Operation - Parts

General Industry Supply Systems

334221C

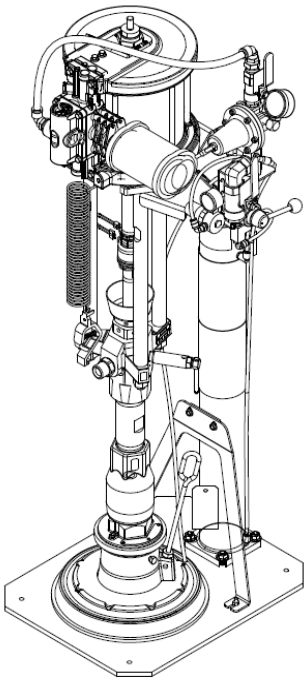
EN

For use with non-heated bulk supply of medium to high viscosity materials. For professional use only.

Not approved for use in explosive atmospheres or hazardous locations.

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

See page 4 for maximum working pressure and model information.



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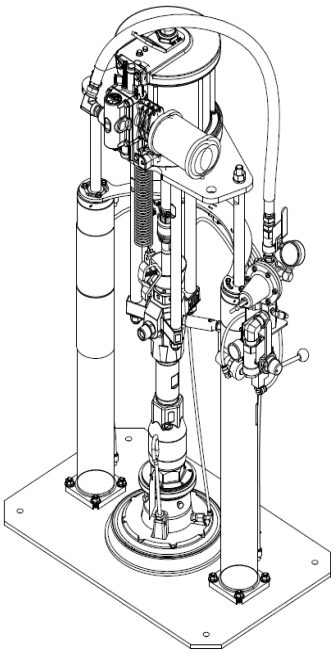

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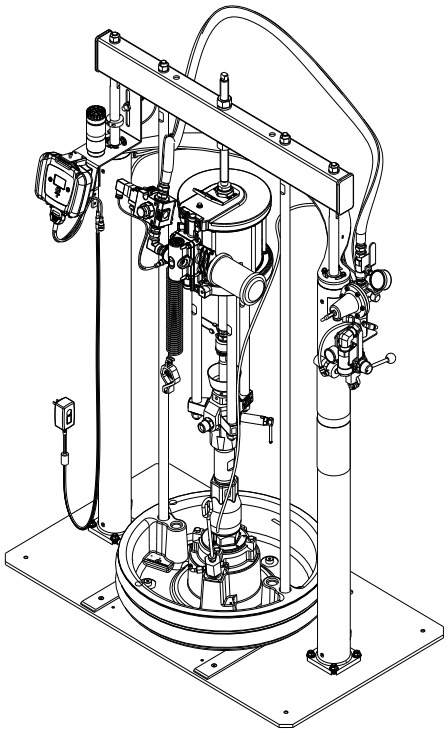

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Contents

Related Manuals

Manual	Description
334222	General Industry Supply Systems - Accessory Kits
3A1211	SaniForce® Air Motors, Instructions-Parts
312375	Check-Mate® Displacement Pumps, Instructions-Parts
312376	Check-Mate Pump Packages, Instructions-Parts
312467	Repair Parts for Check-Mate 100cc Displacement Pumps, Repair Kit
312468	200 cc Check-Mate Displacement Pump Repair Parts Manual
312491	Pump Fluid Purge Kit

Models

Model Number	Maximum fluid working pressure psi (MPa, bar)	Pump Size cc	Ram Size liter (gallon)	Ram Type		Applied Scope	Electronics Kit
				Single Post	Dual Post		
24V917	6100 (42, 421)	100	200 (55)			GI*	---
24V918		100	60 (16)			GI	---
24V626	3400 (23, 234)	200	200 (55)			GI	---
24W286	6100 (42, 421)	100	200 (55)			GI	DataTrak™
24W288		100	60 (16)			GI	DataTrak
24W289	3400 (23, 234)	200	200 (55)			GI	DataTrak
24W290	6100 (42, 421)	100	200 (55)			GI	Customer Provided Programmable Logic Controller (PLC)
24W291		100	60 (16)			GI	PLC
24W292	3400 (23, 234)	200	200 (55)			GI	PLC
25A685	6100 (42, 421)	100	200 (55)			GI	---
25A653	6100 (42, 421)	100	20 (5)			AUTO*	---
25A654	6100 (42, 421)	100	20 (5)			AUTO	---
25A655	4060 (28, 280)	100	20 (5)			AUTO	---
25A656	4060 (28, 280)	100	20 (5)			AUTO	---
25A666	6100 (42, 421)	100	20 (5)			AUTO	---
25A667	6100 (42, 421)	100	20 (5)			AUTO	---
25A668	4060 (28, 280)	100	20 (5)			AUTO	---
25A669	4060 (28, 280)	100	20 (5)			AUTO	---
25A694	6100 (42, 421)	100	20 (5)			GI	---
25A695	6100 (42, 421)	100	20 (5)			GI	---
25A696	4060 (28, 280)	100	20 (5)			GI	---
25A697	4060 (28, 280)	100	20 (5)			GI	---
25A698	6100 (42, 421)	100	20 (5)			GI	---
25A699	6100 (42, 421)	100	20 (5)			GI	---
25A700	4060 (28, 280)	100	20 (5)			GI	---
25A701	4060 (28, 280)	100	20 (5)			GI	---

GI: General Industry
AUTO: Automotive Industry

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

SKIN INJECTION HAZARD

High-pressure fluid from dispensing device, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. **Get immediate surgical treatment.**

- Do not point dispensing device at anyone or at any part of the body.
- Do not put your hand over the fluid outlet.
- Do not stop or deflect leaks with your hand, body, glove, or rag.
- Follow **Pressure Relief Procedure** in this manual, when you stop dispensing and before cleaning, checking, or servicing equipment.
- Tighten all fluid connections before operating the equipment.
- Check hoses and couplings daily. Replace worn or damaged parts immediately.

MOVING PARTS HAZARD

Moving parts can pinch, cut 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** and disconnect all power sources.

FIRE AND EXPLOSION HAZARD

Flammable fumes, such as solvent and paint fumes, in **work area** can ignite or explode. To help prevent fire and explosion:

- Use equipment only in well ventilated area.
- Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static arc).
- Keep work area free of debris, including solvent, rags and gasoline.
- Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present.
- Ground all equipment in the work area. See **Grounding** instructions.
- Use only grounded hoses.
- Hold gun firmly to side of grounded pail when triggering into pail. Do not use pail liners unless they are antistatic or conductive.
- **Stop operation immediately** if there is static sparking or you feel a shock**.** Do not use equipment until you identify and correct the problem.
- Keep a working fire extinguisher in the work area.

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** in this manual 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. Alterations or modifications may void agency approvals and create safety hazards.
- Make sure all equipment is rated and approved for the environment in which you are using it.
- 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.

SPLATTER HAZARD

Hot or toxic fluid can cause serious injury if splashed in the eyes or on skin. During blow off of platen, splatter may occur.

- Use minimum air pressure when removing platen from drum.

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.

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. This protective equipment includes but is not limited to:

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

Component Identification

24W286 Model Shown

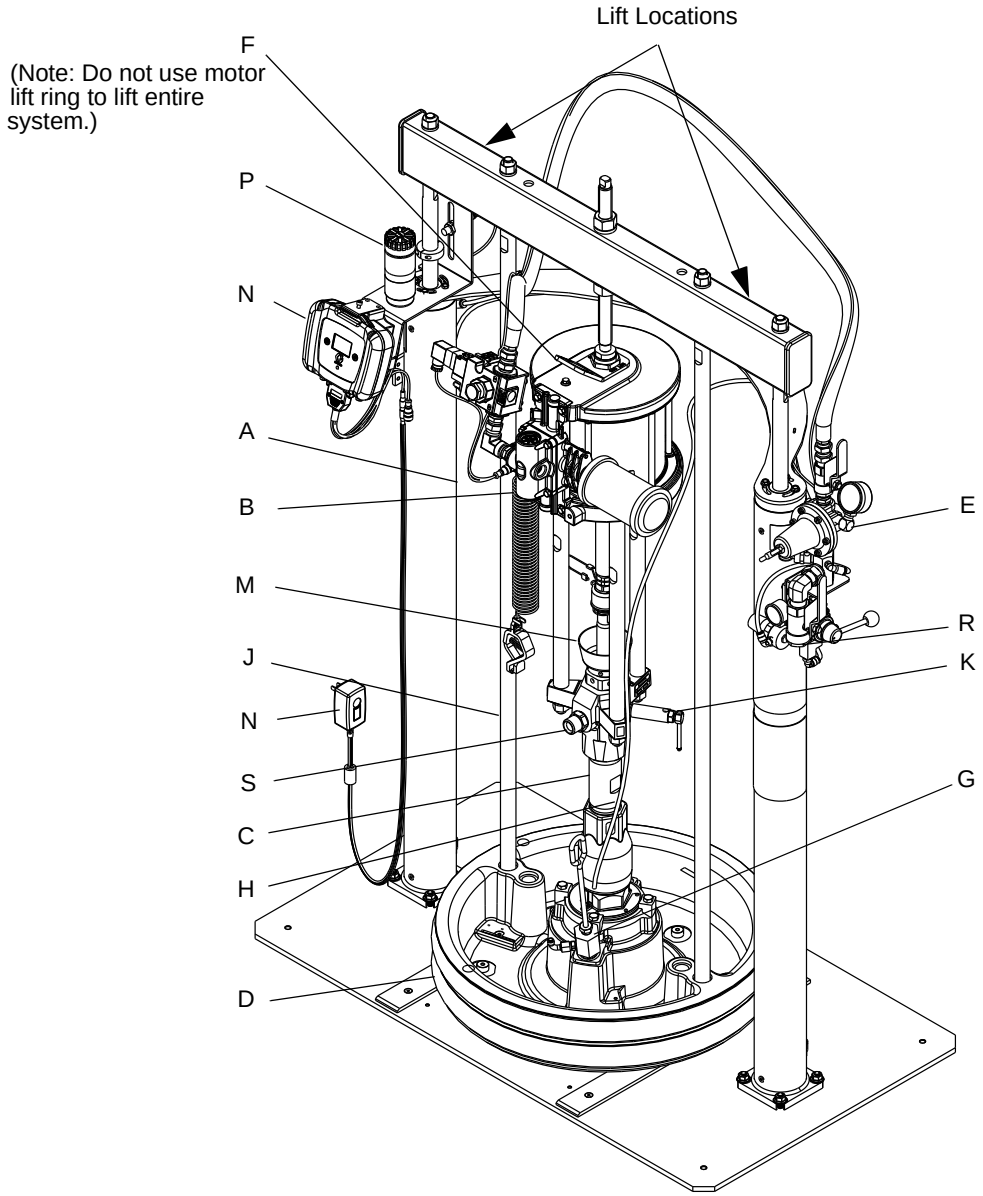

FIG. 1: System

Key:

A Ram Assembly
B Air Motor
C Displacement Pump
D Platen
E Air Controls (see FIG. 4)
F Air Motor Lift Ring
G Platen Bleed Port
H Blowoff Air Supply Line
J Platen Lift Rod
K Pump Bleeder Valve
M Wet Cup
N Remote DataTrak Kit (Optional)
P Light Tower (Optional)
R System Air Inlet
S Material Outlet

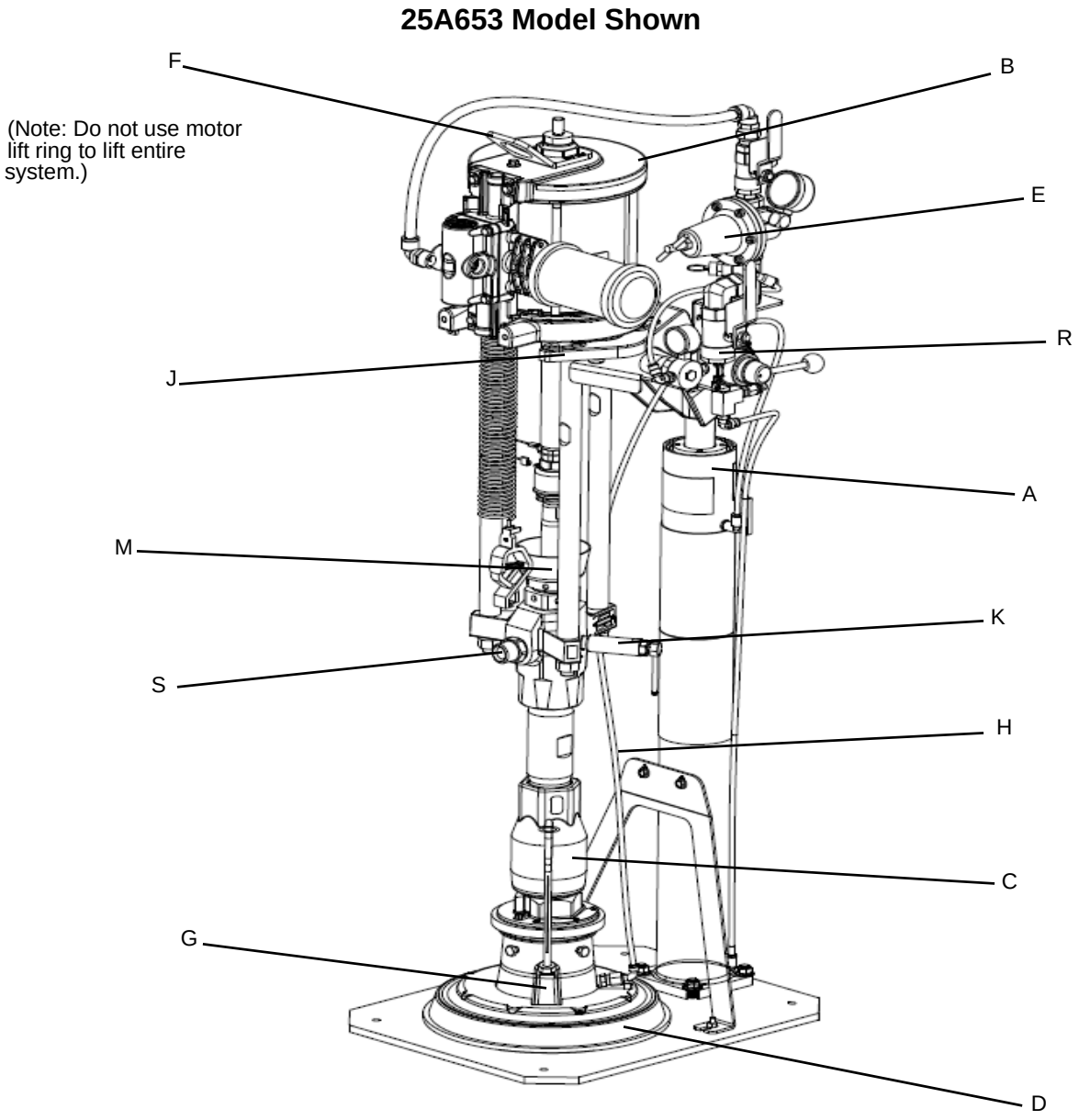

FIG. 2: System

Key:

A Ram Assembly
B Air Motor
C Displacement Pump
D Platen
E Air Controls (see FIG. 4)
F Air Motor Lift Ring
G Platen Bleed Port
H Blowoff Air Supply Line
J Air Motor Bracket
K Pump Bleed Valve
M Wet Cup
R System Air Inlet
S Material Outlet

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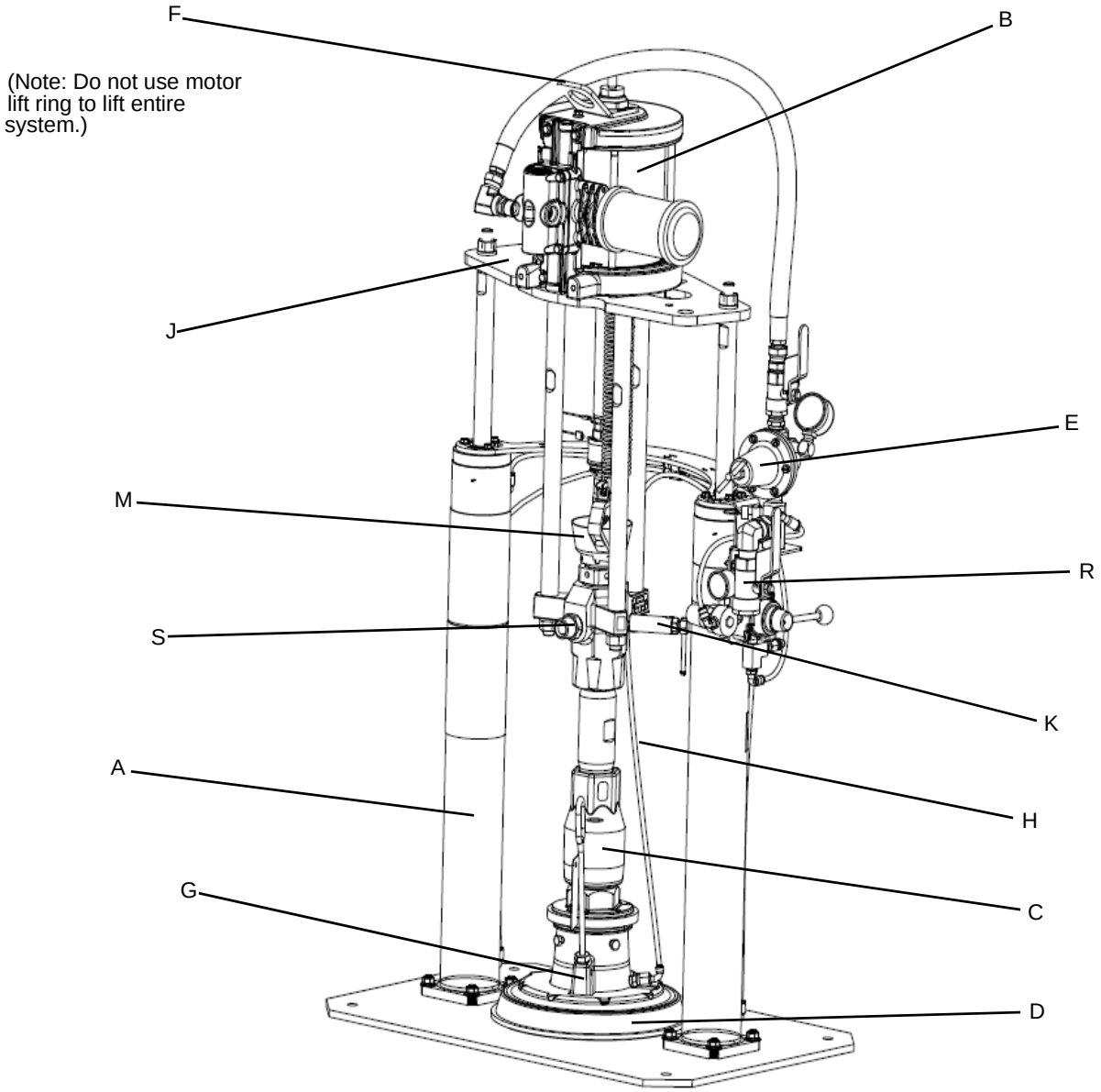


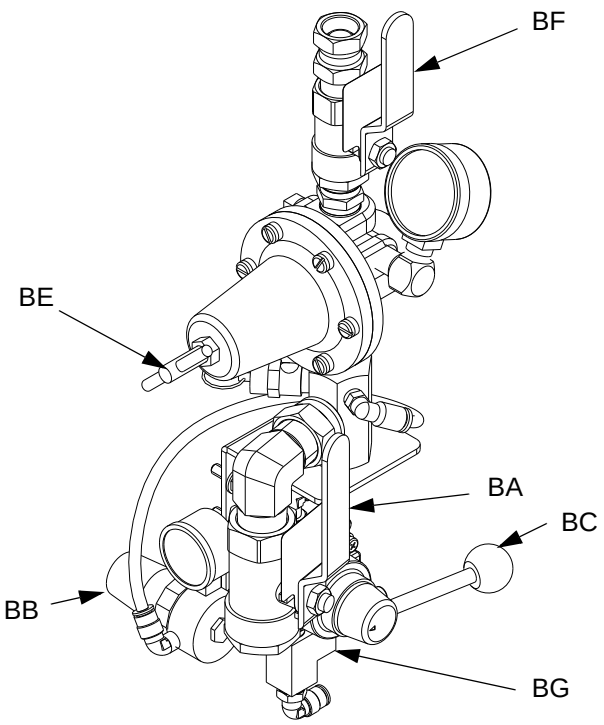
FIG. 3: System

Key:

A Ram Assembly
B Air Motor
C Displacement Pump
D Platen
E Air Controls (see FIG. 4)
F Air Motor Lift Ring
G Platen Bleed Port
H Blowoff Air Supply Line
J Air Motor Bracket
K Pump Bleed Valve
M Wet Cup
R System Air Inlet
S Material Outlet

Air Controls

- **Main air ball valve (BA):** turns air on and off to the system. When closed, the valve relieves pressure downstream.
- **Ram air regulator (BB):** controls ram up and down pressure and blowoff pressure.
- **Ram director valve (BC):** controls ram direction.
- **Air motor regulator (BE):** controls air pressure to the motor.
- **Air motor ball valve (BF):** turns air on and off to the air motor. When closed, the valve relieves air trapped between it and the air motor.
- **Blowoff button (BG):** turns air on and off to push the platen out of an empty drum.



