



Model 1400, 1440, 1442, 1442E, 1444, 1444E
PowerLuber Grease Gun
Series "A"



Note: Extra battery only included on Models 1444 and 1444E



Patent Pending

Model 1400, 1440, 1442, 1442E, 1444, 1444E **LINCOLN** PowerLuber Grease Gun

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 7,000 PSI (476 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 Lincoln APPROVED hoses and follow whip hose instructions and warnings.

General Description

The Lincoln PowerLuber is a fully battery operational, automatic grease gun. The gun was developed for manual lubrication of the grease points and includes a circuit breaker to stop motor at excessive pressure (7000 PSI or 476 Bar) in the case of a blocked bearing, fitting or lubrication line.

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

Appropriate use

The PowerLuber was exclusively designed to pump and dispense lubricant using 14.4 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.

Specifications

Basic PowerLuber Model 1400

Operating Power, Volt	14.4
Maximum Operating Pressure, PSIG (bar)	
- Low Output -	7,000 (476)
- High Output -	3,000 (204)
Grease Reservoir Capacity, oz. (cm ³)	14.5 (411)
Operating Temperature Range, °F (°C)	0 to 120 (-18 to +50)
Operating Current, Amp	4.0
Lubricant (Grease)	Up to NLGI #2
Grease output oz./min. (gram/min)	
- Low Output	3.8/107.7
- High Output	8.5/240.9
Weight, Lbs. (Kg)	8.0 (3.6)
Accessories:	
Battery Model 1401	
Output, VDC	14.4
Capacity, mAh	1700
Battery Charger Model 1410	
Charge time	1 Hour
Input, VAC (2.0 A)	120 V, 60 Hz
Model 1410E (for use in Europe)	
Input, VAC, (1.0 A)	220 V, 50 Hz
Outlet Hose Model 1230	
Pressure Rating, psi (Bar)	7,500 (510)
Length of the Hose, In (mm)	30 (760)

NOTE: Operating current and grease output data at 1,000 PSI (69 bar).

Models and Components

Sales Model	Basic PowerLuber	Battery	Charger	Case
1440	1400	1401	1410	No
1442	1400	1401	1410	1402
1442E	1400	1401	1410E	1402
1444	1400	1401(2)	1410	1402
1444E	1400	1401(2)	1410E	1402

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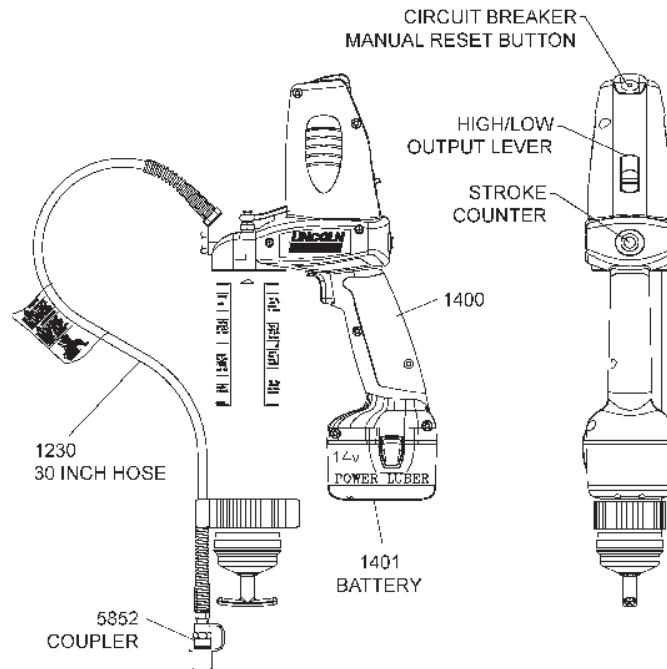


Figure 1


Circuit Breaker

To prevent motor from overload circuit breaker will stop the motor when operating pressure exceeds 7,000 PSIG (476 bar). Manual press-to-reset red color button will pop up, see Fig 1. To reset push the red button after waiting for 5 to 10 seconds.

The circuit breaker also is an indication of the bearing or lubrication line conditions. If the red button is popping out this is an indication of clogged or tight bearing, clogged grease fitting or blocked lubrication line. Correct this before resetting and continue lubrication with PowerLuber.

Changing output/pressure

The PowerLuber is designed to operate in two modes: High output/medium or low pressure ("H") and low output/ high pressure ("L"). To change the mode of operation, push the red lever Fig. 1 when motor is not running until "H" or "L" letters will be completely visible in the window. In case output lever is not completely shifted/engaged, hold the lever and start the tool.

