



**Model TY24920
PowerLuber Grease Gun
Series "B"**



Model TY24920
NOTE: Grease cartridges and extra battery are not included.



U.S. Patent Number 6,135,327

This PowerLuber Conforms to the European Directive for Product Safety



PowerLuber Grease Gun

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The PowerLuber is driven by a small, low voltage electric motor connected to a three-stage planetary gear reducer. The rotary motion of the motor is converted into a reciprocating motion of the plunger through an eccentric and yoke mechanism. The PowerLuber is a positive displacement single acting pump.

Appropriate use

The PowerLuber was exclusively designed to pump and dispense lubricant using 12 volt battery power. The maximum specification ratings should not be exceeded. Any other use not in accordance with instructions will result in loss of claim for warranty or liability

MODELS AND COMPONENTS

Sales Model	Battery	Charger	Whip Hose
TY24920	TY24921	TY24922	TY24923

Specifications

Basic PowerLuber Model TY24920

Operating Power, Volt	12
Maximum Operating Pressure, PSIG (bar)	6,000 (413)
Grease Reservoir Capacity, oz. (cm ³)	14.5 (411)
Operating Temperature Range, °F (°C)	0 to 120 (-18 to +50)
Operating Current, AMP (at 1,000 PSIG (69 bar)	4
Lubricant (Grease)	Up to NLGI #2
Grease output oz./min. (cm ³ /min) at 1000psi (69bar)	2.6 (76.3)
Weight, Lbs. (Kg)	8.2 (3.76)

Accessories:

Battery Model TY24921	
Output, VDC	12
Capacity, mAh	1300
Battery Charger	
Charge time	1 Hour
Output, VDC, (1.7A)	14.5
Model TY24922	
Input, VAC (350mA)	120 V, 60 Hz
Outlet Hose Model TY24923	
Pressure Rating, psi(Bar)	7,500 (510)
Length of the Hose, In (mm)	30 (910)

Safety

Read and carefully observe these operating instructions before unpacking and operating PowerLuber. Operate PowerLuber only after safety instructions and this operation manual are fully understood.

WARNING

Never operate PowerLuber in explosive atmosphere. Electric power tools can create sparks which may ignite flammable liquids, dust or fumes. Do not use battery charger in damp or wet locations.

WARNING

Grease gun can develop high pressure - up to 6,000 PSI (414 Bar). Use safety glasses and gloves for protection during operation. Keep hands clear of the exposed rubber portion of hose.

WARNING

Extreme pressure may cause nozzle extension or whip hose to burst. Use only John Deere approved hoses and follow whip hose instructions and warnings.

General Description

The John Deere PowerLuber is a fully battery operational, automatic grease gun. The gun was developed for manual lubrication of the grease points and includes a pressure relief valve to relieve excessive pressure in the case of a blocked bearing, fitting or lubrication line.