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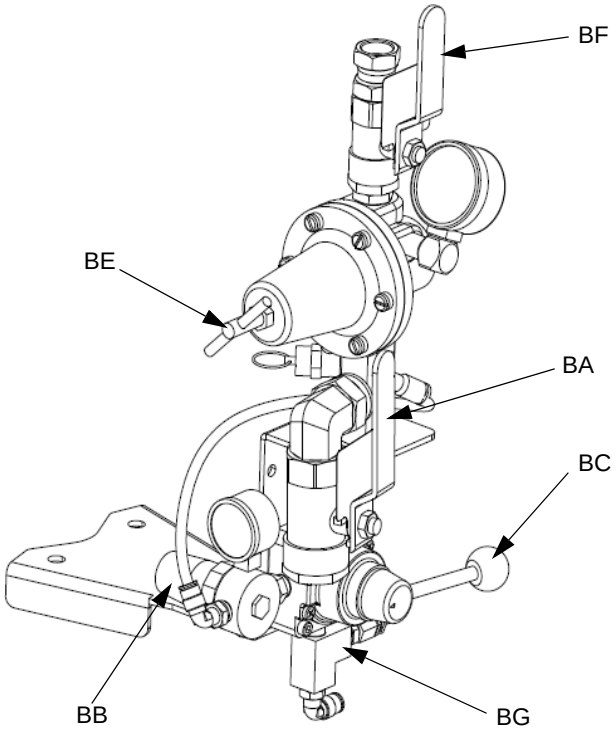

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FIG. 4. Integrated Air Controls

Installation

Location

NOTICE

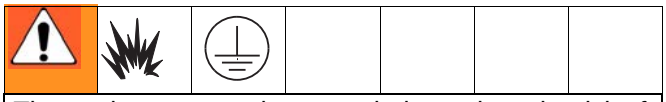
Always lift supply system at proper lift locations (see FIG. 1). Do **not** lift in any other way.

Attach a lifting sling at the proper lift spots. Lift off the pallet using a crane or a forklift.

Option #1:
Using the holes in the ram base as a guide, drill holes for 5/16 in. (8 mm) anchors. Ensure that the ram base is level in all directions. If necessary, level the base using metal shims. Secure the base to the floor using 5/16 in. (8 mm) anchors that are long enough to prevent the ram from tipping.

Option #2:
Use M10x1.5 hex screws (not supplied) in each corner of the base plate to act as jack bolts to level the machine frame.

Grounding



The equipment must be grounded to reduce the risk of static sparking. Static sparking can cause fumes to ignite or explode. Grounding provides an escape wire for the electric current.

Pump: use a ground wire and clamp. Connect end of wire to a true earth ground. See FIG. 5.

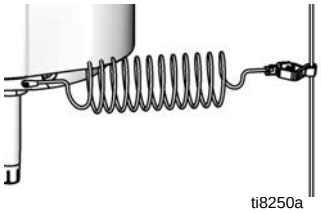


FIG. 5: Ground

Air and fluid hoses: use only electrically conductive hoses with a maximum of 500 ft. (150 m) combined hose length to ensure grounding continuity. Check electrical resistance of hoses. If total resistance to ground exceeds 29 megohms, replace hose immediately.

Air compressor: follow manufacturer's recommendations.

Spray gun/dispense valve: ground through connection to a properly grounded fluid hose and pump.

Fluid supply container: follow local code.

Object being sprayed: follow local code.

Solvent pails used when flushing: follow local code. Use only conductive metal pails, placed on a grounded surface. Do not place the pail on a nonconductive surface, such as paper or cardboard, which interrupts grounding continuity.

To maintain grounding continuity when flushing or relieving pressure: hold metal part of the dispense valve firmly to the side of a grounded metal pail, then trigger the valve.

Mechanical Setup

1. Fill displacement pump wet cup 2/3 full with Graco Throat Seal Liquid (TSL).
2. Back-off air regulators to their full counterclockwise position and close all shutoff valves.
3. Connect air line from an air source to the system air inlet. See FIG. 1, FIG. 2, and FIG. 3. Refer to the pump Performance Charts in the Check-Mate Pump Packages, Instructions-Parts manual to determine your air supply flow requirements. Use a supply hose capable of meeting the required flow.

Install Remote DataTrak™ Machine Monitoring Kit - Optional

Order the 24W477 Remote Datatrak Accessory as a machine monitoring control interface. Refer to the General Industry Supply Systems - Accessory Kits manual for more details.

NOTE: Kit is not available if PLC monitoring kit is installed.

Install Customer Provided Programmable Logic Controller (PLC) Machine Monitoring Kit - Optional

Order the 24W478 PLC Interface Accessory as a machine monitoring control interface. Refer to the General Industry Supply Systems - Accessory Kits manual for more details.

NOTE: Kit is not available if DataTrak monitoring kit is installed.

Install Light Tower Accessory - Optional

Order the 127187 Light Tower Accessory as a diagnostic indicator. Refer to the General Industry Supply Systems - Accessory Kits manual for more details.

NOTE: The light tower accessory is only available when the Remote Datatrak accessory is installed.

Install Customer Signal Module Accessory - Optional

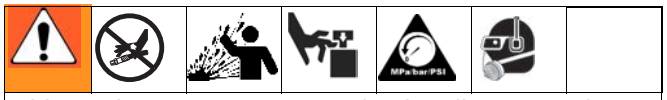
Order the 24V979 Customer Signal Module Accessory as a customer monitoring device. Refer to the General Industry Supply Systems - Accessory Kits manual for more details.

NOTE: The customer signal module accessory is only available when the Remote DataTrak accessory is installed.

Operation

Pressure Relief Procedure

Follow the Pressure Relief Procedure whenever you see this symbol.



This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as skin injection, splashing fluid and moving parts, follow the Pressure Relief Procedure when you stop spraying and before cleaning, checking, or servicing the equipment.

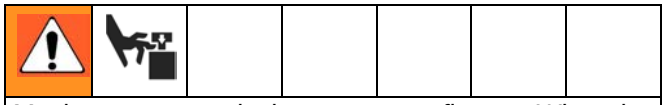
1. Lock the gun/valve trigger, if applicable.
2. See FIG. 4, page 10.
   a. Close the air motor ball valve (BF) and the main air ball valve (BA).
   b. Set the ram director valve (BC) to DOWN. The ram will slowly drop.
   c. Jog the ram director valve (BC) up and down to bleed air from ram cylinders.
3. Unlock the gun/valve trigger.
4. Hold a metal part of the gun/valve firmly to the side of a grounded metal pail, and trigger the gun/valve to relieve pressure.
5. Lock the gun/valve trigger.
6. Open the pump bleeder valve (K). Have a container ready to catch the drainage.
7. Leave the pump bleeder valve (K) open until ready to spray again.

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

Flush Before Using Equipment

The pump was tested with lightweight oil, which is left in the fluid passages to protect parts. To avoid contaminating fluid with oil, flush the pump with a compatible solvent before use. See pump manual for flushing directions.

Start and Adjust Ram



Moving parts can pinch or amputate fingers. When the pump is operating and when raising or lowering the ram, keep fingers and hands away from the pump intake, platen, and lip of the drum.

1. Refer to FIG. 4. Close all air regulators (BA, BF) and air valves (BE, BB).
2. Open main air ball valve (BA) and set ram air regulator (BB) to 40 psi (0.28 MPa, 2.8 bar). Set ram director valve (BC) handle to UP and let the ram rise to its full height.
3. Lubricate the platen seals with grease or other lubricant compatible with the fluid you will pump.
4. Put a full drum of fluid on the ram base, slide it back against the drum stops, and center it under the platen.

NOTE: To avoid damage to the platen seals, do not use a drum that is dented or damaged.

5. Remove bleed stick from platen bleed port.

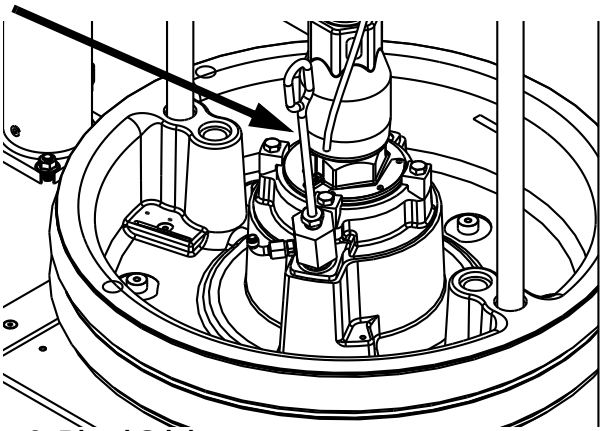


FIG. 6: Bleed Stick

6. If drum has a plastic liner, pull it over edge of drum. Secure liner with tape wrapped around circumference of drum.
7. Set the director valve to DOWN and lower the ram until fluid appears at the top of the platen bleed port. Adjust ram air regulator as needed. Set the director valve to neutral and close the platen bleed port.

Start and Adjust Pump

1. Connect pump outlet fittings and hose (not supplied).

NOTE: Be sure all components are adequately sized and pressure rated to meet the system's requirements.

2. Be sure the air motor ball valve (BF) is closed. Then set the ram air regulator to about 50 psi (0.35 MPa, 3.5 bar). Set the ram director valve (BC) to DOWN. **Remote DataTrak:** If system has this feature, press the prime/flush key.
3. Start the pump as explained in the separate pump instruction manual.
4. Keep the ram director valve (BC) set to DOWN while pump is operating.

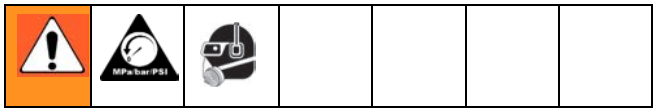
NOTE: Increase air pressure to the ram if the pump does not prime properly with heavier fluids. Decrease air pressure if fluid is forced out around the top seal or platen.

Change Drums

Excessive air pressure in the material drum could cause the drum to rupture, causing serious injury. The platen must be free to move out of the drum. Never use drum blowoff air with a damaged drum.

1. Turn the air motor ball valve (BF) to stop the pump.
2. Set ram director valve (BC) to UP to raise the platen and immediately press and hold the blowoff air button until the platen is completely out of drum. Use minimum amount of air pressure necessary to push the platen out of the drum.
3. Release the blowoff button (BG) and allow the ram to rise to its full height.
4. Remove empty drum.
5. Inspect platen and, if necessary, remove any remaining material or material build up.
6. Place full drum on ram base.
7. Lower the ram and adjust the position of the drum relative to the platen. See **Start and Adjust Ram** on page 13.

Shutdown and Care of the Pump



1. Set the ram director valve to DOWN.
2. Follow the **Pressure Relief Procedure** on page 13.
3. Follow the pump shutdown instructions in separate pump manual.

Maintenance Procedures

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief** procedure.

Platen Maintenance

See FIG. 7. If the platen does not come out of the pail easily when the pump is being raised, the air assist tube or check valve may be plugged. A plugged valve prevents air from reaching the underside of the plate to assist in raising it from the pail.

1. Perform **Pressure Relief Procedure**, page 13. Disassemble air assist valve.
2. Clear air assist tube (F) in the platen. Clean all parts of valve and reassemble.
3. Remove bleed stick (EH) from platen. Push bleed stick through bleed relieve ports to remove material residue.

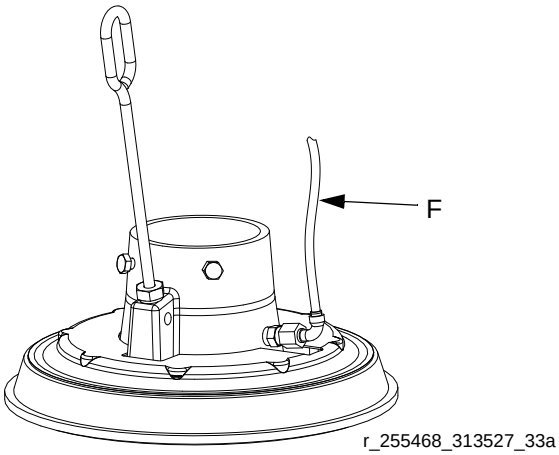


FIG. 7: Platen

Adjust Spacers

Use Platen with Tapered and Straight Sided Pails

The platen is supplied for use with 60 liter (16 gallon) straight sided pails, but only single wiper platens can be easily modified for use with tapered pails.

Use platen with tapered pails

1. *Working from the bottom*, use screwdriver to pry spacer (EG) loose. Work spacer upward completely above the flange of the platen. See FIG. 8.
2. By hand, angle spacer (EG) and work it off the plate, pulling it down over the flange and bottom wipers (EB).
3. Save spacer (EG), as it is required for other applications.

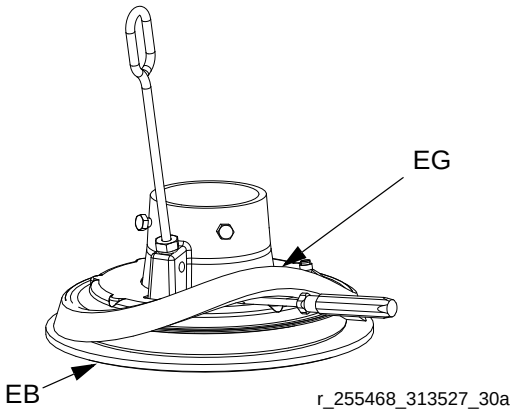


FIG. 8: Remove Spacer

Use platen with straight sided pail

1. Ensure large diameter of spacer (EG) is facing **down.** Work spacer (EG) up over the platen by hand completely above the flange of the platen.
2. *Working from the top*, use screwdriver to position spacer (EG) between flange and wipers (EB). See FIG. 9.

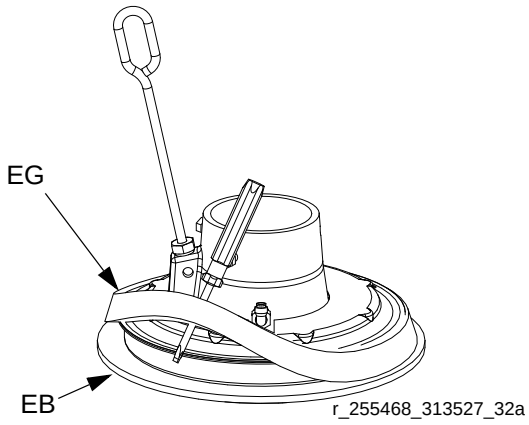


FIG. 9: Installing Spacer

Remove and Reinstall Wipers

Disassemble 60 Liter (16 Gallon) Wiper Assembly and 20 Liter (5 Gallon) Wiper Assembly

1. Remove wiper assembly; see FIG. 10:
   a. For all single wiper platens: Remove two clips (470) with needle nose pliers and remove platen cover (469).
   b. Remove eight nuts (459) that hold wiper assembly to platen casting (451) and remove wiper assembly.
   c. See **Reassemble 60 Liter (16 Gallon) Wiper Assembly and 20 Liter (5 Gallon) Wiper Assembly** to change wiper sizes, styles, or a complete wiper assembly.
2. Remove eight nuts (459) on wiper assembly.
3. Separate top plate (457), spacer (452), wiper(s) (453), wiper support (454), and bottom plate (455).
4. Clean, inspect, and replace worn components.

Reassemble 60 Liter (16 Gallon) Wiper Assembly and 20 Liter (5 Gallon) Wiper Assembly

1. Assemble wiper assembly.

   a. *For single wiper assemblies*: Place bottom plate (455) on flat surface. Place wiper support (454), wiper (453), spacer (452), and top plate (457) on bottom plate (455).

   b. *For single wiper assemblies with SST platens*: Place bottom plate (455) on flat surface. Place wiper support (454), wiper (453), flowered wiper support (460), PTFE spacer (452), and top plate (457) on bottom plate (455).

   c. *For double wiper assemblies*: Place bottom plate (455) on flat surface. Place wiper support (454), wiper (453), spacer (452), wiper (453) and top plate (457) on bottom plate (455).

   d. Install eight nuts (409) on outer ring. Torque to 45 in-lbs (61 N•m).

   e. Replace o-ring (456), or install new o-ring under platen casting (451). Use lubricant to hold in place.

   f. Install platen casting (451). Tighten with four nuts (509).

