

Description

The 670AN4 20V Lithium-ion Cordless Grease Gun is designed to dispense petroleum-based greases (NLGI 1/ NLGI 2) for general lubrication applications. A 36-inch (0.91 metre) long high-pressure whip hose, heavy-duty grease coupler, charger and molded carrying case are included. This gun has a two speed electronic transmission. The gun is equipped with a back lighted Liquid Crystal Display (LCD), which features a battery level, gauge, grease level gauge, grease meter, and a loss of prime and stall indicator warnings. A built-in LED flashlight is included.

The gun uses an electric motor with three stages of gear reduction. A crank and yoke mechanism drives a reciprocating piston pump. The motor is powered by a rechargeable 20V/1,500mAh Lithium-ion battery pack.

The gun is designed for 3-way loading: cartridge, suction, and loader pump (requires optional loader fitting 322610). The gun is spring-primed and includes an air bleed valve to aid priming.



| Shoulder Strap | Mobile Battery Charger (12Vdc -24Vdc Input) | Loader Fitting |
|----------------|------------------------------------------------|----------------|
| 339812 | 343289 | 322610 |

| Grease Cylinder Capacity | | | Hose Assembly | | | | Weight (empty) | | Maximum Pressure | |
|--------------------------|-------|----------------|-----------------|-----|--------|--------|-------------------|------|---------------------|-----|
| Bulk | | Cartridge Size | Pressure Rating | | Length | | Lbs | kg | psi | bar |
| Ounces | Grams | Ounces | psi | bar | Inches | Metres | | | | |
| 16 | 454 | 14 | 10,000 | 690 | 36 | 0.91 | 6.3 | 2.88 | 10,000 | 690 |

| Delivery Capacity per Charge ¹ | | Flow Rate ¹ | | | | Meter Accuracy ^{1,2} | | Meter Range | |
|-------------------------------------------|-----------|------------------------|-------|-----------|-------|-------------------------------|-------|-------------|----------|
| 20V, 1.5Ah Battery | | High Speed | | Low Speed | | High | Low | Ounces | Grams |
| High Speed | Low Speed | oz/min | g/min | oz/min | g/min | Speed | Speed | 0.0 to 99.9 | 0 to 999 |
| 13 | 15 | 6.2 | 176 | 4.2 | 119 | ±3% | ±4% | | |

Sound pressure (LpA) 70.9 dB(A), uncertainty (K) 3 dB(A)

Acoustic power (LwA) 82.0 dB(A), uncertainty (K) 3 dB(A)