PowerLuber Grease Gun

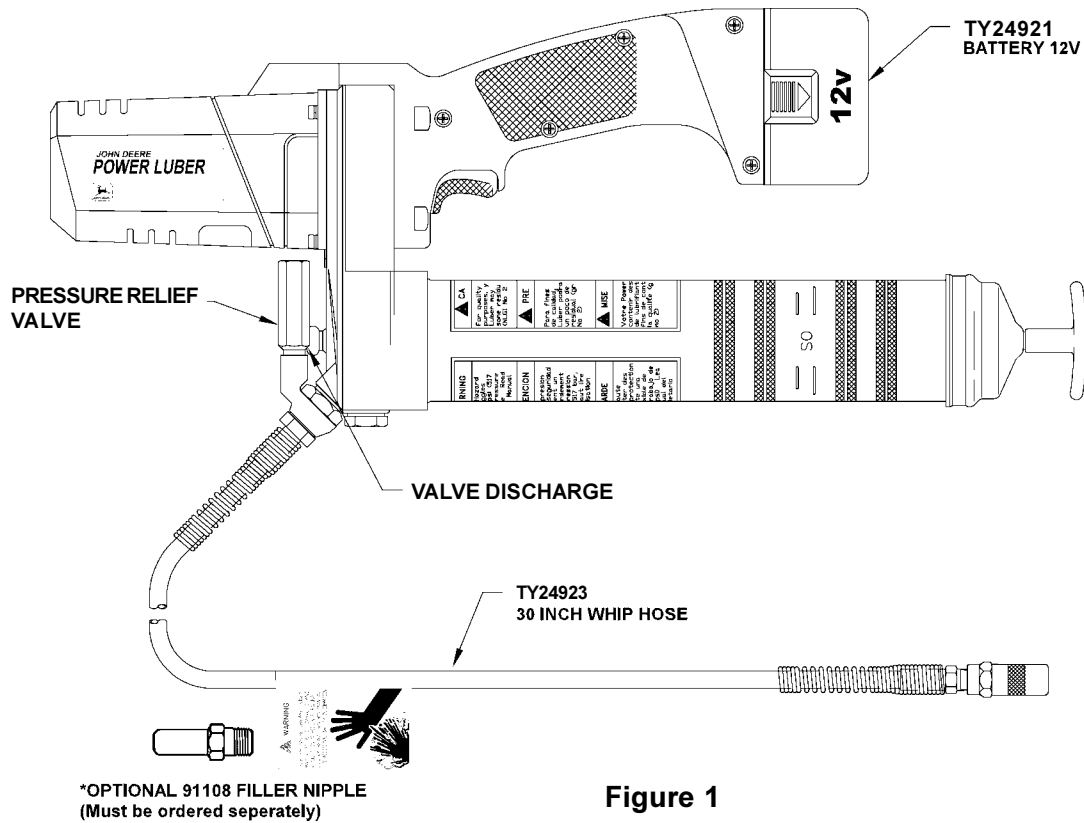
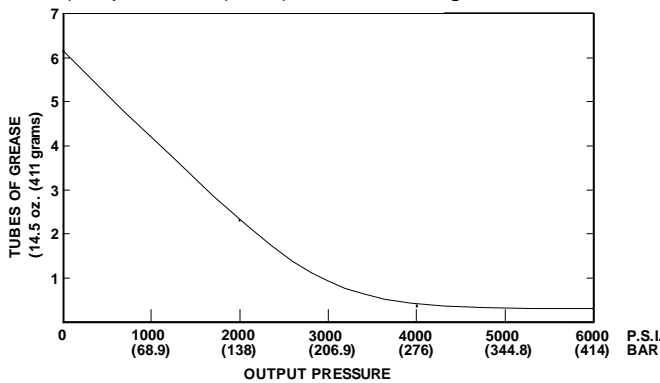
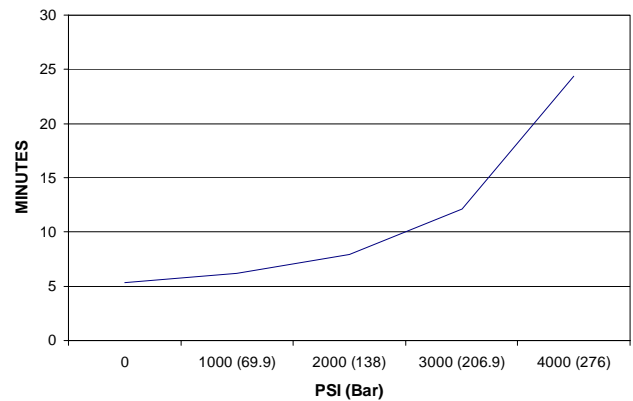


Figure 1

PowerLuber Performance Graph
(Graph at 72° (22°C) with NLGI #2 grease.)



Time to Dispense One Full Grease Cartridge



Note: Two fully charged batteries were used to dispense one grease cartridge at 4,000 PSI (275 bar).

WORK AREA

1. Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. The PowerLuber can create sparks which may ignite the dust or fumes.
2. Keep bystanders, children and visitors away while operating. Distractions can cause you to make mistakes.

ELECTRICAL SAFETY

1. A battery operated PowerLuber with a separate battery pack must be recharged only with the specified battery charger. A charger that may be suitable for one type of battery may create a risk of fire when used with another battery.
2. Use battery operated tool only with specifically designed battery pack. Use of any other batteries may create a risk of fire.
3. Batteries are shipped in an uncharged state. Charge batteries for 12 hours before first use.