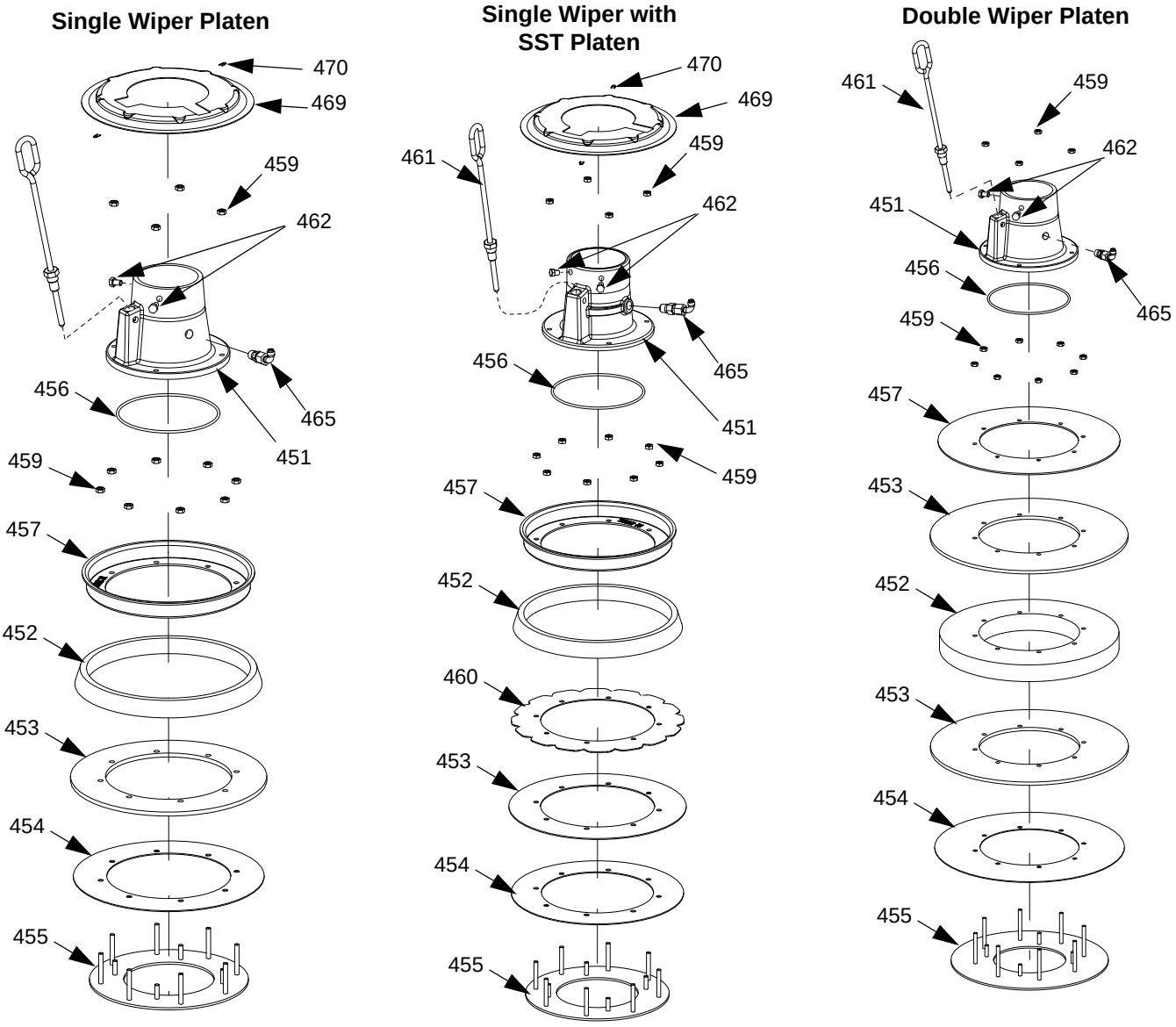


FIG. 10: 60 Liter (16 Gallon) Single and Double Wiper Assemblies

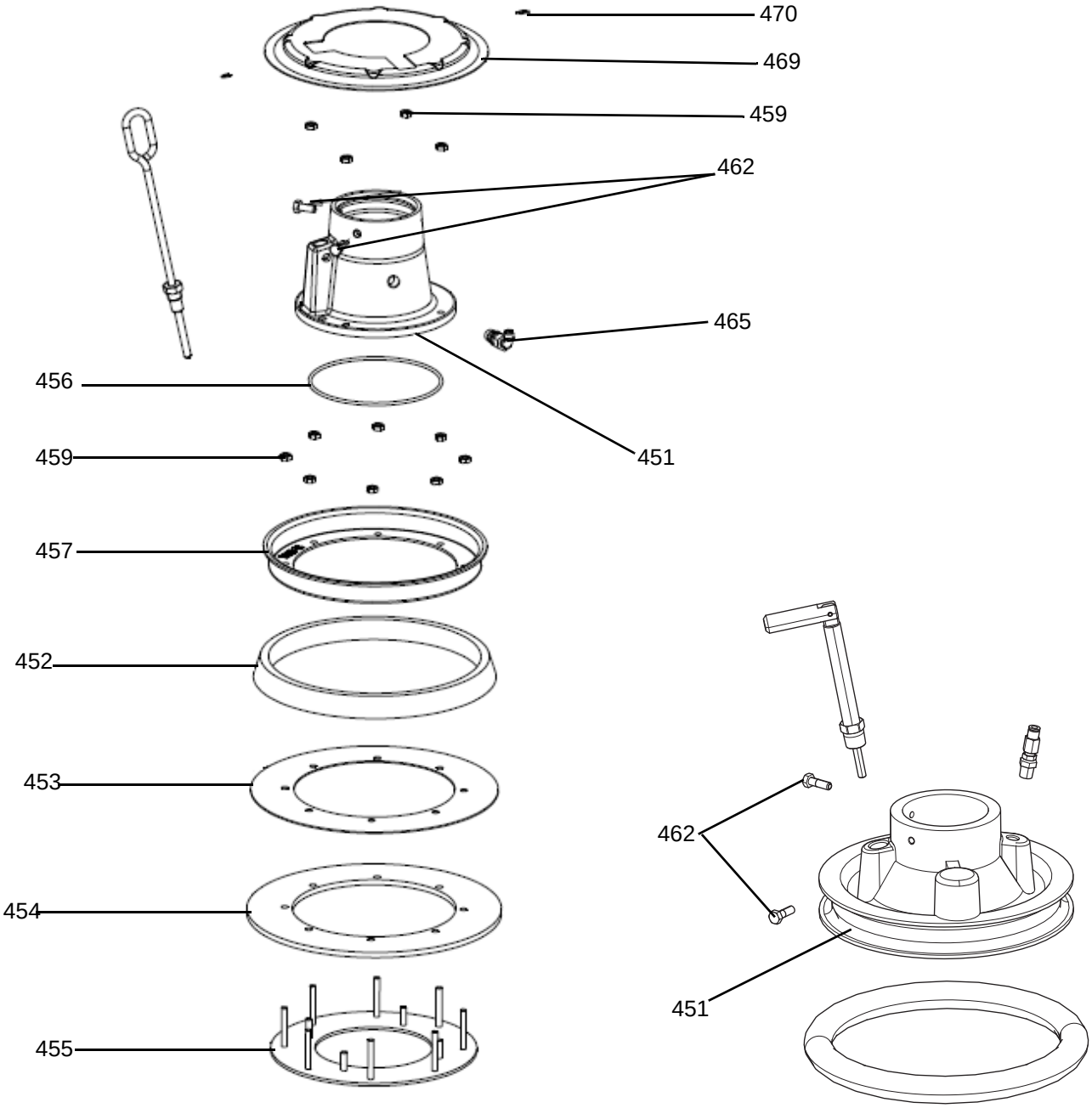


FIG. 11: 20 Liter (5 Gallon) Single Wiper Assemblies

Remove 55 Gallon Platen Wipers

1. To replace worn or damaged wipers, raise platen up out of drum. Remove drum from base. Wipe fluid off of platen.
2. Cut top and bottom wipers with knife and remove from platen. See FIG. 12.
3. For hose wiper, cut steel clamp with a tong after cutting top and bottom wipers with knife. Then remove them.

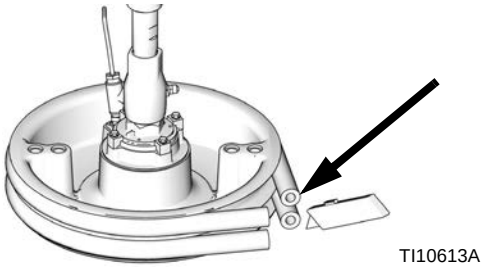


FIG. 12: Remove Wiper

Reinstall 55 Gallon Platen Wipers

1. Using a wooden or plastic tool to prevent damage to the wiper, clean all material from seal grooves.
2. *Working from the bottom*, angle one wiper over back of platen. See FIG. 13.
3. Insert wiper in top groove and run front of wiper into groove.
4. Insert second wiper in lower groove and run front of wiper into groove.
5. For hose wiper, insert the clamp into hose and bend hose around the platen groove, then tighten the clamp.
6. To tighten top and bottom hose wiper at opposite location (180 degree).
7. Lubricate outside of wiper with lubricant compatible with material being pumped. Check with material supplier.

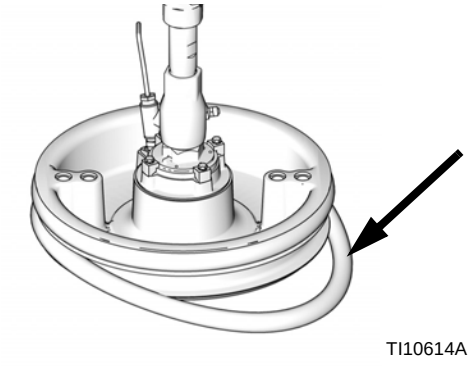
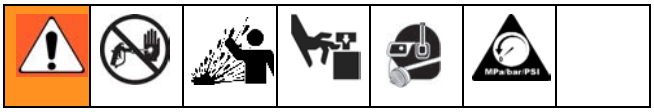


FIG. 13: Install Wiper

Troubleshooting



Check all possible problems before disassembling the ram, pump, or platen. Refer to the General Industry Supply Systems - Accessory Kits manual for descriptions of DataTrak diagnostic codes. Refer to **Check-Mate Pump Packages** in the Check-Mate Pump Packages, Instructions-Parts manual for pump troubleshooting.

Ram

Problem	Cause	Solution
Ram will not raise or lower.	Closed air valve or clogged air line.	Open, clear.
	Not enough air pressure.	Increase.
	Worn or damaged piston.	Replace. See **55 gallon Air Cylinder, 24R489** on page 40. See **5 gallon Air Cylinder, 24R640** on page 42.
	Hand valve closed or clogged.	Open, clear.
Ram raises and lowers too fast.	Air pressure is too high.	Decrease.
Air leaks around cylinder rod.	Worn rod seal.	Replace. See **55 gallon Air Cylinder, 24R489** on page 40. See **5 gallon Air Cylinder, 24R640** on page 42.
Fluid squeezes past ram plate wipers.	Air pressure too high.	Decrease.
	Worn or damaged wipers.	Replace. See **Remove and Reinstall Wipers** on page 16.
Pump will not prime properly or pumps air.	Closed air valve or clogged air line.	Open, clear.
	Not enough air pressure.	Increase.
	Worn or damaged piston.	Replace. See pump manual.
	Hand valve closed or clogged.	Open, clear. See **Platen Maintenance** on page 15.
	Hand valve is dirty, worn, or damaged.	Clean, service.
Air assist valve will not hold drum down or push plate up.	Closed air valve or clogged air line.	Open, clear. See **Platen Maintenance** on page 15.
	Not enough air pressure.	Increase.
	Valve passage clogged.	Clean. See **Platen Maintenance** on page 15.

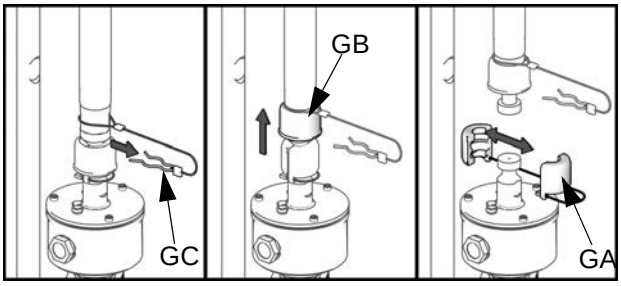
Repair

Replace Throat Seals

Quick Coupler

Remove wet cup from displacement pump while attached to the ram to replace throat seals.

1. Ensure displacement pump is at bottom of stroke.
2. Follow the **Pressure Relief Procedure** on page 13.
3. Remove Quick Coupler:
   Remove clip (GC), and slide coupling cover (GB) up to remove coupling (GA).



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4. Remove Threaded Coupler: (not shown)
   Loosen and remove coupling nut as described in the Check-Mate Pump Packages, Instructions-Parts manual.
5. Lift air motor rod to bring rod to top of stroke.
6. Remove wet cup and packing cartridge according to instructions in displacement pump manual(s).

Disconnect Pump from Platen

200 Liter (55 Gallon) Platen

1. Remove four hex screws, four clamps, and washers.
2. Carefully pull pump away to prevent damage to pump inlet and remove o-ring.

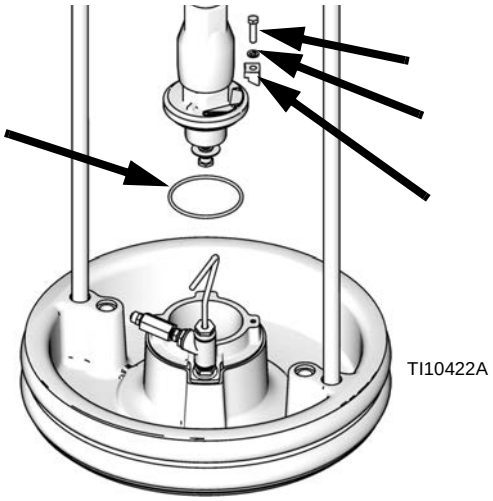

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FIG. 14: 200 Liter (55 Gallon) Mounting Kit

60 Liter (16 Gallon) Platen and 20 Liter (5 Gallon) Platen

1. Loosen two 5/16 in. screws from platen.
2. Carefully pull pump away to prevent damage to pump inlet.

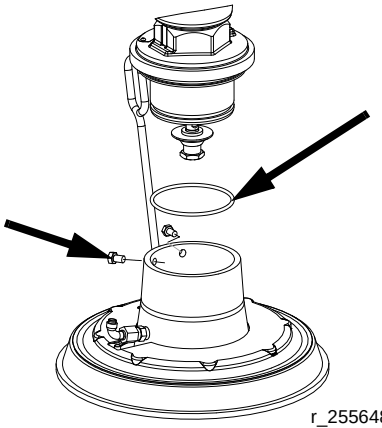

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FIG. 15: 60 Liter (16 Gallon) and 20 Liter (5 Gallon) Mounting Kit

Connect Platen

200 Liter (55 Gallon) Platen

1. Place o-ring from mounting kit 255392 on the platen. Place displacement pump onto platen. See FIG. 14.
2. Secure pump's intake flange to plate with screws, washers, and clamps included in mounting kit 255392.

60 Liter (16 Gallon) and 20 Liter (5 Gallon) Platen

NOTE: Before installing the 60 liter (16 gallon) platen or 20 liter (5 gallon) platen to a pump with an intake adapter, install adapter and o-ring from mounting kit 257630 using the two set screws. See FIG. 15.

1. Place o-ring from mounting kit 257630 on pump intake. Loosen mounting bracket screws and carefully lower pump onto o-ring and platen.
2. Secure pump's intake flange to plate with screws.

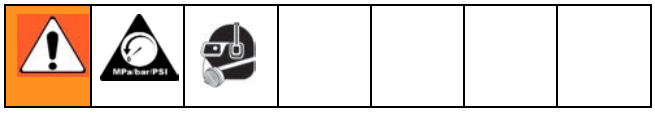
Remove Wipers

See **Remove and Reinstall Wipers** on page 15.

Install Wipers

See **Remove and Reinstall Wipers** on page 15.

Remove Displacement Pump



The procedure for removing your displacement pump depends on which air motor and platen your unit uses. Find your ram unit, air motor, and platen below to remove the displacement pump. Refer to your Check-Mate Pump Packages, Instructions-Parts manual to repair the displacement pump.

If the air motor does not require servicing, leave it attached to its mounting. If the air motor does need to be removed, see page 24.

1. Perform **Pressure Relief Procedure**, page 13.
2. See **Disconnect Displacement Pump** in the Check-Mate Pump Packages, Instructions-Parts manual.
3. Raise the air motor:
   a. *For 200 liter (55 gallon) platen:* Loosen nut under ram bar and thread it down the threaded rod to the lift ring adapter holding the motor. Use wrench on nut on top of ram bar to raise air motor.

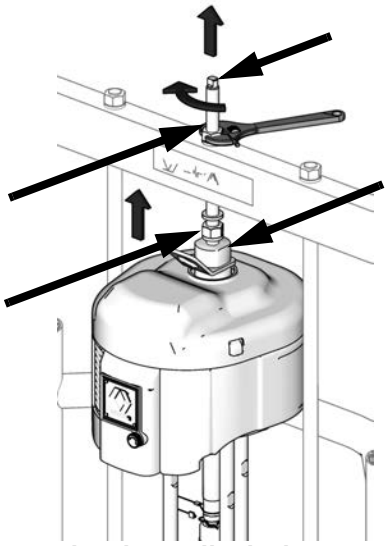


FIG. 16: 200 Liter (55 Gallon) Platen

   b. *For 60 liter (16 gallon) platen or 20 liter (5 gallon) platen:* Refer to ***Remove Air Motor*** *on page 24.*

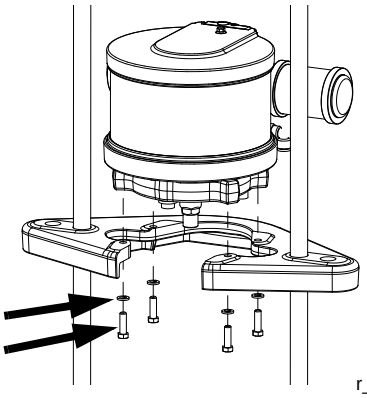


FIG. 17: 60 Liter (16 Gallon) Platen or 20 Liter (5 Gallon) Platen

4. See **Disconnect Pump from Platen** on page 21 to disconnect the platen from the displacement pump.
5. Use two people to lift out the displacement pump.

