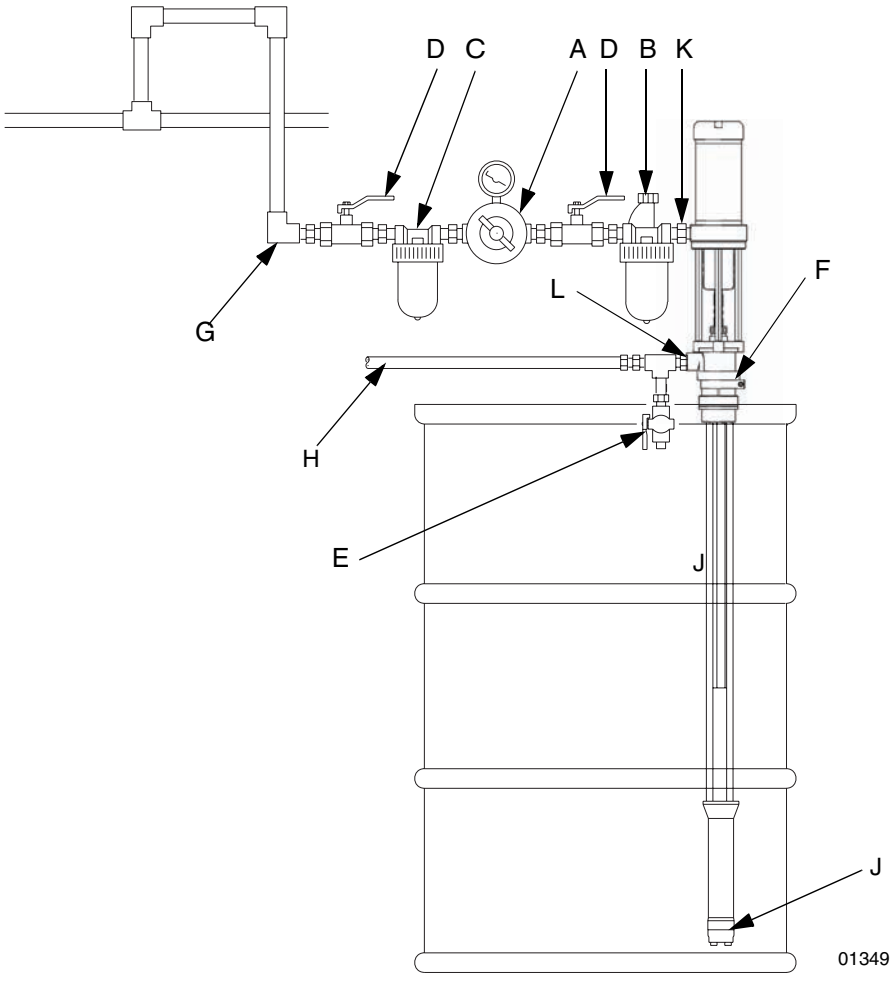


FIG. 3: Typical Installation for Lubrication Applications

Installation

A bleed-type master air valve (D) and a fluid drain valve (E) are required in your system, to help reduce the risk of serious injury, including splashing fluid in the eyes or on the skin, and injury from moving parts when you are adjusting or repairing the pump.

The bleed-type master air valve (D) relieves air trapped between this valve and the pump after the pump is shut off. Trapped air can cause the pump to cycle unexpectedly and result in serious injury, including amputation. Install the valve close to the pump.

The fluid drain valve (E) helps relieve pressure in the displacement pump, hose, and dispensing valve when shutting off the pump. Actuating the dispensing valve to relieve pressure may not be sufficient, especially if there is a clog in the hose or the dispensing valve.

System Accessories

To ensure maximum pump performance, be sure that all accessories used are properly sized to meet your system's requirements. See **Accessories**, page 22.

Air Line Accessories

Install the following accessories in the order shown in the **Typical Installation for Lubrication Applications**, using adapters as necessary:

An air line lubricator (B) provides automatic air motor lubrication.

A bleed-type master air valve (D) is required in your system to relieve air trapped between it and the air motor when the valve is closed (see the WARNING on left). Be sure the bleed valve is easily accessible from the pump, and is located downstream from the air regulator.

An air line filter (C) to remove harmful dirt and moisture from the compressed air supply.

A second bleed-type air valve (D) isolates the air line accessories for servicing. Locate upstream from all other air line accessories.

Fluid Line Accessories

A fluid drain valve (E) is required in your system to relieve fluid pressure in the hose and gun (see the WARNING on left). Install the drain valve so that it points down and the handle points up when the valve is opened.

Setup

1. Apply thread sealant to the male threads of the air needle valve (48) and the quick disconnect fitting (49) and install. See FIG. 4