PERSONAL SAFETY

1. Always wear eye protection. The PowerLuber can generate up to 6,000 psi (414 bar).
2. Use only John Deere TY24923 outlet whip hoses. Grease injection injuries are a very serious injury. Hold the hose only in the area of the spring guard.
3. Avoid accidental starting. Be sure switch is not depressed when inserting battery pack.
4. Do not bend the hose in such a manner that it may become kinked.
5. Replace the hose at the first sign of wear, kink or damage to the outside jacket.

USE AND CARE

1. Do not continue to hold down trigger if grease gun is stalled. This could damage the motor or cause fire.
2. When battery pack is not in use, keep it away from other metal objects like: paper clips, coins, keys, nails, screws, or other small metal objects that can make a connection from one terminal to another. Shorting battery terminals together may cause sparks, burns, or a fire.
3. Use only accessories that are recommended for use with the John Deere PowerLuber. This tool is a full rated portable power lubrication product, only accessories that are capable of handling 6,000 psi (414 bar) should be used.

SERVICE

1. Service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel may result in a risk of injury.
2. When servicing a PowerLuber, use only John Deere replacement parts. Use of unauthorized parts may create risk of injury and will void the warranty.

INSPECTION

Visually inspect for damaged, loose or missing parts. If equipment is worn or damaged, remove from service. Contact an authorized service center for damage assessment or repair.

OPERATION

Prime the PowerLuber after each refill or grease cartridge change. Prime the gun before using it to lubricate grease points.

CAUTION

Air pockets in the cartridge lubricant will cause the gun to lose its prime.

To prime, operate the gun until grease flows from the hose. Use vent valve 23 (Figure 7) to expel air pockets.

PRESSURE RELIEF VALVE

The pressure relief valve (fig. 6) is factory set to relieve pressure above 6,000 PSIG (414 Bar). The valve also is an indicator of the bearing and lubrication line conditions. If grease is coming out of the relief valve, this is an indication

of clogged or tight bearing, clogged grease fitting, or blocked lubrication line. Correct this before continuing lubrication with the PowerLuber.

CHARGER OPERATION

CHARGING THE BATTERY PACK GENERAL

Before using your PowerLuber for the first time, the battery pack should be charged for 12 hours. If the battery pack is installed in the PowerLuber, remove it by following instructions under **INSTALLING OR REMOVING BATTERY PACK**.

As a battery pack approaches the discharged state, you will notice a sharp drop in tool performance. When the tool is unable to perform the task at hand, it is time to recharge the battery pack. Recharging the battery pack before this condition is reached will reduce the total work life of the pack. Discharging the pack beyond this point can damage the pack.

NOTE: Battery temperature will increase during and shortly after use. Batteries may not accept a full charge if they are charged immediately after use. Allow the battery pack to cool to room temperature before charging for best results.

CAUTION: Vent slots in top and bottom of charger must not be obstructed. Do not charge battery when temperature is BELOW 32°F (0° C) or ABOVE 104°F (40° C).

NORMAL CHARGING

Make sure power circuit voltage is the same as that shown on the charger specification plate, Connect charger to power source.

The first charge should be for 12 hours before use. Insert battery pack into charger. The red light should glow indicating the battery is charging. After the red light goes out indicating a fully charged battery pack the green trickle charge light should glow indicating that the charger has switched to trickle charge mode. The battery pack may be left on the trickle charge until you are ready to use. Disconnect charger from power source when not in use.

INSTALLING OR REMOVING BATTERY PACK

TO REMOVE BATTERY PACK: Depress the two battery release buttons (one button on each side of battery pack) and pull battery pack out of PowerLuber.

TO INSTALL BATTERY PACK: Align battery pack with opening in PowerLuber handle and push battery pack into handle until it locks in place.



SAFETY INSTRUCTIONS FOR CHARGER AND BATTERIES SAVE THESE INSTRUCTIONS

This manual contains important safety and operating instruction for John Deere Model TY24922 Battery Charger.