Install Displacement Pump

1. Insert displacement pump on platen. Follow **Connect Platen** steps on page 22.

2. See **Reconnect Displacement Pump** in the Check-Mate Pump Packages, Instructions-Parts manual.

3. Reconnect ground wire and air motor harness (units with Remote DataTrak) if they were disconnected.

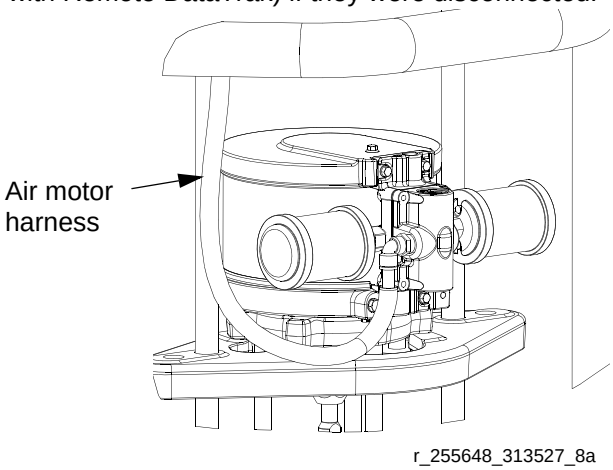


FIG. 18: Air Motor Harness

4. Connect air motor:

   a. *For 200 liter (55 gallon) platen:* Use wrench on nut on top of ram bar to lower air motor onto displacement pump. See FIG. 16 on page 22. Thread nut up and tighten it under ram bar. Tighten nut below the crossbar to 25 ft-lb (34 N•m) maximum.

   b. *For 60 liter (16 gallon) platen or 20 Liter (5 Gallon) Platen:* If the motor was removed, tighten set screws and washers on mounting bracket.

Remove Air Motor

1. Perform **Pressure Relief Procedure**, page 13.
2. See **Disconnect Displacement Pump** in the Check-Mate Pump Packages, Instructions-Parts manual.
3. Disconnect air hose from air motor. If using a remote DataTrak, detach electrical connections from the air motor.
4. Disconnect air motor:
   a. *For 200 liter (55 gallon) platen:* Loosen nut below crossbar. Use wrench to hold lift ring adapter n place and loosen threaded rod above crossbar with another wrench. See FIG. 19.

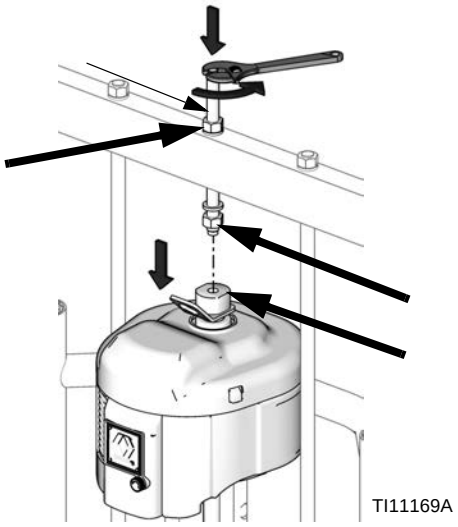


FIG. 19: 200 Liter (55 Gallon) Platen

   b. *For 60 liter (16 gallon) platen:* Remove screws and washers securing motor to mounting plate. See FIG. 20.

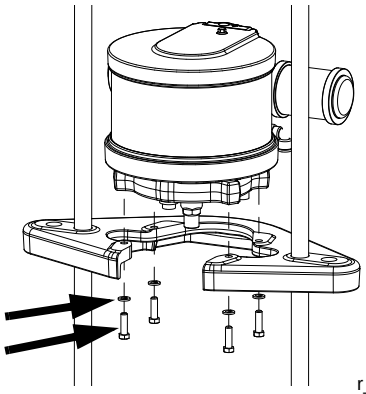


FIG. 20: 60 Liter (16 Gallon) Platen or 20 Liter (5 Gallon) Platen

Install Air Motor

200 liter (55 gallon) platen:

1. Using a capable hoist, insert tie rods into displacement pump and secure air motor to pump.

   a. See **Reconnect Displacement Pump** in the Check-Mate Pump Packages, Instructions-Parts manual.

   b. Install threaded rod through center hole in the crossbar. Install lock washers and nuts onto threaded rod, both above and below crossbar. Use wrench to hold lift ring adapter and tighten threaded rod into lift ring adapter using another wrench. See FIG. 21.

   c. Tighten nut below crossbar to 25 ft-lb (34 N•m) maximum.

   d. Tighten nut above crossbar to lock motor in place.

   e. Connect air hose to motor. If using a remote DataTrak, connect electrical connections to the air motor. See FIG. 18 on page 23.

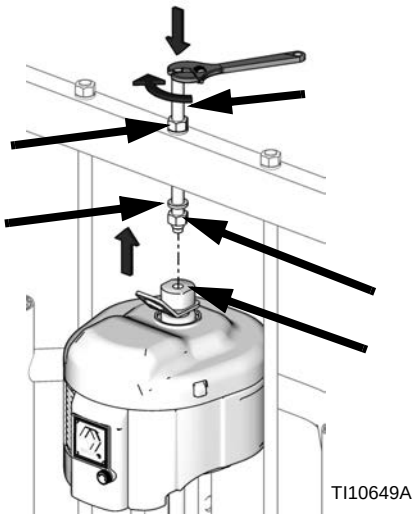


FIG. 21: 200 Liter (55 Gallon) Platen

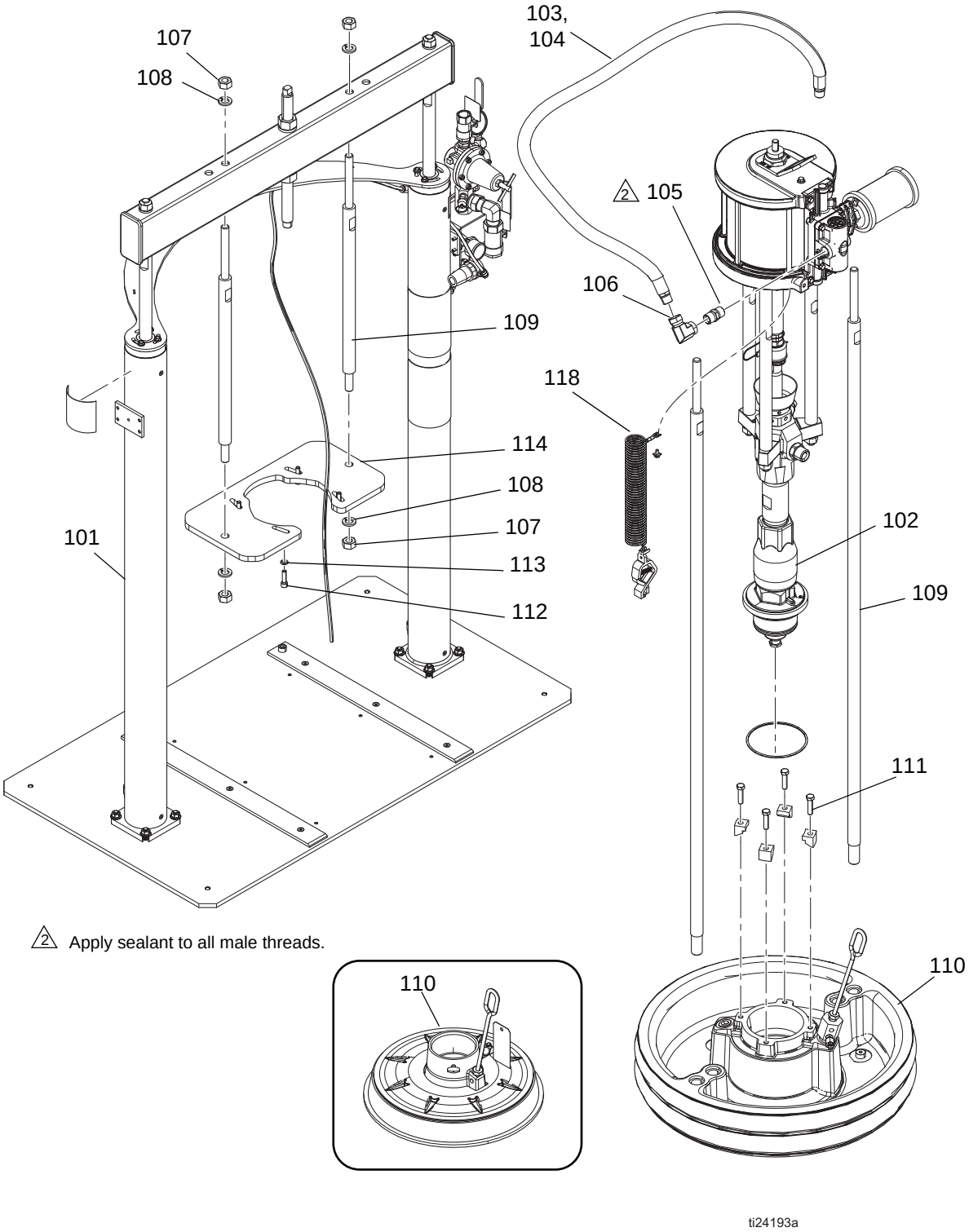
60 liter (16 gallon) platen or 20 liter (5 gallon) platen:

1. Attach motor to mounting bracket with screws and washers. See FIG. 20 on page 24.

2. Connect air hose to motor. If using a remote DataTrak, connect electrical connections to the air motor. See FIG. 18 on page 23.

Parts

System and Supply Unit



2 Apply sealant to all male threads.

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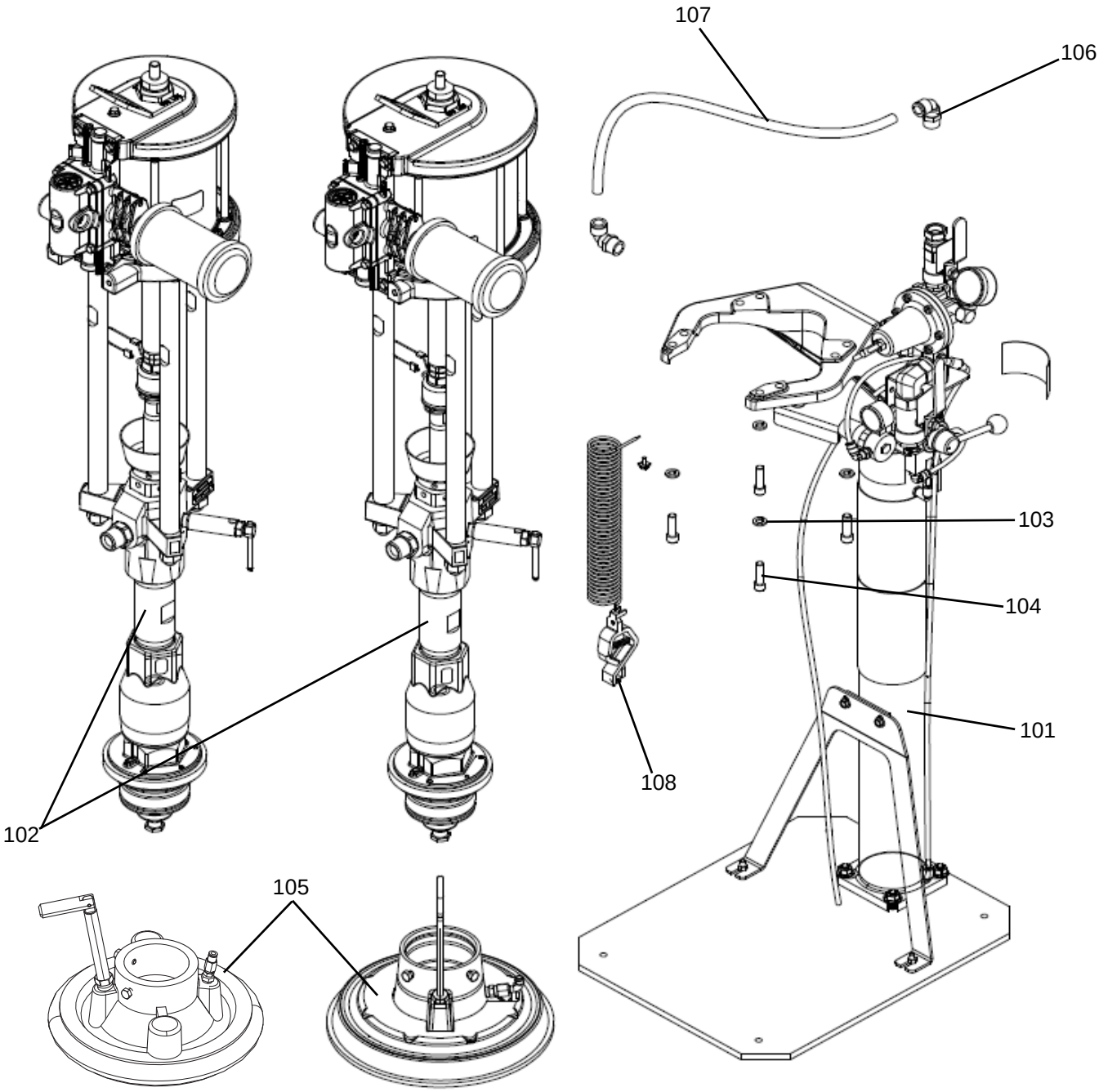
Ref	Part	Description	Quantity					
			24W286, SYSTEM, 61:1, 100cc, 200L, DM	24W288, SYSTEM, 61:1, 100cc, 60L, DM	24W289, SYSTEM, 34:1, 200cc, 200L, DM	24W290, SYSTEM, 61:1, 100cc, 200L, PLC	24W291, SYSTEM, 61:1, 100cc, 60L, PLC	24W292, SYSTEM, 34:1, 100cc, 200L, PLC
1	24V626	SUPPLY UNIT, 34:1, 3.0 ram, 200L			1			1
	24V917	SUPPLY UNIT, 61:1, 3.0 ram, 200L	1			1		
	24V918	SUPPLY UNIT, 61:1, 3.0 ram, 60L		1			1	
2 ❖	24W477	KIT, electronics, DM	1	1	1			
	24W478	KIT, electronics, PLC				1	1	1

❖ *Refer to specific component manual for more details.*

Ref	Part	Description	Quantity			
			24V626, SUPPLY UNIT, 34:1, 200L	24V917, SUPPLY UNIT, 61:1, 200L	24V918, SUPPLY UNIT, 61:1, 60L	25A685 SUPPLY UNIT, 61:1, 200L
101	24V622	RAM, pneumatic, 200L/60L	1	1	1	1
102	24V625	PUMP, assembly, 34:1, 200cc	1			
	24V623	PUMP, assembly, 61:1, 100cc		1	1	1
103	205418	HOSE, coupled	1	1	1	1
104	121144	HOLDER, cable tie, rotating	1	1	1	1
105	158491	FITTING, nipple	1	1	1	1
106	157416	FITTING, swivel, union, 90 degree	1	1	1	1
107	100127	NUT, 5/8-11	2	2	4	1
108	100128	WASHER, lock, 5/8	2	2	4	1
109	17A469	ROD, tie, adapter, 60L			2	
	16V176	ROD, tie, platen, 55gal	2	2		2
110	256755	PLATE, 60L, dual wiper, nitrile			1	
	255319	PLATE, wiper 55gal EPDM	1	1		
	24Y342	PLATEN, wiper 55gal, EPDM hose				1
111	255392	KIT, mounting, CM lower	1	1		1
112	109114	SCREW, M8x30mm			4	
113	104572	WASHER, lock spring			4	
114	24V759	PLATE, adapter, 60L			1	
118	238909	WIRE, grounding assembly	1	1	1	1
119*	206994	FLUID, TSL 8 oz bottle	1	1	1	1

* *Not shown.*

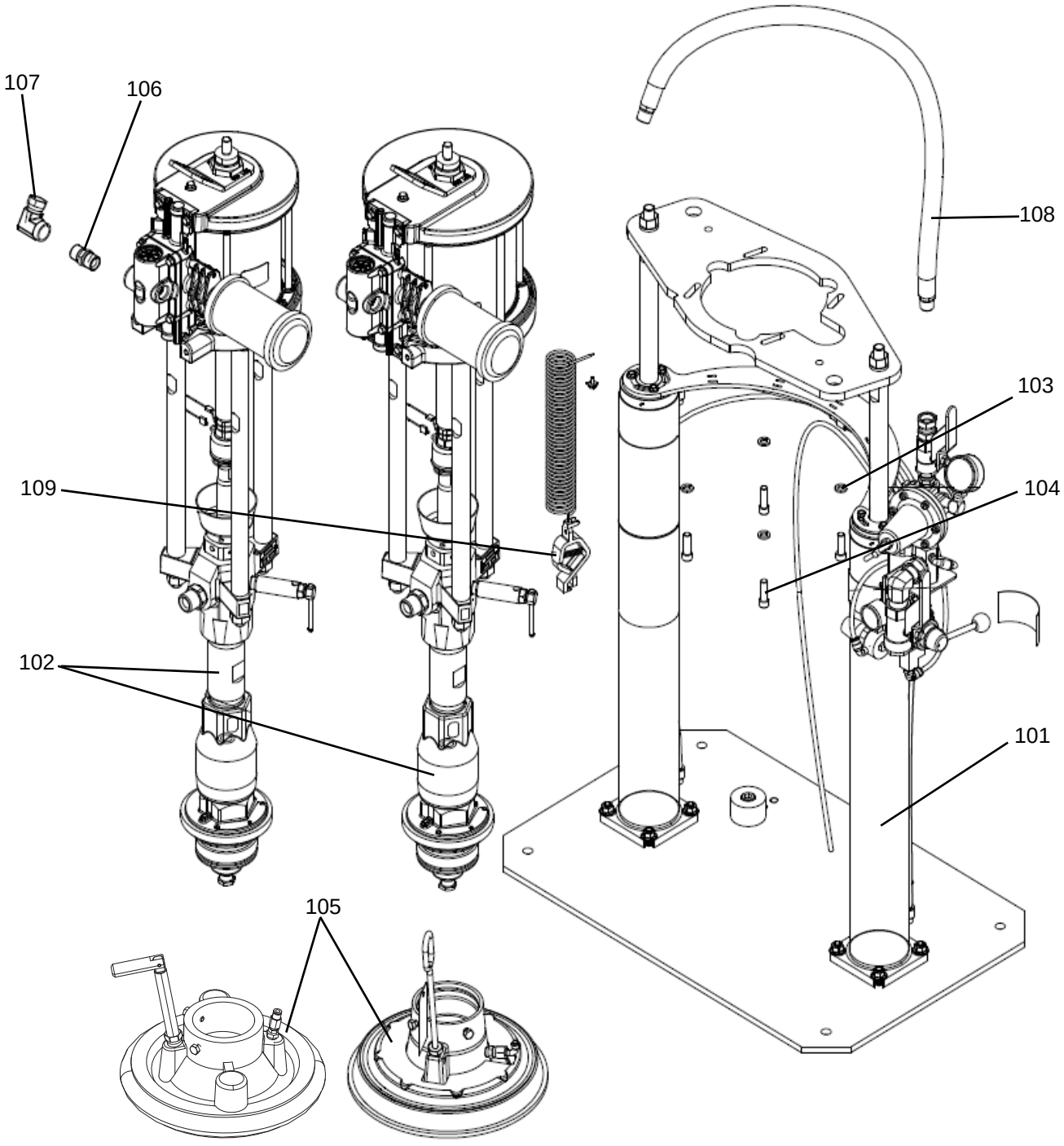


1 Apply sealant to all male threads.

Ref	Part	Description	Quantity			
			24V623 Pump, ASSY, 61:1, 100CC, MS	25A652 Pump, 40:1, SANIFORCE, CHECKMATE	256742 PLATEN, 20L, SINGLE WIPER, NITRILE	255419 PLATE, FOLLOWER, 5 GAL, PVC
1	25A653	SUPPLY UNIT, 61:1, S20, 20L	1		1	
	25A655	SUPPLY UNIT, 40:1, S20, 20L		1	1	
	25A667	SUPPLY UNIT, 61:1, S20, 20L	1			1
	25A669	SUPPLY UNIT, 40:1, S20, 20L		1		1
	25A695	SUPPLY UNIT, GI, 61:1, S20, 20L	1		1	
	25A697	SUPPLY UNIT, GI, 40:1, S20, 20L		1	1	
	25A699	SUPPLY UNIT, GI, 61:1, S20, 20L	1			1
	25A701	SUPPLY UNIT, GI, 40:1, S20, 20L		1		1