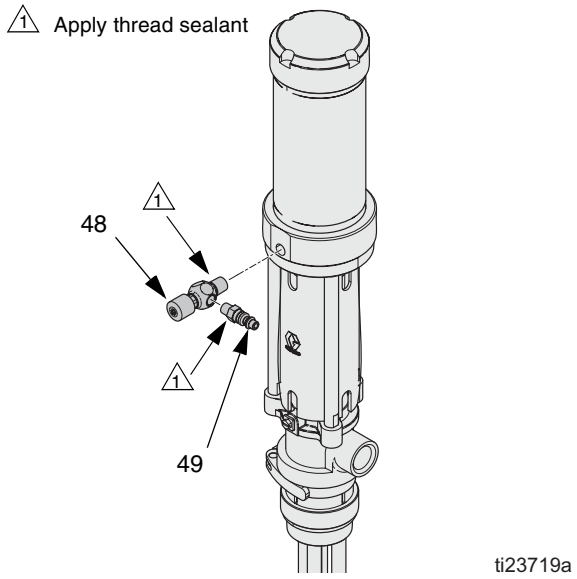


FIG. 4

2. Apply thread sealant to the male outlet fitting (not supplied) and insert into the outlet port. See FIG. 5.

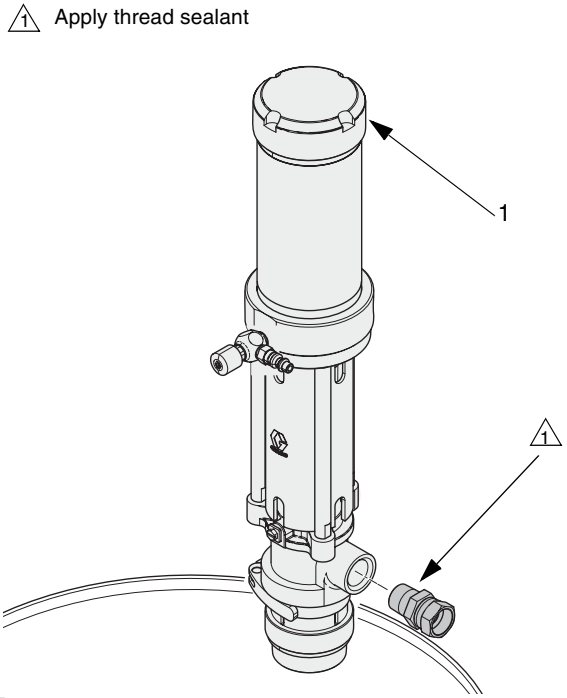


FIG. 5

3. Use labels (70) provided to identify the appropriate pump for your material. See FIG. 5.

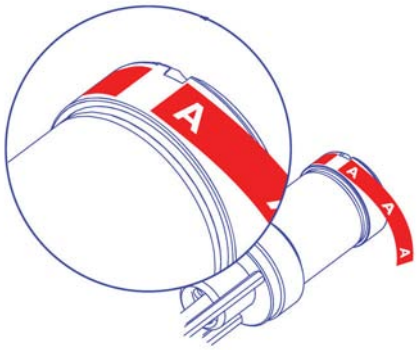


FIG. 6

4. Lubricate the bung adapter inside diameter and mounting threads. Ensure the gasket is in place and screw the bung adapter (51) securely into the bung-hole of the drum. Insert the pump through the adapter and lock it in place. See FIG. 7.

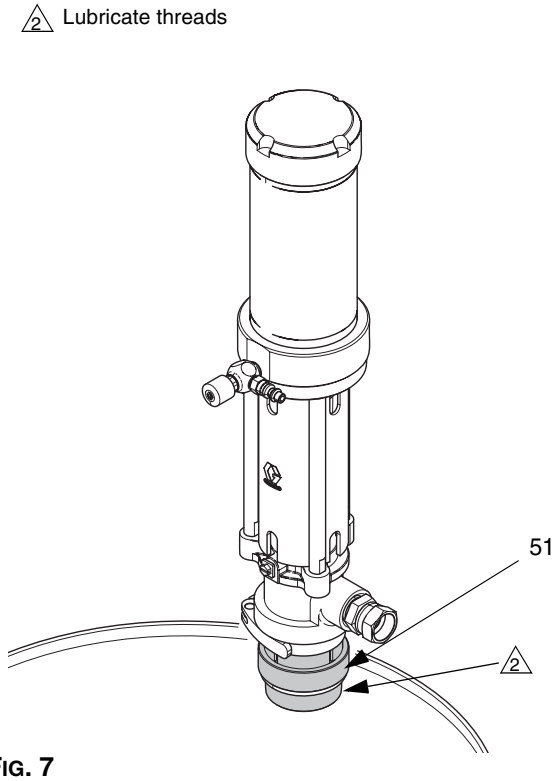


FIG. 7

5. Install air line (3/8 in. (76 mm) ID minimum) with quick disconnect air coupler (52) provided. See FIG. 8.

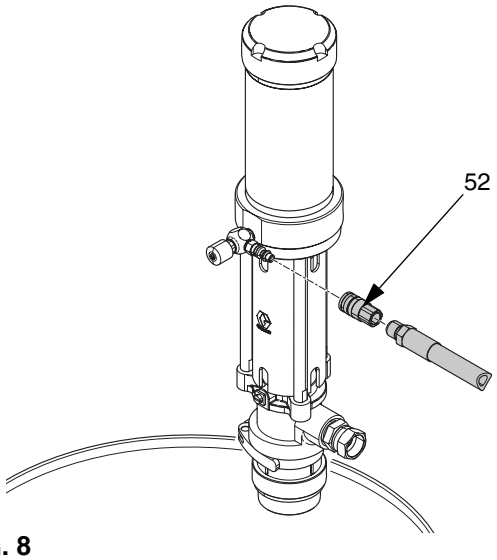
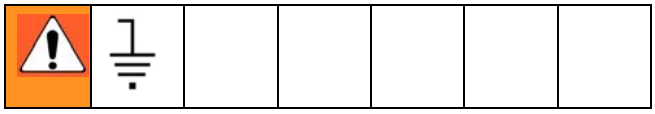


FIG. 8

Grounding the System



To reduce the risk of static sparking, ground the pump and all other equipment used or located in the pumping area. Check your local electrical code for detailed grounding instructions for your area and type of equipment. ***Ground all of this equipment.***

1. *Pump*: Connect Ground Wire (Y) to grounding screw (72) and tighten the screw securely. See FIG. 9. Connect the other end of the wire to a true earth ground. Make certain to comply with all National, State, and Local Electrical Codes.

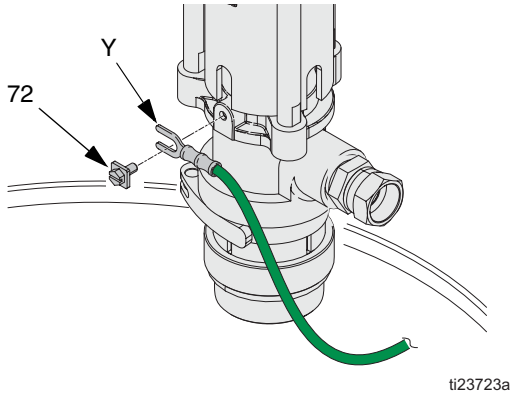
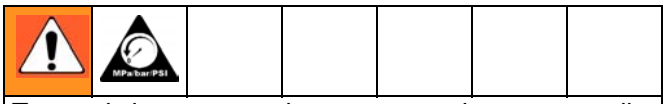


FIG. 9

2. *Air compressor*: according to manufacturer's recommendations.
3. Fluid hoses: use only grounded hoses with a maximum of 300 ft (91 m) combined hose length to ensure grounding continuity. Refer to Hose Grounding Continuity.
4. *Dispensing valve:* grounding is obtained through connection to a properly grounded fluid hose and pump.
5. *Object being sprayed:* according to local code.
6. *Fluid supply container:* according to local code.
7. *All solvent pails used when flushing*, according to local code. Use only metal pails, which are conductive. Do not place the pail on a non–conductive surface, such as paper or cardboard, which interrupts the grounding continuity.
8. *To maintain grounding continuity when flushing or relieving pressure*, always hold a metal part of the spray gun/dispensing valve firmly to the side of a grounded *metal* pail, then trigger the gun/valve.

Operation

Pressure Relief Procedure



Trapped air can cause the pump to cycle unexpectedly, which could result in serious injury from splashing or moving parts.

1. Engage trigger lock.
2. Close the bleed-type master air valve.
3. Disengage the trigger lock.
4. Hold a metal part of the dispense valve firmly to a grounded metal pail. Trigger the valve to relieve pressure.
5. Engage the trigger lock.
6. Open all fluid drain valves in the system, having a waste container ready to catch drainage. Leave drain valve(s) open until you are ready to dispense again.
7. If you suspect the nozzle or hose is clogged or that pressure has not been fully relieved after following the steps above, VERY SLOWLY loosen the hose end coupling to relieve pressure gradually, then loosen completely. Clear hose or nozzle obstruction.

