GRIZZLY

OPERATOR'S INSTRUCTION MANUAL

MODEL: ___**222 000**_____ ENGINE MODEL: _____
SERIAL: _____ ENGINE SERIAL: _____

DATE OF PURCHASE: _____
PURCHASED FROM: _____

WARNING: THIS PRODUCT IS DESIGNED AND MANUFACTURED TO PROVIDE SAFE AND DEPENDABLE SERVICE IF OPERATED ACCORDING TO INSTRUCTIONS. THE MANUFACTURER PROVIDES THE FOLLOWING INSTRUCTIONS FOR USE AND CARE OF THIS EQUIPMENT AND RELIES UPON THE PURCHASER TO SEE TO IT THAT THESE INSTRUCTIONS ARE MADE CLEAR TO THE PERSONS WHO WILL ACTUALLY BE USING THE EQUIPMENT. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY OR EQUIPMENT DAMAGE.

GRIZZLY EQUIPMENT
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INTRODUCTION

222 000 BOTTLE WARMER

Thank you for purchasing this quality **GRIZZLY** product. With proper use and care, the bottle warmer will provide many years of reliable service. For the safety of all job-site personnel it is mandatory that the instructions provided for the use and handling of the equipment be read and thoroughly understood by the operators.

CAUTION

INTENDED USE; THIS MACHINE IS INTENDED TO BE USED ON FLAT, LEVEL ROOFS ONLY FOR THESE APPLICATIONS; PROPANE BOTTLE WARMER ANY OTHER USE OF THIS EQUIPMENT VOIDS THE MANUFACTURER'S WARRANTY AND IS THE SOLE RESPONSIBILITY OF THE OWNER/USER, SHOULD ANY DAMAGE OR INJURY OCCUR.

PREPARATION

OPERATOR

START BY READING AND FULLY UNDERSTANDING OPERATING INSTRUCTIONS. IF SOMETHING IS NOT UNDERSTOOD, HAVE SOMEONE ELSE READ AND EXPLAIN THE INSTRUCTIONS TO THE OPERATOR OR CALL THE MANUFACTURER FOR INFORMATION. AN UNINFORMED OPERATOR CAN SUBJECT HIMSELF AND OTHERS TO DEATH OR SERIOUS INJURY.

WEAR PROPER ATTIRE

Safety glasses are recommended and must be worn if any roof cutting or scraping is being done in the vicinity. Safety glasses and or face shield are also necessary when working with hot stuff.

Wear properly fitting clothes. Tight clothing can restrict movement and slow down reaction time in a dangerous situation. Loose fitting clothing can be dangerous and cause serious injury if it gets caught in moving mechanical parts. Wear a long-sleeved shirt, buttoned at the cuffs, safety shoes, and pants without cuffs, and knit wrist type gloves.

A hard hat must be worn by operator when working on a job site.

ROOF PREPARATION

INSPECT ROOF DECK

Before allowing equipment and personnel access to roof, make certain roof is strong enough to support the weight. Check load limits of deck with owner, builder or architect. Clear the work area of all potentially dangerous obstacles that could cause personal injury to the operator or others. Keep unauthorized people away from construction area. Check to see that all roof openings are guarded to protect against falls.

WARNING LINE SYSTEM

When operating parallel to roof edge warning line system must be at least six feet from edge. When operating perpendicular to edge warning line must be ten feet from roof edge.

HOISTING TO ROOF

WARNING: ALWAYS CHECK DECK LOAD LIMITS WITH BUILDER, OWNER, OR ARCHITECT BEFORE DECIDING TO USE ON THE ROOF.

INSPECT THE HOIST

Make certain hoist is in safe operating condition, to be operated by trained personnel. The hoist should be clear of ground objects and overhead obstacles, such as power lines; it should be secure and properly counterbalanced. Hoist should be inspected for frayed cables, bent frame members of faulty mechanical parts. Make sure everyone on the ground is completely clear of the hoisting area. Do not exceed the weight and size capacity of your hoist. Do not use if you are in doubt.

