

Supply Units

312373G

For transferring or dispensing sealants, adhesives, or other medium to high viscosity fluids. Not for use in hazardous locations.

S20 3 inch single post

20 liter (5 gallon) size

150 psi (1.0 MPa, 10 bar) Maximum Air Inlet Pressure

D30 3 inch dual post

30 liter (8 gallon) size

125 psi (0.9 MPa, 9 bar) Maximum Air Inlet Pressure

D200 3 inch dual post

200 liter (55 gallon), 115 liter (30 gallon),

30 liter (8 gallon), 20 liter (5 gallon)

150 psi (1.0 MPa, 10 bar) Maximum Air Inlet Pressure

D200S 6.5 inch dual post

200 liter (55 gallon), 115 liter (30 gallon)

125 psi (0.9 MPa, 9 bar) Maximum Air Inlet Pressure



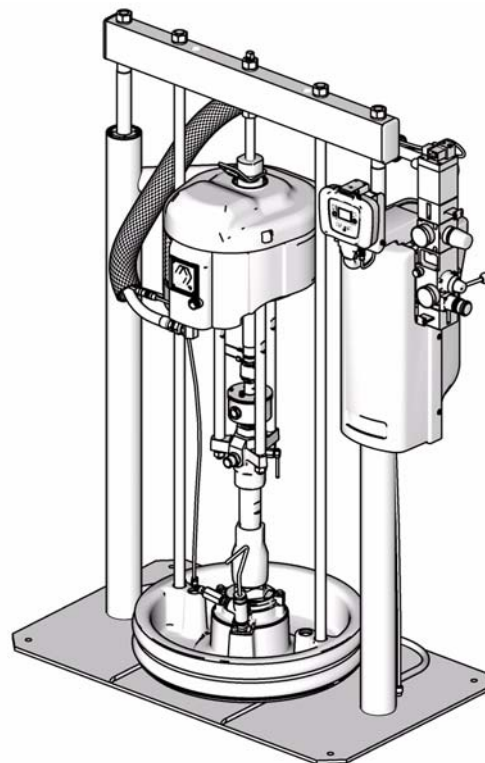
Important Safety Instructions

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

See page 6 for model information.

U.S. Patent Pending

*The Graco Control Architecture Electric Components
are Listed in Intertek's Directory of Listed Products.*



D200 CM14BA

Ti10429A



Recognized Component



110474
Certified to CAN/CSA C22.2 No. 14-05
Conforms to UL 508



Table of Contents

Related Manuals	3	Accessories	50
Translations	3	DataTrak Accessory Kit, 255705, 255704, 255757, 255758	50
Warnings	4	Two-Button Interlock Air Control Kit	51
Models	6	Drum Roller Kits for D200 and D200S Supply Units, 255627	51
Component Identification	9	Drum Position Clamp Set for D200 Supply Units, 206537	51
D200 3 in. and D200s 6.5 in. Dual Post	9	Drum Position Clamp for D200S Supply Units ..	51
Integrated Air Control Module	10	Enclosed Wet Cup Recirc Kit	51
Integrated Air Line Accessories	10	200 Liter (55 Gallon) Platen Cover Kits, 255691	51
2-Button Interlock Air Controls	10	Light Tower Kit, 255467	51
S20 3 in. Single Post and D30 3 in. Dual Post ..	11	Repair Kits	51
Standard Air Controls	12	Dimensions	52
Standard Air Line Accessories	12	Technical Data	53
Platen Component Identification	13	Graco Standard Warranty	54
Before Beginning Repair	14	Graco Information	54
Grounding	14		
Pressure Relief Procedure	14		
Flush Before Using Equipment	14		
Maintenance Procedures	15		
Platen Maintenance	15		
Adjust Spacers	15		
Remove and Reinstall Wipers	16		
Troubleshooting	18		
Ram	18		
Repair	19		
Disconnect Pump from Platen	19		
Connect Platen	20		
Remove Wipers	20		
Install Wipers	20		
Remove Displacement Pump	20		
Install Displacement Pump	22		
Remove Air Motor	23		
Install Air Motor	25		
Supply Unit Repair	26		
Power Supply	32		
Parts	34		
D200s 6.5 in. Supply Units	34		
D200 3 in. Supply Units	37		
Power Supply - D200s 6.5 in. and D200 3 in. Supply Units	40		
Pump Mounts - D200s 6.5 in. and D200 3 in. Supply Units	41		
D30 3 in. Dual Post Supply Unit	43		
S20 3 In. Single Post Ram	45		
30 and 55 Gallon Platen	47		
20 Liter (5 Gallon) and 30 Liter (8 Gallon) Platen	48		

Related Manuals

Component manuals in U.S. English:

Manual	Description
312371	Supply Systems Operation Manual
312395	Tandem Supply Systems Operation Manual
312400	Tandem Supply Systems Repair-Parts Manual
312375	Check-Mate® Displacement Pumps Instructions-Parts Manual
312376	Check-Mate® Pump Packages Instruction-Parts Manual
311827	Dura-Flo™ Displacement Pumps (145cc, 180cc, 220cc, 290cc) Instructions-Parts Manual
311825	Dura-Flo™ Displacement Pumps (430cc, 580cc) Instructions-Parts Manual
311717	Carbon Steel Displacement Pump (1000cc) Instructions-Parts Manual
311828	Dura-Flo™ Pump Packages (145cc, 180cc, 220cc, 290cc) Instructions-Parts Manual
311826	Dura-Flo™ Pump Packages (430cc, 580cc) Instructions-Parts Manual
311833	Two-Ball NXT™ Pump Packages (1000cc) Instructions-Parts Manual
312467	100 cc Check-Mate Displacement Pump Repair Parts Manual
312468	200 cc Check-Mate Displacement Pump Repair Parts Manual
312469	250 cc Check-Mate Displacement Pump Repair Parts Manual
312470	500 cc Check-Mate Displacement Pump Repair Parts Manual
311238	NXT™ Air Motor Instructions-Parts Manual
308213	Premier® Air Motor Instructions-Parts Manual
312374	Integrated Air Controls Instructions-Parts Manual
312491	Pump Fluid Purge Kit Instruction-Parts Manual
312492	Drum Roller Kit Instruction Manual
312493	Light Tower Kit Instruction Manual
406681	Platen Cover Kits

Translations

The Supply Unit Repair manual is available in the following languages. See the following chart for specific languages and corresponding part numbers.

Manual	Language
312697	Chinese
312698	French
312699	German
31314	Italian
312700	Japanese
312701	Korean
312702	Portuguese
313158	Russian
312703	Spanish

Warnings

 WARNING	
	SKIN INJECTION HAZARD High-pressure fluid from dispense valve, 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 dispense valve at anyone or at any part of the body. • Do not put your hand over the end of the dispense nozzle. • Do not stop or deflect leaks with your hand, body, glove, or rag. • Follow Pressure Relief Procedure in this manual, when you stop spraying and before cleaning, checking, or servicing equipment.
	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.
	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. • If there is static sparking or you feel a shock, stop operation immediately. Do not use equipment until you identify and correct the problem. • Keep a working fire extinguisher in the work area.

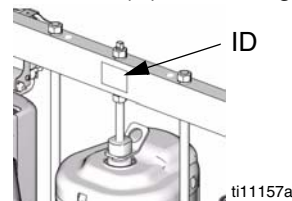
 WARNING	
	EQUIPMENT MISUSE HAZARD Misuse can cause death or serious injury. • Do not operate the unit when fatigued or under the influence of drugs or alcohol. • Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See Technical Data in all equipment 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.
	ELECTRIC SHOCK HAZARD Improper grounding, setup, or usage of the system can cause electric shock. • Turn off and disconnect power cord before servicing equipment. • Use only grounded electrical outlets. • Use only 3-wire extension cords. • Ensure ground prongs are intact on sprayer and extension cords. • Do not expose to rain. Store indoors.
	SPLATTER HAZARD During blowoff of platen splatter may occur. • Use minimum drum removal air pressure.
	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

Models

Check the identification plate (ID) for the 6-digit part number of the supply system. Use the following matrix to define the construction of the supply system, based on the six digits. For example, Part No. **CM14BA** represents a Check-Mate supply system (**CM**), a carbon steel Check-Mate 100 MaxLife® displacement pump with an NXT 2200 air motor with remote DataTrak (pump code **14**), a 3 in. dual post ram with integrated air controls (**B**) and a 55-gallon, uncoated platen with a neoprene seal (**A**).

 Systems with the **GD** as the first and second digits are Dura-Flo supply systems.

Some configurations in the following matrix cannot be built. See the Product Selection Guide for available systems



To order replacement parts, see **Parts** section in manual 312373. The digits in the matrix do not correspond to the Ref. Nos. in the Parts drawings and lists.

CM	14	5					A				
First and Second Digit	Third and Fourth Digit	Fifth Digit					Sixth Digit				
	Pump Code	Ram Options					Platen and Seal Options				
			Size	Style	DataTrak Voltage	Air Controls		Platen Size	Platen Style	Pump inlet	Seal Material
CM (Supply System with Check-Mate displacement pump) GD (Supply System with Dura-Flo displacement pump)	(See Table 1 for 2-digit Check-Mate Pump Code)	2	3 in.	S20C		STD	1	20 L (5 Gal)	F	Sm	Buna-N
		3	3 in.	S20		STD	2	20 L (5 Gal)	F	Lg	Buna-N
		4	3 in.	D30		STD	3	20 L (5 Gal)	F	Sm	PTFE
		5	3 in.	D200	no volt	INT	4	20 L (5 Gal)	F	Lg	PTFE
	(See Table 2 for 2-digit Dura-Flo Pump Code)	6	3 in.	D200i	no volt	2-Button Interlock	5	20 L (5 Gal)	R	Lg	Buna-N
		7	6.5 in.	D200s	no volt	INT	6	30 L (8 Gal)	F		Buna-N
		8	6.5 in.	D200si	no volt	2-Button Interlock	7	115 L 30 Gal	D		EPDM
		9	3 in.	D200	24 Vdc	INT	8	200 L (55 Gal)	PTFE coated		EPDM
		A	3 in.	D200i	24 Vdc	2-Button Interlock	9	200 L (55 Gal)	STD		EPDM
		B	3 in.	D200	100-240 Vac	INT	A	200 L (55 Gal)	STD		Neoprene
		C	3 in.	D200i	100-240 Vac	2-Button Interlock					
		F	6.5 in.	D200s	24 Vdc	INT					
		G	6.5 in.	D200si	24 Vdc	2-Button Interlock					
		H	6.5 in.	D200s	100-240 Vac	INT					
		J	6.5 in.	D200si	100-240 Vac	2-Button Interlock					

KEY:

S = Single post ram

i = 2-Button Interlock

INT = Integrated air controls

D = D Style

C = Cart mounted

s = 6.5 inch

F = Flat

Sm = Small bore

D = Dual post ram

STD = Standard air controls

R = Round

Lg = Large bore

Table 1: Check-Mate Pump Code/Part No. Index

Pump Code	Pump Part No. (see manual 312376)	Pump Code	Pump Part No. (see manual 312376)	Pump Code	Pump Part No. (see manual 312376)	Pump Code	Pump Part No. (see manual 312376)
NXT 2200/CM 100		NXT 3400/CM 200		NXT 3400/CM 250		NXT 3400/CM 500	
11	P40LCS	29	P36LCS	31	P29LCS	51	P14LCS
12	P40LCM	2A	P36LCM	32	P29LCM	52	P14LCM
13	P40RCS	2B	P36RCS	33	P29RCS	53	P14RCS
14	P40RCM	2C	P36RCM	34	P29RCM	54	P14RCM
19	P40SCS	2F	P36LSS	35	P29LSS	55	P14LSS
NXT 3400/CM 100		2G	P36LSM	36	P29LSM	56	P14LSM
15	P63LCS	2H	P36RSS	37	P29RSS	57	P14RSS
16	P63LCM	2J	P36RSM	38	P29RSM	58	P14RSM
17	P63RCS	NXT 6500/CM 200		NXT 6500/CM 250		NXT 6500/CM 500	
18	P63RCM	2L	P68LCS	39	P55LCS	59	P26LCS
NXT 2200/CM 200		2M	P68LCM	3A	P55LCM	5A	P26LCM
21	P23LCS	2R	P68RCS	3B	P55RCS	5B	P26RCS
22	P23LCM	2S	P68RCM	3C	P55RCM	5C	P26RCM
23	P23RCS	2T	P68LSS	3F	P55LSS	50	P26SCS
24	P23RCM	2U	P68LSM	3G	P55LSM	5F	P26LSS
25	P23LSS	2W	P68RSS	3H	P55RSS	5G	P26LSM
26	P23LSM	2Y	P68RSM	3J	P55RSM	5H	P26RSS
27	P23RSS	20	P68SCS	Premier/CM 250		5J	P26RSM
28	P23RSM			3L	P82LCS	Premier/CM 500	
				3M	P82LCM	5L	P39LCS
				3R	P82LSS	5M	P39LCM
				3S	P82LSM	5R	P39LSS
						5S	P39LSM

See manual 312375 or the ID plate on the pump to determine pump identification code.

Table 2: Dura-Flo Pump Identification Code/Part No. Index

Pump Code	Pump Part No. (see manual 311828)	Pump Code	Pump Part No. (see manual 311826)	Pump Code	Pump Part No. (see manual 311826)	Pump Code	Pump Part No. (see manual 311833)
NXT 2200/DF 145SS		NXT 3400/DF 430CS		NXT 6500/DF 580CS		NXT 3400/DF 1000CS	
A1	P31LSS	41	P15LCS	59	P22LCS	O1	P06LCS
A2	P31LSM	42	P15LCM	5A	P22LCM	O2	P06LCM
A3	P31HSS	43	P15HCS	5B	P22HCS	O3	P06HCS
A4	P31HSM	44	P15HCM	5C	P22HCM	O4	P06HCM
NXT 3400/DF 145SS		NXT 3400/DF 430SS		NXT 6500/DF 580SS		NXT 3400/DF 1000SS	
11	P46LSS	45	P15LSS	5F	P22LSS	O5	P06LSS
12	P46LSM	46	P15LSM	5G	P22LSM	O6	P06LSM
13	P46HSS	47	P15HSS	5H	P22HSS	O7	P06HSS
14	P46HSM	48	P15HSM	5J	P22HSM	O8	P06HSM
NXT 3400/DF 180SS		NXT 6500/DF 430CS		Premier/DF 580CS		NXT 6500/DF 1000CS	
15	P40LSS	49	P32LCS	5L	P34LSS	O9	P10LCS
16	P40LSM	4A	P32LCM	5M	P34LSM	0A	P10LCM
17	P40HSS	4B	P32HCS	5R	P34LCS	0B	P10HCS
18	P40HSM	4C	P32HCM	5S	P34LCM	0C	P10HCM
NXT 3400/DF 220SS		NXT 6500/DF 430SS				NXT 6500/DF 1000SS	
21	P30LSS	4F	P32LSS			0F	P10LSS
22	P30LSM	4G	P32LSM			0G	P10LSM
23	P30HSS	4H	P32HSS			0H	P10HSS
24	P30HSM	4J	P32HSM			0J	P10HSM
NXT 6500/DF 220SS		Premier/DF 430				Premier/DF 1000	
2A	P57LSS	4L	P44LSS			0L	NR
2B	P57LSM	4M	P44LSM			0M	NR
2C	P57HSS	4R	P44LCS			0R	NR
2D	P57HSM	4S	P44LCM			0S	NR
NXT 6500/DF 290SS		NXT 3400/DF 580CS					
31	P45LSS	51	P12LCS				
32	P45LSM	52	P12LCM				
33	P45HSS	53	P12HCS				
34	P45HSM	54	P12HCM				
Premier/DF 290SS		NXT 3400/DF 580SS					
3L	P67LSS	55	P12LSS				
3M	P67LSM	56	P12LSM				
3R	P67HSS	57	P12HSS				
3S	P67HSM	58	P12HSM				

Component Identification

D200 3 in. and D200s 6.5 in. Dual Post

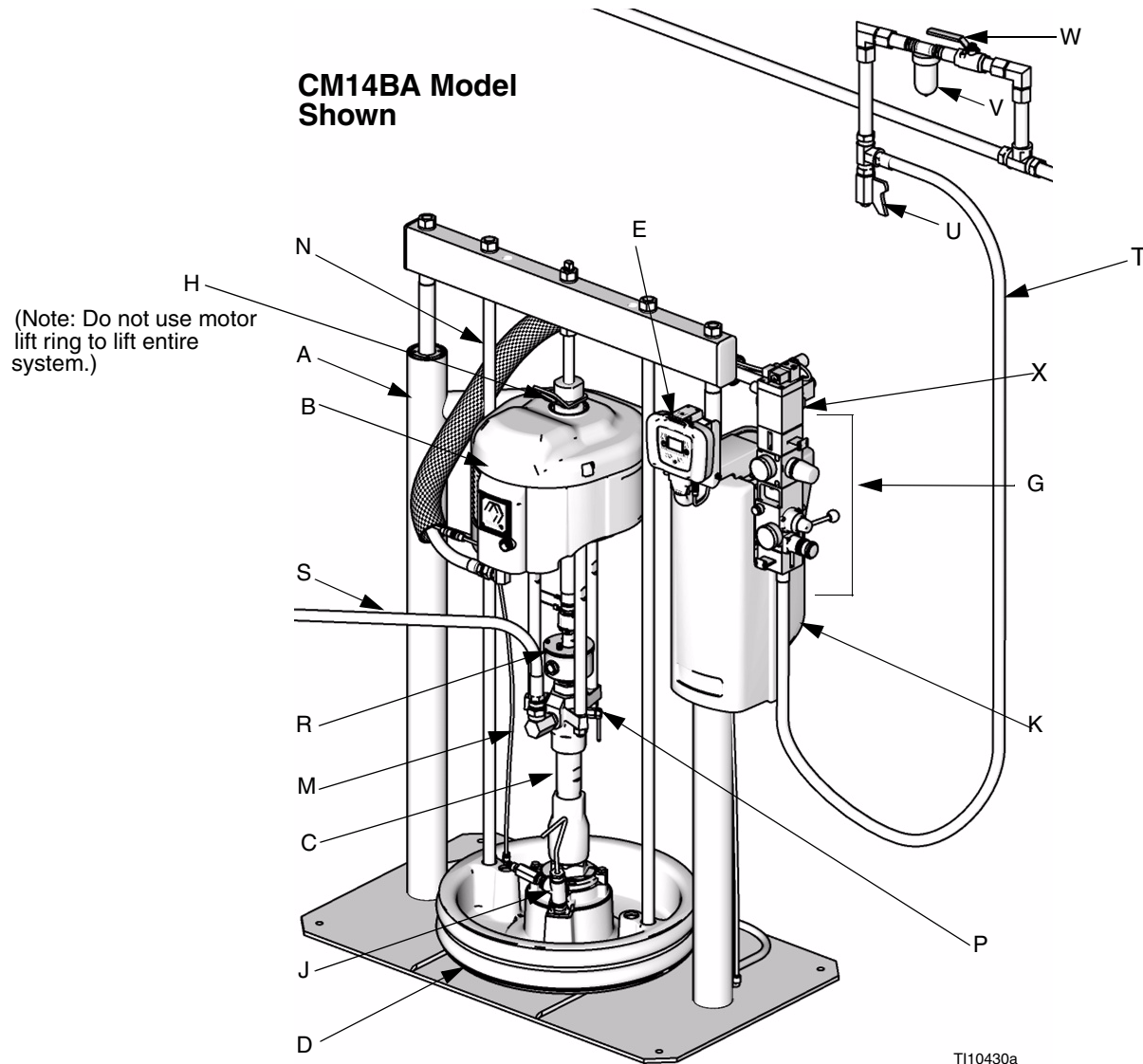


FIG. 1

Key:

A	Ram Assembly	N	Platen Lift Rod
B	Air Motor	P	Pump Bleed Valve
C	Displacement Pump	R	Enclosed Wet Cup
D	Platen	S	Fluid Line (not supplied)
F	Remote DataTrak (single ram systems) or Display Module (tandem systems)	T	Air Line (not supplied)
G	Integrated Air Controls (see FIG. 2)	U	Air Line Drain Valve (not supplied)
H	Lift Ring	V	Air Filter (not supplied)
J	Platen Bleed Port	W	Bleed Type Air Shutoff Valve (not supplied)
K	Power Supply Box (under shrouding)	X	Air Motor Solenoid
M	Blowoff Air Supply Line		

Integrated Air Control Module

D200 and D200s Models

The integrated air controls include:

- **Main air slider 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.
- **Exhaust port with muffler (BD)**
- **Air motor regulator (BE):** Controls air pressure to motor.
- **Air motor slider valve (BF):** turns air on and off to the air motor. When closed, the valve relieves air trapped between it and the air motor. Push the valve in to shutoff. **Remote DataTrak:** The air solenoid, the air motor slider valve (BF), and the main air slider valve (BA) must be open for air to flow. (See **Remote DataTrak Setup**, in manual 312371)
- **Blowoff button (BG):** turns air on and off to push the platen out of an empty drum.