Ref	Part	Description	Quantity							
			25A653 SUPPLY UNIT, 61:1, S20, 20L	25A655 SUPPLY UNIT, 40:1, S20, 20L	25A667 SUPPLY UNIT, 61:1, S20, 20L	25A669 SUPPLY UNIT, 40:1, S20, 20L	25A695 SUPPLY UNIT, GI, 61:1, S20, 20L	25A697S UPPLY UNIT, GI, 40:1, S20, 20L	25A699 SUPPLY UNIT, GI, 61:1, S20, 20L	25A701 SUPPLY UNIT, GI, 40:1, S20, 20L
101	25A651	KIT, ram, sp, assembly	1	1	1	1	1	1	1	1
102	24V623	PUMP, asst, 61:1, 100cc, ms	1		1		1		1	
	25A652	PUMP, assy, 40:1, 100cc, ms		1		1		1		1
103	100133	WASHER, lock, 3/8	4	4	4	4	4	4	4	4
104	C19839	SCREW, cap, socket, hd	4	4	4	4	4	4	4	4
105	256742	PLATEN, 20L, single wiper, nitrile	1		1		1		1	
	255419	PLATE, follower, 5 gal, pvc		1		1		1		1
106	15V204	FITTING, elbow, swivel, 1/2 TX 1/2 MNPT	2	2	2	2	2	2	2	2
107	061513	TUBE, polyurethane, rnd	1	1	1	1	1	1	1	1
108	238909	WIRE, grounding assembly	1	1	1	1	1	1	1	1
109	206994*	FLUID, TSL, 8 oz bottle	1	1	1	1	1	1	1	1

** Not Shown*



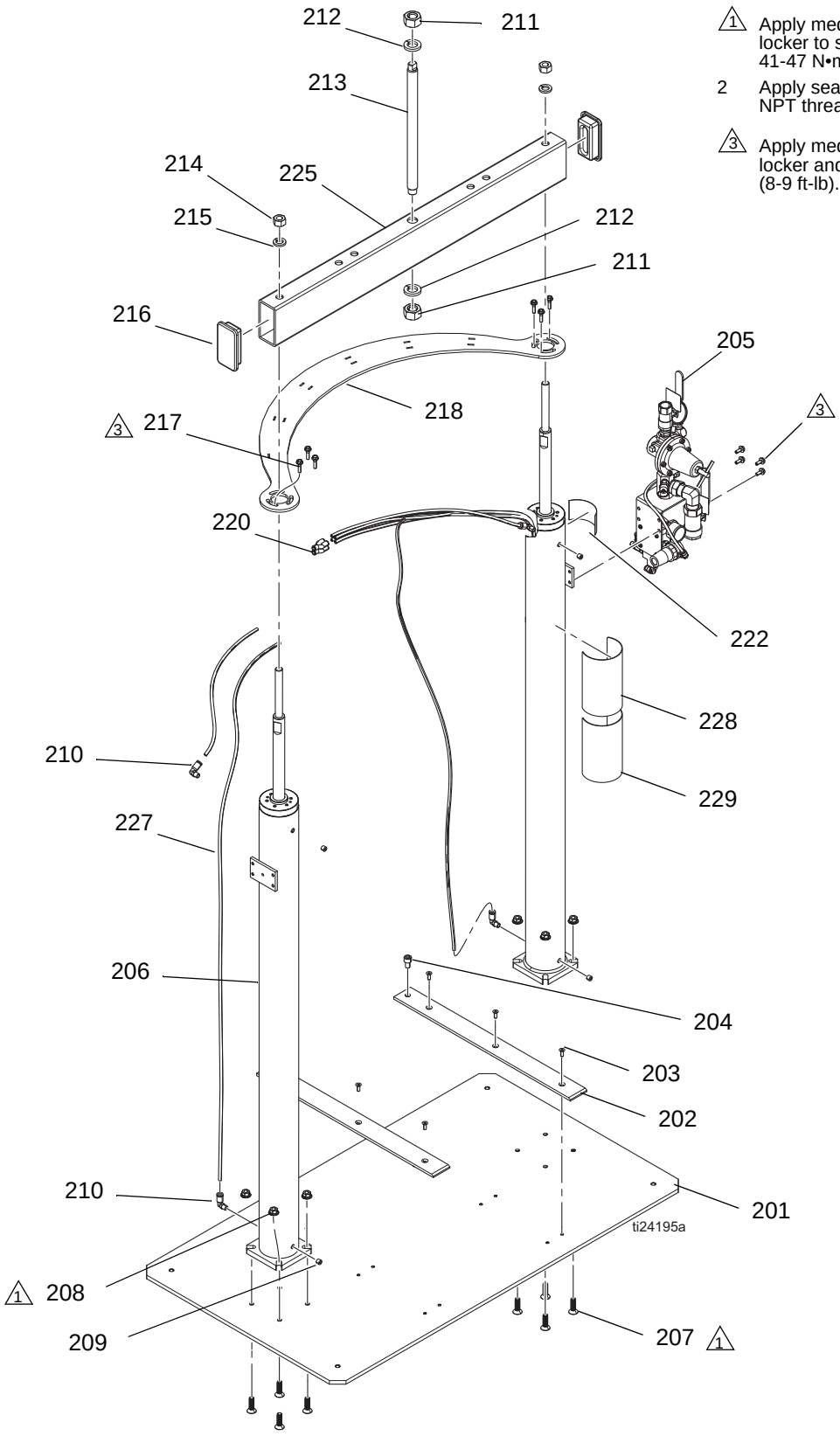
1 Apply sealant to all male threads.

Ref	Part	Description	Quantity			
			24V623 Pump, ASSY, 61:1, 100CC, MS	25A652 Pump, 40:1, SANIFORCE, CHECKMATE	256742 PLATEN, 20L, SINGLE WIPER, NITRILE	255419 PLATE, FOLLOWER, 5 GAL, PVC
1	25A654	SUPPLY UNIT, 61:1, D20, 20L	1		1	
	25A656	SUPPLY UNIT, 40:1, D20, 20L		1	1	
	25A666	SUPPLY UNIT, 61:1, D20, 20L	1			1
	25A668	SUPPLY UNIT, 40:1, D20, 20L		1		1
	25A694	SUPPLY UNIT, GI, 61:1, D20, 20L	1		1	
	25A696	SUPPLY UNIT, GI, 40:1, D20, 20L		1	1	
	25A698	SUPPLY UNIT, GI, 61:1, D20, 20L	1			1
	25A700	SUPPLY UNIT, GI, 40:1, D20, 20L		1		1

Ref	Part	Description	Quantity							
			25A654 SUPPLY UNIT, 61:1, D20, 20L	25A656 SUPPLY UNIT, 40:1, D20, 20L	25A666 SUPPLY UNIT, 61:1, D20, 20L	25A668 SUPPLY UNIT, 40:1, D20, 20L	25A694 SUPPLY UNIT, GI, 61:1, D20, 20L	25A696 SUPPLY UNIT, GI, 40:1, D20, 20L	25A698 SUPPLY UNIT, GI, 61:1, D20, 20L	25A700 SUPPLY UNIT, GI, 40:1, D20, 20L
101	25A650	KIT, ram,	1	1	1	1	1	1	1	1
102	24V623	PUMP, asst, 61:1, 100cc, ms	1		1		1		1	
	25A652	PUMP, assy, 40:1, 100cc, ms		1		1		1		1
103	100133	WASHER, lock, 3/8	4	4	4	4	4	4	4	4
104	C19839	SCREW, cap, socket, hd	4	4	4	4	4	4	4	4
105	256742	PLATEN 20L, single wiper, nitrile	1		1		1		1	
	255419	PLATE, follower, 5 gal, pvc		1		1		1		1
106	158491	PITTING, swivel, union, 90 deg	1	1	1	1	1	1	1	1
107	157416	FITTING, nipple	1	1	1	1	1	1	1	1
108	205418	HOSE, coupled	1	1	1	1	1	1	1	1
109	238909	WIRE, grounding assembly	1	1	1	1	1	1	1	1
133 9910	206994*	FLUID, TSL, 8 oz bottle	1	1	1	1	1	1	1	1

** Not Shown*

Pneumatic Ram, 24V622

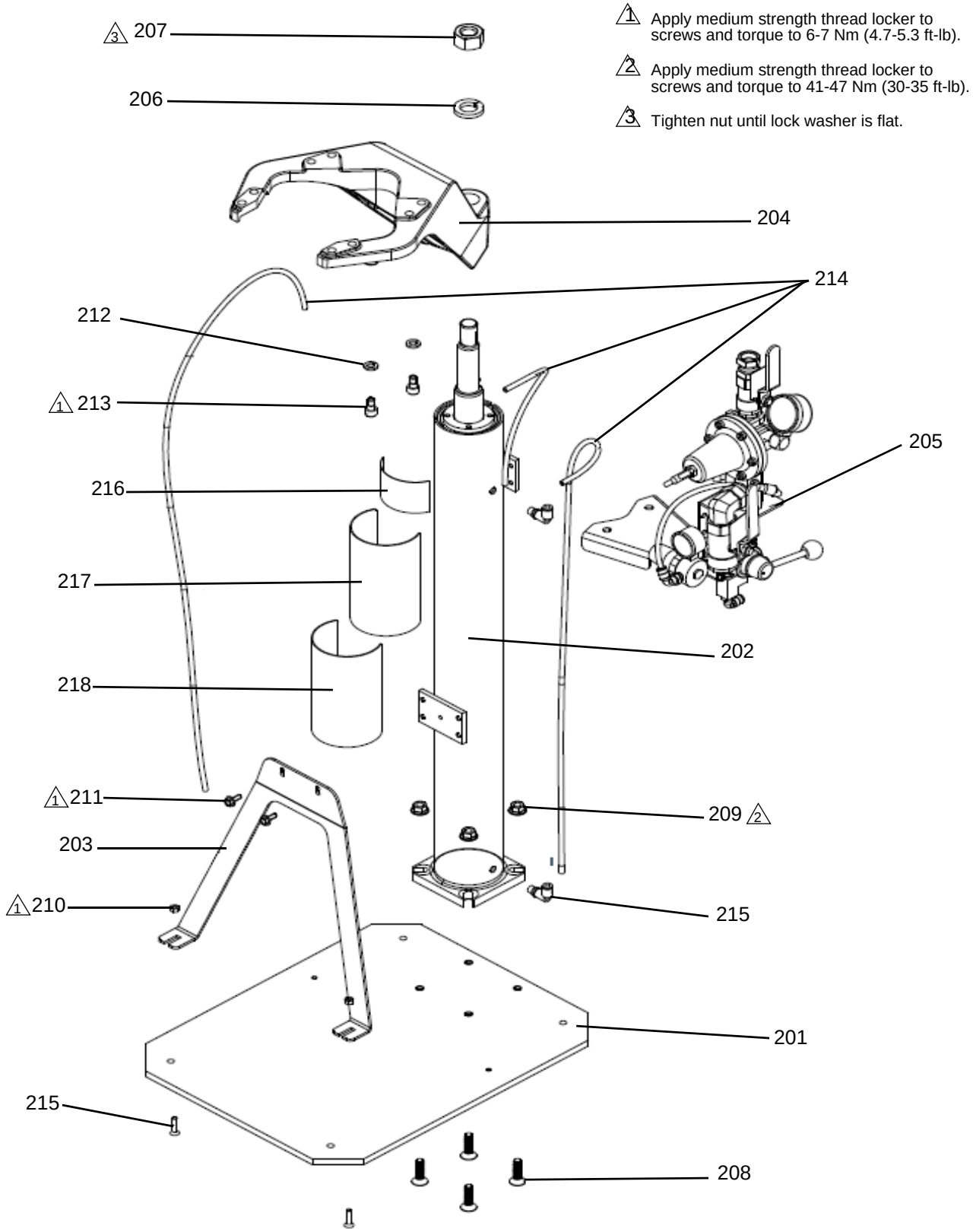


Ref	Part	Description	Quantity
201	24V758	BASE, ram, GI, painted	1
202	16V208	GUIDE, drum, UHMW	2
203	127036	SCREW, machine, M6x16mm	6
204	127668	SCREW, cap, M10x16mm	2
205	24V841	REGULATOR, control, ram	1
206	24R489	RAM, assembly, air cylinder	2
207	127669	SCREW, cap, M10x35mm	8
208	127076	NUT, hex, M10	8
209	100139	PLUG, pipe	5
210	597151	FITTING, elbow	4
211	101535	NUT, full hex, 7/8-9	2
212	101533	WASHER, spring lock, 7/8	2
213	15J992	ROD, threaded	1
214	100127	NUT, hex, 5/8-11	2
215	100128	WASHER, lock, 5/8	2
216	189559	CAP, end	2
217	127618	SCREW, M6x25mm	6
218	16V108	SUPPORT, cylinder	1
220	115287	FITTING, Y tube	2
222▲	15J074	LABEL, safety, crush & pinch	1
225	16V166	BEAM, ram	1
227	C12509	TUBE, round	24
228▲	15G280	LABEL, safety, warning, multiple	1
229▲	16X831	LABEL, safety	1

▲ *Replacement Danger and Warning labels, tags and cards are available at no cost.*

* *Not shown.*

Pneumatic Ram, 25A651

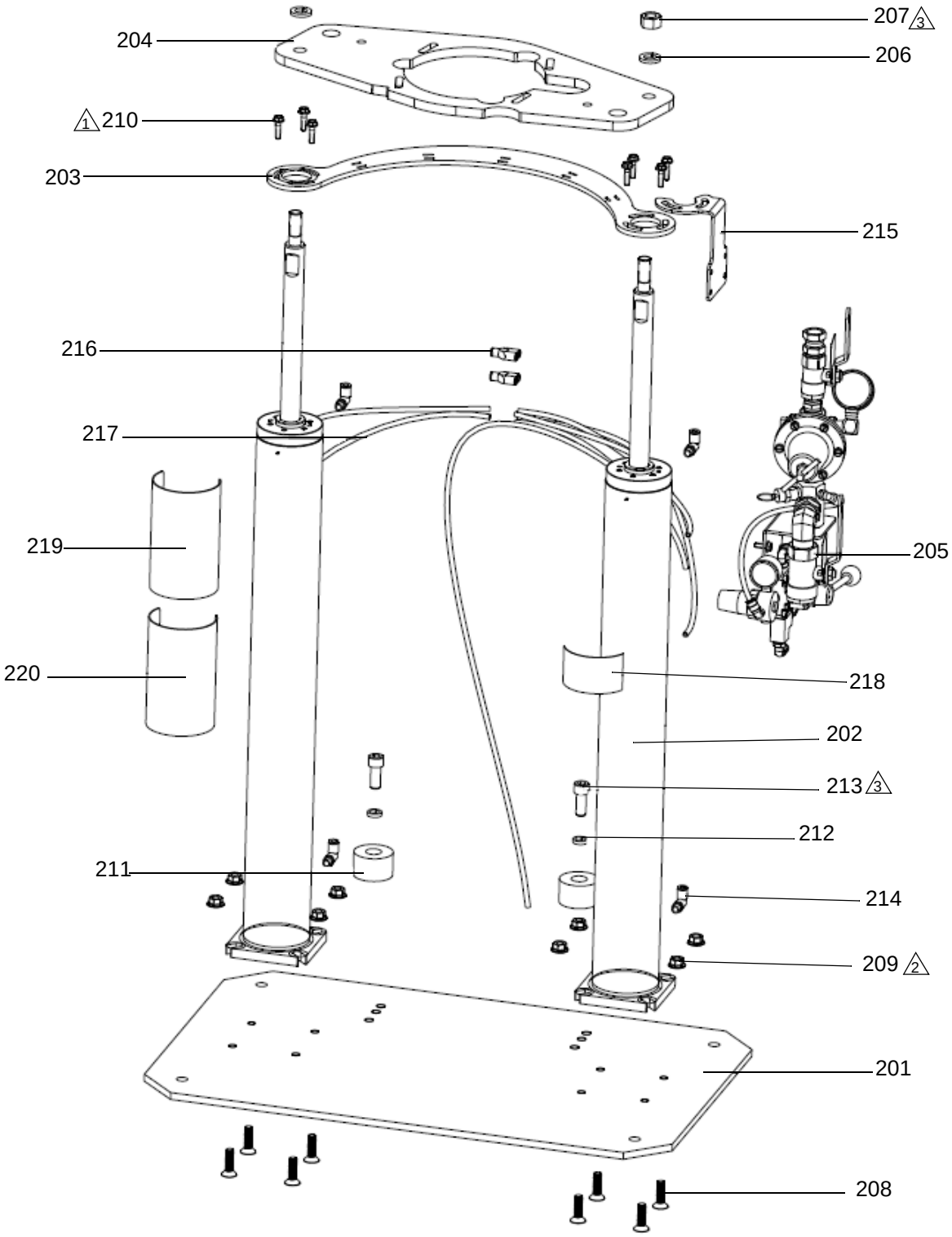


Ref	Part	Description	Quantity
201	17K568	BASE, ram, sp	1
202	24R640	RAM, assy, air cylinder, 5 gallon	1
203	24R688	GUSSET, sp ram	1
204	15T888	BRACKET, motor mount	1
205	25A644	REGULATOR, control, ram	1
206	101533	WASHER, spring lock	1
207	101535	NUT, full hex	1
208	127669	SCREW, cap, flat head, M10X35	4
209	127076	NUT, hex, flange, serrated, M10	4
210	114816	NUT, hex	2
211	114182	SCREW, M6X16	2
212	100133	WASHER, lock, 3/8	2
213	121293	SCREW, cap, socket head	2
214	C12509	TUBE, nylon, rnd	14
215	597151	FITTING, elbow	2
216▲	15J074	LABEL, safety, crush & pinch	1
217▲	15F674	LABEL, safety, warning, multiple	1
218▲	17L712	LABEL, safety, warning, multiple	1
219	070269*	SEALANT, anaerobic	1

▲ *Replacement Danger and Warning labels, tags and cards are available at no cost.*