CONNECTING TO LIFT RINGS

One hoist ring is provided on top of the bottle warmer frame as shown in fig. 2 Connect hook from hoist line to this ring when lifting the Bottle warmer. The bottles must be chained to prevent any injury from happening. Make certain bottles are secured before hoisting.

Fig. 2

WEIGHT: **210 LBS** without bottles

OPERATION

BEFORE OPERATION

ATTENTION: OPERATION WITHOUT CHAINS COULD CAUSE SERIOUS PERSONAL INJURY. DO NOT OPERATE WITH DAMAGED CHAINS, OR WITH BROKEN WELDS.

Inspect the bottle warmer before use, look for cracks in welds, broken or loose parts. Make certain chains are in place and fastened securely. Check chains for cracks, broken welds and other damage. Repair or replace if damaged. Never operate when damaged.

The bottles must be chained to bottle warmer. Strap the hand torch securely. Propane bottles must be handled safely and with care, for more information ask your propane bottle supplier or manufacturer.

WARNING: NEVER LIFT THE BOTTLE WARMER WITH ONLY ONE BOTTLE. ALWAYS LIFT BOTTLE WARMER EITHER WITH TWO BOTTLES OR WITHOUT ANY BOTTLES OR ELSE INJURIES MAY OCCUR.

ATTENTION: BOTTLES MUST BE CHAINED TO BOTTLE WARMER AND THE HAND TORCH MUST BE STRAPPED TO BOTTLE WARMER TO PREVENT FROM BOUNCING OR BECOMING SEPARATED FROM BOTTLE WARMER WHEN LIFTING. SECURE THE CHAIN BEFORE LIFTING.

BEFORE OPERATING WITH BOTTLE WARMER

1. Always wear proper clothing (100% cotton is best) as recommended by roof association when on roof.
    a) Hard hat with face shield.
    b) Long sleeve work shirt buttoned at the wrist and collar
    c) Long work pants with no cuffs
    d) Safety high top shoes
    e) Work gloves with knit wrist (to prevent hot material from spilling into the glove)

2. Be sure bottle warmer is secure.
3. Use bottle warmer only on a flat, level roof and within a perimeter warning system.
4. Keep an **approved fire extinguisher** available in case of fire.
5. Inspect bottle warmer for any damage and do not use is you suspect damage.
6. Have a constant attention on quantity and heat of water in the bottle warmer.
7. Do not let water heat go over 30°C.

WARNING: WATER IN THE BOTTLE WARMER MUST NEVER PASS 30°C SO AS NOT TO OVERHEAT THE PROPANE AND CAUSE A GAZ LEAK THROUGH THE SAFETY VALVE

WARNING: IF A PROPANE BOTTLE LEAKS OR SHOWS RISKS OF DEFECT, STOP ALL USE AND PUT IMMEDIATELY OUT ALL FLAMES

OPERATION OF BOTTLE WARMER

ATTENTION: **IT IS MANDATORY THAT BOTTLES IN WARMER ARE OPEN AND CONNECTED IN SERIES WHEN BOTTLE WARMER IS IN OPERATION OR ELSE BOTTLE NOT USED MAY OVERHEAT.**

ATTENTION: **MAKE SURE MACHINE CONTAINS ENOUGH WATER. HAVE A CONSTANT ATTENTION ON QUANTITY AND HEAT OF WATER. DO NOT LET WATER HEAT GO OVER 30° C.**

The burner on the bottle warmer is equipped with a safety shut off valve that shuts off gas if flame is blown off.

You can either light up burner in its working position or remove from warmer to light. Use a long neck lighter like those used for lighting BBQ'S.

LIGHTING PROCEDURES

USING 1 BOTTLE IN WARMER

1. Make sure that connections and hoses are leak tight and in good condition.
2. Open propane bottle valve
3. Open burner valve
4. Light the lighter and point it at the tip of the burner
5. Push in the safety valve button and hold until thermocouple is hot enough to maintain a flame.
6. Adjust flame in a way that the water will be kept at moderate temperature (20°C to 30°C), if the flame is blown off, the safety valve will shut off gas as soon as the thermocouple cools.