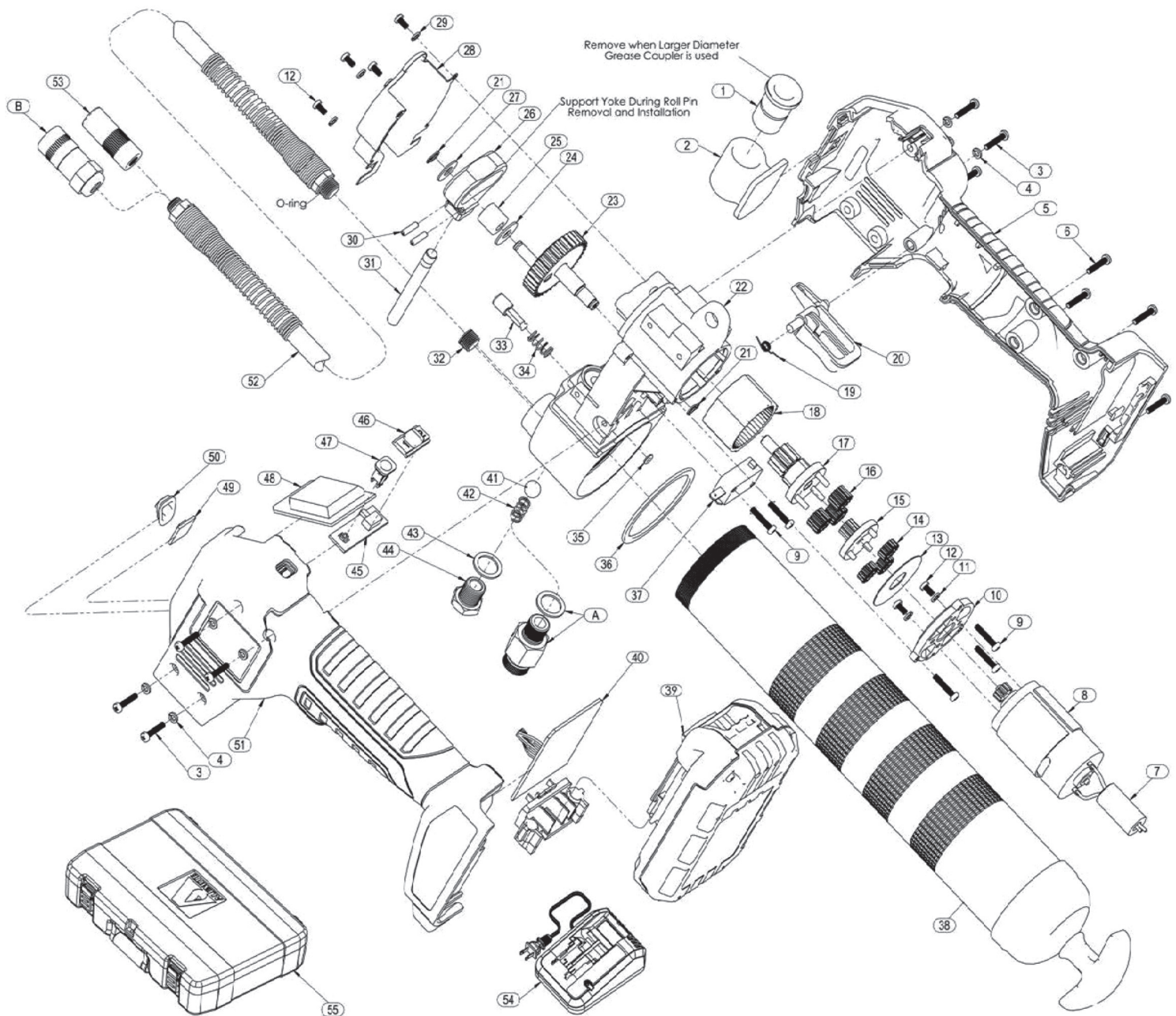
Vibration emission value (ah) 0.49 m/s², uncertainty (K) 1.5 m/s²

¹NLGI 2 EP Lithium grease (specific gravity 0.92) at 75° F (24° C) dispensed through included hose assembly with grease coupler and against 150psi (10bar) added pressure (simulates grease fitting with ball check).

²Meter accuracy is valid for use with NLGI 2 EP Lithium grease (specific gravity 0.92) at 75° F (24° C).