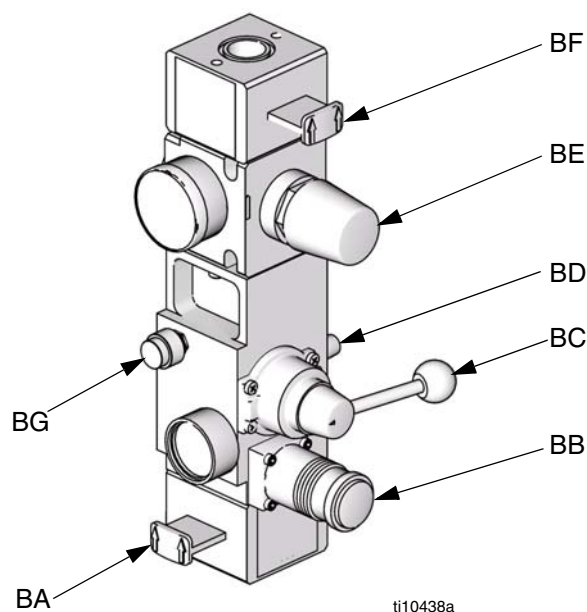


FIG. 2. Integrated Air Control Module

Integrated Air Line Accessories

See FIG. 1.

- **Air line drain valve (U)**
- **Air line filter (V):** removes harmful dirt and moisture from compressed air supply.
- **Second bleed-type air valve (W):** isolates air line accessories for servicing. Locate upstream from all other air line accessories.
- **Air relief valve (not visible):** automatically relieves excessive pressure.

2-Button Interlock Air Controls

D200i and D200si Models

Units that have 2-Button Interlock controls have the following additional components:

- **2-Button Module:** See manual 312374 for information.
- **Roller switch (CA):** shuts off air supply when it contacts the bracket actuator. Operator must push and hold buttons to resume ram movement.

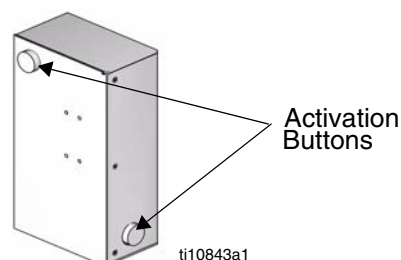


FIG. 3

- **Bracket actuator (CB):** attaches to the platen lift rod. When ram is near the top, actuator makes contact with the roller switch.

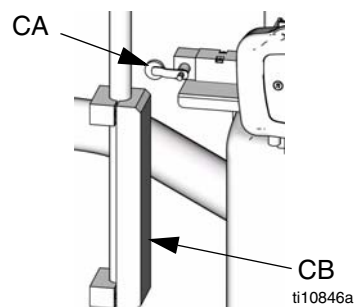


FIG. 4

S20 3 in. Single Post and D30 3 in. Dual Post

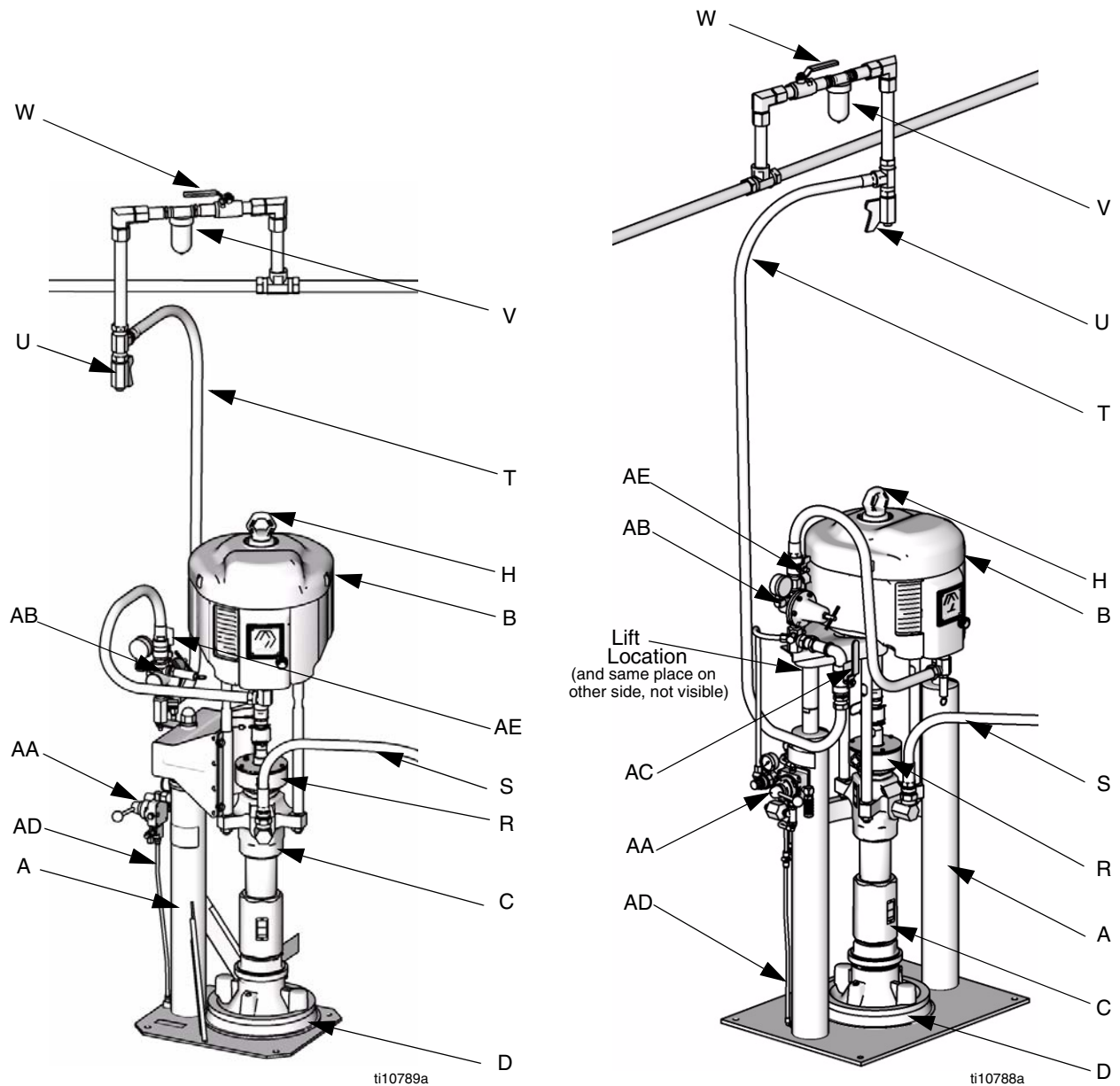


FIG. 5

Key:

- A Ram Assembly
- B Air Motor
- C Displacement Pump
- D Platen
- AA Ram Air Control Assembly
- AB Air Motor Regulator Assembly
- H Lift Ring
- P Pump Bleeder Valve (not visible)
- R Enclosed Wet Cup
- S Fluid Line (not supplied)
- T Main Air Line (not supplied)
- U Air Line Drain Valve (not supplied)

- V Air Filter (not supplied)
- W Air Shutoff Valve (not supplied)
- AC Main Air Shutoff Valve (bleed-type)
- AD Air line to ram
- AE Air Motor Shutoff Valve (bleed-type)

Standard Air Controls

(Models 237788, 255763, 255764)

Refer to FIG. 5, FIG. 6, and FIG. 7.

The air regulator assembly (AF) includes:

- **Main Air Bleed Valve, D30 supply units only (AC):** turns air on and off to the system. The ram will hold pressure if the ram director valve (AS) is in the horizontal (neutral) position. To relieve air pressure in the ram, close the red-handled bleed valve (AM) and move the director valve (AS) to DOWN. The ram will slowly drop.
- **Air Motor Valve (AE):** The pump air bleed valve relieves air trapped between it and the pump after the air is shut off. Trapped air can cause the pump to cycle unexpectedly.

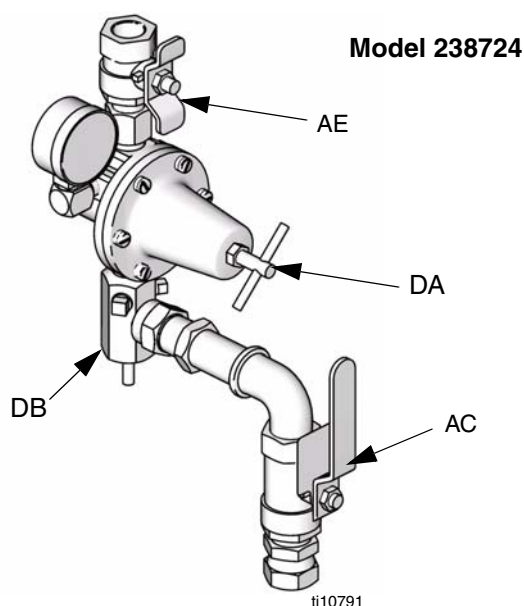


FIG. 6. Air Regulator Assembly

- **The air pressure relief valve (not shown)** limits air pressure to the pump, to prevent over pressurization.
- **The pump air regulator (DA)** controls pump speed and outlet pressure by adjusting the air pressure to the pump.
- **The air manifold (DB)** has a swivel air inlet. It mounts to the ram, and provides ports for connecting lines to air-powered accessories.

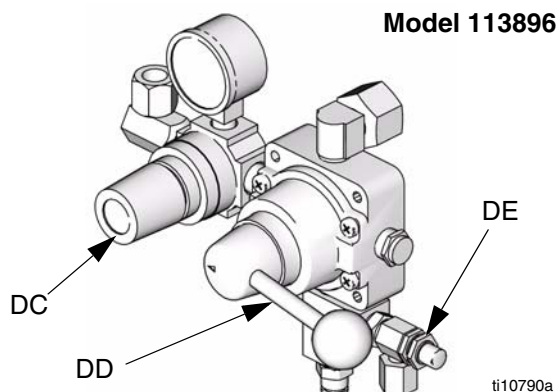


FIG. 7. Ram Air Control Assembly

- **The ram air regulator (DC)** controls the air pressure to the ram.
- **The ram director valve (DD)** controls the raising and lowering of the ram.
- **The air release valve (DE)** opens and closes the flow of air to assist raising the platen out of an empty pail.

Air and Fluid Hoses

Be sure all air hoses (AI) and fluid hoses (AH) are properly sized and pressure-rated for your system. Use only electrically conductive hoses. Fluid hoses must have spring guards on both ends. Use of a short whip hose and a swivel between the main fluid hose and the gun/valve allows freer gun/valve movement.

Standard Air Line Accessories

See FIG. 5.

- **Air line filter (U):** removes harmful dirt and moisture from compressed air supply.
- **Second bleed-type air valve (V):** isolates air line accessories for servicing. Locate upstream from all other air line accessories.
- **Air line drain valve (W)**
- **Air relief valve** (attached to air motor regulator, not visible): automatically relieves excessive pressure.

Platen Component Identification

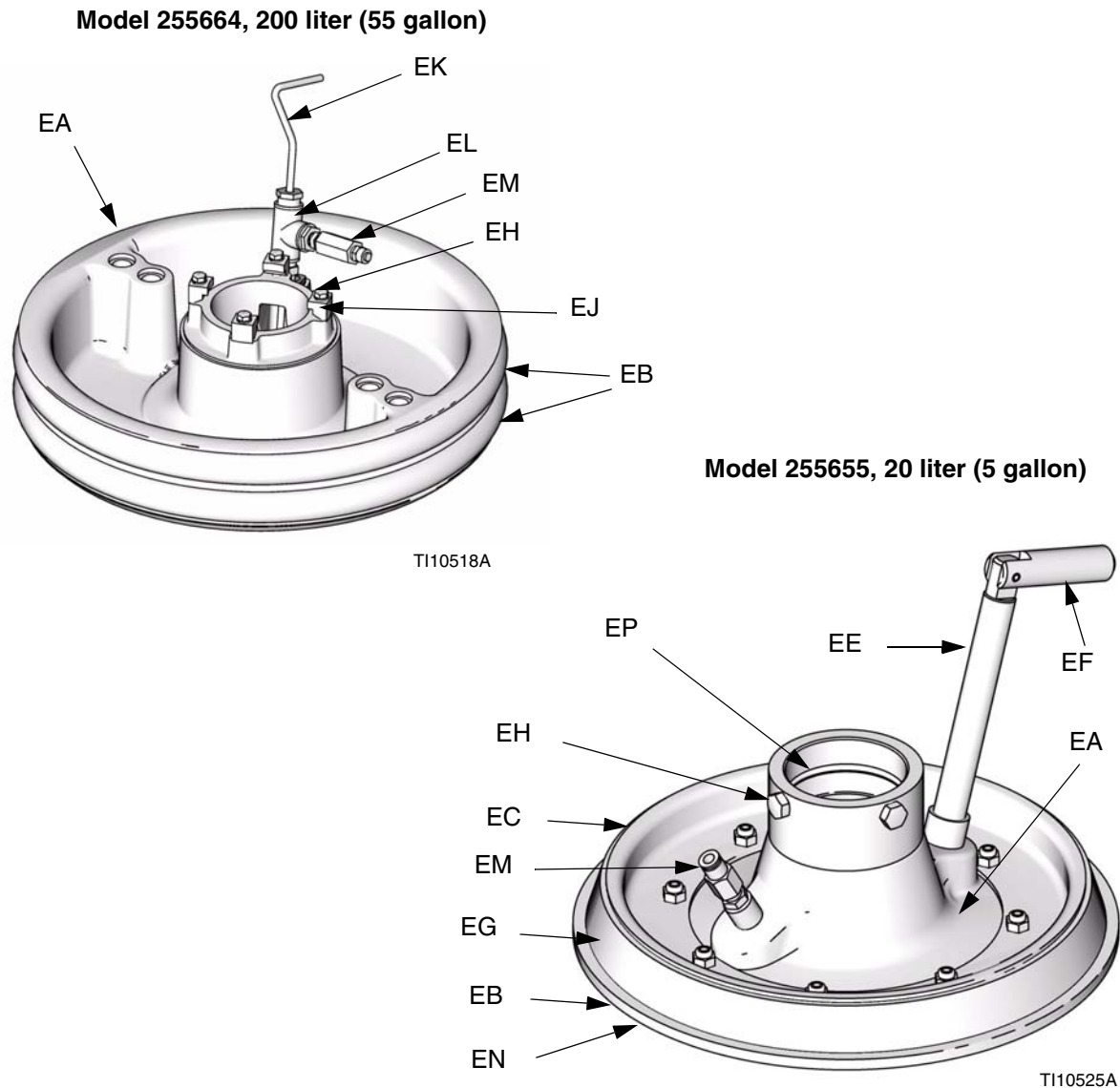


FIG. 8

Key:

- EA Plate
- EB Wipers
- EE Stem Probe
- EF Handle
- EG Spacer
- EH Cap Screws
- EJ Clamps
- EK Bleed Handle
- EL Bleed Valve
- EM Air Assist Body Check Valve
- EN Wiper Plate (under wiper)
- EP O-ring Seal

Before Beginning Repair

Grounding

						
The equipment must be grounded. Grounding reduces the risk of static and electric shock by providing an escape wire for the electrical current due to static build up or in the event of a short circuit.						

Pump: use a ground wire and clamp. Loosen the grounding lug locknut and washer. Insert one end of a 1.5 mm² (12 ga) minimum ground wire into the slot in lug and tighten the locknut securely. Connect the other end of the wire to a true earth ground.

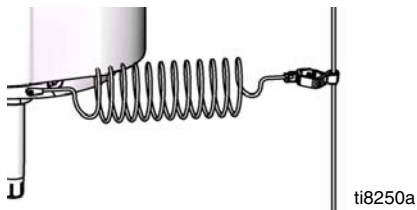


FIG. 9

Air hoses: use only electrically conductive hoses.

Fluid hoses: use only electrically conductive hoses.

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.

All 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 the grounding continuity.

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

Pressure Relief Procedure

								
---	---	--	--	--	--	--	--	--

1. Lock the gun/valve trigger.
2. **Integrated Air Controls:** See FIG. 2, page 10. Close the air motor slider valve (BF) and the main air slider valve (BA).
- Standard Air Controls:** See FIG. 5 and FIG. 6. Close the air motor valve (AE) and the main air valve (AC).
3. Set the ram director valve to DOWN. The ram will slowly drop.
4. Jog the director valve up and down to bleed air from ram cylinders.
5. Unlock the gun/valve trigger.
6. 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.
7. Lock the gun/valve trigger.
8. Open the fluid line drain valve and the pump bleeder valve (P). Have a container ready to catch the drainage.
9. Leave the pump bleeder valve (P) 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 your fluid with oil, flush the pump with a compatible solvent before use. See your pump manual for flushing directions.

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. 10. If the platen does not come out of the pail easily when the pump is being raised, the air assist tube (F), 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. Relieve pressure. Refer to parts illustration on page 48 and disassemble air assist valve as shown.
2. Clear air assist tube (F) in platen. Clean all parts of valve and reassemble.

 To use Model 255655 platens with tapered pails, the spacer (EG) must be removed.

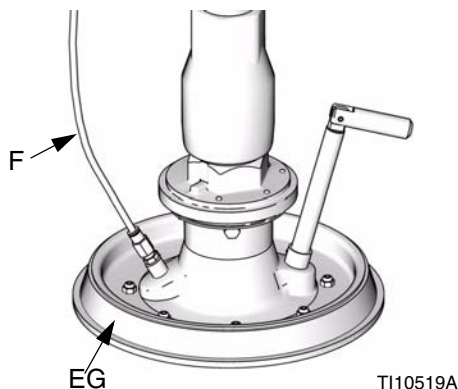


FIG. 10

Adjust Spacers

Use Platen with Tapered and Straight Sided Pails

The platen is supplied for use with 20 liter (5 gallon) straight sided pails, but it 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. 11.
2. By hand, angle spacer (EG) and work it off the plate, pulling it down over the flange and bottom wipers (EB). See FIG. 12.
3. Save spacer (EG), as it is required for other applications.

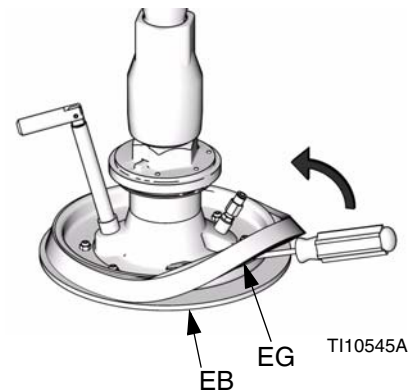


FIG. 11

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. See FIG. 12.
2. Working from the top, use screwdriver to position spacer (EG) between flange and wipers (EB). See FIG. 13.