**Not shown.*

Pneumatic Ram, 25A650



Ref	Part	Description	Quantity
201	17K572	BASE, ram, dp	1
202	25A626	RAM, assy, air cylinder, 3.0 ID	1
203	25A663	BRACKET, tiebar, ram 3.0”, silver	1
204	25A391	BRACKET, motor, ram, 3.0”, SGAL	1
205	24V841	REGULATOR, control, ram	1
206	100128	WASHER, lock	2
207	100127	NUT, mscr, hex	2
208	127669	SCREW, cap, flat head, M10X35	8
209	127076	NUT, hex, flange, serrated, M10	8
210	127618	SCREW, mach, hex flange	7
211	C32467	STOP, drum	2
212	C38185	WASHER, lock	2
213	C19853	SCREW, cap, socket, HD	2
214	597151	FITTING, elbow	4
215	17K571	BRACKET, air kit	1
216	115287	TUBE, Y, 1/4”	2
217	C12509	TUBE, nylon, rnd	21.5
218▲	15J074	LABEL, safety, crush & pinch	1
219▲	15F674	LABEL, safety, warning, multiple	1
220▲	17L712	LABEL, safety, warning, multiple	1
221	070269*	SEALANT, anaerobic	1

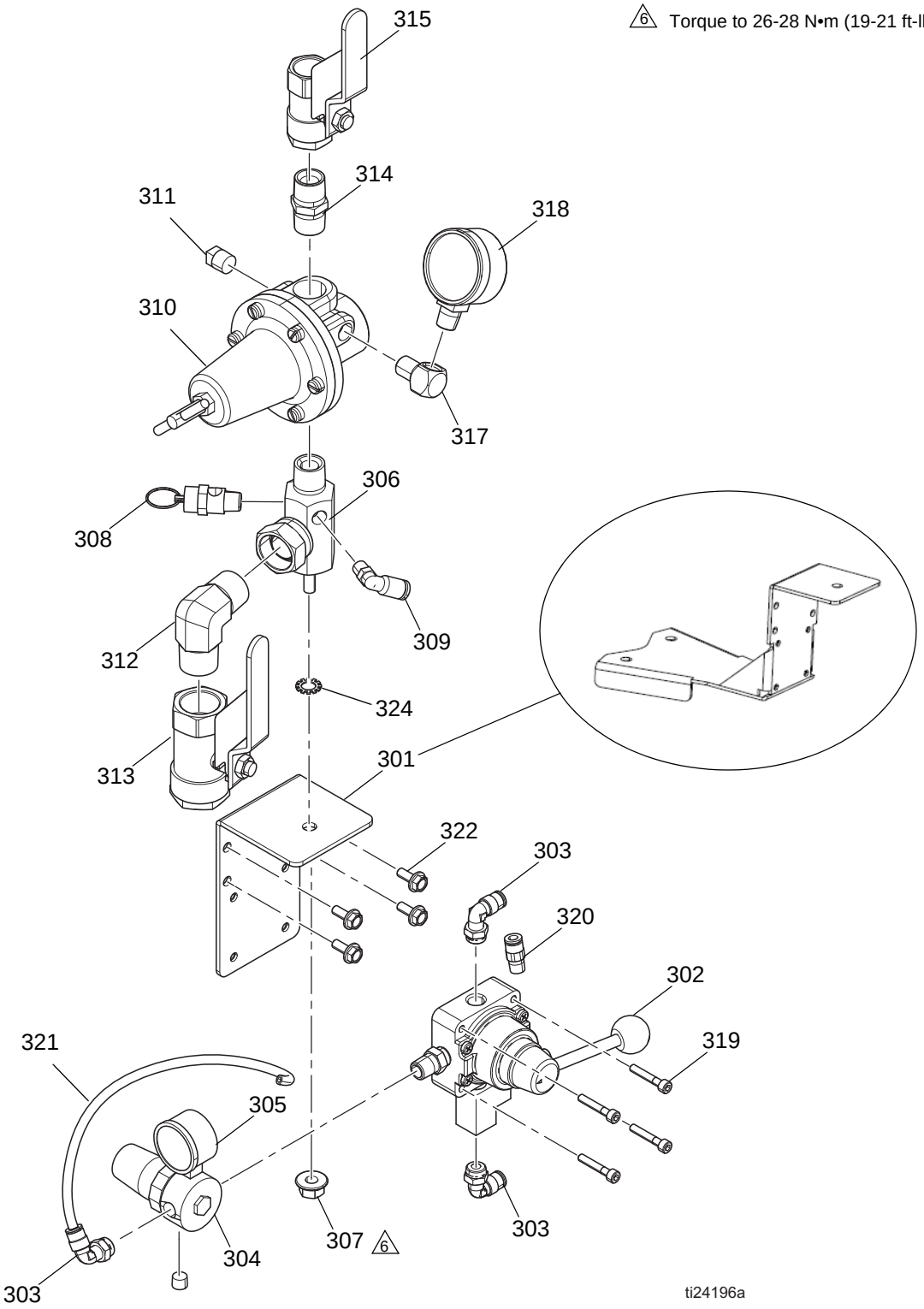
▲ *Replacement Danger and Warning labels, tags and cards are available at no cost.*

**Not shown.*

Ram Control, 24V841 / 25A644

1 Apply sealant to all non-swivel NPT threads.

6 Torque to 26-28 N•m (19-21 ft-lb).

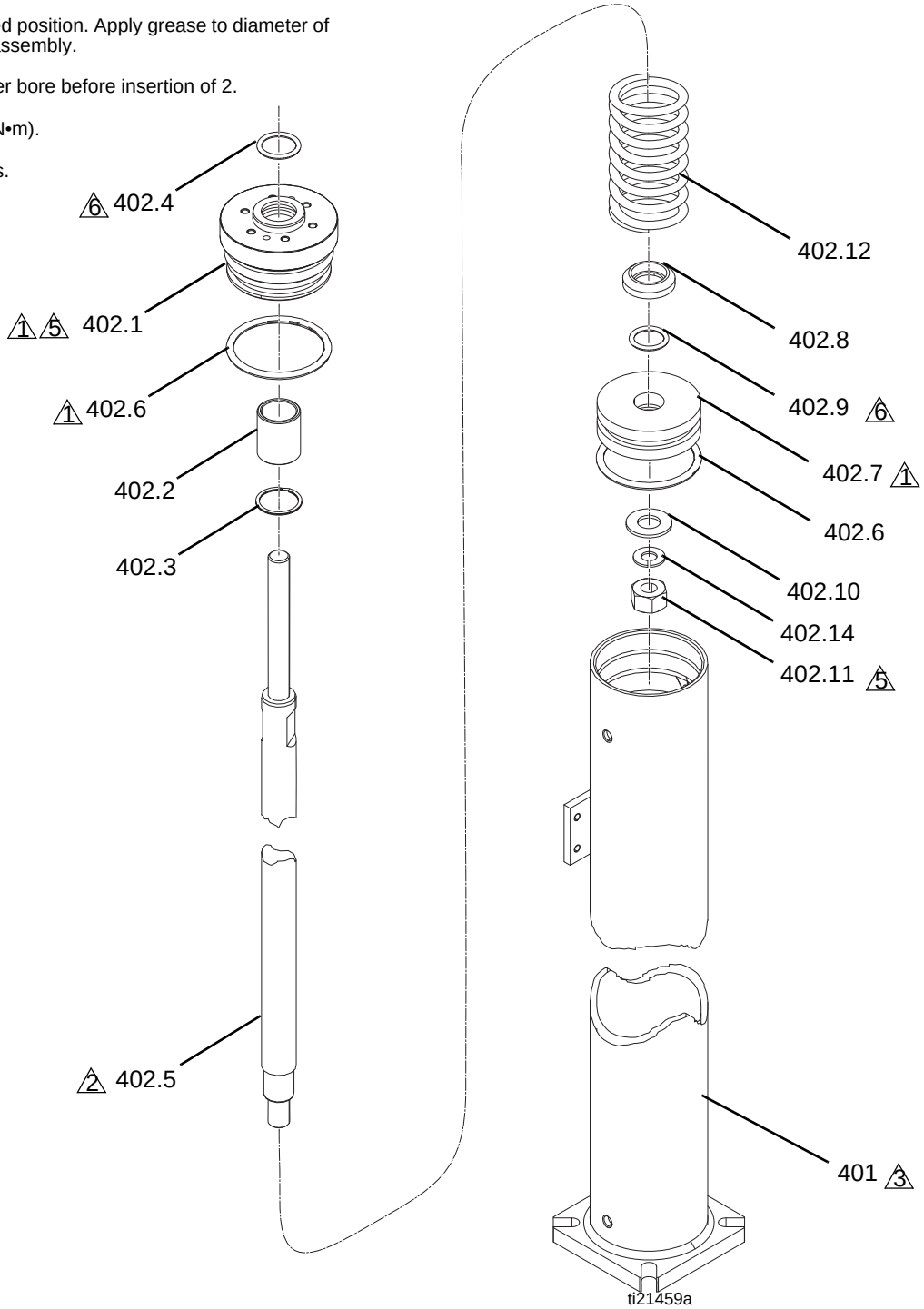


Ref	Part	Description	Quantity	
			24V841	25A644
301	24V801	BRACKET, controls, ram, painted	1	
	25A658			1
302	127702	VALVE, control, ram	1	1
303	121022	FITTING, elbow, male, 1/4 NPT	1	1
304	110318	REGULATOR, air, 1/4 NPT	3	3
305	110319	GAUGE, press, air, 1/8 NPT	1	1
306	206205	MANIFOLD, air	1	1
307	127076	NUT, hex, M10	1	1
308	113498	VALVE, safety	1	1
309	597151	FITTING, elbow	1	1
310	206197	REGULATOR, air	1	1
311	100509	PLUG, pipe	1	1
312	295847	FITTING, elbow	1	1
313	113332	VALVE, ball, vented	1	1
314	158491	FITTING, nipple	1	1
315	113331	VALVE, ball, vented	1	1
316*	190451	UNION, adapter	1	1
317	100840	FITTING, elbow, street	1	1
318	100960	GAUGE, press air	1	1
319	121194	SCREW, M5x30mm	4	4
320	120388	FITTING, tube	1	4
321	C12509	TUBE, nylon	1.25	1.25
322	114182	SCREW, M6x16mm	4	4
324	100639	WASHER, lock, 3/8	1	1

* *Not shown.*

55 gallon Air Cylinder, 24R489

1. Apply grease to o-rings and threads of 2 prior to assembly.
2. Install 2 in fully retracted position. Apply grease to diameter of shaft inside 1 prior to assembly.
3. Add lubricant to cylinder bore before insertion of 2.
5. Torque to 30 ft-lb (41 N•m).
6. Apply grease to o-rings.



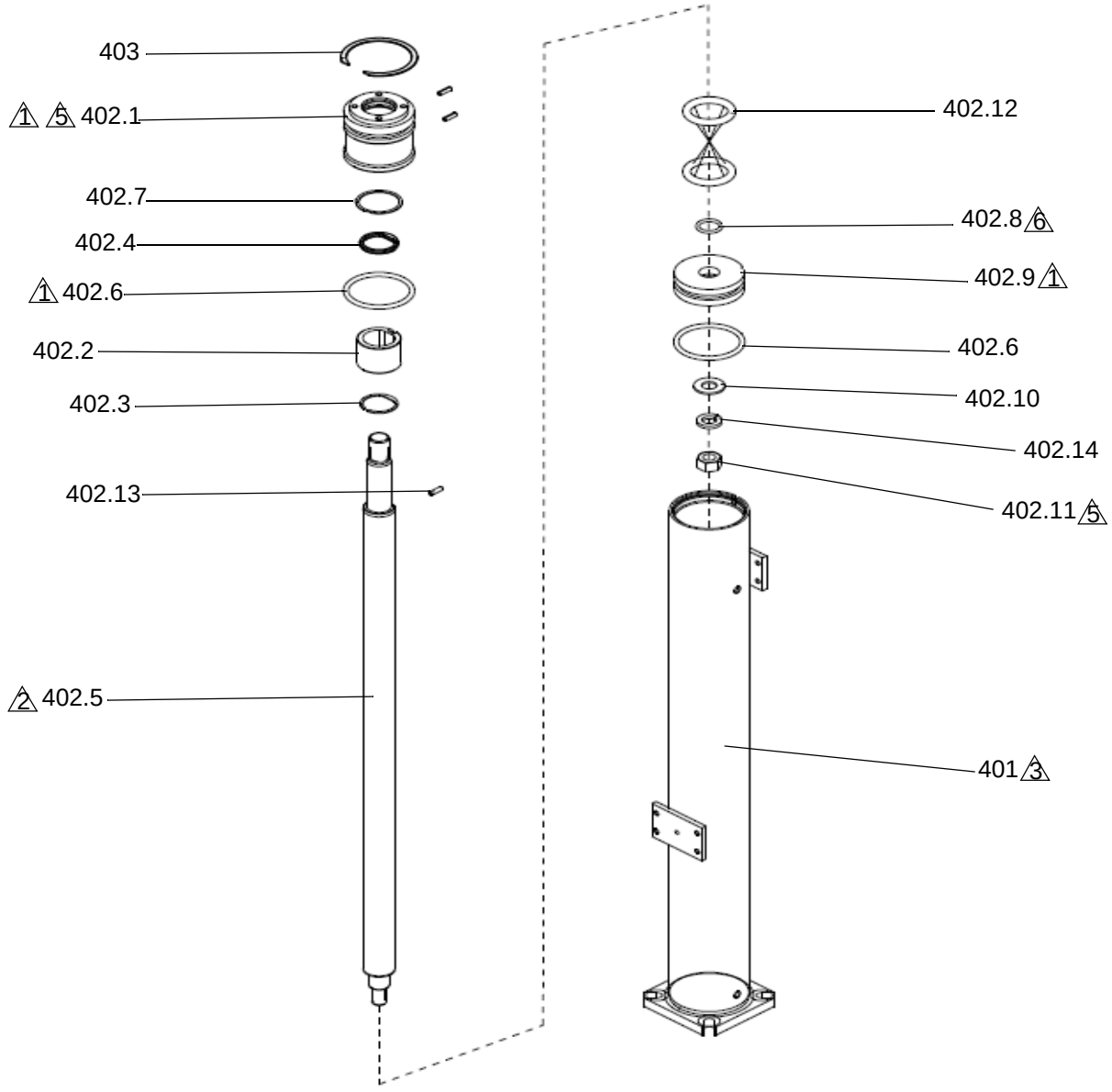
Ref	Part	Description	Quantity
401	---	RAM, tube, assembly	1
402	---	PISTON, rod, assembly	1
402.1	---	CAP, bearing, air cylinder	1
402.2◆	---	BEARING, air cylinder	1
402.3◆	---	RING, retaining, spiral	1
402.4◆	---	PACKING, o-ring, 214	1
402.5	16V078	SHAFT, piston, air cylinder	1
402.6◆	---	PACKING, o-ring, buna-n	2
402.7	183943	PISTON	1
402.8◆	---	GUIDE, spring	1
402.9◆	---	PACKING, o-ring	1
402.10◆	---	WASHER, plain, 5/8	1
402.11◆	---	NUT, hex, 5/8-11	1
402.12◆	---	SPRING, compression	1
402.14◆	---	WASHER, lock, 5/8	1

◆ *Parts available in kit 24T006.*

--- *Not available for individual sale.*

5 gallon Air Cylinder, 24R640

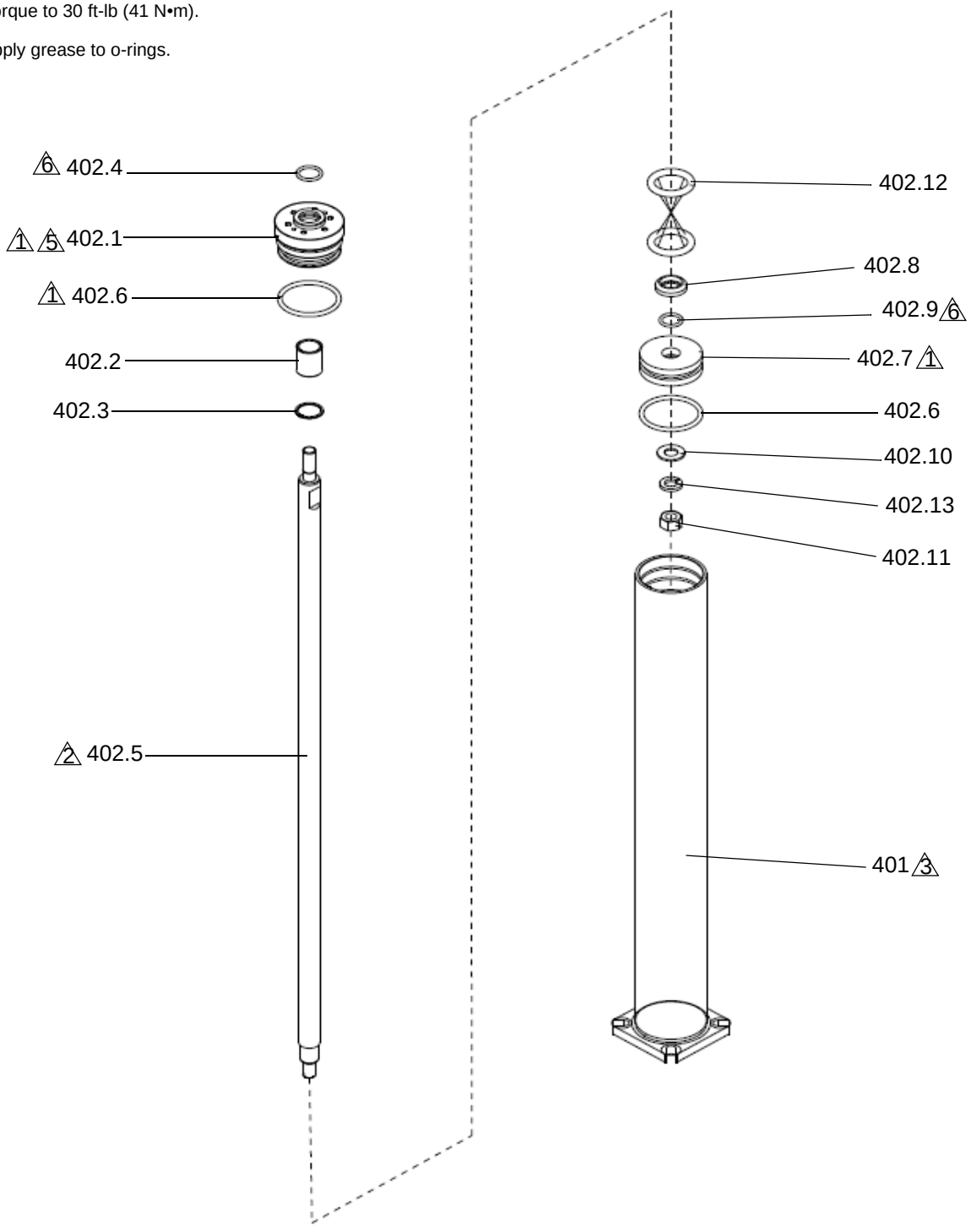
1. Apply grease to o-rings and threads of 2 prior to assembly.
2. Install 2 in fully retracted position. Apply grease to diameter of shaft inside 1 prior to assembly.
3. Add lubricant to cylinder bore before insertion of 2.
5. Torque to 30 ft-lb (41 N•m).
6. Apply grease to o-rings.