Flushing

Trapped air can cause the pump to cycle unexpectedly, which could result in serious injury from splashing or moving parts.

- Flush at the lowest pressure possible. Check connectors for leaks and tighten as necessary.
- Flush with a fluid that is compatible with the fluid being dispensed and the equipment wetted parts.

1. Follow **Pressure Relief Procedure**, page 11.
2. Place suction tube in grounded metal drum containing cleaning fluid.
3. Set pump to lowest possible fluid pressure, and start pump.
4. Hold a metal part of the dispense valve firmly to a grounded metal pail. Trigger the dispense valve until clean solvent dispenses.
5. Remove valve from hose.
6. Follow **Pressure Relief Procedure**, and remove fluid filter and soak in solvent. Replace filter cap.

Daily Startup

1. Verify that the air needle valve is closed.
2. Connect the air line quick disconnect coupler to the transfer pump
3. Turn on the main air supply.
4. Slowly open the air needle valve until the transfer pump runs slowly.
5. Use the air needle valve to control the pump speed.

Caution
Never allow the pump to run dry of the fluid being pumped. A dry pump will quickly accelerate to a high speed and could cause personal injury and/or damage to the pump. If the pump accelerates quickly or starts running too fast, stop it immediately and check the fluid supply. If the supply container is empty or air has been pumped into the lines, refill the container and prime the pump and the lines with fluid, or flush and leave it filled with a compatible solvent. Be sure to eliminate all air from the fluid system. Do not attempt to operate pump unless it is securely mounted in a drum.

Daily Shutdown

1. Disconnect air line coupler.
2. When air pressure is bled off, close the air line needle valve.

Air Motor Repair

CAUTION
Air valve assembly has changed to series B for improved performance. Parts are not interchangeable between series A and B air motor. Series A air valves can be upgraded to series B with kit 262042.

1. Remove cap (1), cylinder (4), and square gaskets (3*). Inspect all parts, including spring under cap (not shown in FIG. 10) for damage and replace if necessary. See FIG. 10. Unscrew by hand or use a chain wrench to prevent distortion of the cylinder's shape.

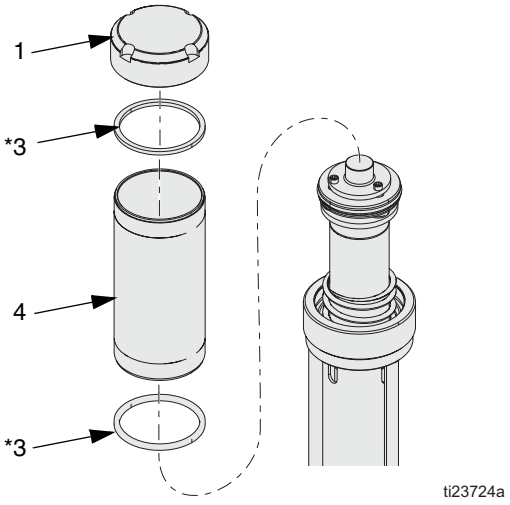


FIG. 10

NOTE: Series A air motors have thin, flat, white seals in air valve. Series B air motors have thicker black seals in the air valve.

2. *Series A air motors only:* Loosen set screw (18) and unscrew air valve (5). If necessary to assist turning, wedge a screwdriver blade between the screw heads and the hex cap of air valve (5). Discard items 5, 13, 15, and 18. See FIG. 11.

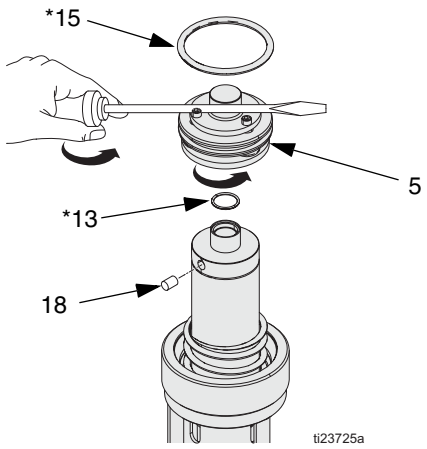


FIG. 11: Series A Air Valve

3. *Series B air motors only:* Unscrew air valve (5). If necessary to assist turning, wedge a screwdriver blade between the screw heads and the hex cap of the air valve (5). Inspect o-rings (13* and 15*) for damage and replace if necessary. Ensure o-ring (13*) is correctly positioned and not pinched. See FIG. 12.

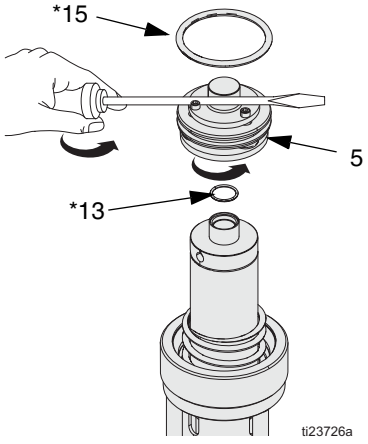


FIG. 12 Series B Air Valve

4. Align slot of shield (75) with piston hole and place pin tool (69) in piston hole to prevent piston from turning. Use second pin tool (69) to unscrew piston cap (17) and separate from piston (21) to expose dowel pin (19). See FIG. 13.

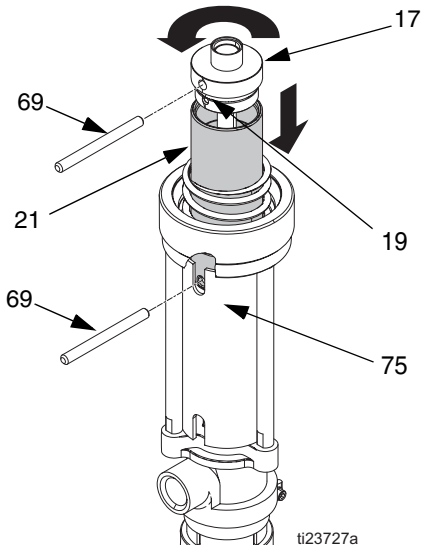


FIG. 13

5. *Series A air motors only:* Remove dowel pin (19) and take piston cap (17) off transfer shaft (20). Discard items 17, 19, 50. See FIG. 14.