 CAUTION
<p>Stop the motor running before changing the high/low ("H"/"L") output to prevent damage to the transmission gears.</p>

High output is recommended if the tool is used to lubricate large bearings not requiring high pressure, beyond 3,000 PSIG (204 bar). Also, high output is recommended if tool is used to refill small reservoirs of the automatic lubrication systems.

Low output is recommended if the tool is used in construction, mining applications and general lubrication. Low output will provide the maximum pressure of up to 7,000 PSIG (476 bar) the tool is capable of producing.

Stroke counter

The tool is equipped with capability for calibration. This is accomplished by measuring (weighing) grease flow output and dividing the weight of grease by number of strokes. Simply put your thumb on the stroke counter button, Fig. 1 during operation of the tool and count.

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Some OEM's are recommending the exact amount of grease to lubricate critical bearings. By counting the strokes you will know how much grease has been dispensed to lubricate the bearing. Here is the table of the grease output vs. number of strokes.

Stroke count	Output/stroke	
	oz.	gram
10	0.20	5.7
15	0.30	8.5
20	0.40	11.4

Note: Lincoln is recommending this feature only on low output/high pressure mode.

PERSONAL SAFETY

1. Always wear eye protection. The PowerLuber can generate up to 7,000 psi (476 bar).
2. Use only Lincoln 1218, 1224, 1230 or 1236 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 so that it becomes 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 Lincoln PowerLuber. This tool is a fully rated portable power lubrication product, only accessories that are capable of handling 7,000 psi (476 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 Lincoln replacement parts. Use of unau-

thorized 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.

To prime, operate the gun until grease flows from the hose. Use vent valve to expel air pockets.

CAUTION

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

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 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. 2. 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 into pump assembly.
5. Release follower rod from slot. Purge air from pump. See air purging instructions.

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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.

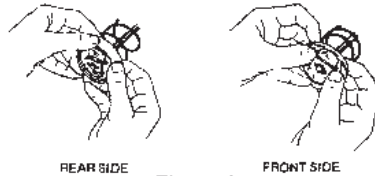


Figure 2

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.

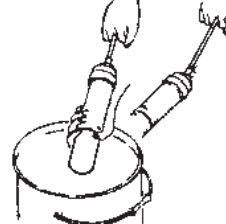


Figure 3

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.