1. Before using a battery charger, read all instructions and cautionary markings on Battery Charger, Battery Pack, and product using battery.
2. CAUTION: To reduce the risk of injury, John Deere Model TY24922 Chargers should only be used to charge John Deere Model battery pack Model TY24921. Other types of batteries may burst causing personal injury and damage. Do not charge John Deere Model TY24921 Battery Packs with any other charger.
3. Do not expose charger to rain, snow or frost.
4. Do not abuse cord. Never carry charger by cord or yank it to disconnect from receptacle. Pull by plug rather than cord when disconnecting charger. Have damaged or worn power cord and strain reliever replaced immediately. **DO NOT ATTEMPT TO REPAIR POWER CORD.**
5. Make sure cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress.
6. Do not use an extension cord unless absolutely necessary. Use of improper extension cord could result in a risk of fire and electric shock. If an extension cord must be used, make sure:
 - A That the extension cord is properly wired and in good electrical condition.
 - B Wire Size of cord is at least as specified in following chart:

LENGTH OF CORD IN FEET (M)	25 (7.5)	50 (15)	100 (30)	150 (45)
AWG SIZE OF CORD (mm ²)	18 (1)	18 (1)	18 (1)	16 (1.5)

- C If an extension cord is to be used outdoors it must be marked with the suffix W-A following the cord type designations. For example -SJTW-A to indicate it is acceptable for outdoor use.
7. Do not operate charger with damaged cord or plug. Have them replaced immediately, to avoid a hazard **DO NOT ATTEMPT TO REPAIR POWER CORD.**
8. Do not operate charger if it has received a sharp blow, been dropped, or otherwise damaged in any way, take it to a qualified serviceman.
9. Do not disassemble charger or battery pack. Take it to a qualified serviceman when service or repair is required. Incorrect reassembly may result in risk of electrical shock or fire.
10. Unplug charger from outlet before attempting any maintenance or cleaning to reduce risk of electric shock.
11. Charge the battery pack in a well ventilated place, do not cover the charger and battery with a cloth, etc. , while charging.
12. Do not store the charger or battery packs in locations (such as a metal tool shed, or a car in the summer) where the temperature may reach or exceed 122° F

(50° C) , which can lead to deterioration of the storage battery.

13. Do not charge battery pack when the temperature is BELOW 32° F (0° C) or ABOVE 104° F (40° C). This is very important for proper operation.
14. Do not incinerate battery pack It can explode in a fire.
15. Do not charge battery in damp or wet locations.
16. Do not attempt to charge any other cordless tool or battery pack with the John Deere Model TY24922 charger.
17. Do not short across the terminals of the battery pack **EXTREMELY HIGH TEMPERATURES COULD CAUSE PERSONAL INJURY OR FIRE**
18. Dispose of expended batteries properly. The John Deere Model TY24921 Battery Pack contains rechargeable, nickel-cadmium batteries. These batteries must be recycled or disposed of properly. Drop off expended battery packs at your local replacement battery retailer, or your recycling center.

Users in the United States NOTE:
Applicable fees for the collection and recycling of these batteries have been paid to the RBRCTM. For further information, call 1-800-8BATTERY.



Figure 2



Removing Empty Grease Cartridge

- 1) Pull back on the follower handle until the follower rod is fully extended and latch the follower rod groove into the slot on the tube cap.
- 2) Unscrew the Grease Tube Assembly (9) (Fig. 6) from the PowerLuber.
- 3) Carefully release the follower handle to eject the empty cartridge from container tube.

Installing Grease Cartridge

- 1) Visually check the follower seal lip direction before loading a new cartridge. The follower seal lip must be directed toward the follower handle or rear side for cartridge loading. See Fig. 3. To change the direction of the follower seal, unscrew tube cap from grease tube assembly and pull on the handle to remove follower seal from tube. Flip follower seal over and re-assemble.
- 2) Pull back on the follower handle and latch the follower rod groove into the slot on the tube cap.
- 3) Remove the plastic cap from the grease cartridge and insert cartridge into the container tube.
- 4) Remove the pull tab from grease cartridge and screw Grease Tube Assembly (9) into Pump Assembly (4).
- 5) Release follower rod from slot. Purge air from pump. See air purging instructions.

TO CONVERT GUN TO ALLOW FILLING FROM BULK CONTAINER OR FILLER PUMP

- 1) Unscrew the grease tube assembly cap from the grease tube assembly. Pull on the follower handle to extract the follower and spring from the grease tube assembly.
- 2) Grasp follower between thumb and forefinger and flip the follower lip from the rear to the front side.