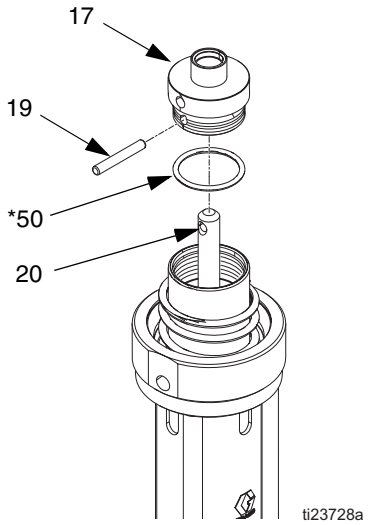


FIG. 14

6. *Series B air motors only:* Remove dowel pin (19) and take piston cap (17) off transfer shaft (20). Remove o-ring (50*) from piston cap. Inspect all parts for damage. See FIG. 15.

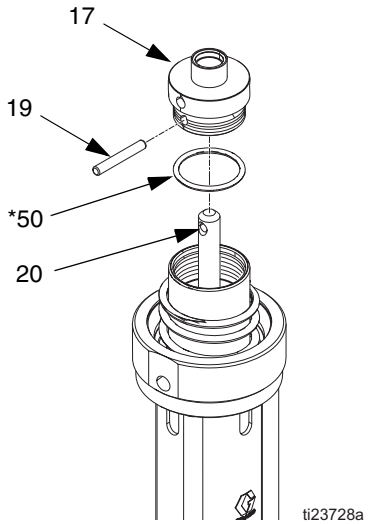


FIG. 15

7. Slide air piston (21) out the top of the air motor base (23). Remove o-ring (24*) from air motor base. Inspect all parts, including the spring (22) in the air motor base, for damage. See FIG. 16.

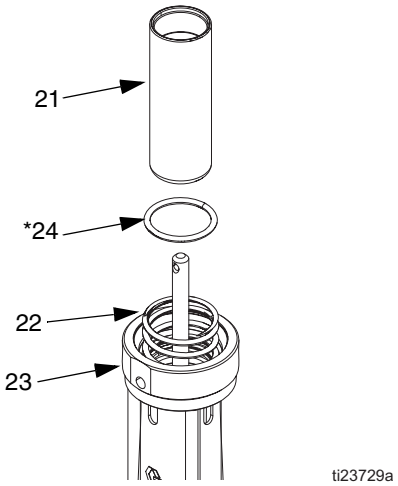


FIG. 16

Pump Lower Repair

1. Use a chain wrench near the top of the suction tube at the point indicated in FIG. 17, and a wrench on the flats of the foot valve (45) to loosen the foot valve from the suction tube (44). To prevent damage to the suction tube, do not remove the foot valve until instructed to do so in step 3.

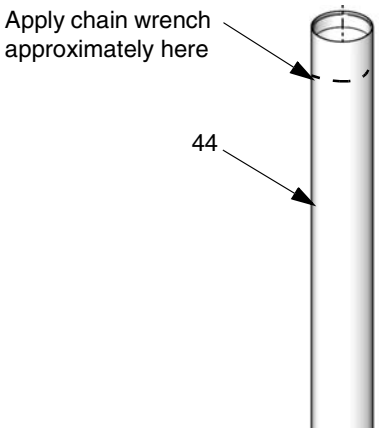


FIG. 17

NOTE: When removing the suction tube, be very careful not to bend, dent, or damage it. To avoid damage, use the chain wrench only at the top and bottom of the suction tube as indicated in FIG. 17 and FIG. 18. Do not apply the wrench to the middle of the suction tube.

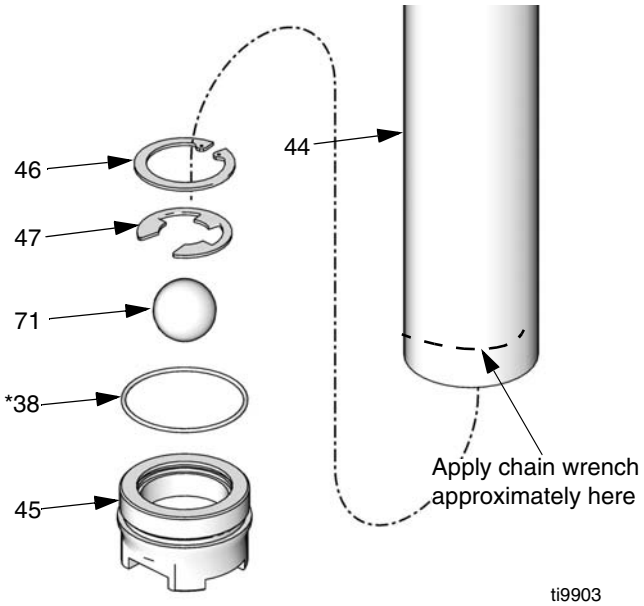


FIG. 18

2. With the foot valve still in place to support the suction tube, use a chain wrench near the bottom of the suction tube at the point indicated in FIG. 18, to loosen the suction tube (44) from the pump body (34).

3. Remove the foot valve assembly from the suction tube (44).

4. Remove retaining ring (46), snap ring (47), ball (71), and o-ring (38*) from foot valve (45). Inspect all parts for damage. See FIG. 18.

5. Remove suction tube (44) from pump body (34). See FIG. 19.

6. Inspect o-ring (38) on pump body and suction tube for damage. See FIG. 19.

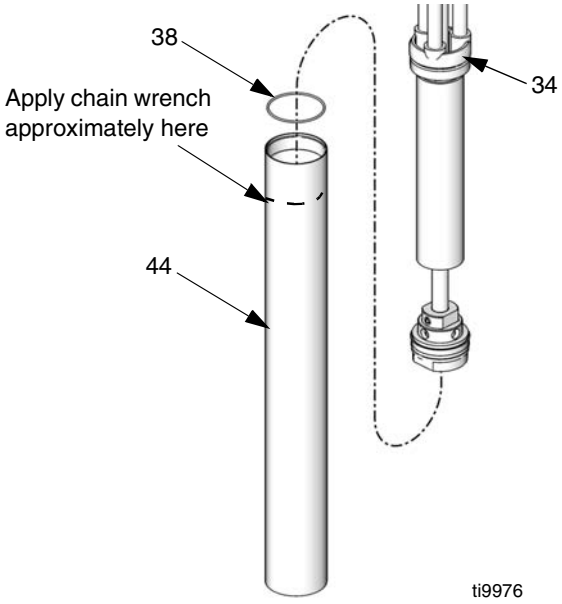


FIG. 19

7. Pull transfer shaft (20) out the bottom of pump body (34). See FIG. 20.

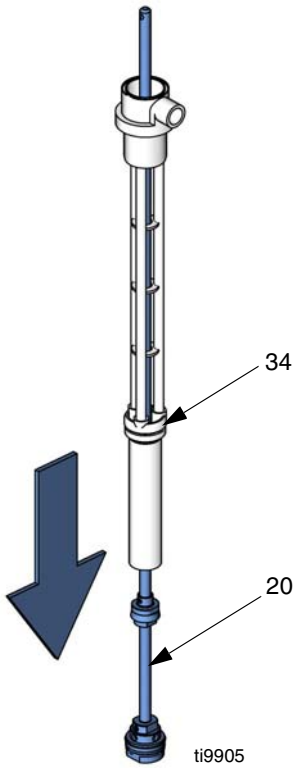


FIG. 20

8. Remove pin (56). Remove piston valve assembly. Unscrew piston valve (43) from piston housing (53). Remove wear ring (41*), u-cup (40*) and ball (42). Inspect all parts for damage. See FIG. 21.