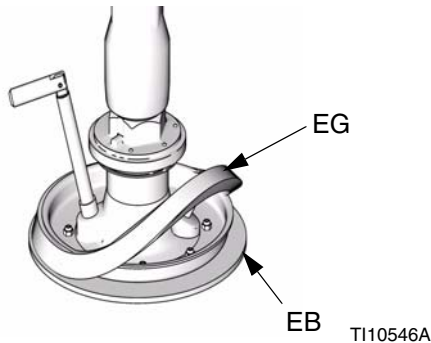


FIG. 12: Sliding spacer

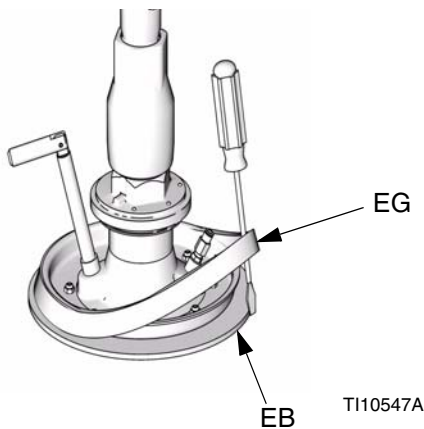


FIG. 13: Installing Spacer

Remove and Reinstall Wipers

Remove 20 and 30 Liter Wipers

1. For flat wipers see FIG. 14:
 - a. Remove screws (410), nuts (406), and retaining clamp (412).
 - b. Separate wiper (408), wiper plate (409), and spacer (407).
 - c. Clean, inspect, and replace worn components.

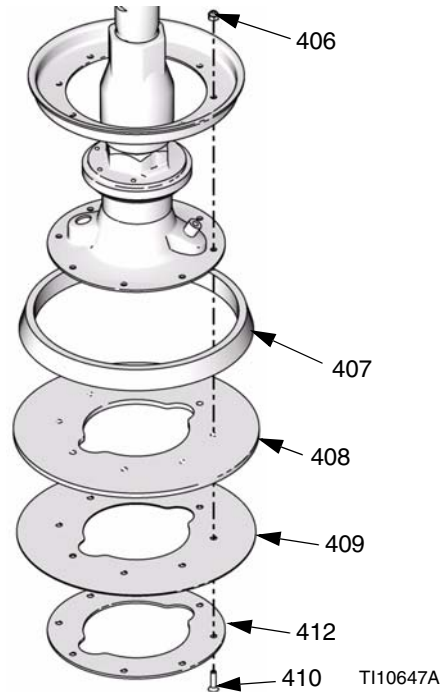


FIG. 14

2. For tire wipers, 255659 only see FIG. 15:
 - a. Separate wiper (422) joint enough to bend back strapping that covers the worm gear clamp (423). See FIG. 15.
 - b. Unscrew worm gear (423) and remove wiper (422).
 - c. Clean, inspect, and replace worn components.

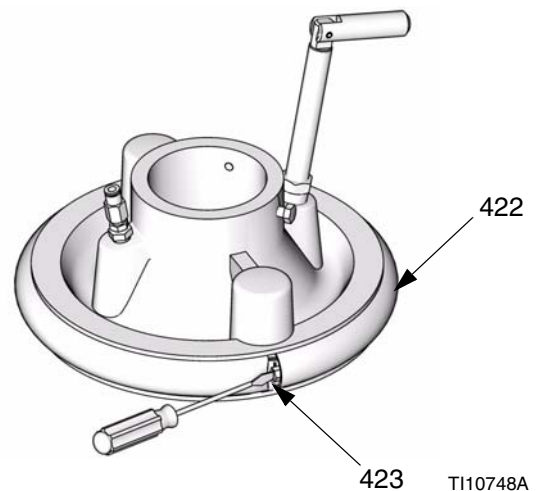


FIG. 15

Reinstall 20 and 30 Liter Wipers

1. For flat wipers see FIG. 14:
 - a. Attach wiper (408), wiper plate (409), spacer (407), and retaining clamp (412) with screws (410) and nuts (406).
 - b. Do not overtighten screws (410), to prevent warping the wiper plate (409).
2. For tire wiper, 255659 only, see FIG. 16:
 - a. Thread worm gear (423) through new wiper (422).
 - b. Insert strap end through clamp (423) and tighten.
 - c. Use rubber mallet to pound wiper (422) around plate (414) until the wiper ends are butted tightly together.
 - d. Apply lubricant to wiper (422). Use lubricant that is compatible with the material to be pumped. Check with material supplier.

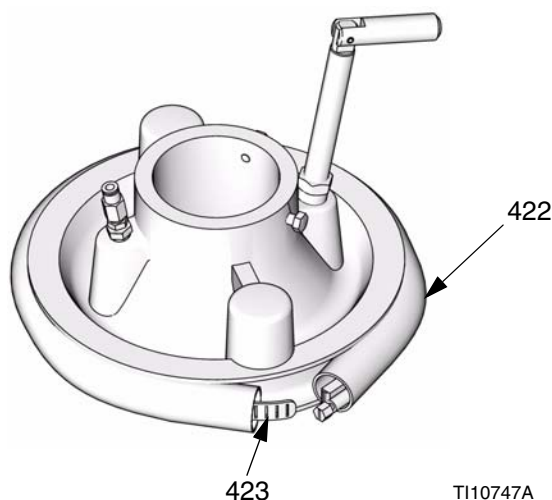


FIG. 16

Remove 30 and 55 Gallon Platen Wipers

1. To replace worn or damaged wipers (EB), 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. 17.

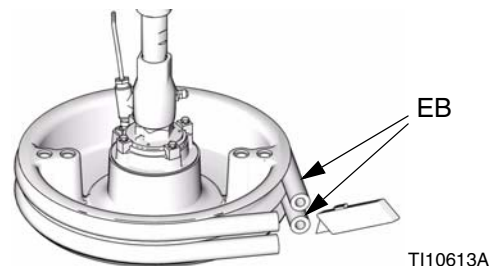


FIG. 17

Reinstall 30 and 55 Gallon Platen Wipers

1. Using a wooden or plastic tool to prevent damage to the wiper (EB), clean all material from seal grooves.
2. *Working from the bottom*, angle one wiper (EB) over back of platen. See FIG. 18.
3. Insert wiper (EB) in top groove and run front of wiper into groove.
4. *55 gallon wiper only*: Insert second wiper (EB) in lower groove and run front of wiper into groove.
5. Lubricate outside of wiper with lubricant compatible with material being pumped. Check with material supplier.

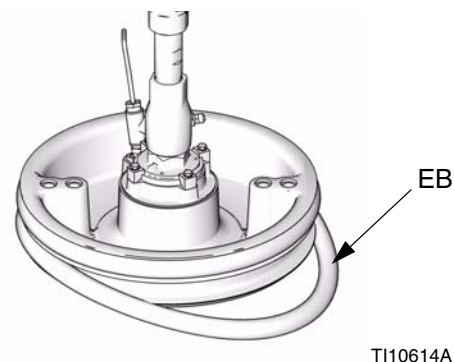


FIG. 18

Troubleshooting

Check all possible problems before disassembling the ram, pump, or platen. Refer to **Supply Unit Operation** manual 312371 for descriptions of DataTrak diagnostic codes. Refer to **Check-Mate Pump Packages** manual 312376 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 Supply Unit Repair on page 26.
	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 Supply Unit Repair on page 26.
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.

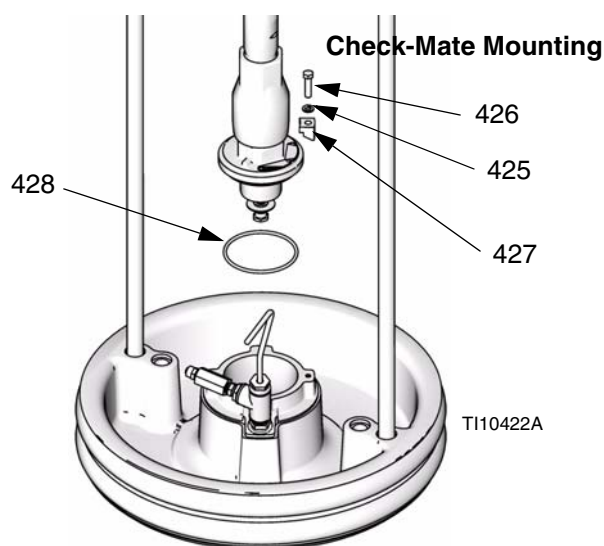
Repair

Disconnect Pump from Platen

The pump is mounted to the platens by mounting kit 255392 or 255393. See the **Repair Kits** on page 51.

30 and 55 Gallon Platen

1. Remove four hex screws (426), four clamps (427), washers (425), and o-ring (428).
2. Carefully pull pump away to prevent damage to pump inlet.



Dura-Flo Mounting

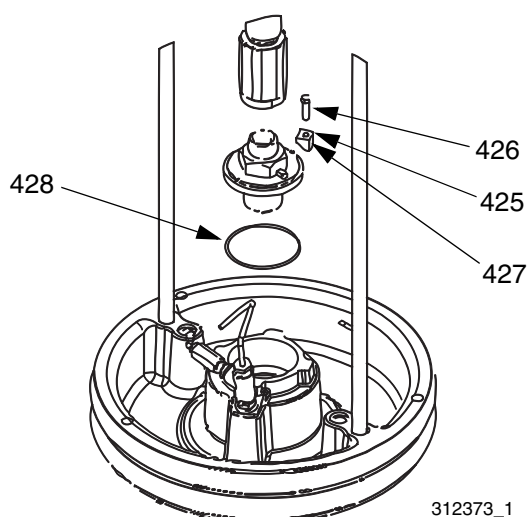
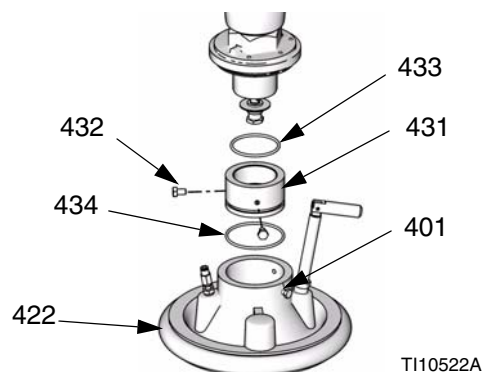


FIG. 19: 55 and 30 Gallon Mounting Kit

20 and 30 Liter Platen

1. Remove two 5/16 in. screws (401) from platen. If using a Check-Mate 100 pump, remove screws (432), adapter (431), and o-rings (433, 434) from pump inlet.
2. Carefully pull pump away to prevent damage to pump inlet.

Check-Mate Mounting



Dura-Flo Mounting

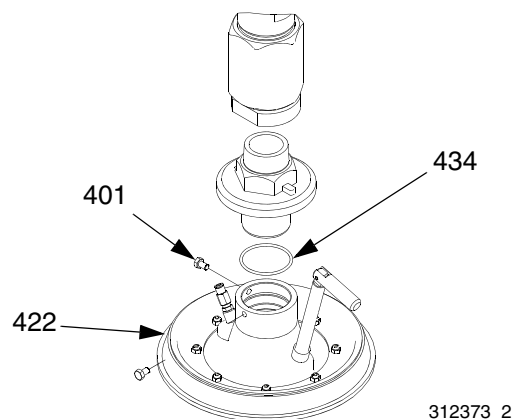


FIG. 20: 20 and 30 liter mounting kit

Connect Platen

30 and 55 Gallon Platen

1. Place o-ring (428) from mounting kit 255392 on the platen. If attached to plate, place displacement pump onto platen. See FIG. 19.
2. Secure pump's intake flange to plate with screws (426), washers (425), and clamps (427) included in mounting kit 255392.

20 and 30 Liter Platen

 Before installing the 20 liter platen with a PVC tire wiper or 30 liter platen to the Check-Mate 100, install adapter from mounting kit 255393 using the two set screws.

1. Insert o-ring (433) and two screws (432) in adapter (431) from mounting kit 255393 and push adapter into pump intake. See FIG. 20.
2. Place o-ring (434) from mounting kit 255393 on platen. Loosen mounting bracket screws (426) and carefully lower pump onto o-ring (434) and platen.
3. Secure pump's intake flange to plate with screws (401).

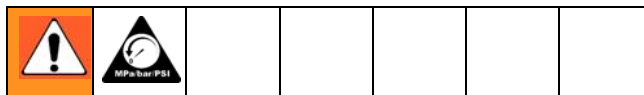
Remove Wipers

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 Displacement Pump 312376 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 23.

D200 3 in. and D200s 6.5 in. Supply Units

NXT Air Motors:

1. See **Disconnect Displacement Pump** in Check-Mate Pump Packages manual 312376.
2. Raise the air motor:
 - a. *For NXT with 55 gallon platen:* Loosen nut (105a) under ram bar and thread it down the threaded rod (106) to the lift ring adapter (107) holding the motor. Use wrench on nut (105) on top of ram bar to raise air motor.

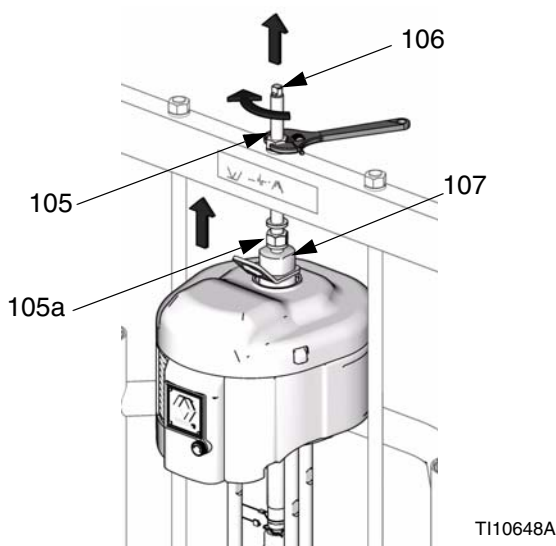


FIG. 21

- b. *For NXT with smaller platen and all supply units:* See procedure for **D30 3 in. Dual Post and S20 Single Post Supply Units** on page 21.

3. To disconnect the platen from the displacement pump see **Disconnect Pump from Platen** on page 19.
4. Use two people to lift out the displacement pump.

Premier Air Motors:

1. Remove nuts and washers (102, 103) from top of platen lift rods (101). See FIG. 22.

Caution

Do not remove or adjust the nuts (102) below the brackets. See FIG. 22. If the nuts are adjusted the pump will not fully engage with the platen or the smaller distance will put stress on the motor, tie rods, and displacement pump.

2. See **Disconnect Displacement Pump** in Check-Mate Pump Packages manual 312376.
3. To disconnect the platen from the displacement pump see **Disconnect Pump from Platen** on page 19.
4. Raise ram to ensure air motor assembly is clear of lower pump assembly and platen.
5. Remove displacement pump and service as needed.

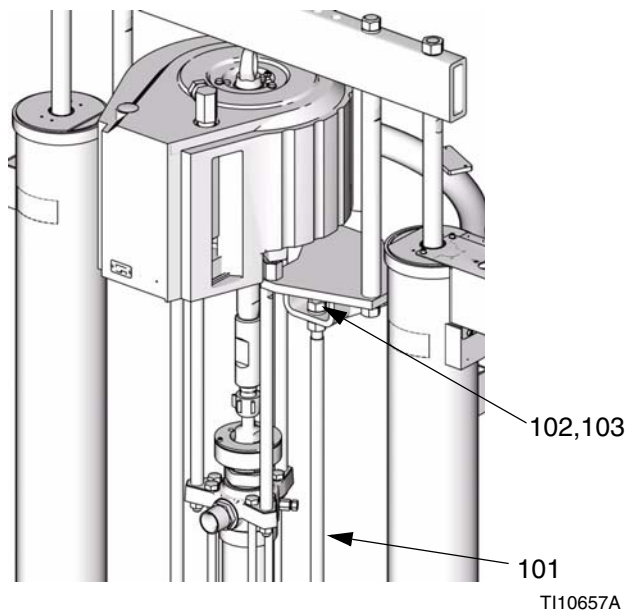


FIG. 22

D30 3 in. Dual Post and S20 Single Post Supply Units

NXT Air Motors:

1. See **Disconnect Displacement Pump** in Check-Mate Pump Packages manual 312376.
2. See **Disconnect Pump from Platen** on page 19 to disconnect the platen from the displacement pump.
3. Raise the ram assembly to lift the air motor away from the displacement pump.
4. Use two people to lift out the displacement pump.

Install Displacement Pump

D200 3 in. and D200s 6.5 in. Supply Units

NXT Air Motors

1. Insert displacement pump on platen. Follow **Connect Platen** steps on page 20.
2. See **Reconnect Displacement Pump** in Check-Mate Pump Packages manual 312376.
3. Reconnect ground wire and air motor harness (units with Remote DataTrak) if they were disconnected.

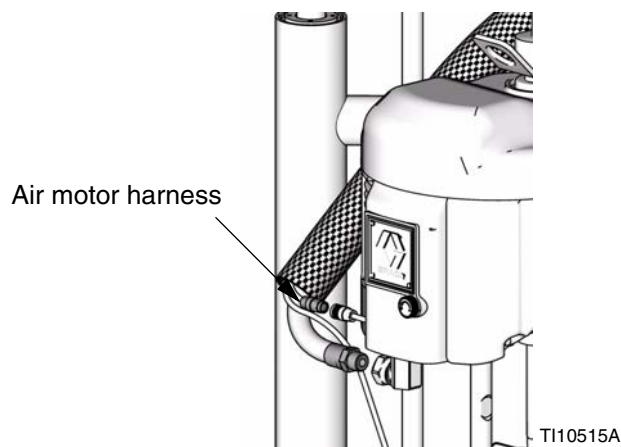


FIG. 23

4. Connect air motor:
 - a. *For NXT with 55 gallon platen:* Use wrench on nut (105) on top of ram bar to lower air motor onto displacement pump. See FIG. 21 on page 20. Thread nut (105) up and tighten it under ram bar. Tighten nut (105) below the crossbar to 25 ft-lb (34 N•m) maximum.
 - b. *For NXT with smaller platen:* If the motor was removed, tighten set screws (111) and washers (110) on mounting bracket (109). See FIG. 26 on page 23.

Premier Air Motors

1. Raise ram to install displacement pump to platen.
2. Insert displacement pump on platen. Follow **Connect Platen** steps on page 20.
3. See **Reconnect Displacement Pump** in Check-Mate Pump Packages manual 312376.

4. Tighten nuts (103) and washers (102) to top of platen lift rods (101). See FIG. 22.

Caution

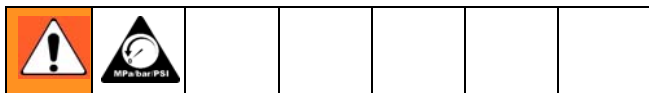
Do not remove or adjust the nuts (103) below the brackets. If the nuts are adjusted the pump will not fully engage with the platen or the smaller distance will put stress on the motor, tie rods, and displacement pump.

D30 3 in. Dual Post and S20 Single Post Supply Units

NXT Air Motors:

1. Raise ram to install displacement pump to platen.
2. Insert displacement pump on platen. Follow **Connect Platen** steps on page 20.
3. See **Reconnect Displacement Pump** in Check-Mate Pump Packages manual 312376.

Remove Air Motor



NXT Air Motors

1. See **Disconnect Displacement Pump** in Check-Mate Pump Packages manual 312376.
2. Disconnect air hose from air motor. If using a remote DataTrak, detach electrical connections from the air motor.
3. Disconnect air motor:
 - a. For NXT with 55 gallon platen (D200 3 in. and D200s 6.5 in. supply units): Loosen nut (105a) below crossbar. Use wrench to hold lift ring adapter (107) in place and loosen threaded rod (106) above crossbar with another wrench. See FIG. 24.