Ref	Part	Description	Quantity
401	---	RAM, tube, assembly	1
402	---	PISTON, rod, assembly	1
402.1	---	CAP, bearing, air cylinder	1
402.2	---	BEARING, air cylinder	1
402.3	---	RING, retaining, spiral	1
402.4	---	SEAL, dshaped ucup	1
402.5	16V170	SHAFT, piston, air cylinder	1
402.6	---	PACKING, o-ring, buna-n	2
402.7	---	RING, retaining	1
402.8	---	PACKING, o-ring	1
402.9	183943	PISTON	1
402.10	---	WASHER, plain	1
402.11	---	NUT, MSCR, hex	1
402.12	---	SPRING, compression	1
402.13	---	RING, snap	3
402.14	---	WASHER, lock	1
403	---		1

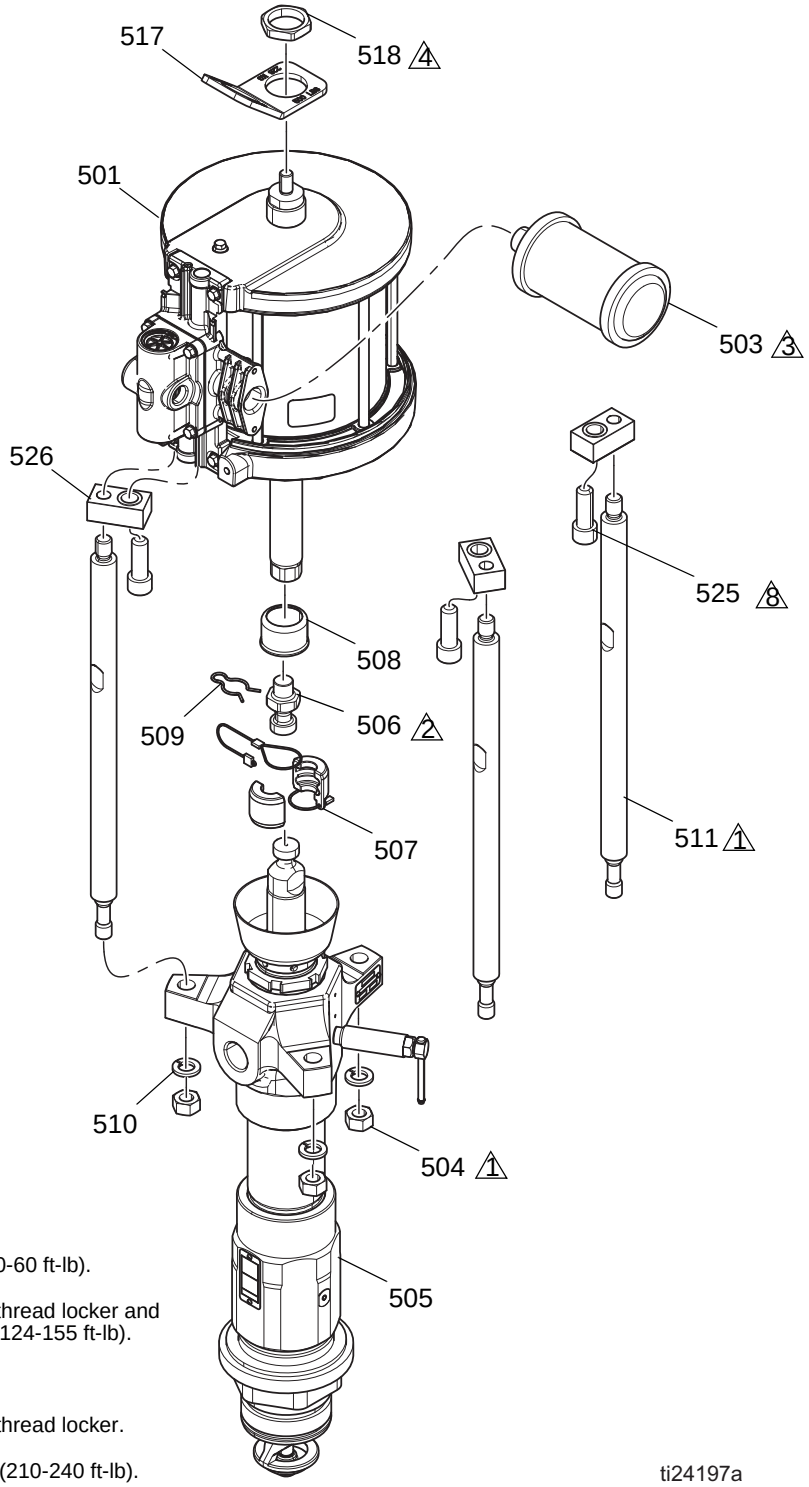
5 Gallon Air Cylinder, 25A626

1. Apply grease to o-rings and threads of 2 prior to assembly.
2. Install 2 in fully retracted position. Apply grease to diameter of shaft inside 1 prior to assembly.
3. Add lubricant to cylinder bore before insertion of 2.
5. Torque to 30 ft-lb (41 N•m).
6. Apply grease to o-rings.



Ref	Part	Description	Quantity
401	---	RAM, tube, assembly	1
402	---	PISTON, rod, assembly	1
402.1	---	CAP, bearing, air cylinder	1
402.2	---	BEARING, air cylinder	1
402.3	---	RING, retaining, spiral	1
402.4	---	PACKING, o-ring	1
402.5	17C803	SHAFT, piston, air cylinder	1
402.6	---	PACKING, o-ring, buna-n	2
402.7	183943	PISTON	1
402.8	---	GUIDE, spring	1
402.9	---	PACKING, o-ring	1
402.10	---	WASHER, plain	1
402.11	---	NUT, MSCR, hex	1
402.12	---	SPRING, compression	1
402.13	---	WASHER, lock	1

Pump Assembly



1 Torque to 68-81 N•m (50-60 ft-lb).

2 Apply medium strength thread locker and torque to 196-210 N•m (124-155 ft-lb).

3 Apply pipe sealant.

4 Apply medium strength thread locker.

8 Torque to 284-325 N•m (210-240 ft-lb).

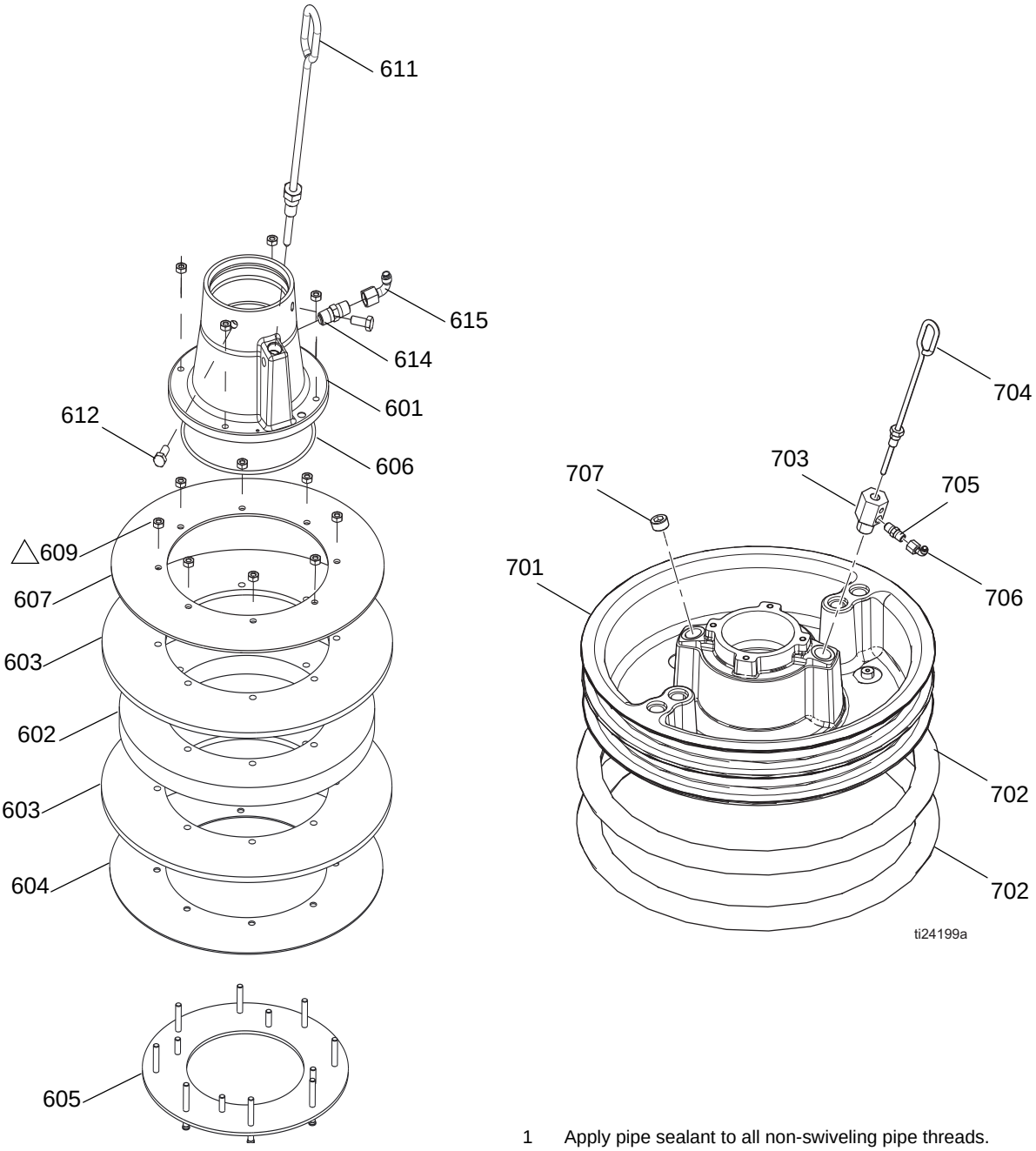
ti24197a

Ref	Part	Description	Quantity		
			24V623, PUMP, assembly, 61:1, 100cc	24V625, PUMP, assembly, 34:1, 200cc	25A652 PUMP, assembly, 40:1, 100cc
501 ❖	24R015	MOTOR, assembly, air, 7.5 inch, blue	1	1	
	24V530	MOTOR, air, 6.0 in, 4.78 strk, blue			1
503	102656	MUFFLER	1	1	1
504	106166	NUT, hex, M16	3	3	3
505 ❖	L100CS	LOWER, 100 Severe Duty	1		1
	L200CS	LOWER, 200 Severe Duty		1	
506	15H392	ROD, adapter Xtreme	1	1	1
507	244819	COUPLING, assembly	1	1	1
508	197340	COVER, coupler	1	1	1
509	244820	CLIP, hairpin (with lanyard)	1	1	1
510	108098	WASHER, lock, M16	3	3	3
511	15H395	ROD, tie		3	1
	15K750	ROD, tie, NXT to CM lower	3		3
517	15J993	RING, lift, plate	1	1	1
518	188784	NUT, hex, 1.5-12	1	1	1
521*	112887	TOOL, wrench, spanner	1	1	1
525	126924	SCREW, socket head, 5/8-11x1-3/4		3	
526	17B407	BLOCK, spacer, pump		3	

❖ *Refer to specific component manual for more details.*

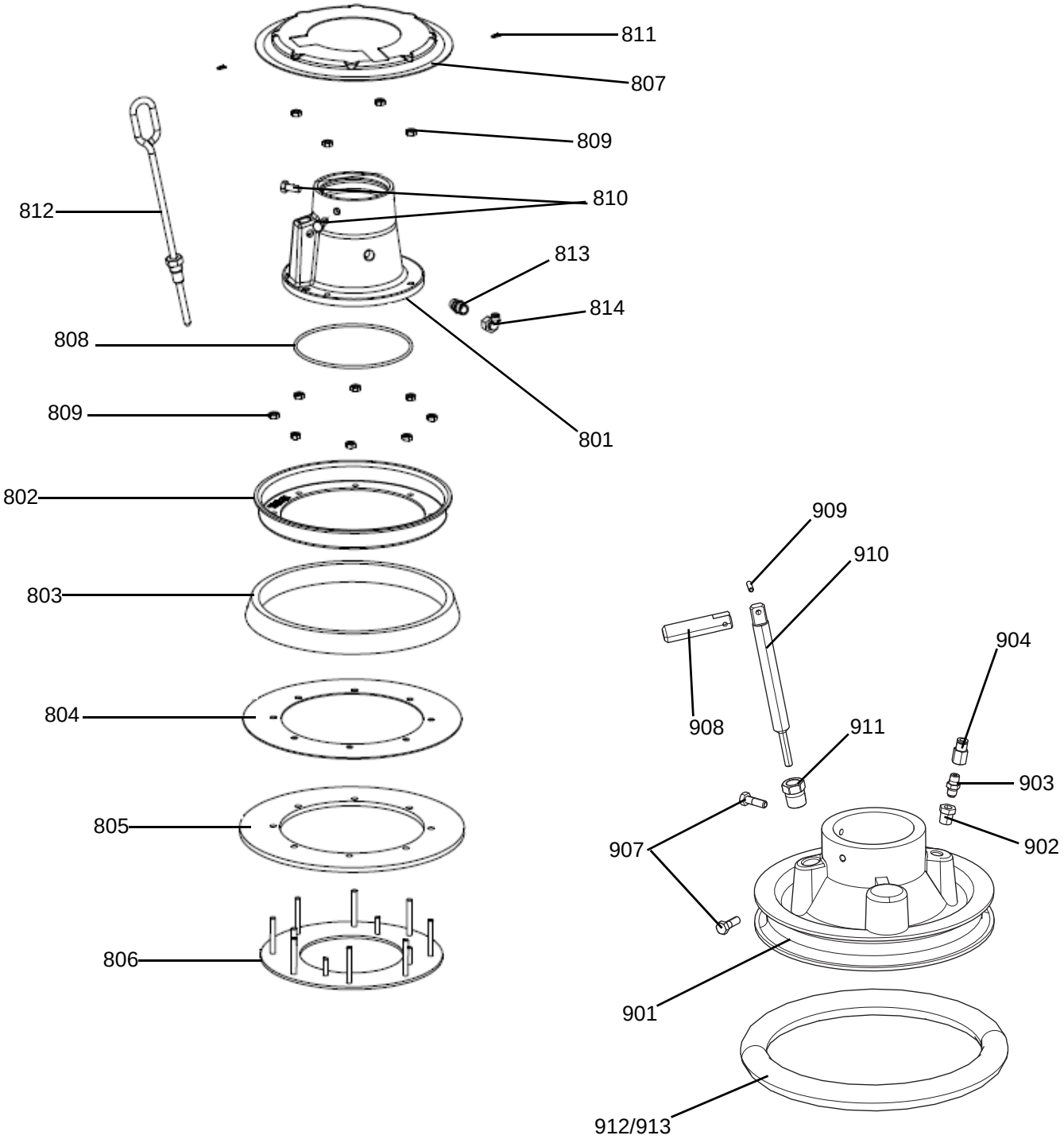
* *Not shown.*

Platen Assembly



1 Apply pipe sealant to all non-swiveling pipe threads.

4 Torque to 5 N•m (45 in-lb).


811
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912/913

256755, PLATE, 60 liter (16 gallon)			
Ref	**Part**	**Description**	**Quantity**
601	15U674	BASE, platen, 20-60 liter	1
602	15V476	SPACER, dual wiper	1
603	15V108	WIPER, main	2
604	15V117	WIPER, support	1
605	256717	PLATE, bottom, platen	1
606	121829	O-RING, packing	1
607	15V299	PLATE, top, double wiper	1
609	113504	NUT, hex, 1/4-20	12
611	15W035	HANDLE, bleed	1
612	100057	SCREW, HHCS, 5/16-18 x 3/4	2
613*	109482	PACKING, o-ring	1
614	122056	VALVE, check	1
615	C20350	FITTING, elbow	1

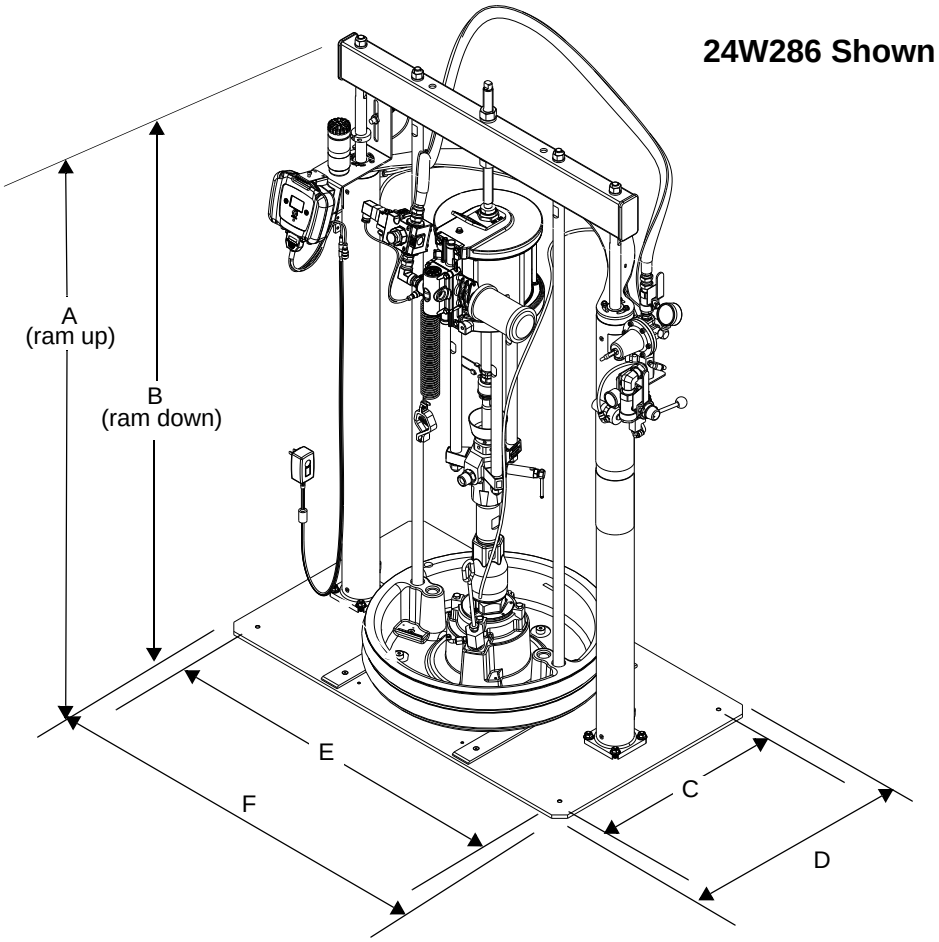
* *Not shown.*

255319, PLATE, 200 liter (55 gallon)			
Ref	**Part**	**Description**	**Quantity**
701	15Y351	PLATE, ram, 55 gal, low volume	1
702	120819	SEAL, drum wiper 55 gallon	2
703	15W032	ADAPTER, bleed stick	1
704	15W035	HANDLE, bleed	1
705	122056	VALVE, check	1
706	C20350	FITTING, elbow	1
707	102726	PLUG, pipe headless	1