NOTE. The follower resembles a cup. When the gun is assembled for use with bulk lubricant, the cup opens toward the pump assembly.

- 3) Reassemble follower into grease tube assembly and position with the follower handle so that the grease tube assembly cap can be tightened onto the container tube.

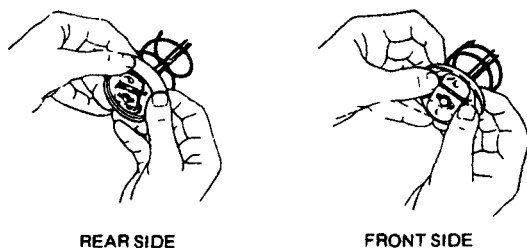


Figure 3

TO FILL THE GUN FROM BULK CONTAINER

- 1) Remove pump assembly from grease tube assembly.
- 2) Pack lubricant into cavity of the pump assembly.
- 3) Insert the open end of the grease tube assembly into lubricant. Slowly pull the follower handle back while pushing the grease tube assembly deeper into the lubricant to prevent air pockets from being pulled into the grease tube assembly.

- 4) When the follower rod is fully extended, pull it sideways to latch the rod groove into the keyhole slot in the grease tube assembly cap.
- 5) Loosely assemble the pump assembly to the grease tube assembly. Release the follower rod from the grease tube assembly cap and disengage the follower rod from the follower by rotating the follower handle. Push the follower rod into the grease tube assembly. Slowly unscrew the grease tube assembly from the pump assembly until lubricant oozes from the interface. Tighten grease tube assembly into the pump assembly.

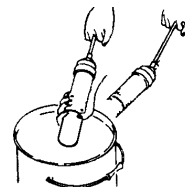


Figure 4

TO FILL THE GUN WITH A FILLER PUMP

Engage the follower rod with the follower by rotating the follower handle. Insert the gun filler nipple into the filler pump socket. Operate the filler pump to fill the container. When the follower rod groove is exposed, the grease tube assembly is filled. The Follower Rod will be extended approximately 8 inches (20 cm). Disengage the follower rod from the follower by rotating the follower handle. Push the follower rod into the grease tube assembly.