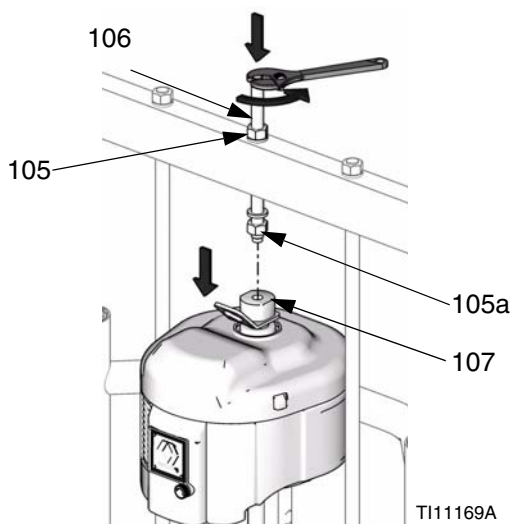


FIG. 24

- b. For NXT with smaller platen (D200 3 in. and D200s 6.5 in. supply units): Remove screws (111) and washers (110) securing motor to mounting plate. See FIG. 25.

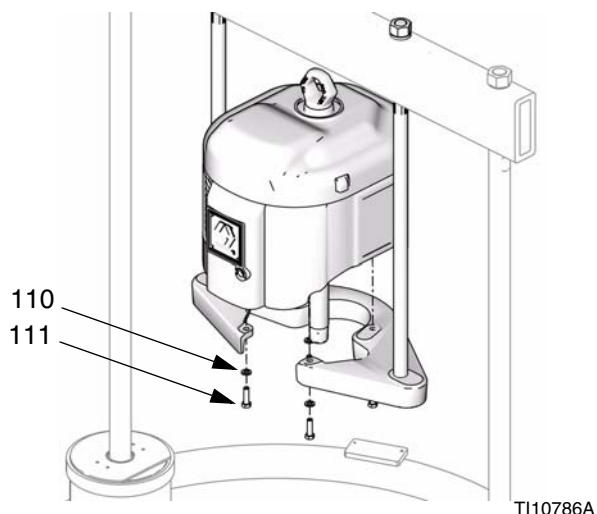


FIG. 25

- c. For NXT on D30 3 in. short dual post supply unit: Remove screws (111) and washers (110) securing motor to mounting plate (109).

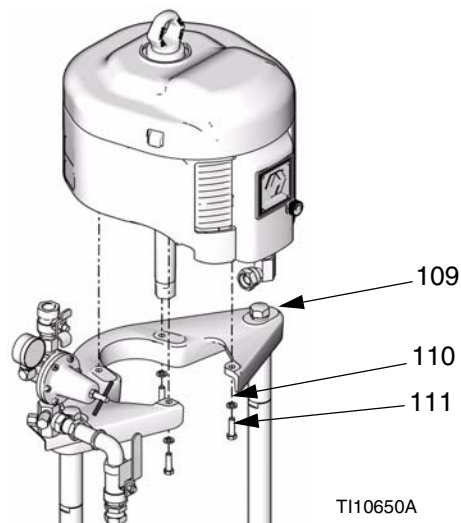


FIG. 26

- d. For NXT on S20 single post supply unit:
Remove screws (304), washers (303), and
clamps (302) securing tie rods to the pump sup-
port (301).

4. Using a capable hoist, secure air motor to hoist and
remove air motor.

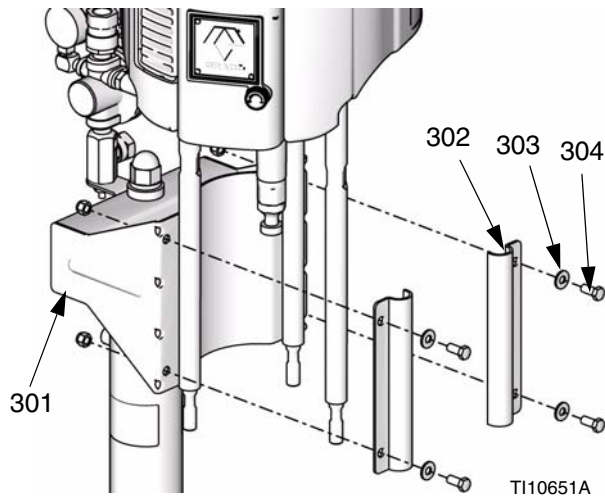


FIG. 27

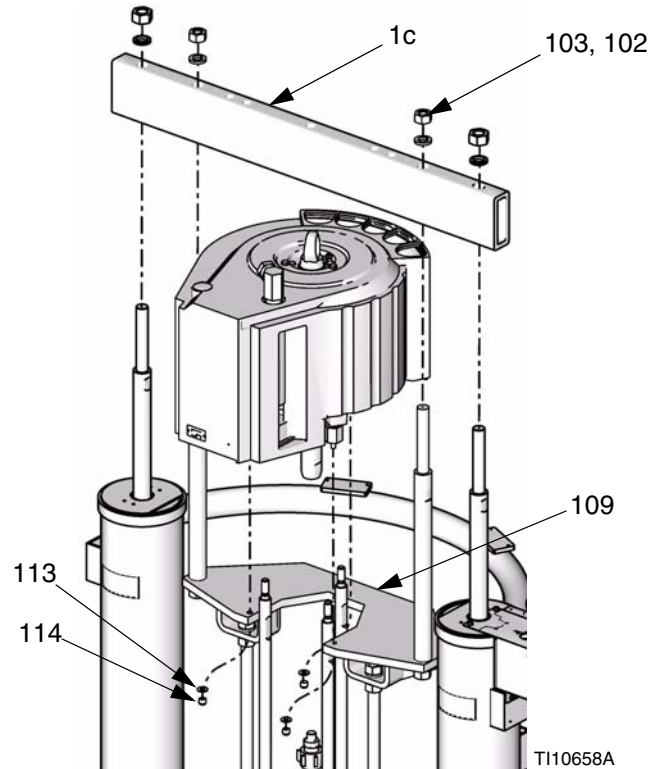


FIG. 28

Premier Air Motors

1. Remove air hose.
2. See **Disconnect Displacement Pump** in
Check-Mate Pump Packages manual 312376.
3. Remove nuts (103), washers (102), and cross bar
(1c).
4. Remove nuts (114) and washers (113) under the
mounting plate.
5. Using a capable hoist, secure air motor lift ring to
hoist and lift air motor off of mounting plate (109).

Install Air Motor

NXT Air Motors

NXT with 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 Check-Mate Pump Packages manual 312376.
 - b. Install threaded rod (106) through center hole in the crossbar. Install lock washers (104) and nuts (105) onto threaded rod (106), both above and below crossbar. Use wrench to hold lift ring adapter (107) and tighten threaded rod (106) into lift ring adapter (107) using another wrench. See FIG. 29.
 - c. Tighten nut (105) below crossbar to 25 ft-lb (34 N•m) maximum.
 - d. Tighten nut (105) 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. 23 on page 22.

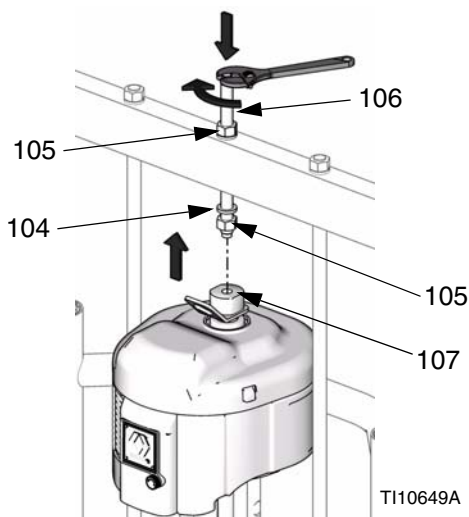


FIG. 29

NXT with smaller platen:

2. Position mounting plate (109) to ensure top of motor will clear the crossbar. See FIG. 25. Using a capable hoist, attach motor to mounting plate (109) using screws (111) and washers (110).
 - a. See **Reconnect Displacement Pump** in Check-Mate Pump Packages manual 312376.
 - b. Connect air hose to motor. If using a remote DataTrak, connect electrical connections to the air motor. See FIG. 23 on page 22.

Premier Air Motors

1. Using a capable hoist, lower air motor on the mounting plate (109). See FIG. 28.
2. Secure motor to mounting plate (109) with nuts (114) and washers (113).
3. Install cross bar (1c), nuts (103), and washers (102).
4. See **Reconnect Displacement Pump** in Check-Mate Pump Packages manual 312376.
5. Connect air hose to motor. If using a remote Data-Trak, connect electrical connections to the air motor. See FIG. 23 on page 22.

D30 3 in. Dual Post Supply Unit

NXT Air Motors

1. Using a secure hoist, attach motor to mounting plate (109) with screws (111) and washers (110). See FIG. 26 on page 23.
2. See **Reconnect Displacement Pump** in Check-Mate Pump Packages manual 312376.
3. Connect air hose to motor.

S20 Single Post Supply Unit

NXT Air Motors

1. Align and insert tie rods into the displacement pump. See FIG. 27.
2. See **Reconnect Displacement Pump** in Check-Mate Pump Packages manual 312376.
3. Position pump assembly against the support (301) so that the clamps (302) will fit over the tie rods.

4. Tighten clamps (302) over tie rods to the support (301) with four screws (304) and washers (303). Position motor and displacement pump as shown in FIG. 5 on page 11.
5. Connect air hose to motor.

Supply Unit Repair



To reduce the risk of serious injury whenever you are instructed to relieve pressure always follow the **Pressure Relief Procedure** on page 14. Do not use pressurized air to remove the guide sleeve or the piston.

D200s 6.5 in. Ram Piston Rods

Always service both cylinders at the same time. When you service the lift rod always install new o-rings in the piston rod seal and ram piston.

Disassemble Piston Rod Seal

1. Relieve pressure.
2. Remove the nuts (1a) and lockwashers (1b) holding the tie bar (1c) to the piston rods (1d). See parts illustration on page 34.
3. Remove nuts (103, 105) and washers (102, 104). See parts illustration on page 41.
4. Lift tie bar (1c) off of rods.
5. Remove retaining ring (1h) by gripping the ring tab with a pair of pliers and rotating the ring out of its groove.
6. Remove snap ring (1e) and rod wiper (1f).
7. Remove guide sleeve (1g) by sliding it off of rod (1d). Four 1/4 in -20 holes are provided to ease removal of the guide sleeve.
8. Inspect parts for wear or damage.

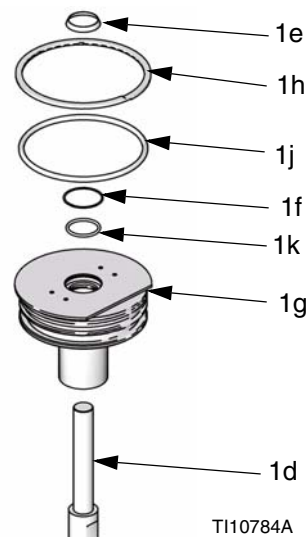


FIG. 30: 6.5 in. Piston Rod Seal

Assemble Piston Rod Seal

1. Install new o-rings (1j, 1k), rod wiper (1f), and snap ring (1e). Lubricate packings with o-ring lubricant.
2. Slide guide sleeve (1g) onto rod (1d) and push it into cylinder. Replace retaining ring (1h) by feeding it around the guide sleeve groove.
3. Reinstall tie bar (1c) using nuts (1a) and lockwashers (1b). Torque to 40 ft-lb (54 N•m).
4. Reinstall washers (102, 104) and nuts (103, 105).

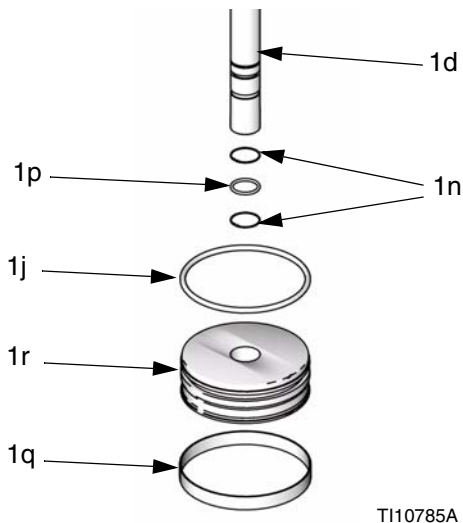
Disassemble Ram Piston

1. Relieve pressure.
2. Remove nuts (1a) and lockwashers (1b) holding the tie bar (1c) to the piston rods (1d).
3. Remove nuts (103, 105) and washers (102, 104). See parts illustration on page 41.
4. Lift tie bar (1c) off rods.
5. Remove retaining ring (1h) by gripping the ring tab with a pair of pliers and rotating the ring out of its groove.
6. Remove guide sleeve (1g) and slide it off piston rod (1d).

Caution

Do not tilt the piston rod to one side when removing it from the base or when installing it. Such movement can damage the piston or inside surface of the base cylinder.

7. Carefully lay piston (1r) and rod (1d) down so rod will not be bent. Remove bottom retaining ring (1n) and o-ring (1p). Remove piston guide band (1q). Slide piston (1r) off piston rod (1d).



TI10785A

FIG. 31: 6.5 in. Ram Piston

Assemble Ram Piston

1. Install new o-rings (1p, 1j) on piston rod (1d) and piston (1r). Lubricate the piston (1r) and o-rings (1p, 1j). Reinstall piston (1r) and lower retaining ring (1n) onto piston rod (1d). Install piston guide band (1q) onto piston (1r).
2. Carefully insert piston (1r) into cylinder and push rod (1d) straight down into cylinder. Add three ounces of lubricant to each cylinder after inserting the piston (1r).
3. Slide guide sleeve (1g) onto piston rod (1d).
4. Install retaining ring (1e) and tie bar (1c) as explained in **Disassemble Ram Piston**.

D200 3 in. Ram Piston Rods

Always service both cylinders at the same time. When you service the piston rod always install new o-rings in the piston rod seal and ram piston.

Disassemble Piston Rod Seal and Bearing

1. Relieve pressure.
2. Remove nuts (206) and lockwashers (205) holding the tie bar (204) to the piston rods (202n). Refer to parts illustration on page 37. Remove nuts (105) and washers (104). Remove tie bar (204).
3. Remove retaining ring (203).
4. Slide end cap (202a), pin (202b), o-ring (202c), and spring (202m) up off of the piston rod (202n).
5. Remove retaining ring (202k) and bearing (202j) from end cap (202a) and remove o-ring (202d).
6. Inspect parts for wear or damage. Replace as necessary.

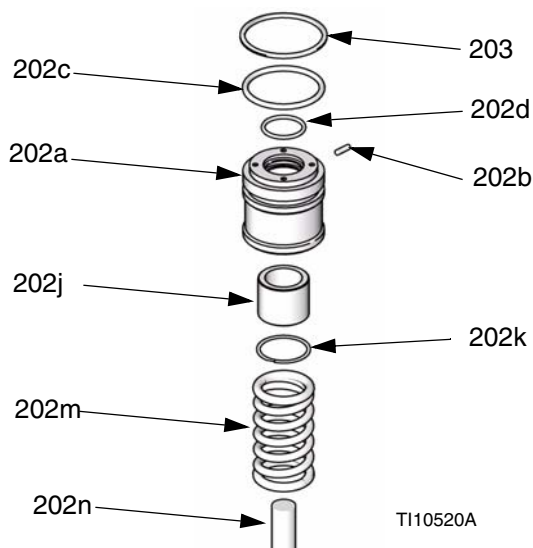


FIG. 32: 3 in. Piston Rod Seal

Assemble Piston Rod Seal and Bearing

1. Lubricate o-ring (202d) and bottom bearing (202j). Install o-ring (202d), bottom bearing (202j), and retaining ring (202k) into end cap (202a).
2. Install new o-ring (202c) and pin (202b) on end cap (202a). Lubricate o-ring (202c) and end cap (202a).
3. Slide spring (202m) and end cap (202a) on the rod (202n).

4. Install retaining ring (203), tie bar (204), washers (104, 205), and nuts (105, 206).

Disassemble Ram Piston

1. Complete steps 1-4 from **Disassemble Piston Rod Seal and Bearing** to remove the end cap from the piston rod.

Caution

Do not tilt the piston rod to one side when removing it from the base or when installing it. Such movement can damage the piston or inside surface of the base cylinder.

2. Carefully lay piston (202e) and rod (202n) down so piston rod will not be bent. Remove nut (202f), washer (202g), piston (202e), outer o-ring (202c), and inner o-ring (202h).
3. Inspect parts for wear or damage. Replace as necessary.

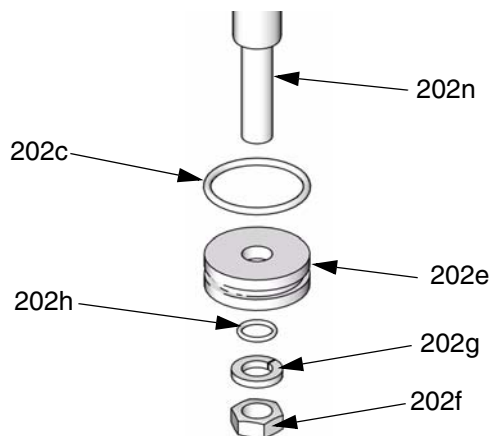


FIG. 33: 3 in. Ram Piston

Assemble Ram Piston

1. Install new o-rings (202h, 202c) and lubricate piston (202e) and o-rings.
2. Apply medium strength thread sealant. Install piston (202e), washer (202g), and nut (202f) on piston rod (202n).
3. Carefully insert piston (202e) into cylinder and push piston rod (202n) straight down into cylinder.
4. Slide spring (202m) and end cap (202a) onto piston rod (202n).
5. Install retaining ring (203), tie bar (204), washers (104, 205), and nuts (105, 206).

D30 3 in. Dual Post Ram Piston Rods

Always service both cylinders at the same time. When you service the lift rod always install new o-rings in the piston rod seal and ram piston.

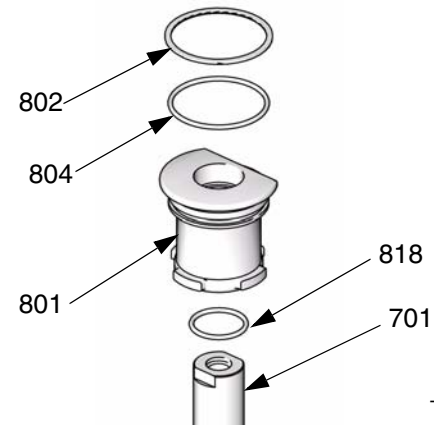
1. Relieve system pressure and ram pressure.
2. Ensure ram is in lowest position.
3. Remove two bolts (703) and lockwashers (702) from adapter rods (701). See parts illustration on page 43.
4. Remove entire pump package, including the mounting plate (710) off of the adapter rods (701). Secure pump package so pump and platen will not fall.

Disassemble Guide Sleeve

1. Grip spiral retaining ring (802) with a pair of pliers and rotate out of groove.
2. Slide guide sleeve off of piston rod and adapter rod (701).
3. Inspect guide sleeve. Replace if damaged or worn.
4. Remove two o-rings from inside (818) and outside (804) guide sleeve (801). Replace with new o-rings (818, 804).
5. Lubricate o-rings with o-ring lubricant.

Assemble Guide Sleeve

6. Slide guide sleeve (801) back onto adapter rod (701) and piston rod (805).
7. Install new spiral retaining ring (802) by feeding it into groove. You may have to wiggle it around a bit to get it feeding properly.
8. The ring (802) is installed completely when the ring tab is facing toward the middle of the ram and is the only part of the spiral retaining ring that remains above the guide sleeve (801).
9. Repeat steps 1 through 8 to service parts of other lift rod.
10. Remount mounting plate (710) and attach nuts (703) and lockwashers (702). Torque to 40 ft-lb (54 N•m).



TI10726A

Fig. 34: Short Dual Post Guide Sleeve

Disassemble Lift Rod Piston

1. Disassemble guide sleeve.
2. Screw 3/4 in.-10 x 1.5 in. bolt (not supplied) into top of adapter rod (701).
3. Grasp bolt and carefully pull piston rod (805) straight up out of cylinder.