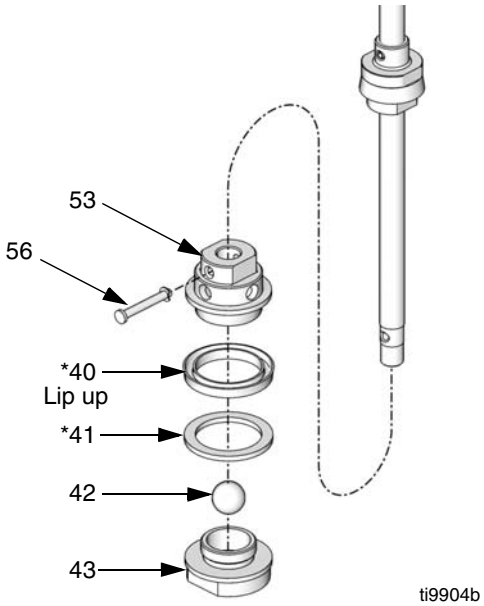


FIG. 21

9. Remove pins (55). See FIG. 22.

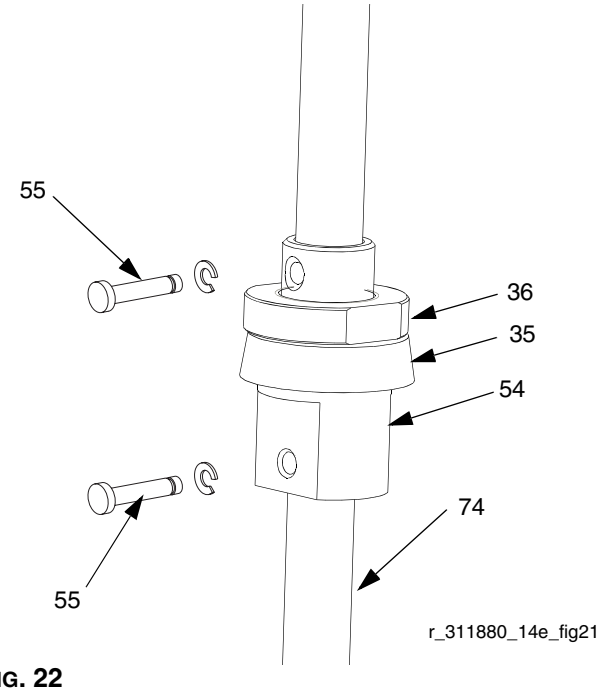


FIG. 22

NOTE: Series A and B pumps were equipped with springs pins. In Series C pumps, these pins were replaced with a solid clevis pin (55, 56).

10. Loosen set screw (37) from collar (36). Remove collar from piston housing (54). Remove u-cup (35*). Inspect all parts for damage. See FIG. 23.

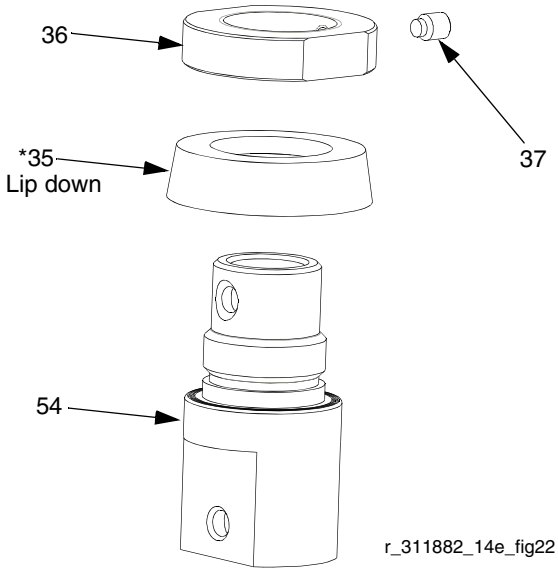


FIG. 23

11. Unscrew mounting flange (26) from pump body (34). Remove o-ring (32*) and PTFE gasket (33*) from pump body (34). Inspect all parts for damage. See FIG. 24.

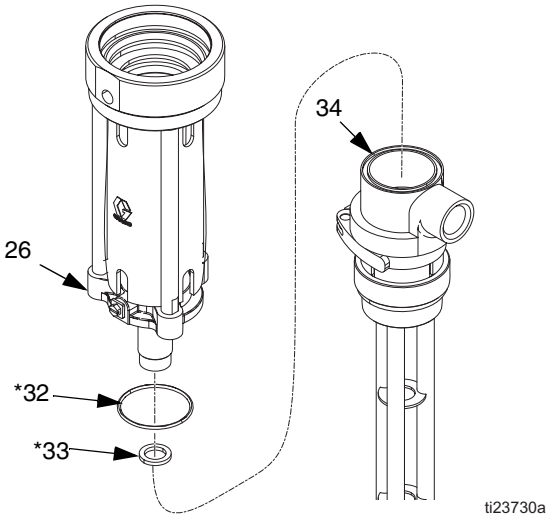


FIG. 24

12. Align slot of shield (75) and insert pin (69) to remove hex nut (27) from mounting flange (26). Remove female gland (30*), 2 PTFE packings (29*), male gland (28*) and wiper (31*). Inspect all parts for damage. See FIG. 26.

13. Unscrew three fasteners (60) to remove the flange (26) and tie-rods (25). Slide the guard (75) out. Unscrew the tie rods (25) using the wrench flats at the bottom.