Parts And Drawing Breakdown For The 670AN4



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| Item No. | Part No. | Description | Qty | Repair Kits | | | | Notes |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------------------|-----|------------------------|-----------------------|------------------------------------|--------------------|------------------|
| | | | | 393795-6 Ball Check | 393757 Bleed Valve | 393795-24 Electronic Circuitry* | 393795-26 Head* | |
| 1 | | Insert, Coupler (Rubber) | 1 | | | | | |
| 2 | | Holster | 1 | | | | | |
| 3 | | Screw, Machine | 8 | | | | | |
| 4 | | Washer, Lock | 10 | | | | | |
| 5 | 393795-23 | Housing, Right | 1 | | | | | |
| 6 | | Screw, Tapping | 4 | | | | | |
| 7 | | Magnet, Ring | 1 | | | | | |
| 8 | 393795-21* | Motor Assembly (with Sun Gear) | 1 | | | | | |
| 9 | | Screw, M3x16 | 5 | | | | | |
| 10 | | Mount, Motor | 1 | | | | | |
| 11 | | Washer, Lock | 2 | | | | | |
| 12 | | Screw, M3x6 | 6 | | | | | |
| 13 | | Washer | 1 | | | | | |
| 14 | | Gear, Planet (First Stage) | 3 | | | | | |
| 15 | | Gear, Sun (Second Stage) | 1 | | | | | |
| 16 | | Gear, Planet (Second Stage) | 3 | | | | | |
| 17 | | Gear, Output Pinion | 1 | | | | | |
| 18 | | Gear, Internal | 1 | | | | | |
| 19 | | Spring, Trigger | 1 | | | | | |
| 20 | | Trigger | 2 | | | | | |
| 21 | | Ring, Retaining | 1 | | | | • | |
| 22 | | Head & Bearing Assembly | 1 | | | | • | |
| 23 | | Gear Assembly, Output | 1 | | | | | |
| 24 | | Washer, 0.24"ID x 0.59"OD | 1 | | | | | |
| 25 | | Bearing, Roller | 1 | | | | | |
| 26 | | Yoke | 1 | | | | | |
| 27 | | Washer, 0.24"ID x 0.67"OD | 1 | | | | | |
| 28 | | Cover, Head | 1 | | | | | |
| 29 | | Washer, M3 Lock | 4 | | | | | |
| 30 | | Pin, Roll | 2 | | | | • | |
| 31 | | Piston | 1 | | | | • | |
| 32 | | Plug | 1 | | | | | |
| 33 | | Valve, Bleed | 1 | | • | | | |
| 34 | | Spring, Bleed Valve | 1 | | • | | | |
| 35 | | O-Ring | 1 | | • | | | |
| 36 | 336523 | Gasket | 1 | | | | | |
| 37 | | Switch | 1 | | | • | | |
| 38 | 339820 | Cylinder Assembly, Grease | 1 | | | | | |
| 39 | 343291 | Battery, 20V | 1 | | | | | Models 596-A, -C |
| | | | 2 | | | | | Models 596-B, -D |
| 40 | | PCB, Battery Connector, Wire Harness | 1 | | | • | | |
| 41 | | Ball, Check, 3/8" Diameter | 1 | • | | | | |
| 42 | | Spring, Check | 1 | • | | | | |
| 43 | | Gasket (Copper) | 1 | • | | | • | |
| 44 | | Plug, Check | 1 | • | | | | |
| 45 | | Board, Slide Switch & Reset Button | 1 | | | | | |
| 46 | | Cover, Slide Switch | 1 | | | | | |
| 47 | | Cover, Reset Button | 1 | | | | | |
| 48 | 393795-25 | PCB with LCD Display | 1 | | | • | | |
| 49 | | LED, Flashlight | 1 | | | • | | |
| 50 | | Lens, Flashlight | 1 | | | | | |
| 51 | 393795-22 | Housing, Left | 1 | | | | | |
| 52 | 340067 | Hose Assembly, Grease | 1 | | | | | Never Substitute |
| 53 | 308730 | Coupler, Grease | 1 | | | | | Never Substitute |
| 54 | 343290 | Charger, Battery (120 Vac / 60 Hz) | 1 | | | | | Models 596-A, -B |
| | 343299 | Charger, Battery (230 Vac / 50 Hz) | | | | | | Models 596-C, -D |
| 55 | | Case, Carrying | 1 | | | | | |
| Optional | | | | | | | | |
| A | 340338 | Relief Valve with Gasket | | | | | | |
| B | 6304-B | Coupler, Grease | | | | | | |
| Part numbers left blank are not available separately. *Replacement of these items by other than an authorized Alemite Service Center voids the warranty. | | | | | | | | |

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WARNING

Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury. Save all warnings and instructions for future reference. The term “power tool” in the warnings refers to your mains-operated (corded) power tool or battery operated (cordless) power tool.

Work Area Safety

- Keep work area clean and well lit. Cluttered and dark areas invite accidents.
- Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.
- Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

Electrical Safety

- Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
- Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.
- Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.
- If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of an RCD reduces the risk of electric shock.

Personal Safety

- Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.
- Use personal protective equipment. Always wear eye protection. Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool. Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
- Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
- If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of these devices can reduce dust related hazards.

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WARNING

Power Tool Use and Care

- Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.
- Do not use the power tool if the switch does not turn it on and off. Any power tool that can not be controlled with the switch is dangerous and must be repaired.
- Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.
- Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.
- Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- Use the power tool, accessories etc., in accordance with these instructions and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from intended could result in a hazardous situation.

Battery Tool Use and Care

- Recharge only with the charger specified by the manufacturer. A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.
- 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 the battery terminals together may cause burns or a fire.
- Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.

Service

- Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.

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WARNING

The gun can develop high pressure up to 10,000 psi (690 bar). Rupture of components can inject grease into skin and eyes, causing serious injury and possible amputation. If injured, seek immediate medical attention.

Do not operate without proper safety protection, gloves, and goggles. Hold hose at spring guard only. Do not use if hose is damaged or worn. Inspect hose before each use. Use only Alemite 340067 Grease Whip Hose. Use only Alemite Grease Coupler 308730.

This gun uses lubricants, that may be flammable and poisonous if ingested. Do not use gun near open flame or other fire hazards. Read all warnings on lubricants before using this gun.

Use ear protection to reduce the risk of induced hearing loss.

Disconnect battery pack from gun before changing accessories, storing gun or unscrewing grease cylinder from the gun.

Ensure the switch is in the off position before inserting battery pack. Inserting the battery pack into power tools that have the switch on invites accidents.