Caution
Do not tilt the piston rod to one side when removing it from the base or when installing it. Such movement can damage the piston or inside surface of the base cylinder.

4. Lay piston rod (805) on a bench or other work surface.
5. Remove nut (828), washer (827), piston (807), bumper (817), and two o-rings (804, 808). See FIG. 35.
6. Inspect parts and look for damage or wear. Replace as necessary.

Assemble Lift Rod Piston

7. Lubricate o-rings (804, 808).
8. Slide piston (807) back onto piston rod (805) against bumper (817).
9. Tighten washer (827) and nut (828) on bottom of piston (807) and piston rod (805).
10. Carefully re-insert piston rod (805) into cylinder. Push lift rod straight down as far as it will go.
11. Reassemble per steps 7-11 from **Assemble Guide Sleeve**.

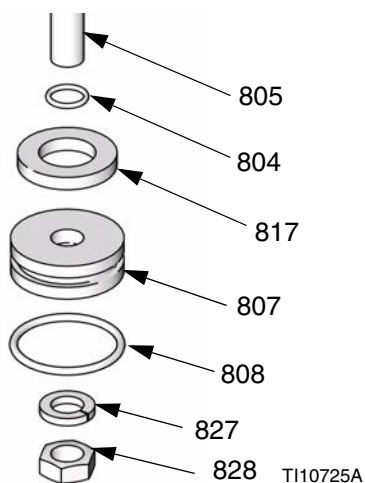


FIG. 35: Short Dual Post Piston

S20 Single Post Ram Piston Rod Bearing

1. Relieve pressure.
2. Unscrew cap nut (920), washer (906), and spacer (919). Remove pump support (301) and attaching hardware. FIG. 36.

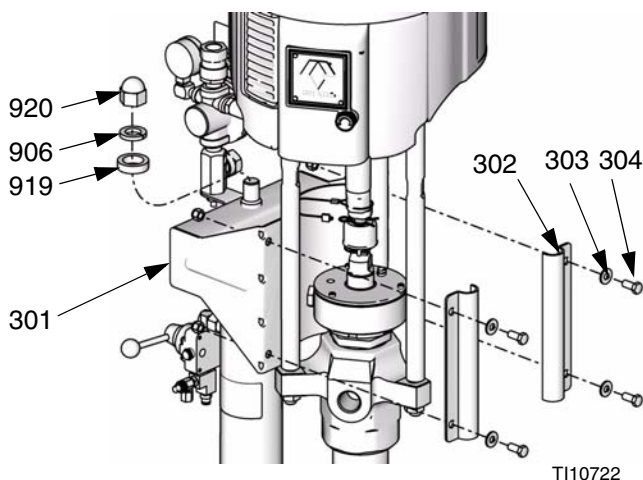


FIG. 36: S20 Mounting Hardware

3. Unscrew cylinder cap (915) and pull rod guide housing (931b) up off piston rod (931c). See FIG. 37.
4. Remove felt wiper seal (931m) and o-ring (931h).
5. Remove v-block packing (931n) and bearings (931p).
6. Clean and inspect all parts for wear or damage. Replace as needed.

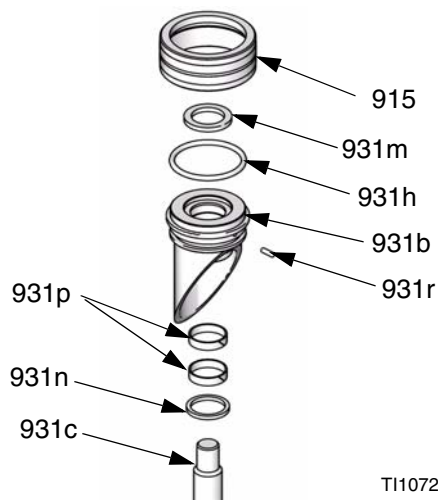


FIG. 37: S20 Piston Rod Bearing

S20 Single Post Ram Piston

1. Relieve pressure.
2. Unscrew cap nut (920), washer (906), and spacer (919). Remove pump support (301) and attaching hardware. See FIG. 36.
3. Unscrew cylinder cap (915) and pull rod guide housing (931b) up off piston rod (931c). See FIG. 37.
4. Carefully pull piston rod (931c) and piston straight (931d) up out of base. See FIG. 38.
9. Slide piston (931d) onto piston rod (931c) and secure tightly with washer (931e) and retainer nut (931f).
10. Carefully insert piston (931d) into base's cylinder and push piston rod (931c) straight down into cylinder.
11. Install rod guide housing (931b) on piston rod (931c) and screw on cylinder cap (915).
12. Reinstall pump support (301) and attaching hardware. See FIG. 36.

Caution

Do not tilt the piston rod to one side when removing it from the base or when installing it. Such movement can damage the piston or inside surface of the base cylinder.

5. Carefully lay piston (931d) and piston rod (931c) down to avoid bending the piston rod.
6. Remove piston retainer nut (931f), washer (931e), piston (931d), outer piston o-ring (931h), and inner piston o-ring (931g).
7. Clean and inspect all parts for wear or damage. Replace as needed.

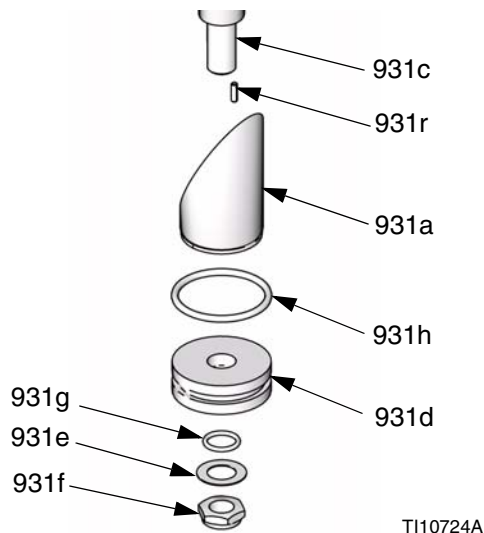
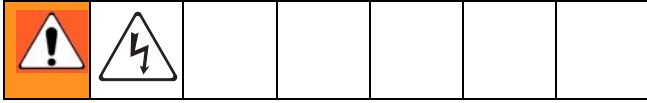


FIG. 38: Single Post Piston

8. Install piston o-rings (931g, 931h) on piston (931d). Lubricate piston and o-rings.

Power Supply



Remove 24 Vdc Module

1. Turn external 24 Vdc power source off.
2. Loosen screws (503), and remove front and back shrouding covers (506, 507). Screws (503) remain attached to front and back shrouding covers (506, 507) by retainers (504). See DataTrak Kit parts illustration on page 50.
3. Remove two screws (8, 234, 536) and press cover plate (17, 233) up from the bottom. Then slide to front of ram to remove.

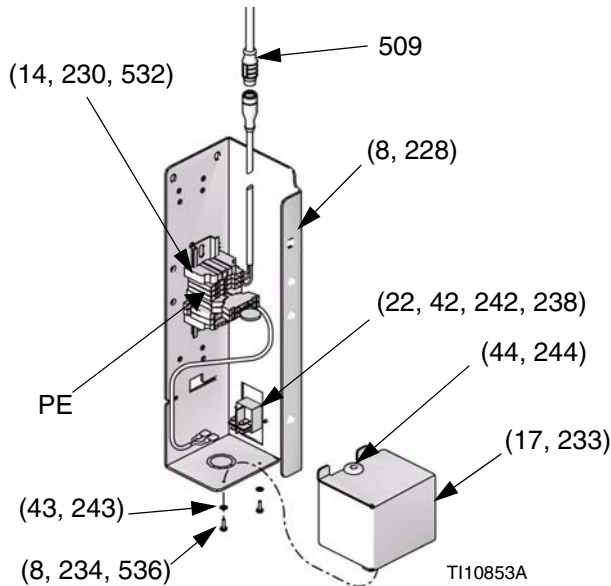


FIG. 39

4. Disconnect power supply output cable from CAN cable (509).
5. Remove quick disconnects from rocker switch terminals 1 and 4.

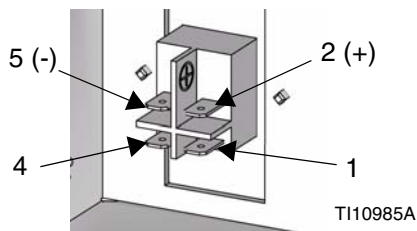


FIG. 40

6. Remove protective earthing conductor from the PE terminal marked $\perp$.
7. Remove screws (15, 231) and 24 Vdc power supply module (14) from power supply mounting bracket (8, 228). See parts illustration on page 40.
8. Remove screws (12, 229) and power switch (22, 238) from power supply mounting bracket (8, 228).
9. Clean and inspect all parts for wear or damage. Replace as needed.

Replace 24 Vdc Fuses

1. Complete steps 1 and 2 from **Remove 24 Vdc Module**.
2. Open the fuse holder and remove two fuses. Install new fuses (21, 237).

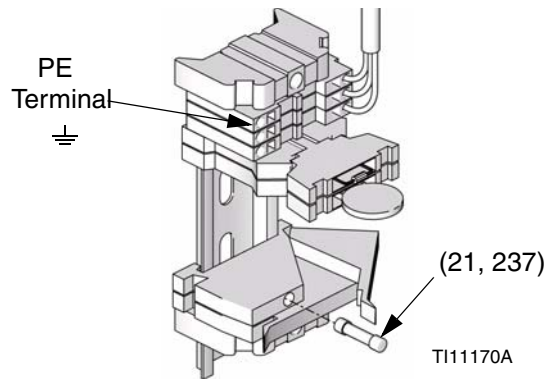


FIG. 41

Install 24 Vdc Module

1. Ensure that the external 24 Vdc power source is off.
2. Mount 24 Vdc module (14, 230, 532) on mounting bracket (8, 228).
3. Mount power switch (22, 238) on mounting bracket (8, 228).
4. Attach quick disconnects on cable from 24 Vdc module (14, 230, 532) to terminals on power switch (22, 238).
 - a. The black wire connects to terminal 4, adjacent to terminal marked (-).
 - b. The red wire connects to terminal 1, adjacent to terminal marked (+).
5. Install power supply output cable to CAN cable (509).

- Attach 24 V Class 2 power supply to terminals on the power switch: +24 Vdc to terminal 2 (+) and 24 Vdc return to terminal 5 (-). See FIG. 40. Attach protective earthing (PE) conductor to terminal marked $\perp$. See FIG. 41. The 24 Vdc power supply must be capable of supplying at least 1.0 Amp and have supply current protection rated at no more than 2.5 Amps.
- Install cover plate (17, 233) and screws (18, 234, 536).
- Install front and back shrouding covers (506, 507), retainers (504), and screws (503). See DataTrak Kit parts illustration on page 50.

Remove 100-240 Vac Power Supply

- Turn power supply OFF and **Disconnect power**.
- Loosen screws (503), and remove front and back shrouding covers (506, 507). Screws (503) remain attached to front and back shrouding covers (506, 507) by retainers (504). See DataTrak Kit parts illustration on page 51.
- Remove two screws (8, 234, 536), two washers (43, 243), and press cover plate (17, 233) up from the bottom. Then slide to front of ram to remove.

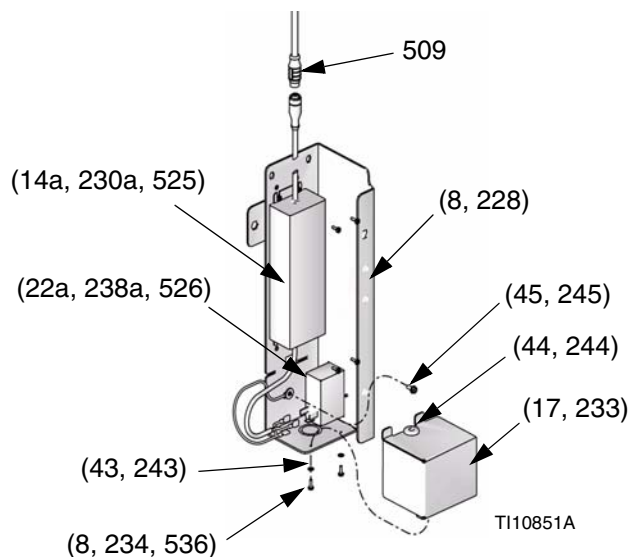


FIG. 42

- Disconnect power supply output cable.
- Remove quick disconnects from rocker switch.
- Remove ground screw (45, 245).

- Remove screws (18, 234, 536) and 100-240 Vac power supply (14a, 230a) from power supply mounting bracket (8, 228, 523).
- Inspect all parts for wear or damage. Replace as needed.

Replace 100-240 Vac Fuses

- Turn power supply OFF and **Disconnect power**.
- Use screwdriver to remove two fuses from module and install new fuses.

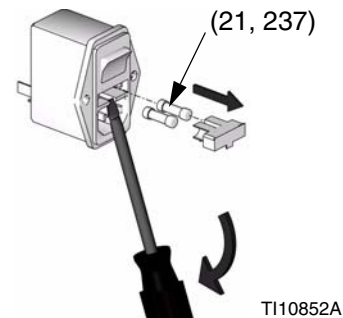


FIG. 43

Install 100-240 Vac Power Supply

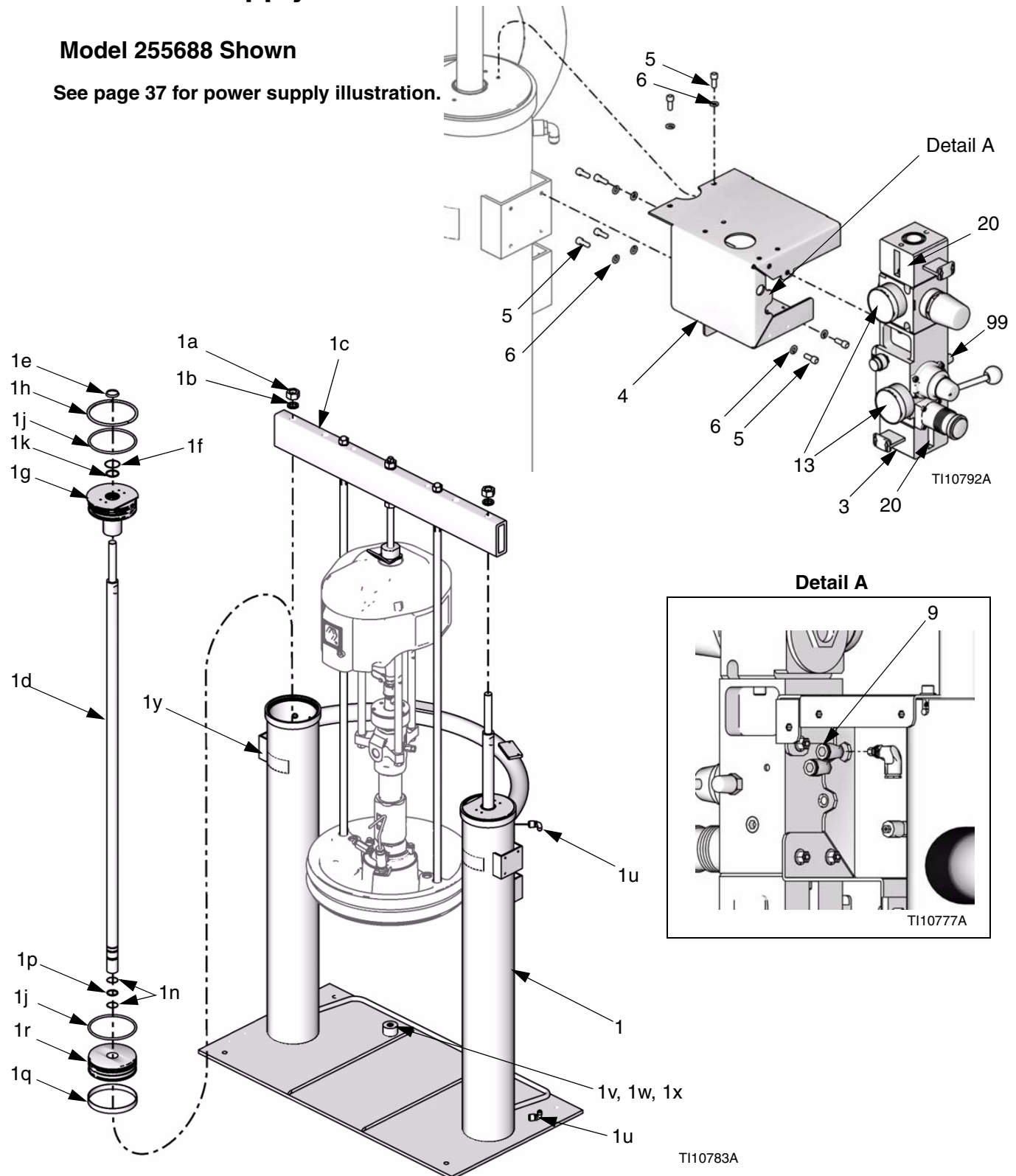
- Turn power supply OFF and **Disconnect power**.
- Mount power entry module (22a, 238a) and 100-240 Vac power supply (14a, 230a) on mounting bracket (8, 228, 523).
- Install power supply output cable to CAN cable (509). See FIG. 42.
- Connect power supply input quick disconnects to power switch terminals (22a, 238a, 526).
 - Connect green wire to Ground $\perp$.
 - Connect brown wire to Line (L).
 - Connect blue wire to Neutral (N).
- Install grounding screw (45, 245) through eyelet terminal of power supply ground (green) pigtail wire and fasten to power supply enclosure (8, 228).
- Install cover plate (17, 233), screws (18, 234, 536), and washers (43, 243).
- Install front and back shrouding covers (6, 7), retainers (504), and screws (503). See DataTrak Kit parts illustration on page 51.

Parts

D200s 6.5 in. Supply Units

Model 255688 Shown

See page 37 for power supply illustration.



D200s 6.5 in. Supply Units - Common Parts

The parts listed below are common among all D200s supply units. Parts that vary are found in the table on the next page.

Ref No.	Part No.	Description	Qty	Ref No.	Part No.	Description	Qty
1		RAM, 6.5 in. (includes 1a - 1z)	1	1r	C32405	PISTON, elevator air	2
1a	113939	NUT, jam, hex	2	1s❖	100040	PLUG, pipe	2
1b	113993	WASHER, lock, helical	2	1u	114153	ELBOW, male, swivel	2
1c	15M538	BEAM, tie	1	1v	C32467	STOP, drum	2
1d	C32401	ROD	2	1w	C19853	SCREW, socket hd cap	2
1e*	C03043	RING, snap	2	1x	C38185	WASHER, lock	2
1f*	C31001	WIPER, rod	2	1y▲	15J074	LABEL, safety	4
1g	617414	SLEEVE, guide, 6-1/2 in. ram	2	1z❖	C14023	LABEL, ram, up-down	1
1h*	C32409	RING, retaining	2	2❖	C12509	TUBE, nylon, 14.6 ft (4.45 m)	1
1j*	C38132	O-RING	4	3	255650	CONTROL, air; see 312374	1
1k*	156593	O-RING	2	4	255375	BRACKET, mounting, air control	1
1n*	C20417	RING, retaining	4	9	113318	ELBOW, plug in	3
1p*	158776	O-RING	2	10❖	C12034	HOSE, coupled	1
1q*	C32408	BAND, guide	2	11❖	160327	UNION, adapter, 90°	2
				13	101689	GAUGE, pressure, air	2
				20	15V954	LABEL	1
				27❖		HOLDER, cable tie, rotating	1
				28❖	552071	SLEEVE, protective, 6 ft (1.83 m)	1
				99		VALVE, safety relief; see page 46.	1

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

* Parts included in Supply Units Repair Kit 918432 (purchase separately).

❖ Not shown.