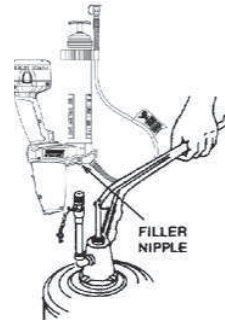
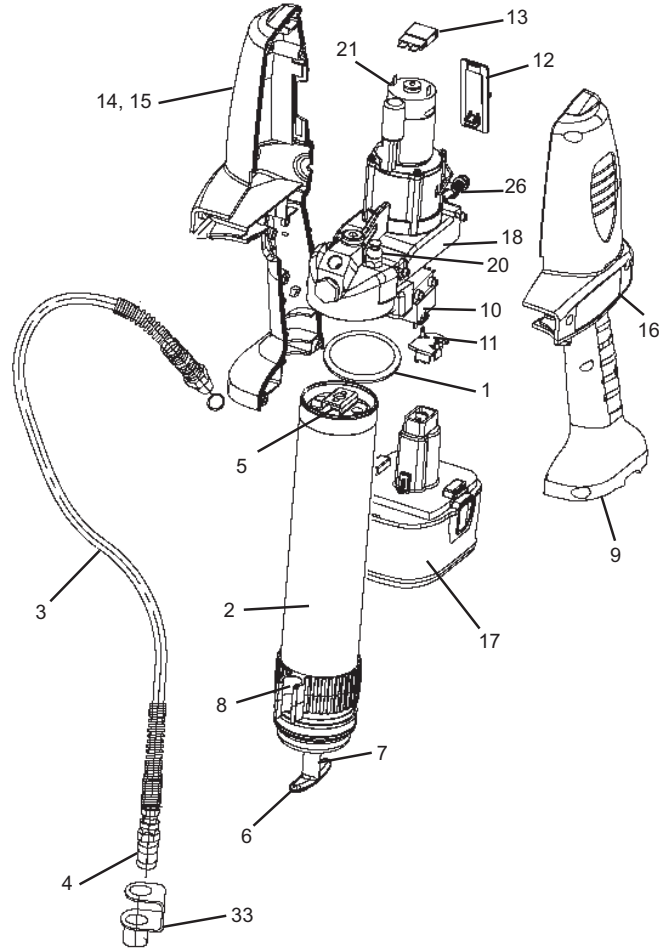
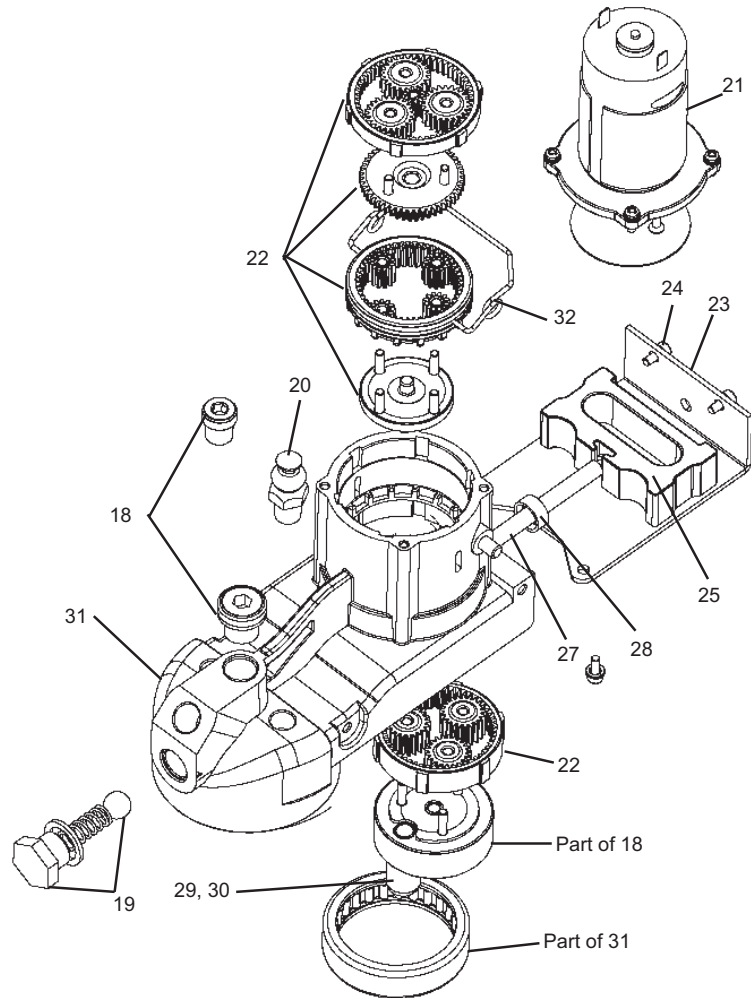


Figure 4

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Service Parts List

Item	Description	Part Number
1	Packing	271880
2	Grease Tube Assembly	271882
3	Flexible Hose 30" w/Gasket	1230
4	Coupler	5852
5	Follower Assembly Kit	286089
6	Handle Kit	286090
7	Rod, Follower Kit	289091
8	Hose Clip Kit	286092
9	Handle Assembly Kit	286094
10	Trigger Kit	286095
11	Terminal Assembly Kit	286096
12	Gear Selector Kit	286097
13	Circuit Breaker Kit	286098
14	Handle Kit	286099
15	Handle Hardware Kit	286100
16	Decal Kit	286101
17	Battery 14.4 V	1401
18	Pump Assembly Kit	286102
19	Check Valve Kit	271885
20	Vent Valve Kit	287886
21	Motor with Plate Kit	286103
22	Gear Set Kit	286104
23	Pump Hardware Kit	286105
24	Cover Pump Kit	286106
25	Yoke Kit	286107
26	Stroke Indicator Kit	286108
27	Plunger Kit	286109
28	Seal	271889
29	Stud Kit	286110
30	Roller Kit	286111
31	Housing Pump with Bearing Kit	286112
32	Spring Selector Kit	286113
33	Coupler Cap kit	286093
--	Charger	1410 or1410E

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TO EXPEL AIR POCKETS

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 fails, 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.

CHARGER OPERATION

CHARGING THE BATTERY PACK

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.

CHARGING PROCEDURE

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

1. Plug the charger into an appropriate outlet before inserting battery pack.
2. Insert the battery pack into the charger. The red (charging) light will blink continuously indicating that the charging process has started.
3. The completion of charge will be indicated by the red light remaining ON continuously. The pack is fully charged and may be used at this time.
4. The battery pack may be left on the trickle charge until you are ready to use.
5. Disconnect charger from power source when not in use.