Never attempt to open the battery pack for any reason.

Do not expose the battery pack to water.

Do not store the battery pack in locations where the temperature may exceed 104°F (40°C).

Charge the battery pack only at ambient temperatures between 40°F (4°C) and 104°F (40°C).



Warning! To reduce the risk of injury, the user must read the instruction manual.



Separate collection. This product must not be disposed of with normal household waste.

Loading the Gun

NOTE: Refer to **Figure 2** for component identification on the following procedures.

Cartridge Loading

1. Unscrew Grease Cylinder (38) from the gun.
2. Pull the follower rod and engage the groove in the follower rod with the slot in the Grease Cylinder cap.
3. Remove the plastic cap from the cartridge.
4. Apply a film of grease to the exposed inside surface of

the cartridge.

NOTE: This is only necessary for a virgin gun.

5. Insert the cartridge into the Grease Cylinder.
 - Remove the tabbed seal from the cartridge.
6. Screw the Grease Cylinder onto the gun.
7. Disengage the follower rod from the slot in the Grease Cylinder cap.
 - Push the follower rod into the Grease Cylinder.

Suction Loading

1. Unscrew Grease Cylinder (38) from gun.
2. Insert the head of the Grease Cylinder below the surface of the grease.
3. Slowly pull the follower rod outward from the Grease Cylinder cap until the groove is visible.
4. Engage the groove in the follower rod with the slot in the Grease Cylinder's cap.
5. Screw the Grease Cylinder onto the gun.
6. Disengage the follower rod from the slot in the Grease Cylinder cap.
 - Push the follower rod into the Grease Cylinder.

Loader Pump



WARNING

The gun can be equipped with an optional low-pressure Loader Fitting. Do not substitute with a high-pressure grease fitting. Personal injury can occur due to excessive pressure.

The use of a grease fitting will void the warranty.

CAUTION

The Loader Fitting on the gun must mate with the loader coupler. The pump may not operate if the components are not compatible.

1. Pull the follower rod and engage the follower by rotating the rod.
2. Seat the Loader Fitting into the loader coupler.
 - Push down to hold the coupler valve open.
3. Operate the pump and view the movement of the follower rod.
4. Discontinue pump operation once the groove on the follower rod is visible.
5. Disengage follower rod from follower and push into the Grease Cylinder

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Priming the Gun

In most cases the gun will prime simply by operating the Trigger several times.

Should grease fail to appear, air must be bled.

Force Prime

This process manually assists air within the gun to be bled at the Bleed Valve.

1. Pull the follower rod and engage the follower by rotating the rod.
2. Depress Bleed Valve (33) and at the same time push on the follower rod.

Once the air is eliminated, operate the gun several times.

Once grease appears, disengage the follower rod from the follower and push into the Grease Cylinder.

Check Valve Contamination

Should the gun fail to prime; the outlet check may be held open. Remove Plug (44), clean Ball (41), and the Ball seat of Head (22).

Gun Operation

Battery Pack (39) is intentionally shipped with a low charge. Charge the Battery Pack prior to use.

- Refer to the Battery Charger Operation section for details.

The battery needs to be charged before first use and whenever it fails to produce sufficient power on jobs that were easily done before.

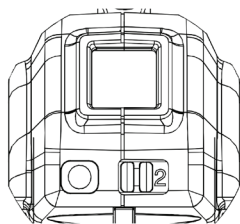
CAUTION

The gun is equipped with software to protect the motor. When a blocked bearing, line, or grease fitting causes the gun to stall, the software will cut power to the motor and the LCD will illuminate with solid red LED backlight. If this situation occurs, release the trigger immediately.

For maximum motor life, avoid operating at stall.

Speed Selection

The gun is equipped with a two speed electronic transmission to provide a high and low flow rate, refer to Specifications for performance at each speed. The gun is in high speed when "2" is shown on the slide switch, see figure for illustration. Maximum pressure can be achieved in both High (2) and Low Speed (1).



LCD Functions

The Liquid Crystal Display features an electronic grease meter, grease level gauge, and battery level indicator. To turn the LCD ON, tap the reset button one time.

To enter reset mode, press and hold the reset button. After 2 seconds the digits of the grease meter begin to flash, followed by the grease cylinder level segments, and then units

of measure (oz/g). Releasing the reset button when grease meter digits is flashing will reset the meter to zero, releasing the button while the grease cylinder level segments are flashing will restore the gauge to full, and releasing the button while the unit of measure is flashing will change unit of measure.