D200s 6.5 in. Supply Units - Varying Parts by Model

Ref. No.	Description	Supply Units and Voltage						Qty.
		255688 (No Volt)	2-Button Interlock (No Volt)	Standard (24 Vdc)	2-Button Interlock (24 Vdc)	Standard (100-240 Vac)	2-Button Interlock (100-240 Vac)	
5	SCREW, cap, socket-hd	101682 (Qty: 8)	101682 (Qty: 10)	101682 (Qty: 14)	101682 (Qty: 16)	101682 (Qty: 14)	101682 (Qty: 16)	-
6	WASHER, lock	100016 (Qty: 8)	100016 (Qty: 10)	100016 (Qty: 14)	100016 (Qty: 16)	100016 (Qty: 14)	100016 (Qty: 16)	-
7	BRACKET, power supply support			n/a	n/a	n/a	n/a	1
8	ENCLOSURE, power supply			n/a	n/a	n/a	n/a	1
12	SCREW, countersunk, 6-32 x 0.38			121255	121255	121255	121255	6
14	MODULE, assy 24Vdc			255649	255649			1
14a	POWER SUPPLY, 100-240 Vac					15M293	15M293	1
15	SCREW, machined, pan hd			110637	110637			2
17	COVER, power					n/a	n/a	1
18	SCREW, self tapping					101845	101845	6
21	FUSE, 250V/1.2A					121261	121261	2
22	SWITCH, power, 24 Vdc			n/a	n/a			1
22a	SWITCH, power, 100-240 Vac					121254	121254	1
23	CABLE, power, female, 0.8M			255673	255673			1
42	PLATE, switch mount			n/a	n/a			1
43	WASHER, lock			100272	100272	100272	100272	2
44	GROMMET			112738	112738	112738	112738	1
45	SCREW, grounding					111593	111593	1

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

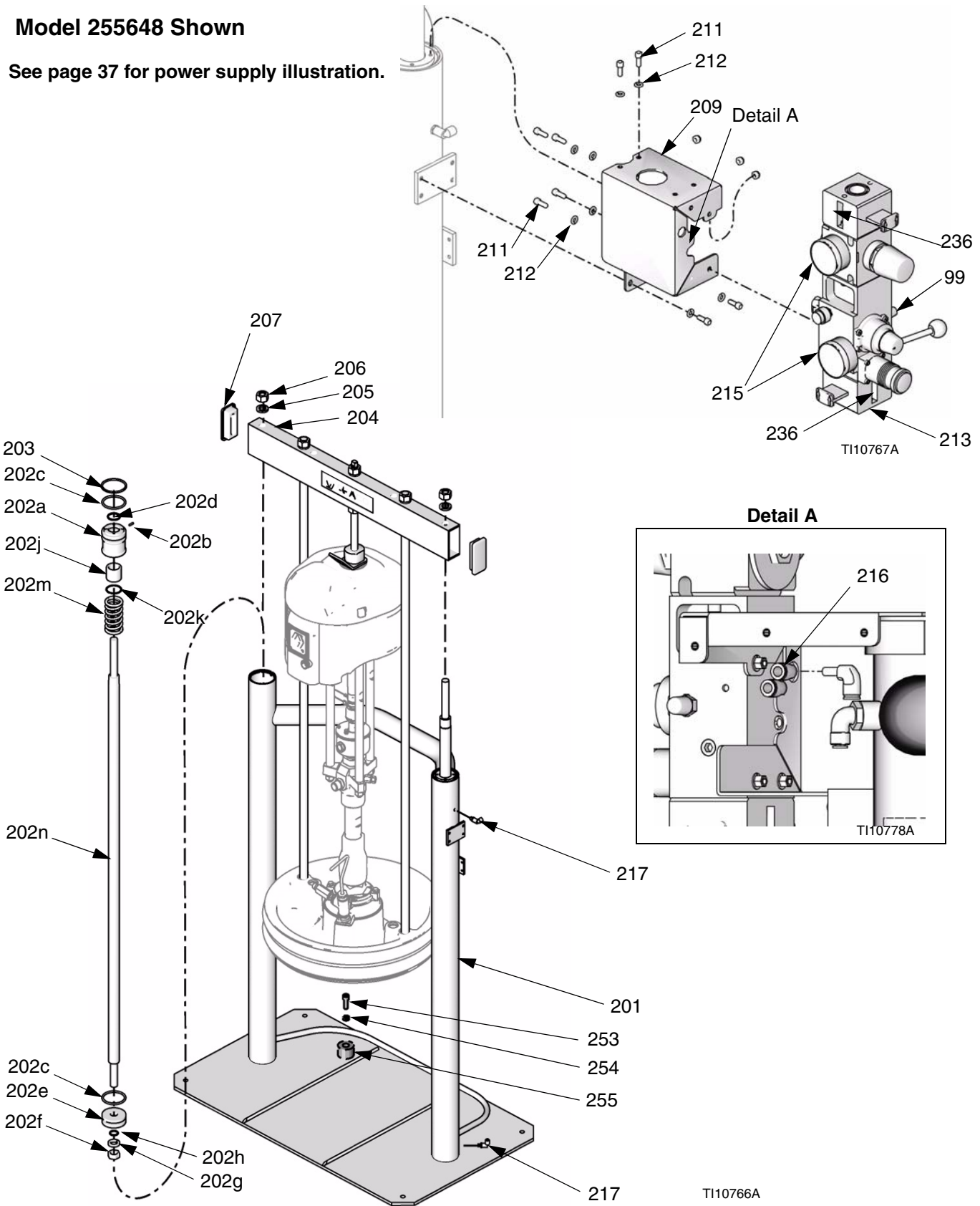
❖ Not shown.

Parts designated n/a are not available separately.

D200 3 in. Supply Units

Model 255648 Shown

See page 37 for power supply illustration.



D200 3 in. Supply Units - Common Parts

The parts listed below are common among all D200 supply units. Parts that vary are found in the table on the page 39.

Ref No.	Part No.	Description	Qty
201		RAM, 3 in.	1
202		PISTON, assembly 3 in. ram; includes 202a - 202m	2
202a	15V032	BEARING, ram end cap	2
202b	107092	PIN, spring, straight	2
202c*		O-RING	4
202d*		O-RING	2
202e	183943	PISTON	2
202f*		NUT, jam	2
202g*		WASHER, split	2
202h*		O-RING	2
202j*		BEARING, ram end cap	2
202k*		RETAINER, retaining ring	2
202m*		SPRING, compression	2
202n	167651	ROD, piston, ram	2
Ref No.	Part No.	Description	Qty
203*	C79109	RING, retaining	2
204	167646	BEAM, tie	1
205	101533	WASHER, spring lock	2
206	101535	NUT, full hex	2
207	189559	CAP, end	2
209	255296	BRACKET, mounting, air control	1
213	255650	CONTROL, air	1
214❖	552071	SLEEVE, protective	6
215	101689	GAUGE, pressure, air	2
216	113318	ELBOW, plug in	3
217	597151	ELBOW	2
218❖	160327	UNION, adapter, 90°	2
219❖	C12034	HOSE, coupled, 72 in. (1828.8 mm)	1
220❖	C12509	TUBE, nylon, 14.60 in. (370.84 mm)	1
236	15V954	LABEL	1
253	C19853	SCREW, cap, socket, hd	2
254	C38185	WASHER, lock	2
255	C32467	STOP, drum	2
99		VALVE, safety relief; see page 46.	1

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

* Parts included in Supply Units Repair Kit 255687 (purchase separately).

❖ Not shown.

D200 3 in. Supply Units - Varying Parts by Model

Ref. No.	Description	Supply Units and Voltage						Qty.
		255648 (No Volt)	2-Button Interlock (No Volt)	Standard (24 Vdc)	2-Button Interlock (24 Vdc)	Standard (100-240 Vac)	2-Button Interlock (100-240 Vac)	
211	SCREW, cap, socket-hd	101682 (Qty: 8)	101682 (Qty: 10)	101682 (Qty: 14)	101682 (Qty: 16)	101682 (Qty: 14)	101682 (Qty: 16)	-
212	WASHER, lock	100016 (Qty: 8)	100016 (Qty: 10)	100016 (Qty: 14)	100016 (Qty: 16)	100016 (Qty: 14)	100016 (Qty: 16)	-
227	BRACKET, power supply support			n/a	n/a	n/a	n/a	1
228	ENCLOSURE, power supply			n/a	n/a	n/a	n/a	1
229	SCREW, countersunk, 6-32 x 0.38			121255	121255	121255	121255	6
230	MODULE, assy, 24 Vdc			255649	255649			1
230a	POWER SUPPLY, 100-240 Vac					15M293	15M293	1
231	SCREW, machine, pan hd			110637	110637			2
233	COVER, power					n/a	n/a	1
234	SCREW, self-tapping					101845	101845	6
237	FUSE, 250V, 1.2A					121261	121261	2
238	SWITCH, power, 24 Vdc			n/a	n/a			1
238a	SWITCH, power, 100-240 Vac					121254	121254	1
239	CABLE, power, female, 0.8M			255673	255673			1
242	PLATE, switch mount			n/a	n/a			1
243	WASHER, lock			100272	100272	100272	100272	2
244	GROMMET			112738	112738	112738	112738	1
245	SCREW, grounding					111593	111593	1

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

* Parts included in Kit 255687 (purchase separately).

❖ Not shown.

Parts designated n/a are not available separately.

This exploded view diagram illustrates the assembly of a power supply unit. The components and fasteners are identified by the following callouts:

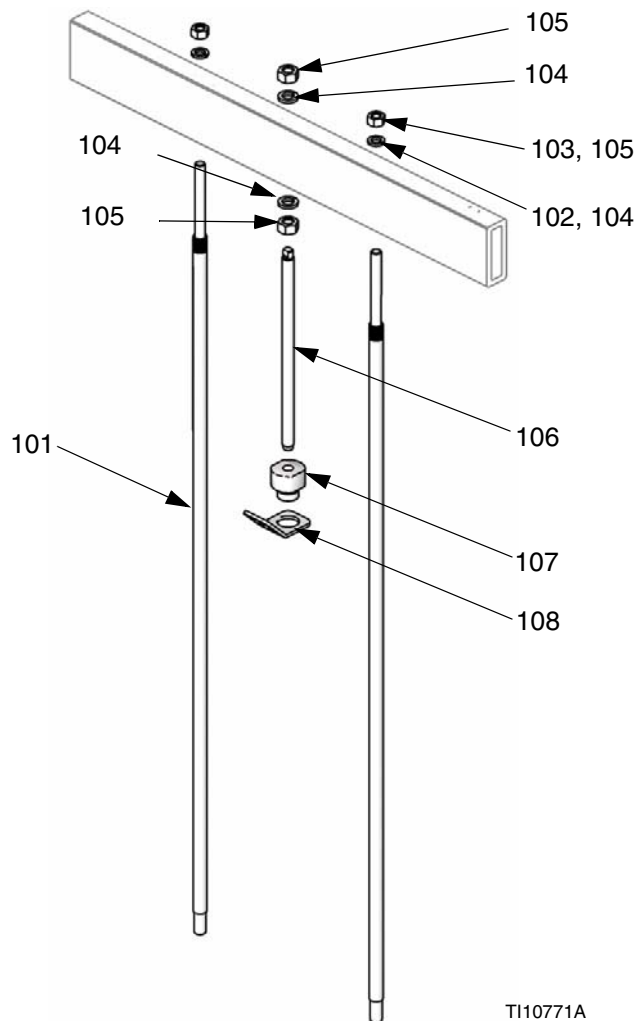
- 5, 211, 502: Screws for mounting the top cover.
- 6, 212, 501: Screws for mounting the side cover.
- 7, 227, 524: Screws for mounting the front panel.
- 8, 228, 523: Screws for mounting the rear panel.
- 12, 229, 522: Screws for mounting the internal components.
- 14, 230, 532: Screws for mounting the output filter.
- 14a, 230a, 525: Screws for mounting the output filter.
- 15, 231, 527: Screws for mounting the output filter.
- 17, 233, 528: Screws for mounting the output filter.
- 18, 234, 536: Screws for mounting the output filter.
- 22, 42, 238, 242: Screws for mounting the output filter.
- 23, 239, 534: Screws for mounting the output filter.
- 22a, 238a, 526: Screws for mounting the output filter.
- 43, 243: Screws for mounting the output filter.
- 44, 244: Screws for mounting the output filter.
- 45, 245: Screws for mounting the output filter.

The diagram shows the main components of the power supply unit, including the top cover, side cover, front panel, rear panel, internal components, output filter, and output filter assembly. The assembly is shown in an exploded view, with dashed lines indicating the assembly path and arrows pointing to the components.

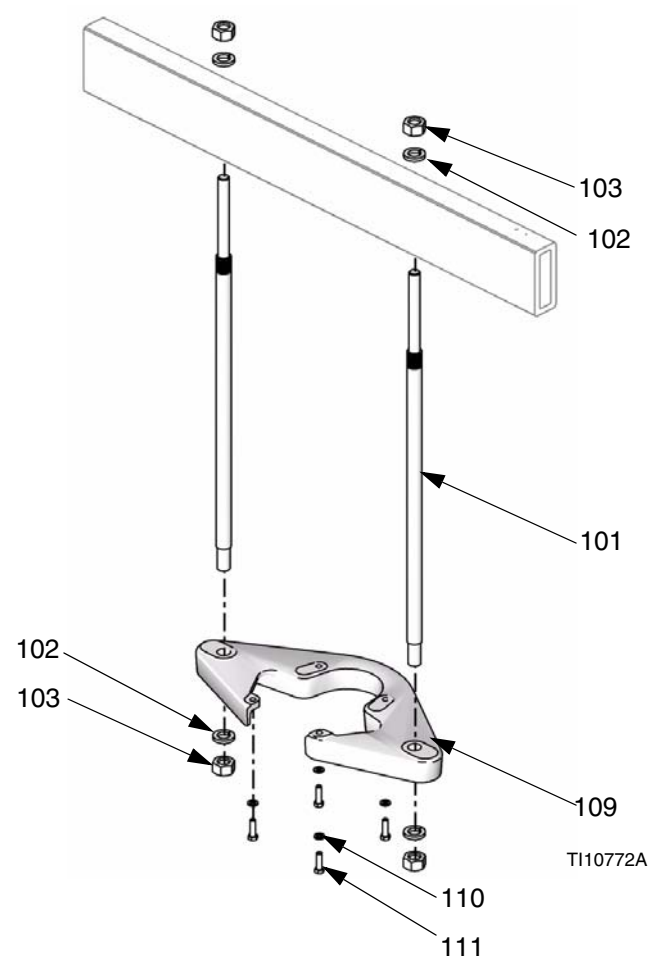
ti10854a

Pump Mounts - D200s 6.5 in. and D200 3 in. Supply Units

255315, 255305, and 256235



255316, 255317, 255308, and 255309



Pump Mount Parts - 255315, 255305, and 256235

Ref No.	Part No.	Description	Qty
101	15M531✓ 167652✿*	ROD, platen	2
102	101015✓	WASHER, lock	2
103	C19187✓	NUT, hex	2
104	101533	WASHER, spring lock	2
105	101535	NUT, full hex	2
106	✓ ✿	ROD, threaded	1
107		ADAPTER, lift, ring	1
108		RING, lift, plate	1

✓ Pump Mount 255315 only.

✿ Pump Mount 255305 only.

* Pump Mount 256235 only.

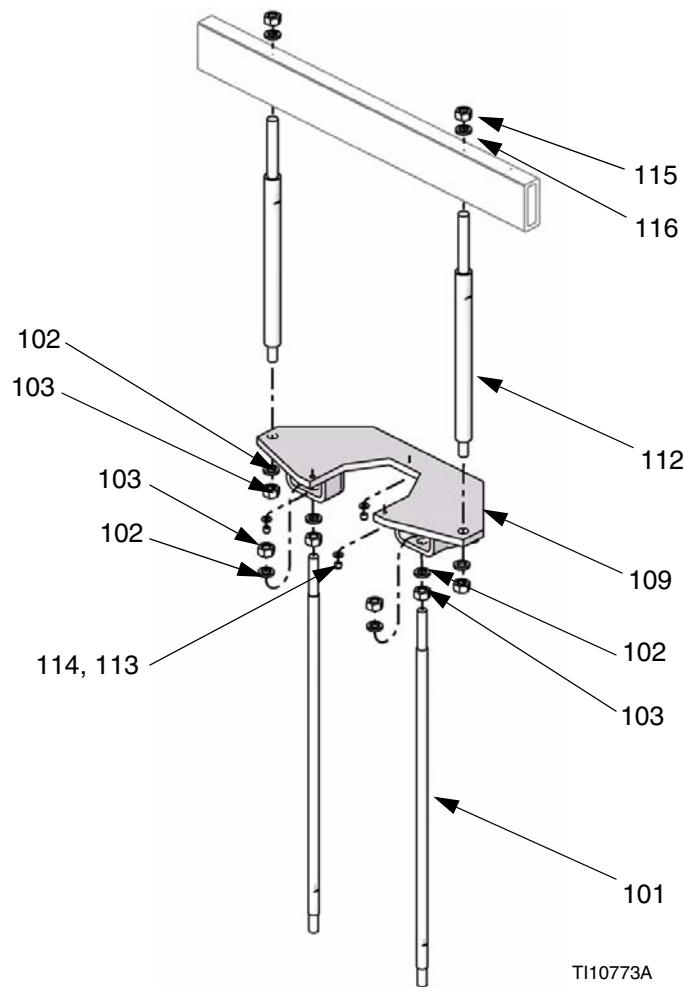
Pump Mount Parts - 255316, 255317, 255308, and 255309

Ref No.	Part No.	Description	Qty
101	15M298◆ 15M297‡	ROD, tie bar, shelf	2
102	101015◆	WASHER, lock	4
103	101533‡ C19187◆	NUT, hex	4
109		BRACKET, shelf 6500, 3400 BRACKET, shelf 2200, 255317 and 255309 only	1 1
110	100133	WASHER, lock	4
111		SCREW, cap, hex hd	4

◆ Pump Mounts 255316 and 255317 only.

‡ Pump Mounts 255308 and 255309 only.