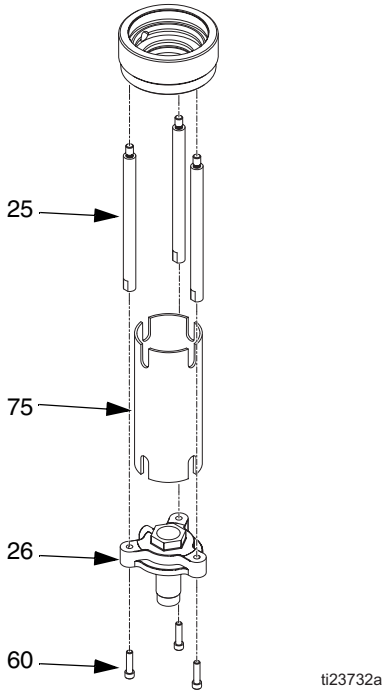
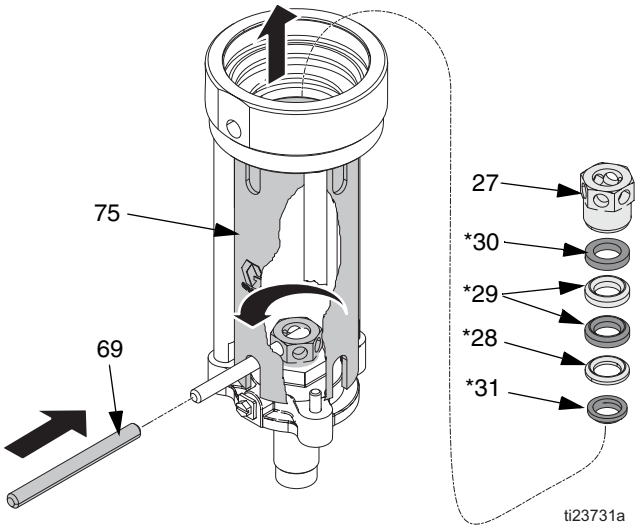
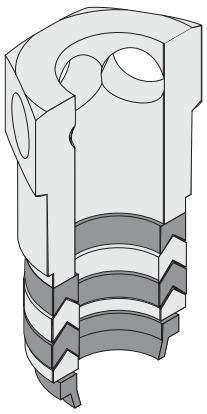


FIG. 25





Seal stack enlarged to show detail.

FIG. 26

Reassembly

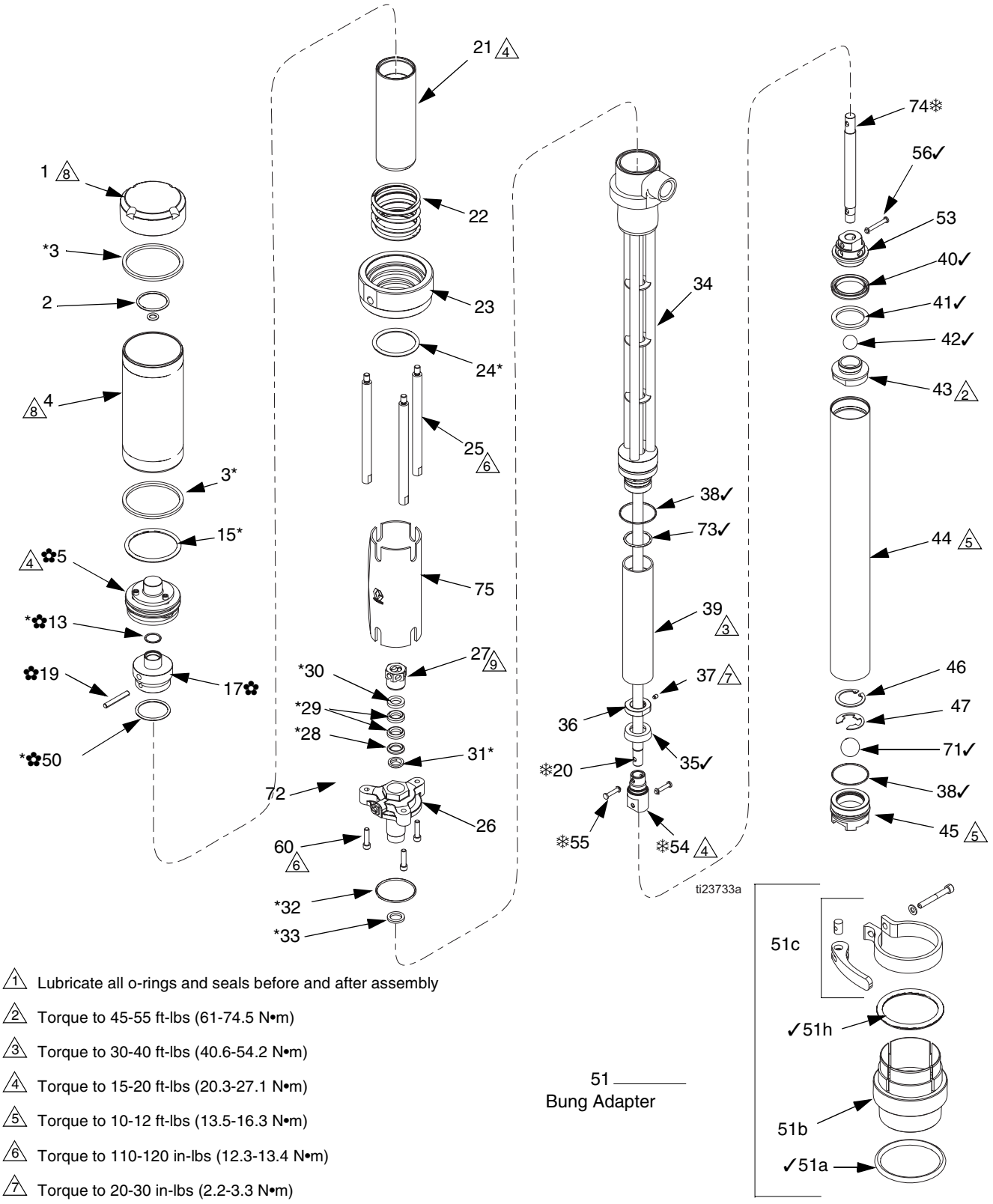
To reassemble the pump lower and air motor, reverse the steps on the preceding pages. Follow the torque requirements listed in the **Parts - Model 295616** drawing on page 20.

NOTE: See Air Motor Repair, step 3 and step 4 (FIG. 12) for special notes on reassembly.

Troubleshooting

Problem	Cause	Solution
The pump fails to operate	Dirty or worn air motor.	Clean, service
	Inadequate air supply or restricted lines.	Clean lines or increase the air supply (see Technical Data).
	Closed or clogged air valves.	Open or clear the valves.
	Clogged fluid hose or valve.	Clear the hose or valves
	Worn or damaged valves or seals.	Service the valves or seals.
The pump operates, but the output is low on both strokes.	Clogged fluid hose or valve.	Clear the hose or valves.
	Exhausted fluid supply.	Refill the fluid supply and reprime the pump.
	Worn or damaged valves or seals.	Service the valves or seals.
The pump operates, but the output is low on the downstroke.	Held open or worn intake valve.	Clear or service the valve.
	Worn or damaged valves or seals.	Service the valves or seals.
The pump operates, but the output is low on the upstroke.	Held open or worn piston valve.	Clear or service the valve.
	Worn or damaged valves or seals.	Service the valves or seals.
Erratic or accelerated operation.	Exhausted fluid supply.	Refill the fluid supply and reprime the pump.
	Broken air motor compression spring.	Replace the spring.
Pump slowly moves after fluid shutoff in downstroke.	Clogged or dirty intake valve check ball.	Clean ball and seat.
	Worn or damaged valves or seats.	Install repair kit.
Pump slowly moves after fluid shutoff in upstroke.	Clogged or dirty lower piston ball or seat.	Clean ball and seat.
	Worn or damaged valves or seats.	Install repair kit.