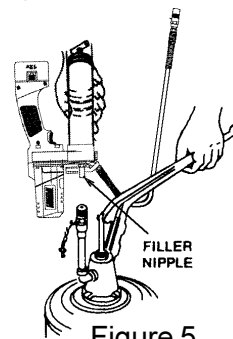
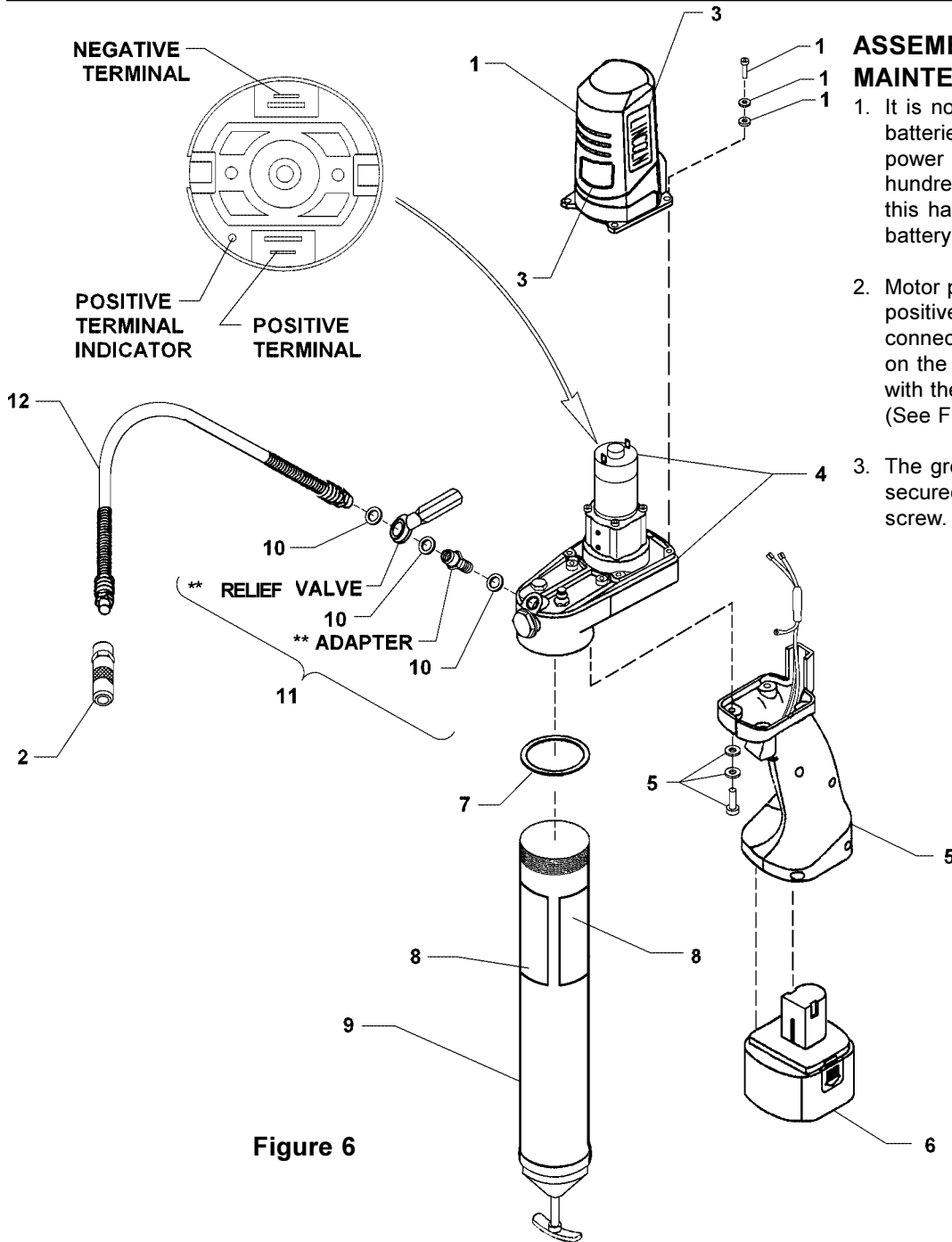


Figure 5

AIR PURGING INSTRUCTIONS

- 1) Withdraw the follower rod from the grease tube assembly cap and engage it with the follower by rotating the follower handle. Exert force on the follower handle while holding down the vent valve 23 (Figure 7).
- 2) Pull the trigger in short bursts to operate gun until trapped air is expelled. Disengage the follower rod from the follower by rotating the follower handle. Push the follower rod into the grease tube assembly.
- 3) If step 2 fail unscrew the grease tube assembly 1-1/2 turns from the pump assembly.
- 4) Exert force on the follower handle until lubricant oozes from the grease tube assembly and pump assembly interface.
- 5) Tighten grease tube assembly into the pump assembly. Disengage the follower rod from the follower by rotating the follower handle. Push the follower rod into the grease tube assembly.

PowerLuber Grease Gun



ASSEMBLY AND MAINTENANCE NOTES:

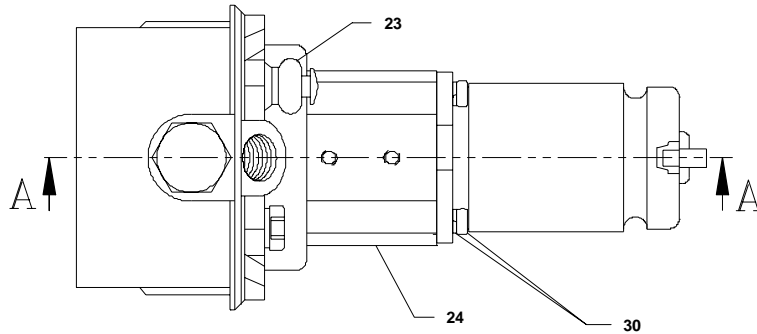
1. It is normal for nickel-cadmium batteries to gradually lose their power retention capacity over hundreds of charge cycles. When this happens replacement of the battery pack will be required.
2. Motor polarity is important, the positive, (red) wire must be connected to the positive terminal on the motor, which is identified with the small plastic dot next to it. (See Fig.6)
3. The green ground wire must be secured under the motor mounting screw.