256742, PLATE, 20 liter (5 gallon)			
Ref	**Part**	**Description**	**Quantity**
801	15U674	BASE, platen, 20L-60L	1
802	15V447	CLAM, retainer	1
803	276049	SPACER	1
804	15V115	WIPER, pe support	1
805	15V106	WIPER, main	1
806	256715	PLATE, bottom, platen	1
807	15W184	COVER, 20L, shroud	1
808	121829	O-RING, packing-162	1
809	113504	NUT, keps, hex hd	12
810	100057	SCREW, cap, hex hd	2
811	122354	PIN, hairpin, cotter	2
812	15W035	HANDLE, bleed, sst assy	1
813	122056	VALVE, check	1
814	C20350	FITTING, below 90 deg	1

255419, PLATE, 20 liter (5 gallon)			
Ref	**Part**	**Description**	**Quantity**
901	617376	PLATE, follower, cold tire	1
902	100030	BUSHING	1
903	114317	VALVE, check	1
904	114320	FITTING, connector, female, 1/8 npt	1
907	100450	SCREW, cap hex hd	2
908	177542	HANDLE	1
909	101831	PIN, spring str	1
910	166560	STEM, probe	1
911	158212	BUSHING	1
912	15W597	HOSE, follower, lower	1
913	C31154	CLAMP, worm gear	2

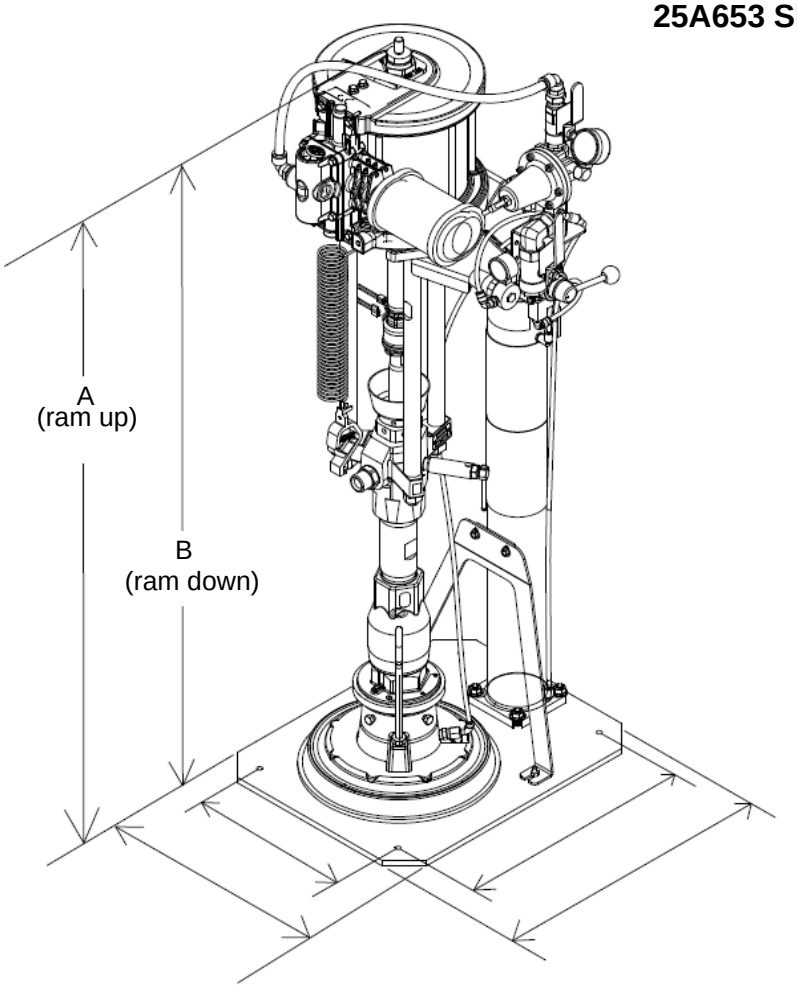
Dimensions



Dimensions

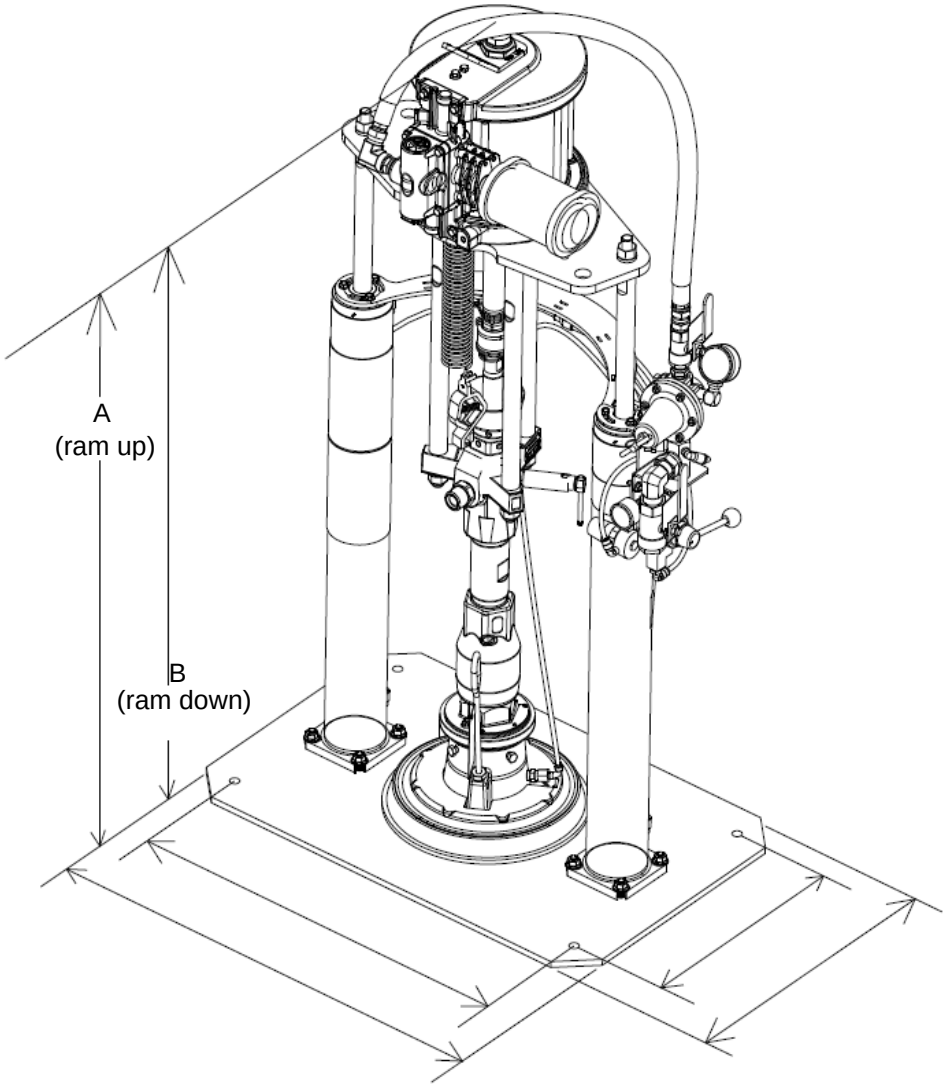
Ram Model	A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	E in. (mm)	F in. (mm)
24V917	102.3 (2599)	64.8 (1646)	21.0 (533)	25.0 (635)	38.0 (965)	42.0 (1067)
24V918						
24V626						
24W286						
24W288						
24W289						
24W290						
24W291						
24W292						
25A685						

25A653 Shown



Dimensions

Ram Model	A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	E in. (mm)	F in. (mm)
25A653	76 (1930)	56 (1422)	16 (406)	19 (483)	11 (279)	15 (381)
25A655						
25A667						
25A669						
25A695						
25A697						
25A699						
25A701						



Dimensions

Ram Model	A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	E in. (mm)	F in. (mm)
25A654	73 (1854)	52 (1320)	14 (356)	18 (457)	24 (610)	28 (711)
25A656						
25A666						
25A668						
25A694						
25A696						
25A698						
25A700						

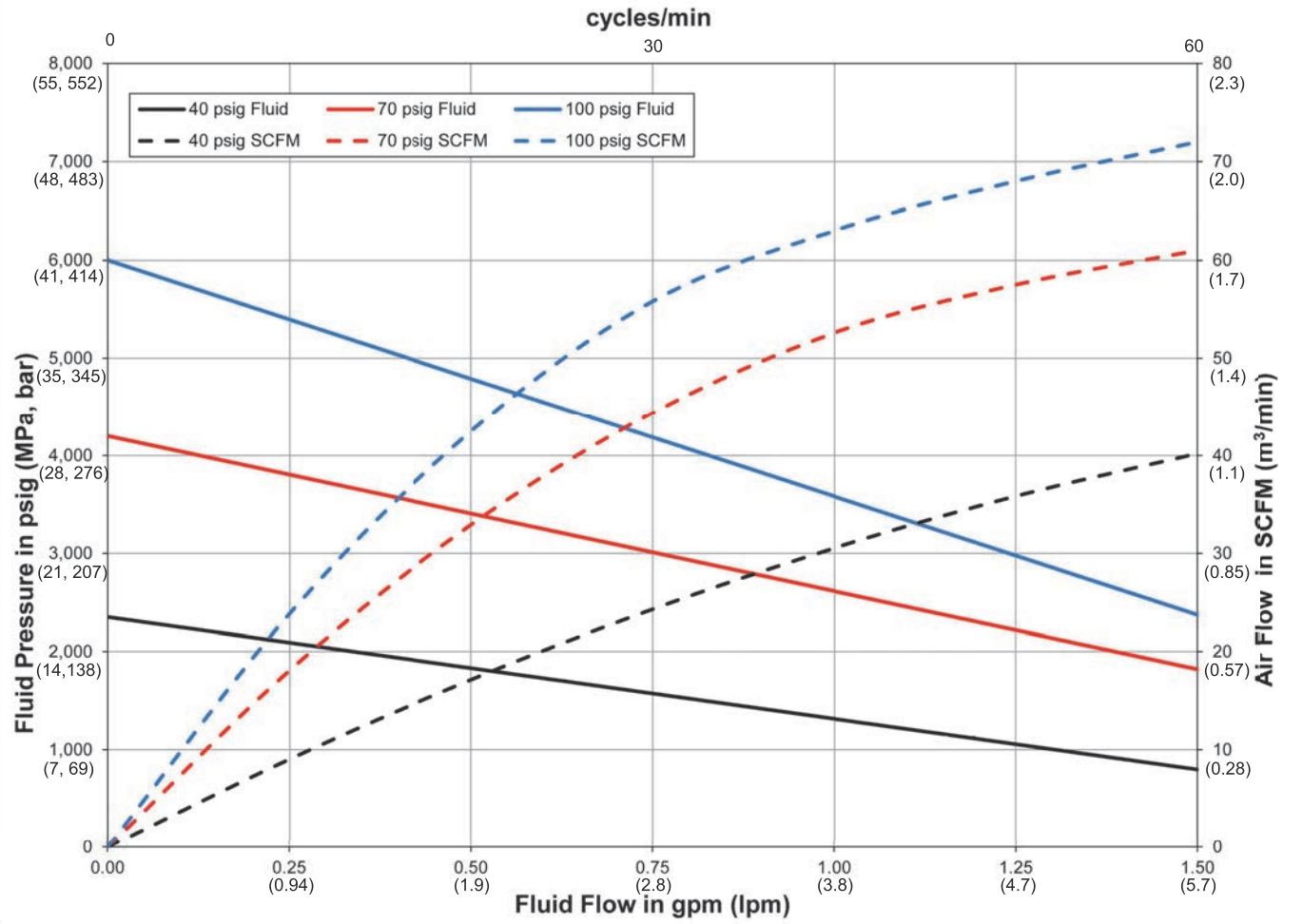
Technical Data

General Industry Ram		
	US	**Metric**
Air pressure operating range	100 psi	0.7 MPa, 7 bar
Minimum fluid temperature	32-120°F	0-49°C
Maximum fluid operating temperature	180°F	82.2°C
Maximum fluid working pressure		
24V917, 24V918, 24W286, 24W288, 24W290, 24W291, 25A685, 25A653, 25A654, 25A666, 25A667, 25A694, 25A695, 25A698, 25A699	6100 psi	42 MPa, 421 bar
24V626, 24W289, 24W292	3400 psi	23 MPa, 234 bar
25A655, 25A656, 25A668, 25A669, 25A696, 25A697, 25A700, 25A701	4060 psi	28 MPa, 280 bar
Noise (dBa)		
Maximum sound pressure	See separate air motor manual.	
Inlet/Outlet Sizes		
Air inlet size	3/4 in. npt(f)	
Materials of Construction		
20 L (5 gal) Platen	Electroless nickel, polyurethane, nitrile, carbon steel, polyethylene, zinc plated carbon steel, buna, 316 sst, 17-4PH sst	
60 L (16 gal) Platen		
200 L (55 gal) Platen	EPDM, aluminum, zinc plated carbon steel, 316 sst	
Pump Lower	See manual 312375.	
Weight		
24V917	395 lb	179 kg
24V918	370 lb	167 kg
24V626	405 lb	183 kg
24W286	400 lb	181 kg
24W288	375 lb	170 kg
24W289	410 lb	186 kg
24W290	400 lb	181 kg
24W291	375 lb	170 kg
24W292	410 lb	186 kg
25A685	395 lb	179 kg
25A653	187 lb	85 kg
25A654	238 lb	108 kg
25A655	187 lb	85 kg
25A656	238 lb	108 kg
25A666	238 lb	108 kg
25A667	187 lb	85 kg
25A668	238 lb	108 kg
25A669	187 lb	85 kg
25A694	238 lb	108 kg
25A695	187 lb	85 kg
25A696	238 lb	108 kg
25A697	187 lb	85 kg
25A698	238 lb	108 kg
25A699	187 lb	85 kg
25A700	238 lb	108 kg
25A701	187 lb	85 kg

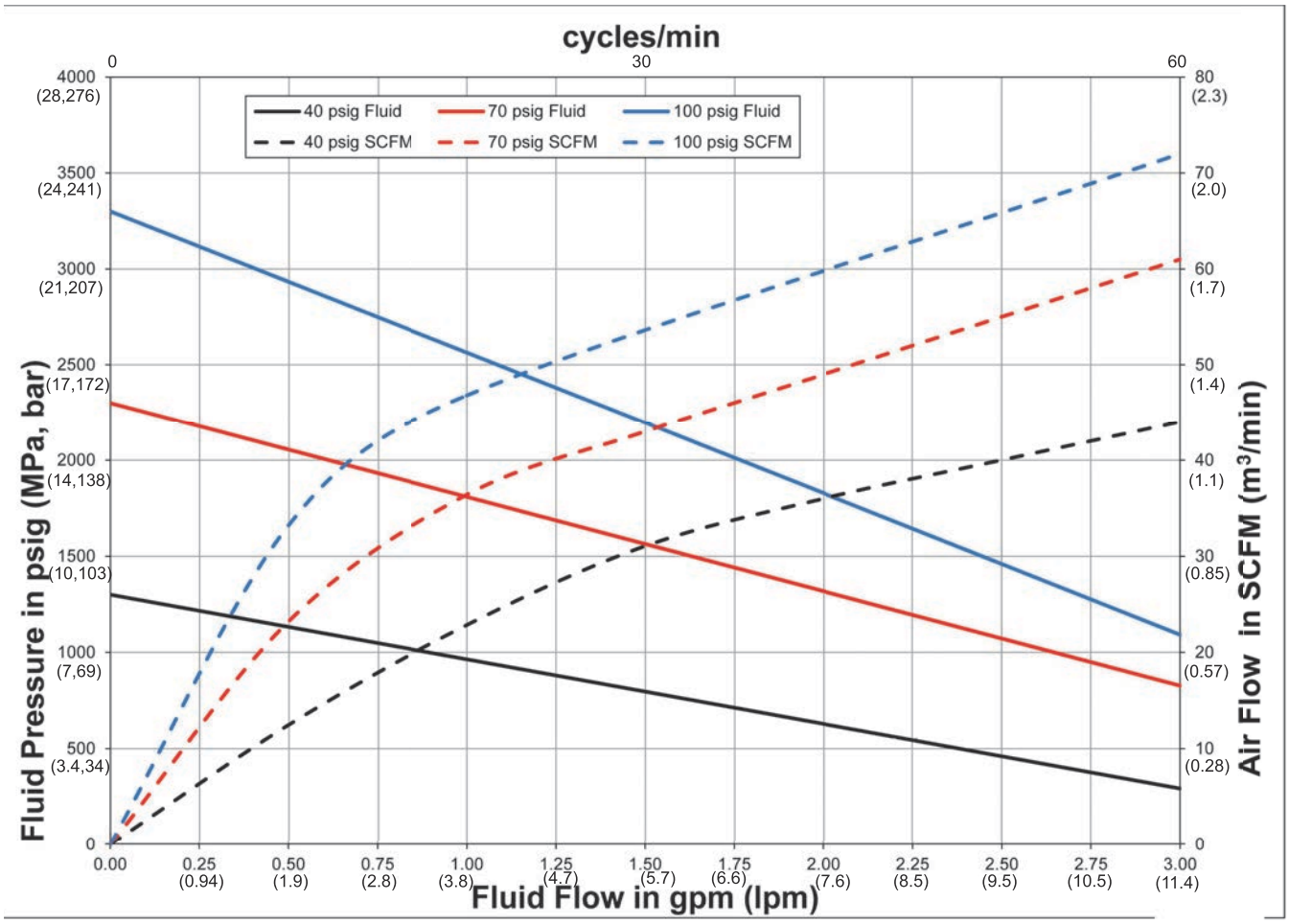
Pump Performance Charts

NOTE: All data shown was gathered by using #2 grease.

61:1, 24V623



34:1, 24V625


cycles/min
0
30
60
40 psig Fluid
70 psig Fluid
100 psig Fluid
40 psig SCFM
70 psig SCFM
100 psig SCFM
Fluid Pressure in psig (MPa, bar)
4000 (28,276)
3500 (24,241)
3000 (21,207)
2500 (17,172)
2000 (14,138)
1500 (10,103)
1000 (7,69)
500 (3.4,34)
0
Air Flow in SCFM (m³/min)
80 (2.3)
70 (2.0)
60 (1.7)
50 (1.4)
40 (1.1)
30 (0.85)
20 (0.57)
10 (0.28)
0
0.00
0.25 (0.94)
0.50 (1.9)
0.75 (2.8)
1.00 (3.8)
1.25 (4.7)
1.50 (5.7)
1.75 (6.6)
2.00 (7.6)
2.25 (8.5)
2.50 (9.5)
2.75 (10.5)
3.00 (11.4)
Fluid Flow in gpm (lpm)

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