Stall Indication

During stall condition (in the case of a clogged fitting or line) the gun will stop pumping grease and the LCD display will be illuminated with Red backlight. If this condition occurs, release trigger immediately. Inspect, clean, and/or fix the grease passage before trying to dispense grease into the system.

Loss of Prime Indication

Loss of prime occurs when there is an air pocket in the grease or when the grease cylinder is empty. When this occurs the LCD screen will flash Red to indicate that the gun is not pumping grease. During loss of prime the grease meter does not count empty piston strokes.

Flashlight

To turn the flashlight ON, tap the reset button one time. If the LCD screen is not already ON, two taps of the reset button would be required to turn the flashlight ON.

To turn the flashlight OFF, simply tap the reset button one time. The flashlight will automatically turn OFF after 20 seconds unless the trigger is operated to dispense grease. If trigger is pressed to operate the gun, the light will remain ON until 20 seconds after the trigger is released.

Battery Pack and Charger Safety Rules

This manual contains important safety and operating instructions for Battery Pack part number 343291 and Battery Chargers 343290 and 343299.



WARNING

Before using the Battery Charger read all instructions and cautionary markings on Battery Charger (54), Battery Pack (39), and products using the Battery Pack.

To reduce the risk of injury, charge only Lithium-ion type rechargeable batteries. Other types of batteries may burst causing injury.

An extension cord should not be used unless absolutely necessary. Use of an improper extension cord could result in a risk of fire and electric shock. If an extension cord must be used, make sure it is 18-gauge. Check to ensure that the pins on the plug of the extension cord are the same number, size, and shape as those of the plug on the Charger. Make sure that the extension cord is properly wired and in good electrical condition.

Do not incinerate the Battery Pack, even if it is severely damaged or completely worn out. The Battery Pack may explode in fire.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

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CAUTION

Do not expose the Charger to rain, snow, or frost. To reduce the risk of damage to electric plug and cord, pull by the plug rather than the cord when disconnecting the Charger.

Make sure the cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress.

Do not operate the Charger with damaged cord or plug. Replace immediately.

Do not operate the Charger if it has received a sharp blow, been dropped, or otherwise damaged in any way.

Do not disassemble the Charger.

Do not charge the Battery when the temperature is below 40° F (4°C) or above 104° F (40°C).

The Charger is designed to operate on standard household electrical power. Do not attempt to use it on any other voltage.

Consecutive charging may cause overheating. If you need to recharge the Battery consecutively, wait for about 15 minutes to allow the Charger to cool.

Do not insert foreign material into the hole for the Battery in the Charger stand.

Do not disassemble the Battery.

Do not Store the gun and Battery assembly in locations where the temperature may reach or exceed 104°F (40°C).

Do not short-circuit the Battery.

Do not place the Charger in an area of extreme heat or cold. It works best at normal room temperature.

Battery Charger Operation

Charge the Battery only with the Charger provided or optional mobile charger 343289. Make sure power circuit voltage is same as that shown on the charger specifications plate. Press down to ensure the battery properly engages with the charger's contacts.

Function of Red and Green Lights

When the charger is powered on, the Green light will flash one time.

Green Light Flashing ■ ■ ■

Charging.

Green Light On ■■■■■

Battery is fully charged.

Red Light Flashing at 4HZ ■■■■■■

Bad Battery condition. The Charger has the ability to detect a weak or damaged battery. If this LED function occurs, do not continue to charge the Battery. Return it to a service center or a collection site for recycling.

Red Light Flashing at 1HZ/5HZ ■■■■■

Hot/Cold Battery. When the Charger detects that a Battery is excessively hot or cold, charging is suspended until the battery has normalized. Once battery is at a temperature between to 40° F (4° C) and 104° F (40° C), the charger automatically switches to Charging mode. Battery overheating could be attributed to:

- A. Long continuous running
- B. Hot ambient temperature
- C. One or more cells are damaged

The Battery will become slightly warm to the touch while charging. This is normal and does not indicate a problem.

Leaving the Battery in the Charger

The Battery can be left connected in the Charger with the green LED glowing indefinitely. The Charger will keep the Battery fresh and fully charged. The Charger features an automatic tune-up mode which equals or balances the individual cells within the Battery to enable it to function at peak capacity. Batteries should be tuned-up weekly or whenever the battery no longer delivers the same amount of work. To use the automatic tune-up mode, place the Battery in the Charger for a minimum of 8 hours.

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