Parts - Model 295616



1 Lubricate all o-rings and seals before and after assembly

2 Torque to 45-55 ft-lbs (61-74.5 N•m)

3 Torque to 30-40 ft-lbs (40.6-54.2 N•m)

4 Torque to 15-20 ft-lbs (20.3-27.1 N•m)

5 Torque to 10-12 ft-lbs (13.5-16.3 N•m)

6 Torque to 110-120 in-lbs (12.3-13.4 N•m)

7 Torque to 20-30 in-lbs (2.2-3.3 N•m)

8 Torque to 50-60 in-lbs (5.6-6.7 N•m)

9 Tighten 1/8 to 1/4 turn past finger-tight

Ref	Part	Description	Qty
1	24J527	CAP, air cylinder	1
2	157630	SPRING, tapered	1
3*	120212	PACKING, square	2
4	24J528	CYLINDER, air motor	1
5✿	262035	VALVE, air	1
5a	15J539	GASKET, upper	1
5b	121889	O-RING	3
13*✿	722834	O-RING	1
15*	160258	O-RING	1
17✿		CAP, air piston	1
19✿	15J548	PIN, dowel	1
20❄		SHAFT, transfer	1
21	24J535	PISTON, air	1
22	15J551	SPRING, compression	1
23	24J529	BASE, air motor	1
24*	159846	O-RING (green)	1
25	15J553	ROD, tie	3
26	24J530	FLANGE, mounting	1
27	15J555	NUT, hex	1
28*	15J556	GLAND, packing, (male)	1
29*	15J557	V-PACKING, PTFE	2
30*	15J558	GLAND, packing, (female)	1
31*	15J559	WIPER, ROD	1
32*	15C638	O-RING, PTFE, encapsulated	1
33*	15J560	GASKET, PTFE	1
34	24J536	BODY, pump, 2:1	1
35✓	15J562	PACKING, piston cup	1
36	15J563	COLLAR, retaining	1
37	101194	SCREW, set, socket head, 10-32 x .25 in. (6 mm)	1
38✓★	106258	O-RING	2
39	24J534	CYLINDER, fluid	1
40✓	15J565	PACKING, u-cup, PTFE	1
41✓	15J566	RING, wear	1
42✓	103462	BALL, outlet, sst, 3/4 in. (19 mm)	1
43	24J531	VALVE, piston	1
44	24J532	TUBE, suction	1
45	24J533	VALVE	1
46	120734	RING, retaining, internal	1
47	120735	RING, snap, e series	1
48†	206264	VALVE, needle	1
49†	169969	FITTING, air line	1
50*✿	108832	O-RING	1
51	253146	ADAPTER, bung (includes 51a-51g)	1
51a✓	120998	O-RING, fluoroelastomer	1
51b	24J526	ADAPTER	1
51c	234188	CLAMP, hopper	1
51h✓	120207	O-RING; inner (brown)	1
52†	114558	COUPLER, air line	1
53	15J570	HOUSING, piston	1
54❄		PISTON, upper	1
55✓❄	120294	PIN, clevis, 3/16 in. x 3/4 in.	2
56✓	120295	PIN, clevis, 3/16 in. x 1-1/4 in.	1
60	120348	SCREW, cap, socket head 1/4-20 x 1 in. (25 mm)	3
69†	15H197	TOOL, pin	2
70†	15K008	LABEL, material identification.	1
71✓	107167	BALL, intake, sst, 1 in. (25 mm)	1
72	116343	SCREW, ground	1
73✓	113944	O-RING	1
74❄		SHAFT, transfer, lower	1
75	16W451	GUARD	1

* *Parts included in Upper Seal Repair Kit 262034 (not sold separately).*

✓ *Parts included in Lower Seal Repair Kit 247883.*

NOTE: Seal Repair Kit 262033 includes all parts in kit 262034 and kit 247883.

❄ *Parts included in repair kit 256560*

✿ *Parts included in repair kit 262042*

† *Indicates parts not shown, 48, 49, 52, 69, 70 (shipped loose)*

★ *O-rings included in Tube Extension Kit 24N451.*

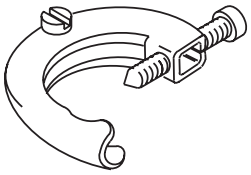
NOTE: If you have a series A pump and wish to repair it, air motor kit 262042 must be ordered so that it can be updated to Series B.

NOTE: The T2 can be adapted for use in 250 gallon (946 liter) totes. Tube Extension 24N451 increases the length by 6.25 in. (165 mm) to reach material in the bottom of larger totes.

Accessories

Grounding Clamp

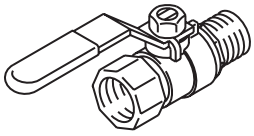
Part	Description	Qty.
103538	CLAMP, ground	1



Bleed-Type Master Air Valve

300 psi (2.1 MPa, 21 bar) Maximum Working Pressure

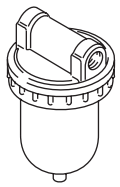
Part	Description	Qty.
107142	VALVE, ball, vented; 1/2 npt(m) inlet x 1/2 npt(f) outlet	1



Air Line Filter

250 psi (1.7 MPa, 17.5 bar) Maximum Working Pressure

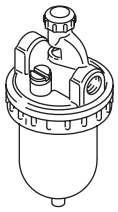
Part	Description	Qty.
106149	FILTER, air line; 1/2 npt(f) inlet and outlet	1



Air Line Lubricator

250 psi (1.7 MPa, 17.5 bar) Maximum Working Pressure

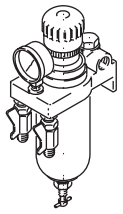
Part	Description	Qty.
214848	LUBRICATOR, air line; 8 oz (0.24 liter) bowl capacity; 1/2 npt(f) inlet and outlet	1



Air Line Filter and Regulator

180 psi (1.3 MPa, 13 bar) Maximum Working Pressure

Part	Description	Qty.
202660	FILTER, air; includes gauge and two 1/4 npt(m) outlet valves, 50 micron filter element with 100 mesh inlet strainer; 1/2 npt(f) inlet; flow rate is over 50 scfm (1.4 m^3/min).	1