CAUTION

120 volts present at charging terminals. Do not probe with conductive objects. Danger of electric shock or electrocution.

INDICATOR LIGHT OPERATION

PACK CHARGING.....	██████████
FULLY CHARGED.....	██████████
REPLACE PACK.....	●●●●●●●●●●
PROBLEM POWER LINE.....	●●●●●●●●

CHARGE INDICATORS

The charger is designed to detect certain problems that can arise with battery packs. Problems are indicated by the red light flashing at a fast rate. If this occurs, re-insert battery pack into the charger. If the problem persists, try a different battery pack to determine if the charger is O.K. If the new pack charges correctly, then the original pack is defective and should be returned to a service center or other collection site for recycling. If the new battery pack elicits the same trouble indication as the original, have the charger tested at an authorized service center.

LEAVING THE BATTERY PACK IN THE CHARGER


The charger and battery pack can be left connected with the red light glowing indefinitely. The charger will keep the battery pack fresh and fully charged.

NOTE: A battery pack will slowly lose its charge when kept out of the charger. If the battery pack has not been kept on maintenance charge, it may need to be recharged before use. A battery pack may also slowly lose its charge if left in a charger that is not plugged into an appropriate AC source.

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).

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SAFETY INSTRUCTIONS FOR CHARGER AND BATTERIES
SAVE THESE INSTRUCTIONS

This manual contains important safety and operating instruction for Lincoln Model 1410 or 1410E Battery Charger.

 **DANGER**

Risk of Electric Shock 120 VAC or 240 VAC present at charger terminals. Do not probe with conductive objects. Do not charge damaged battery. Replace immediately.

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, Lincoln Model 1410 or 1410E Chargers should only be used to charge Lincoln battery pack Model 1401. Other types of batteries may burst causing personal injury and damage. Do not charge Lincoln Model 1401 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 Lincoln Model 1410 or 1410E 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 Lincoln Model 1401 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.

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Important Charging Notes

1. Longest life and best performance can be obtained if the battery pack is charged when the air temperature is between 65°F and 75°F (18° - 24°C). DO NOT charge the battery pack in an air temperature below +40°F (+4.5°C) or above 105°F (+40.5°C). This is important and will prevent serious damage to the battery pack.
2. The charger and battery pack may become warm to the touch while charging. This is a normal condition, and does not indicate a problem.
3. If the battery pack does not charge properly:
 - a. Check current at receptacle by plugging in a lamp or other appliance.
 - b. Check to see if the receptacle is connected to a light switch which turns power off when you turn out the lights.
 - c. Move charger and battery pack to a location where the surrounding air temperature is approximately 65°F - 75°F (18 - 24°C).
 - d. If charging problems persist, take the tool, battery pack and charger to your local service center.
4. The battery pack should be recharged when it fails to produce sufficient power on jobs which were easily done previously. DO NOT CONTINUE to use under these conditions. Follow the charging procedure. You may also charge a partially used pack whenever you desire with no adverse affect on the battery pack.
5. Under certain conditions, with the charger plugged into the power supply, the exposed charging contacts inside the charger can be shorted by foreign material. Foreign materials of a conductive nature such as, but not limited to, steel wool, aluminum foil, or any buildup of metallic particles should be kept away from charger cavities. Always unplug the charger from the power supply when there is no battery pack in the cavity. Unplug charger before attempting to clean.
6. Do not freeze or immerse charger in water or any other liquid.

! WARNING


Don't allow any liquid to get inside charger. Electric shock may result. To facilitate the cooling of the battery pack after use, avoid placing the charger or battery pack in a warm environment such as a metal shed or an uninsulated trailer.

! CAUTION

Never attempt to open the battery pack for any reason. If the plastic housing of the battery pack breaks or cracks, return to a service center for recycling.



Figure 5

Model 1400, 1440, 1442, 1442E, 1444, 1444E 
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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.
PowerLuber fails to dispense grease.	- Grease tube assembly is out of grease. - Loss of prime. - Ball check item 19 is not functioning.	Check that grease tube assembly has grease. Repeat priming operation. Remove Items 19 and clean and inspect ball seat area.
PowerLuber continues to lose prime.	- Air may be trapped in several locations in container after bulk filling. - Follower may be binding in grease tube assembly.	Empty grease tube assembly, refill and repeat priming instructions. Replace grease tube assembly Item 2.
Battery fails to take a charge.	- Charger may not have power. - Battery may be bad.	Check that receptacle has power. Replace battery.