Pump Mount 255306 (Premier motors on 6.5 in. supply units only)

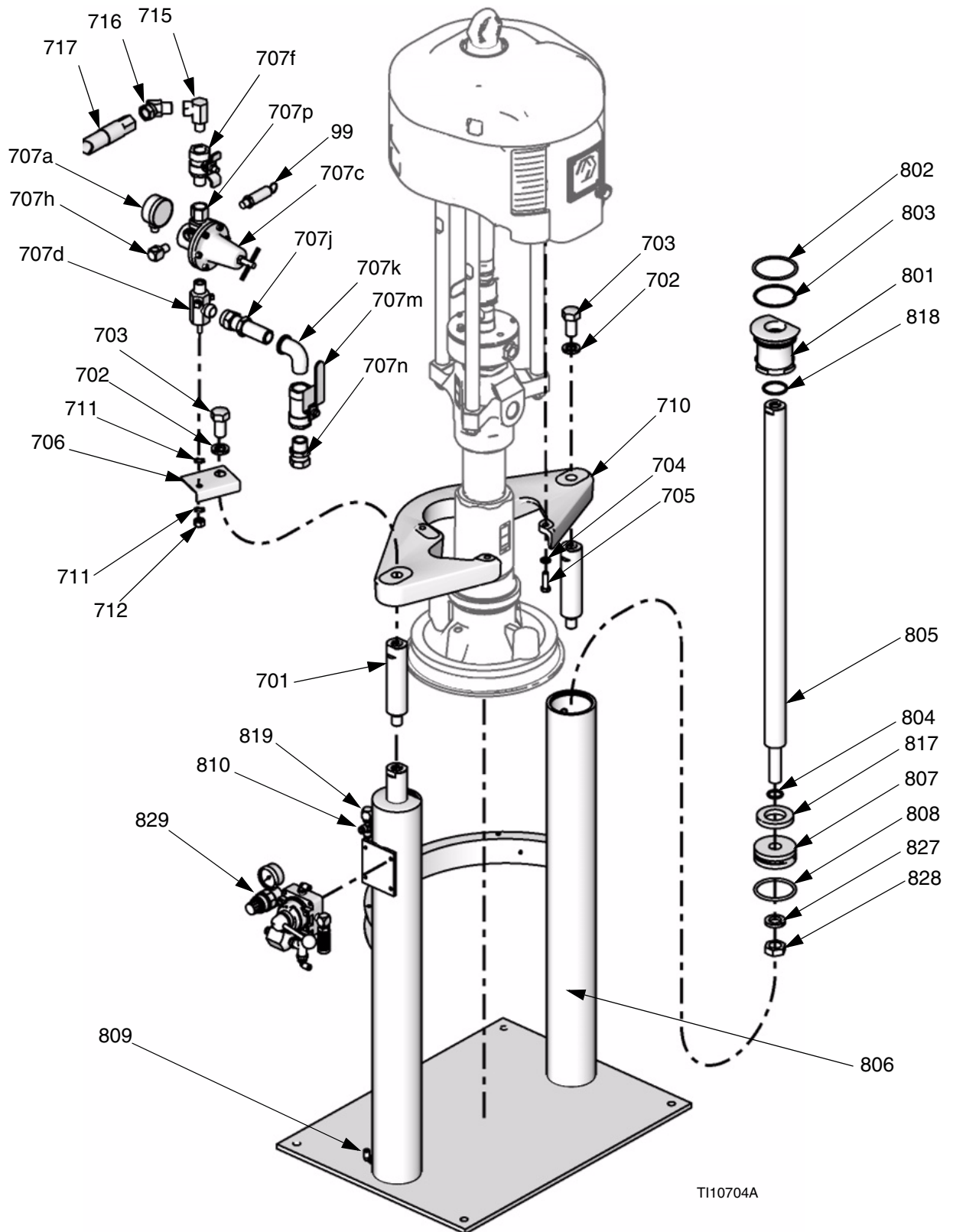


Pump Mount Parts - 255306

Ref No. Part No. Description			Qty	
101	15M686	ROD, lower, platen	2	
102	101533	WASHER, spring lock	6	
103	101535	NUT, full hex	6	
109	617193	PLATE, pump mounting	1	
Ref No. Part No. Description			Qty	
112	617275	ROD, upper tie #(cold cm2100)	2	
113	100023	WASHER	3	
114	101566	NUT, lock	3	
115	113939	NUT, jam, hex	2	
116	113993	WASHER, lock, helical	2	

D30 3 in. Dual Post Supply Unit

CM2942, Ram Model 255763 and Mounting Kit 255311



3 Inch Dual Post Ram Pump Mount Parts, 255311 and 255312

Ref. No.	Part No.	Description	Qty.
701	15M299	ADAPTER	2
702	101015	WASHER, lock	2
703	516587	BOLT, 3/4 - 10 x 1.5 hex hd	2
704	100133	WASHER, lock	4
705	C38372	SCREW, cap, hex hd	4
706	15M681	BRACKET, regular mount	1
707	241132	REGULATOR, assy; includes 707a-707p	1
707a	101180	GAUGE, pressure	1
707c	206197	REGULATOR, air	1
707d	206205	MANIFOLD, air	1
707e❖	100403	PLUG, pipe	1
707f	107142	VALVE, ball, vented	1
707g❖	100509	PLUG, pipe	2
707h	187357	ELBOW, street	1
707j	157129	FITTING, nipple, pipe	1
707k	100549	ELBOW, street, pipe, 90°	1
707m	113332	VALVE, ball, vented, 0.750	1
707n	157785	FITTING, swivel	1
707p	110332	ADAPTER	1
708❖	214954	HOSE, coupled, 61215	1
709❖	238753	HOSE, coupled, 3 ft 2 in.	1
710		BRACKET, shelf 6500, 3400 dual post ram; 2200 bracket	1
711	100322	WASHER, lock	2
712	100131	NUT, full hex	1
713❖	155541	UNION, swivel, 90°	1
714❖	160327	UNION, adapter, 90°	1
99		VALVE, safety relief; see page 46	1
715	155470	UNION, swivel, 90°	1
716	222297	UNION, adapter, swivel, 45°	1
717	217954	HOSE, air, 33 ft.	1

3 Inch Dual Post Ram Parts, 255763

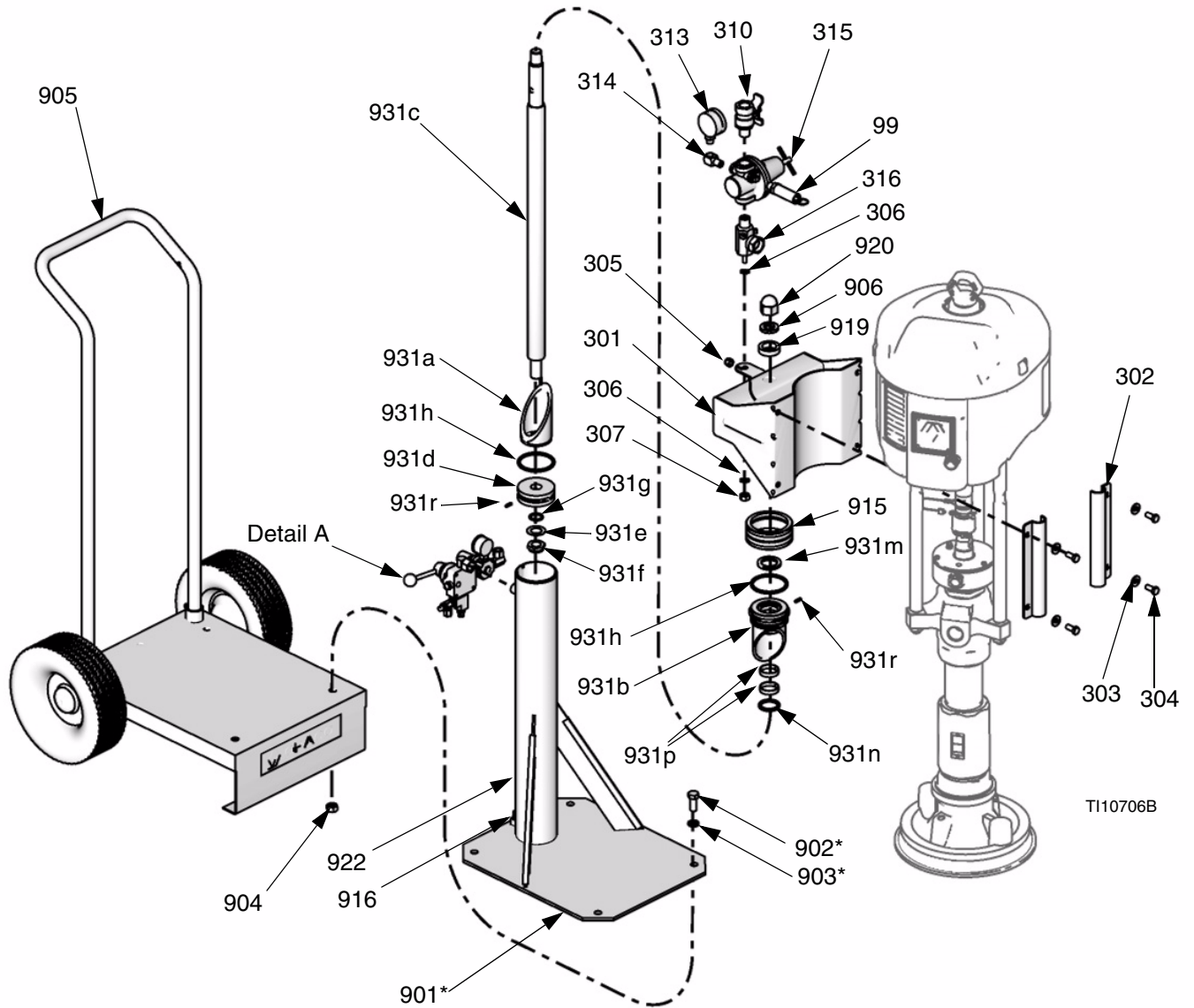
Ref. No.	Part No.	Description	Qty.
801	617375	SLEEVE, guide 3 in. ID ram	2
802	617373	RING, retaining	2
803	162440	O-RING	2
804	156401	O-RING	2
805	15K702	ROD, lift	2
806		HOUSING, ram, 3 in., 5 gal.	1
807	183943	PISTON	2
808	160258	PACKING, o-ring	2
809	C19391	ELBOW	3
810	C20365	TEE, air, quick disconnect	1
811❖	C12509	TUBE, nylon, rnd, 7.170 ft., 0.25 in. OD	1
812❖	C20354	ELBOW, union, quick disconnect	3
813❖	C19979	SCREW, cap, socket, hd	2
814❖	517254	CLIP, tube	2
816❖	C20344	UNION, tee	1
817	C36268	BUMPER	2
818	156593	O-RING	2
819	100840	ELBOW, street	1
824❖	C14023	LABEL, ram up/down	1
825▲❖	C14043	LABEL, warning	4
826❖	C38321	TIE, cable	2
827	101533	WASHER, split lock	2
828	102301	NUT, jam	2
829	918406	CONTROL, assy; see 312374	1

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

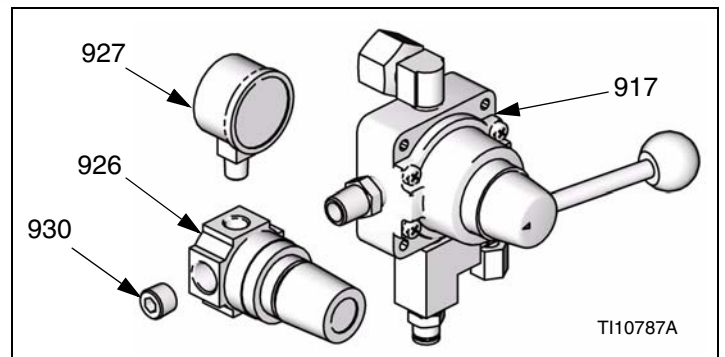
❖ Not shown.

S20 3 In. Single Post Ram

CM2922, Ram Model 255764, Mounting Kit 255313



Detail A



S20 3 In. Single Post Ram Parts, 255764 and 237788

Ref	Part	Description	Qty
901	206726	BASE, and cylinder	1
902*	100424	SCREW, cap, hex hd	4
903*	100018	WASHER, lock, spring	4
904*	100321	NUT	4
905*	237557	CART, universal; see manual	1
	308567		
906	101533	WASHER, lock, spring	1
915	166552	CAP, cylinder	1
916	113208	FITTING, tube	2
917	113896	VALVE, control	1
919	190265	SPACER	1
920	160107	NUT, cap	1
922❖	054123	TUBE, nylon	1
926	110318	REGULATOR, air, 1/4 in. npt	1
927	110319	GAUGE, press, air, 1/8 in. npt	1
929❖	104765	PLUG, pipe, headless	1
930	100721	PLUG, pipe	1
931	238925	PISTON, ram, 5 gal	1
931a	210153	GUIDE, rod	1
931b	206725	GUIDE, rod, upper	1
931c	166553	ROD, elevator	1
931d	183943	PISTON	1
931e	114170	WASHER, flat	1
931f	121482	NUT, lock, nylon	1
931g	156401	O-RING	1
931h	160258	O-RING	2
931m	161569	SEAL, wiper, felt	1
931n	163011	PACKING, v-block	1
931p	165287	BEARING, rod, displacement	2
931r	101154	PIN, driv-lock	3
932▲❖	290138	LABEL, warning	2

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

* Parts included in 255764 only.

❖ Not shown.

S20 3 In. Single Post Ram Mounting Kit, 255313

Ref	Part	Description	Qty
301	237560	SUPPORT, pump	1
302	190267	CLAMP	2
303	100023	WASHER, flat	4
304	100680	SCREW, cap, hex hd	4
305	101566	NUT, lock	4
306	100322	WASHER, lock	2
307	100131	NUT, full hex	1
308❖	155541	UNION, swivel 90°	1
309	238753	HOSE, coupled, 3 ft 2 in., not shown	1
310	107142	VALVE, ball, vented	1
311	238033	HOSE, coupled, 22 in., not shown	1
312	160327	UNION, adapter, 90°, not shown	1
313†	100960	GAUGE, press air	1
314†	100840	FITTING, elbow, street	1
315†	206197	REGULATOR, air	1
316†	206205	MANIFOLD, air	1
99		VALVE, safety relief; see below	1

† Parts included in 238724 1/2 npt Regulator Kit (purchase separately).

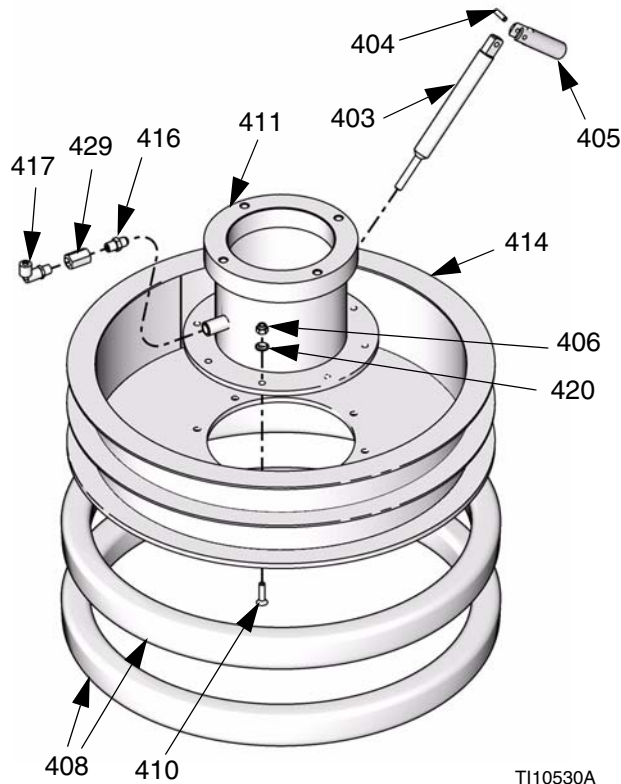
❖ Not shown.

Pump Air Safety Relief Valve, Ref. No. 99

Relief Valve Part No.	Used On Systems With Pump Part No.	Pump Ratio
103347	P23xxx	23:1
	P26xxx	26:1
	P36xxx	36:1
	P39xxx	39:1
	P40xxx	40:1
120306	P63xxx	63:1
	P67xxx	67:1
108124	P68xxx	68:1
110065	P82xxx	82:1

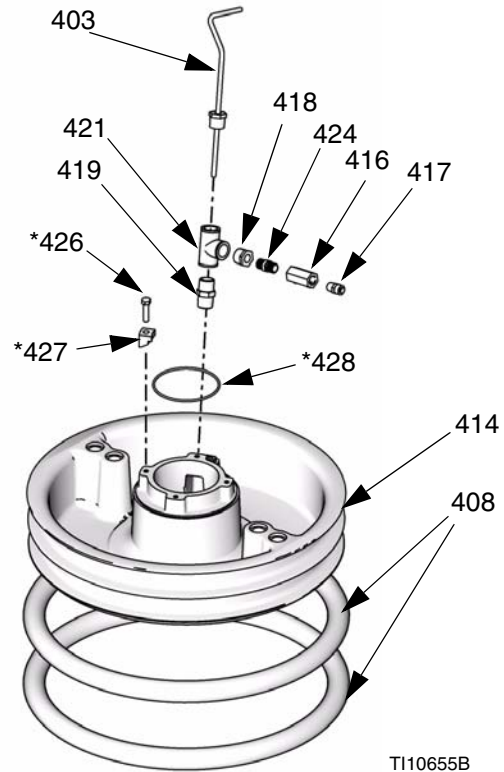
30 and 55 Gallon Platen

115 Liter (30 Gallon) Platen, Model 255661



TI10530A

200 Liter (55 Gallon) Platen, Model 255664



TI10655B

115 Liter (30 Gallon) Platen Parts

Ref. No.	Part No.	Description	Qty.
403	166560	STEM, probe	1
404	101831	PIN, spring	1
405	177542	HANDLE	1
406	102040	NUT, lock, hex	8
408	255654	WIPER, seal	1
410	109469	SCREW, machine flat hd	8
411		ADAPTER, 30 gal.	1
414		PLATE, follower, 30 gal.	1
416	114317	VALVE, check	1
417	597151	FITTING, elbow	1
420	C20521	SEAL, thread	8
429	100451	COUPLING	1

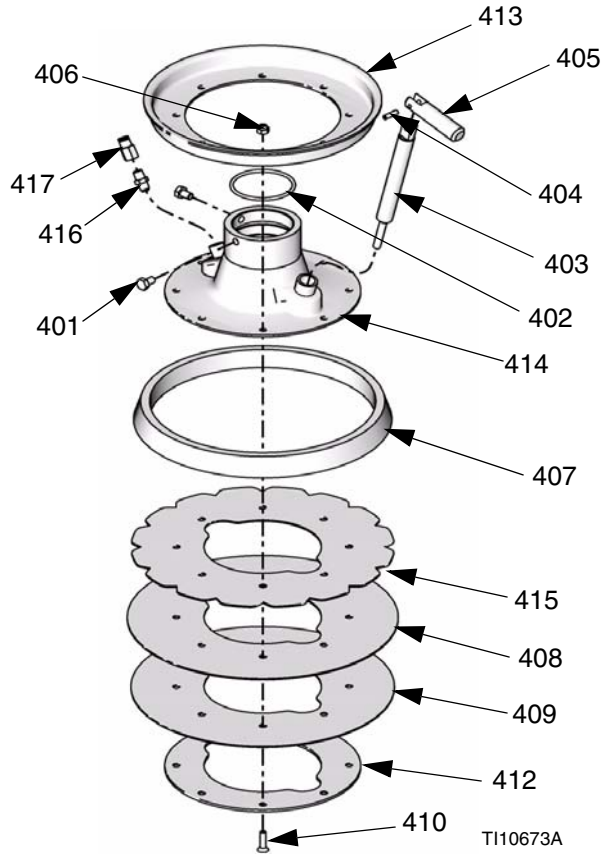
200 Liter (55 Gallon) Platen Parts

Ref. No.	Part No.	Description	Qty.
403	255232	HANDLE, bleed assy	1
408	255652	SEAL, wiper, drum, 55 gal., neo-prene; for 255664 only.	2
	255653	SEAL, wiper, drum, 55 gal., EPDM; for 255663 and 255662 only.	2
414		PLATE, ram 55 gal., for 255664 and 255663 only.	1
		PLATE, ram 55 gal., PTFE	1
416	114243	VALVE, check	1
417	114153	FITTING, TUBE, quick disconnect	1
418	100505	BUSHING, pipe	1
419	119992	NIPPLE, 3/4 x 3/4 npt	1
421	166466	TEE, pipe, female	1
424	156849	NIPPLE	1
426*	102637	SCREW, cap	4
427*	276025	CLAMP	4
428*	109495	O-RING	1

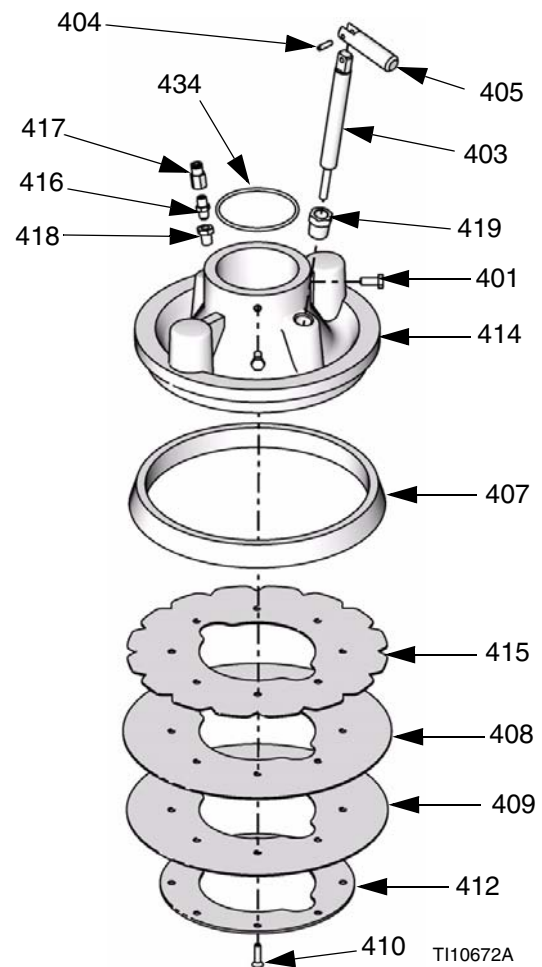
* Parts included in 255392 Kit (purchase separately).