Figure 6

SERVICE PARTS

Item	Description	Part No.	Item	Description	Part No.
1	Motor Housing	271876	7	Packing	271880
2	Coupler	5852	8	Caution Label Kit	271881
3	Nameplate	272014	9	Grease Tube Assembly	271882
4	Pump Assembly	271878	10	Gasket Kit	271884
5	Handle Assembly	271879	11	Pressure Relief Kit	271883
6	Battery	TY24921	12	Flexible Hose 30"	TY24923

** Sold only in Kit (Item 11) along with gaskets (Item 10)



ASSEMBLY AND MAINTENANCE NOTES:

- The seal lips on the rod seal item no. 26 must be pointed toward the grease side of the pump unit block.

SERVICE PARTS (Con't)

Item	Description	Part No.
22	Check Valve Kit	271885
23	Vent Valve	271886
24	Unit Block	271887
25	Plunger	271888
26	Seal	271889
27	Yoke Block	271890
28	Cover	271891
29	Gear Assembly	271892
30	Motor Kit	271893

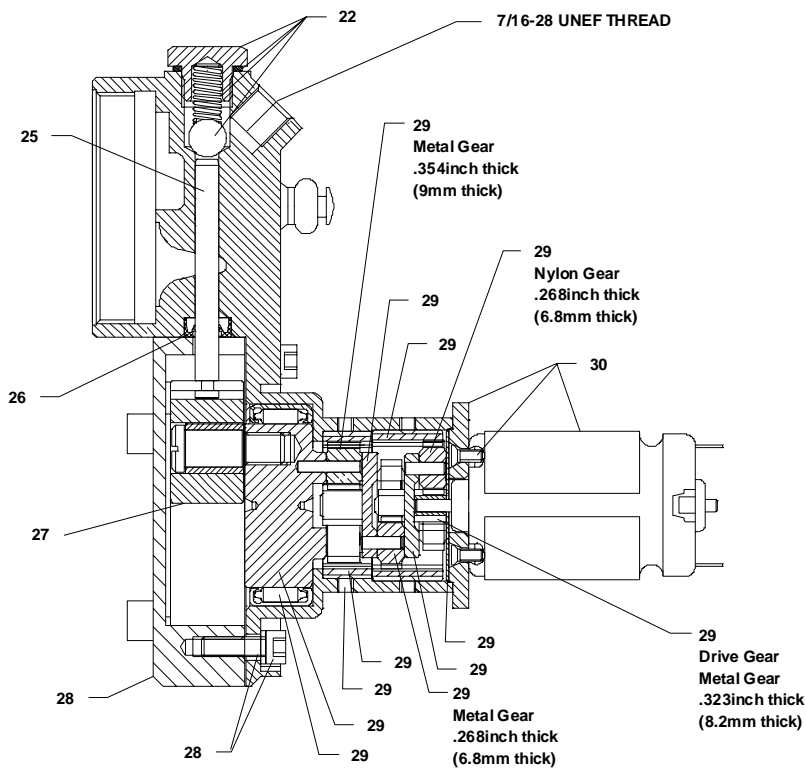


Figure 7

TROUBLESHOOTING

Condition	Possible Cause	Corrective Action
Motor fails to run.	- Battery needs charging. - Faulty wiring to motor.	Recharge battery. Remove battery, disassemble handle and check wiring for loose connection.
Pressure Relief valve leaks.	- Faulty Pressure Relief valve.	Replace valve
PowerLuber fails to dispense grease.	- Grease Tube Assembly is out of grease. - Loss of prime. - Ball check item 22 is not functioning.	Check that Grease Tube Assembly has grease. Repeat priming operation. Remove Items 22 and clean and inspect ball seat area.
PowerLuber continues to lose prime.	- Air may be trapped in several locations in Grease Tube Assembly after bulk filling. - Follower may be binding in container.	Empty Grease Tube Assembly, refill and repeat priming instructions. Replace Grease Tube Assembly Item 9.
Battery fails to take a charge.	- Charger may not have power. - Battery may be bad.	Check that receptacle has power. Replace battery.