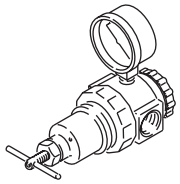


01355

Air Regulator and Gauge

300 psi (2.1 MPa, 21 bar) Maximum Working Pressure

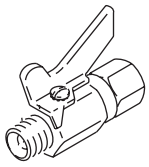
Part	Description	Qty.
202156	REGULATOR, air; 0-200 psi (0-14 bar) regulated pressure range; 3/8 npt(f) inlet and outlet	1



Fluid Drain Valve

500 psi (3.5 MPa, 35 bar) Maximum Working Pressure

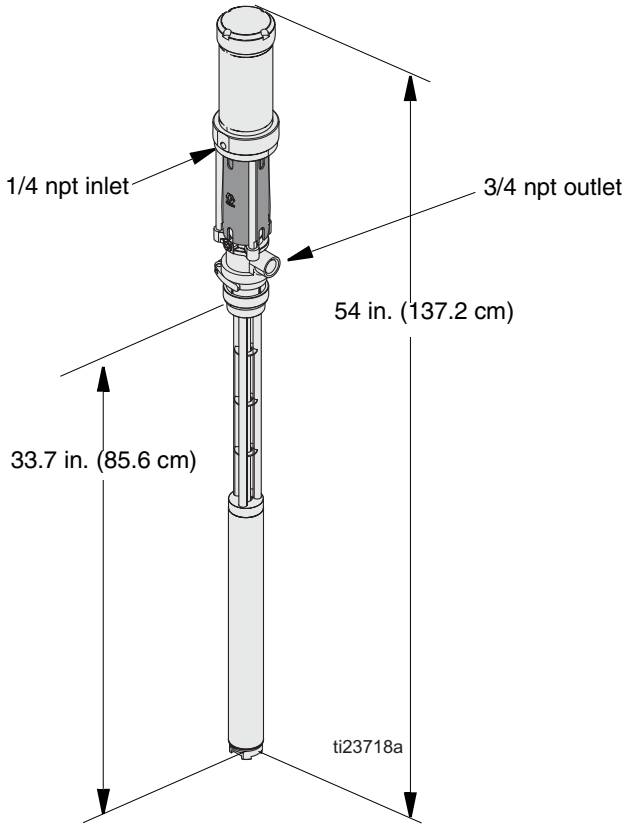
Part	Description	Qty.
208630	VALVE, ball; 1/2 npt(m) x 3/8 npt(f); for non-corrosive fluids; carbon steel and PTFE	1
237534	VALVE, ball; 3/8 npt(m) x 3/8 npt(f); for corrosive fluids; SST and PTFE	1



Technical Data

T2 2:1 Ratio Transfer Pump		
	US	**Metric**
Pressure Ratio	2.25:1	
Max fluid working pressure	405 psi	2.8 MPa, 28 bar
Maximum Air inlet pressure	180 psi	1.2 MPa, 12 bar
Max Output Flow (continuous)	5.0 GPM	20 lpm
Max Output Flow (intermittent	7.5 GPM	28 lpm
Pump cycles per 1 gallon (3.8 liters)	15.9	
Maximum recommended pump speed for continuous operation	100 cycles per min (150 cycles per min intermittent)	
Gallons (liters) per pump cycle	0.063 gal.	0.24 l
Air consumption	See performance chart	
Maximum Ambient temperature	120° F	50° C
Maximum Fluid Temperature	190° F	88° C
Wetted parts	Stainless Steel, PTFE	
Air Inlet Port	1/4 npt(f)	
Fluid Outlet Port	3/4 npt(f)	
Weight	21.0 lb	9.5 kg
Sound Pressure	88.7 dB(A) at 80 psi (.55 MPa, 5.5 bar)	
Sound Power, per ISO 9614-2	96.8 dB(A) at 80 psi (.55 MPa, 5.5 bar)	

Dimensions



Performance Chart

Calculate Fluid Outlet Pressure (black curves)

To calculate fluid outlet pressure (MPa/bar/psi) at a specific fluid flow (lpm/gpm) and operating air pressure (MPa/bar/psi), use the following instructions and pump data chart.

1. Locate desired fluid flow along bottom of chart.
2. Follow vertical line up to intersection with selected air pressure curve (black). Follow horizontally left to read fluid outlet pressure.

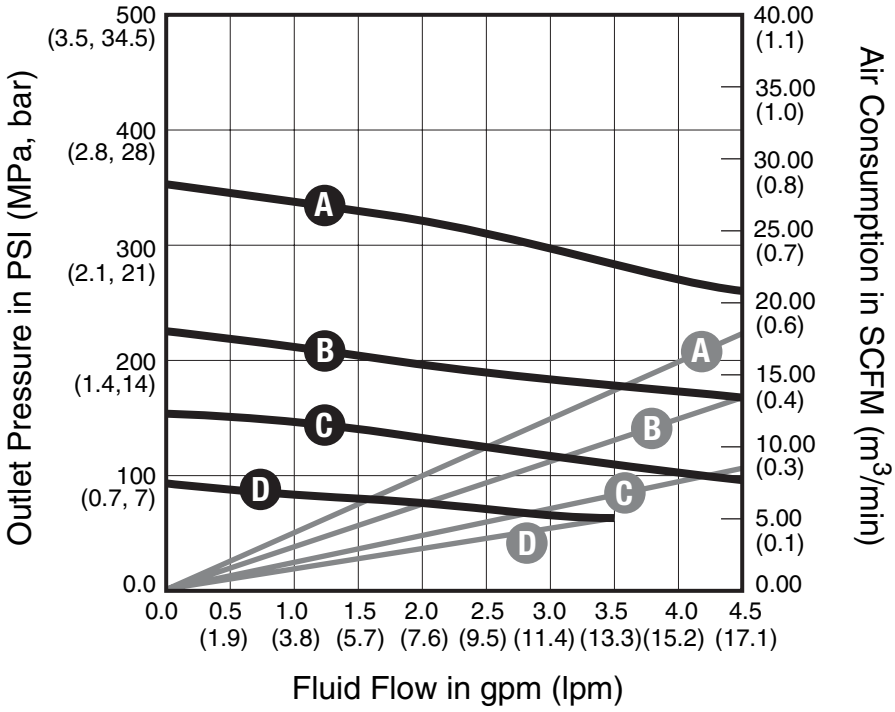
Calculate Pump Air Consumption (gray curves)

To calculate pump air consumption (m^3/min or scfm) at a specific fluid flow (lpm/gpm) and air pressure (MPa/bar/psi), use the following instructions and pump data chart.

1. Locate desired fluid flow along bottom of chart.
2. Follow vertical line up to intersection with selected air pressure curve (gray). Follow horizontally right to read air consumption.

Key: Air Pressure

A 180 psi (1.2 MPa, 12.4 bar)
B 100 psi (0.7 MPa, 7 bar)
C 70 psi (0.5 MPa, 4.8 bar)
D 40 psi (0.3 MPa, 2.8 bar)



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