20 Liter (5 Gallon) and 30 Liter (8 Gallon) Platen

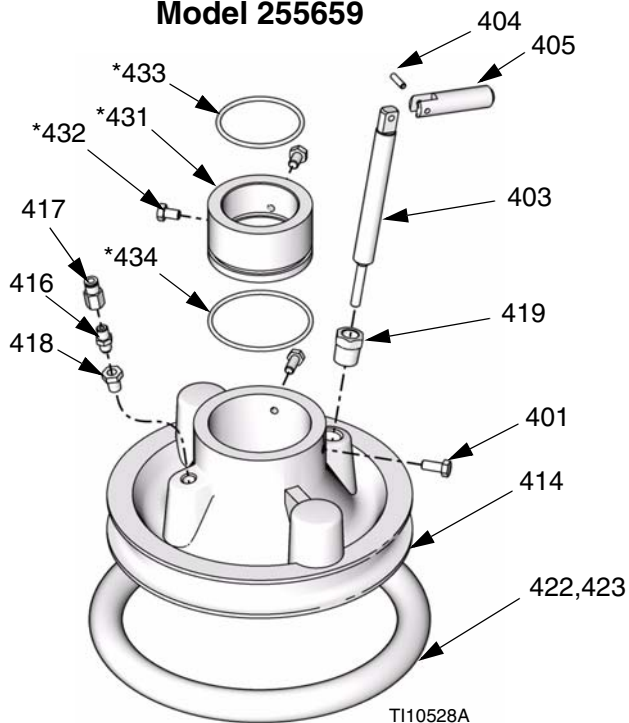
Model 255657



Model 255658



Model 255659



20 Liter (5 Gallon) and 30 Liter (8 Gallon) Platen and Seal Parts

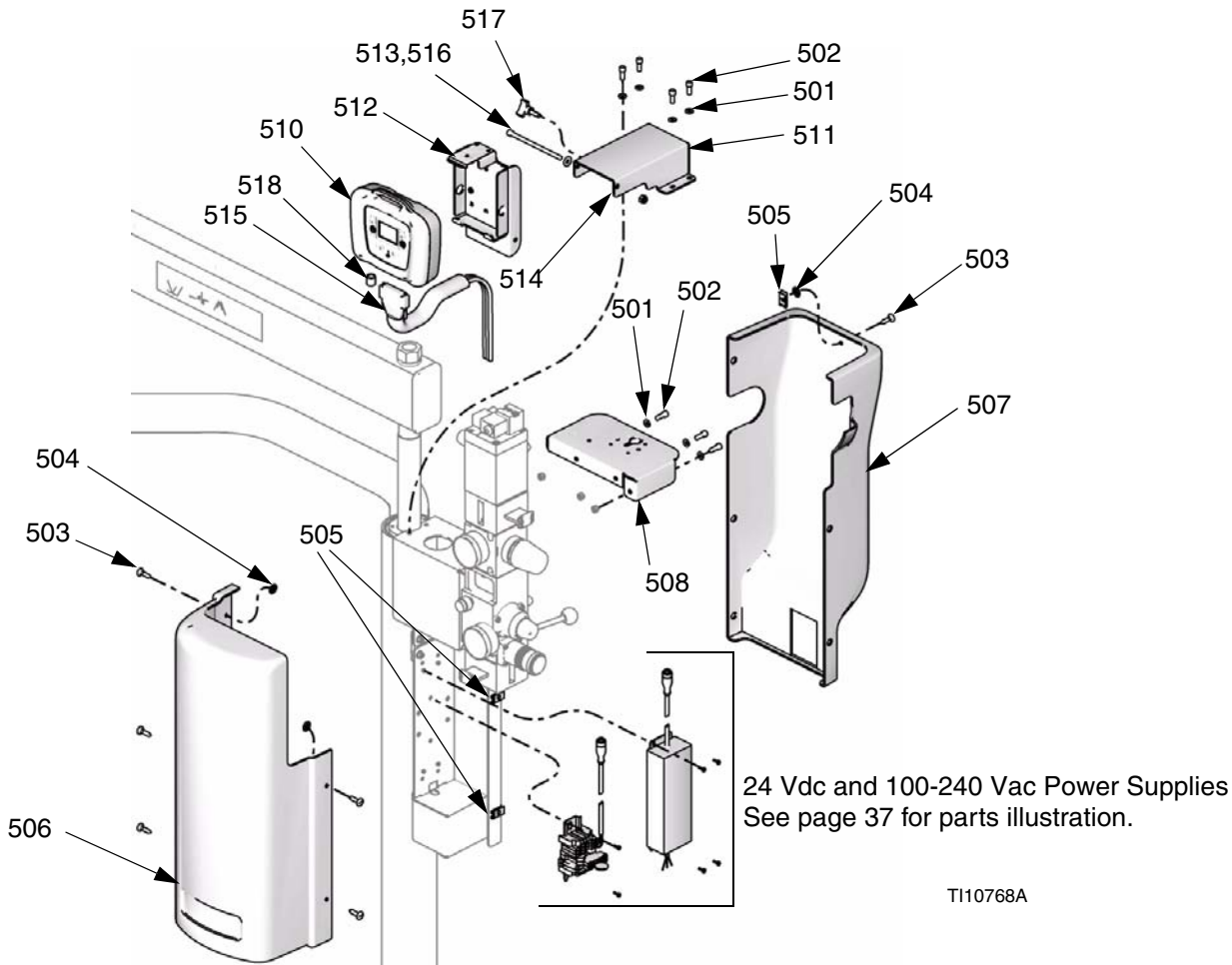
Ref. No.	Description	20 Liter (5 Gallon)					30 Liter (9 Gallon)	Qty.
		255655	255656	255657	255659	255658	255660	
401	SCREW, cap, hex hd	109468	100450	109468	100450	100450	109468	2
402	PACKING, o-ring	109458		109458				1
403	STEM, probe	166560	166560	166560	166560	166560	166560	1
404	PIN, spring	101831	101831	101831	101831	101831	101831	1
405	HANDLE	177542	177542	177542	177542	177542	177542	1
406	NUT, lock, hex	102040		102040			102040	8
407	SPACER	276049	276049	276049		276049	194148	1
408	WIPER	184420	184420	184552		184552	194146	1
409	WIPER, plate, below wiper	184421	184421	184421		184421	194147	1
410	SCREW, machine, flat hd	109469	112980	109469		112980	109469	8
412	CLAMP, retaining	184419	190427	184419		190427	194149	1
413	CLAMP, retaining	184418		184418			194151	1
414	PLATE	222764	190374	222764	617376	190374	241080	1
415	WIPER, plate, above spacer			184551		184551	n/a	1
416	VALVE, check	114317	114317	114317	114317	114317	114317	1
417	FITTING, connector, female, 1/8 npt	114320	114320	114320	114320	114320	114320	1
418	BUSHING		100030		100030	100030		1
419	BUSHING		158212		158212	158212		1
422	HOSE, PVC				15W597			3
423	CLAMP, worm gear				C31154			1
431*	ADAPTER				194152			1
432*	SCREW, socket hd				100421			2
433*	O-RING				109458			1
434*	O-RING		109482		109482	109482	109482	1

* Parts included in Kit 255393 are used when mounting 255659 and 100cc displacement pump (purchase separately).

Parts designated n/a are not available separately.

Accessories

DataTrak Accessory Kit, 255705, 255704, 255757, 255758



TI10768A

Common Parts

The parts listed below are common among all DataTrak accessory kits. Parts that vary are found in the table on the next page.

Ref No.	Part No.	Description	Qty
501	100016	WASHER, lock	5
502	101682	SCREW, cap, socket hd	5
503	121202	SCREW, captive, slotted	6
504	114144	RETAINER, 0.62 O.D., sst	6
505	121204	CLIP, u-nut	6
508		BRACKET, light tower	1
509	121226	CABLE, can, male / female, 0.4M	1
510	255415	PENDANT, datatrak, ambient ram	1
511		BRACKET, pendant pivot	1
512		BRACKET, mounting, assy	1
513	121250	SCREW, cap, socket hd, 1/4-20 UNC 4.25	1

Ref No.	Part No.	Description	Qty
514	102040	NUT, lock, hex	1
515	15M576	HARNESS, DataTrak, ambient ram	1
516	110755	WASHER	1
517	121253	KNOB, display adj., ram pkgs	1
518	121262	CAP, vinyl, 0.437 ID X 0.5	1
519		LABEL, intelligent pump control	1
520	121235	SOLENOID, air motor, ram pkgs	1
521	15V954	LABEL	1
522	121255	SCREW, countersunk, 6-32 x 0.38	6
523		ENCLOSURE, power supply	1
531▲	189285	LABEL, caution, hot surface	1
537▲	196548	LABEL, caution, electric	1
538▲	15J074	LABEL, caution, crush and pinch	2

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

Varied Parts

Ref. No.	Description	24 Vdc		100-240 Vac		Qty.
		D200	D200s	D200	D200s	
		255757	255758	255704	255705	
506	COVER, shroud front	n/a	n/a	n/a	n/a	1
507	COVER, shroud rear	n/a	n/a	n/a	n/a	1
508	BRACKET, light tower	n/a	n/a	n/a	n/a	1
524*	BRACKET, power supply	n/a	n/a	n/a	n/a	1
525*	POWER SUPPLY, 100-240 Vac			15M293	15M293	1
526*	SWITCH, power, 100-240 Vac			121254	121254	1
527*	SCREW, machine, pan hd	110637	110637			2
528*	COVER, power			n/a	n/a	1
529*	FUSE, 250V/1.2A			121261	121261	2
532*	MODULE, assembly, 24V	255649	255649			1
533*	COVER, switch mount	n/a	n/a			1
534*	CABLE, pwr, female, 0.8M	255673	255673			1
536	SCREW, self-tapping			101845	101845	6

* See page 40 for Power Supply parts illustration

Parts designated n/a are not available separately.

Two-Button Interlock Air Control Kit

See 312374 for information.

Drum Roller Kits for D200 and D200S Supply Units, 255627

See 312492 for more information.

Drum Position Clamp Set for D200 Supply Units, 206537

Includes two clamps.

Drum Position Clamp for D200S Supply Units

Order quantity 2 of C32463.

Enclosed Wet Cup Recirc Kit

See 312494 for more information.

200 Liter (55 Gallon) Platen Cover Kits, 255691

See 406681 for more information.

Light Tower Kit, 255467

See 312493 for more information.

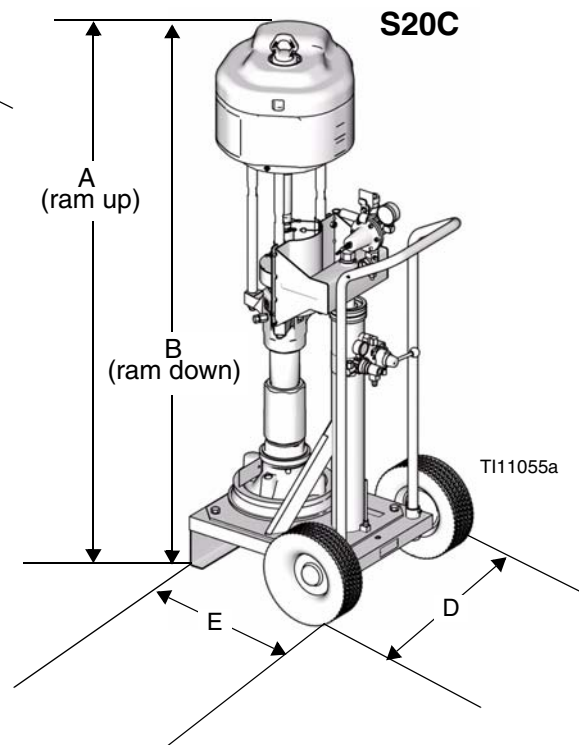
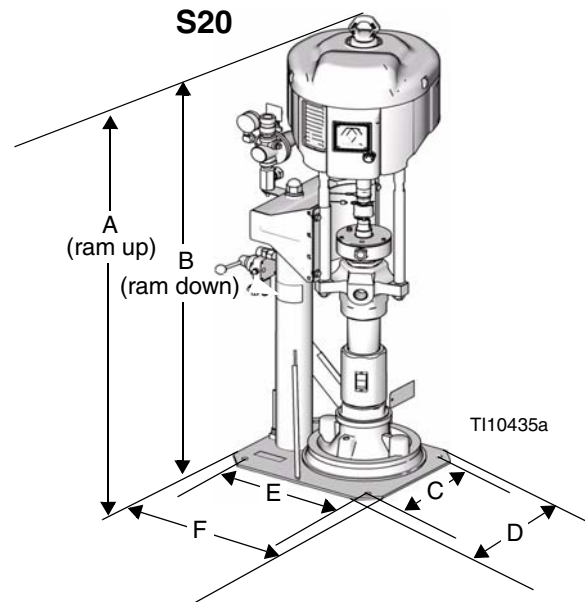
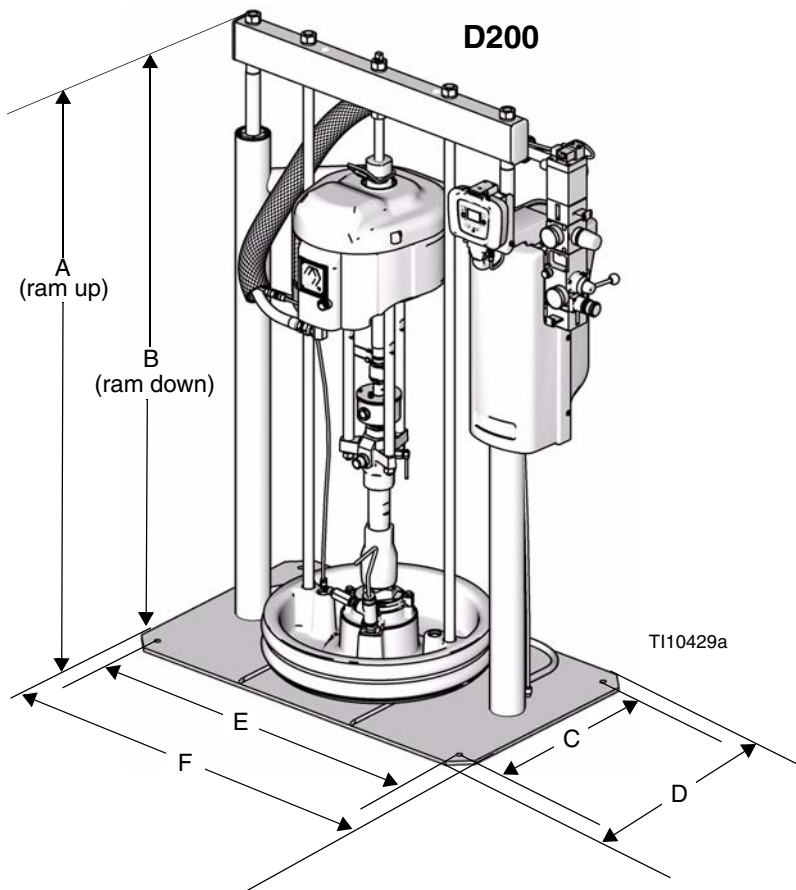
Check-Mate Displacement Pump Kits

Displacement Pump Size	Manual
100cc	312467
200cc	312468
250cc	312469
500cc	312470

Dura-Flo Displacement Pump Kits

Displacement Pump Size	Manual
145cc, 180cc, 220cc, 290cc	311827
430cc and 580cc	311825
1000cc	311717

Dimensions



Ram Model	A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	E in. (mm)	F in. (mm)
S20	69.9 (1776)	53.6 (1362)	14.0 (356)	17.00 (432)	11.0 (279)	14.0 (356)
S20C	75.4 (1916)	59.1 (1502)		26.0 (661)		22.1 (562)
D30	75.1 (1907)	53.4 (1356)	16.0 (406)	18.0 (457)	22.0 (559)	24.0 (610)
D200	102.3 (2599)	64.8 (1646)	21.0 (533)	25.0 (635)	38.0 (965)	42.0 (1067)
D200s	104.9 (2665)	70.3 (1785)	23.0 (584)	25.0 (635)	45.0 (1143)	48.0 (1219)

Technical Data

Max air input pressure (supply system)	
S20 - 3 in. single post, 5 gal. (20 L)	150 psi (1.0 MPa, 10 bar)
D30 - 3 in. dual post, 8 gal. (30 L), 5 gal. (20 L)	125 psi (0.9 MPa, 9 bar)
D200 - 3 in. dual post, 55 gal. (200 L), 30 gal. (115 L), 8 gal. (30 L), 5 gal. (20 L).	150 psi (1.0 MPa, 10 bar)
D200s - 6.5 in. dual post, 55 gal. (200 L), 30 gal. (115 L)	125 psi (0.9 MPa, 9 bar)
Max fluid and air working pressure (displacement pump)	For Check-Mate pump packages, see manual 312376. For Dura-Flo pump packages, see manuals 311826, 311828, 311833.
Wetted parts (displacement pump)	For Check-Mate displacement pumps, see manual 312375. For Dura-Flo displacement pumps, see manuals 311717, 311825, 311827.
Wetted parts (platen)	
255658, 5 gal. (20 L)	sst, polyethylene, PTFE coated aluminum, nitrile, PTFE, polyurethane, zinc plated steel, fluoroelastomer
255655, 5 gal. (20 L)	zinc plated carbon steel, fluoroelastomer, polyurethane, nitrile, polyethylene, sst
255656, 5 gal. (20 L)	sst, fluoroelastomer, zinc plated steel, PTFE coated alu- minum, polyethelene, nitrile, polyurethane
255657, 5 gal. (20 L)	zinc plated carbon steel, fluoroelastomer, polyurethane, nitrile, PTFE, polyethylene
255659, 5 gal. (20 L)	fluoroelastomer, sst, PVC, zinc plated carbon steel
255660, 8 gal. (30 L)	zinc plated carbon steel, polyurethane, nitrile, polyethyl- ene, sst, fluoroelastomer
255661, 30 gal. (115 L)	zinc plated carbon steel, EPDM, sst, fluoroelastomer
255662, 55 gal. (200 L)	PTFE, EPDM, PTFE coated aluminum, zinc plated carbon steel, 316 sst
255663, 55 gal. (200 L)	EPDM, aluminum, zinc plated carbon steel, 316 sst
255664, 55 gal. (200 L)	PTFE, neoprene, aluminum, zinc plated carbon steel, 316 sst
Ambient operating temperature range (supply system)	32-120 °F (0- 49°C)
Sound data	See separate air motor manual.
External power supply requirements (DataTrak)	
AC power units.	100-240 Vac, 50/60 Hz, single phase, 1.2 amps max draw
DC power units	24 Vdc, 1.2 amps max draw

Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

FOR GRACO CANADA CUSTOMERS

The Parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English. Les parties reconnaissent avoir convenu que la rédaction du présente document sera en Anglais, ainsi que tous documents, avis et procédures judiciaires exécutés, donnés ou intentés, à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées.

Graco Information

TO PLACE AN ORDER, contact your Graco distributor or call to identify the nearest distributor.

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

*All written and visual data contained in this document reflects the latest product information available at the time of publication.
Graco reserves the right to make changes at any time without notice.*

This manual contains English. MM 312373

Graco Headquarters: Minneapolis
International Offices: Belgium, China, Japan, Korea

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

Copyright 2007, Graco Inc. is registered to I.S. EN ISO 9001

www.graco.com
Revised 03/2009