USING 2 BOTTLES IN WARMER

WARNING: **IT IS MANDATORY THAT BOTTLES IN WARMER ARE OPEN AND CONNECTED IN SERIES WHEN BOTTLE WARMER IS IN OPERATION OR ELSE BOTTLE NOT IN USE MAY OVERHEAT.**

1. Connect 2 bottles in series with 2 "T" Blocks to connection hose between 2 bottles and 2 regulators with warmer.
2. Make sure that connections and hoses are leak tight and in good condition.
3. Open propane bottle valves. (Both mandatory)
4. Open burner valve.
5. Light the lighter and point it at the tip of the burner.
6. Push in the safety valve button and hold until thermocouple is hot enough to maintain a flame.
7. Adjust flame in a way that the water will be kept at moderate temperature (20°C to 30°C), if the flame is blown off, the safety valve will shut off gas as soon as the thermocouple cools.

WARNING: **THE CHIMNEY COULD CAUSE SERIOUS INJURIES WHEN BURNER IS IN OPERATION AND EVEN AFTER. ALWAYS BE CAREFUL NOT TO TOUCH THE CHIMNEY PROTECTION GRILL.**

WARNING: **IT IS NOT SAFE TO LEAVE A BOTTLE OR BOTTLES IN THE BOTTLE WARMER WHILE THE BURNER IS IN OPERATION. IF THE BOTTLE OR BOTTLES ARE NOT PLUGGED TO THE BURNER AND OPENED.**

TURNING OFF THE BURNER

To put out flame of burner, close valve of each bottle that is in the warmer and once the flame is out, close the burner safety valve.

DRAINING OF WATER

Le warmer has a drain plug on the opposite side of burner, you only have to unscrew and remove so it can drain.

SAFETY PRECAUTIONS

- Do not allow other people to be near the machine during operation (except operator)
- Do not hoist the Bottle warmer with only one bottle.
- Never operate equipment that is damaged in any way. Repairs or replacement of damaged components must be made by a qualified mechanic
- Do not modify the equipment. Do not operate a modified piece of equipment.
- Avoid slick areas on the roof to prevent slipping.
- Wear safety footwear and snug fit clothing.
- Be trained to do the specific job before operating the equipment on an actual job.
- Do not exceed weight carrying capacity of the deck. Check with owner or architect for deck capacity.
- Operate on flat, level roofs only.
- Guard all openings in the roof.
- Do not operate within 10 feet of roof edge (or within 6 feet, if operation is parallel to the edge.)
- Do not operate this machine if you are under the influence of alcohol, marijuana, or drugs that could impair judgment and ability.
- Keep the equipment in good condition.

Characteristics and Operation Mode

This equipment is designed for use inside a perimeter warning system. It is a tilt and push type machine. Do not operate within 10 feet of roof edge or 6 feet if operating parallel to roof operator must comply with OSHA regulations in regard to use of an MSS system. See OSHA Law, section 5.2.

WARNING: **KEEP CHAINS AROUND BOTTLAS AT ALL TIMES, WHEN YOU HAVE PROPANE BOTTLES ON THE BOTTLE WARMER.**

WARNING: NEVER PULL THE BOTTLE WARMER AS YOU NEED TO SEE WHERE YOU ARE GOING AND AT THE SAME TIME KEEP AN EYE ON THE PROPANE BOTTLE(S).

MAINTENANCE

Lubrication recommendations are as follows: roller bearings on the wheels are pre-lubricated and require no greasing. Replace worn or broken parts before operating.

Tire Servicing: Check tire pressure on tires.

Always check tire manufacturer's recommendations for correct tire pressure before inflating tire.
(Correct tire pressure should be imprinted on the side of the tire.)

SAFETY HAZARDS

Safety hazards are not always obvious to workers. Unlike exposure to health hazards, where illness or injury develop slowly, safety hazards usually result in immediate injury or death.
Broken bones, cuts bruises, sprains, burns and loss of limbs, eyesight and hearing are the kinds of injuries caused by safety hazards.
The rate of occupational injuries in roofing, in fact, ranks in the top ten of all major occupational groups.

FALLS

Falls are the number one cause of serious injury and death to roofers. An estimated 10 percent of all roofing accidents result from falls off roof edges, through roofing openings or off ladders, more than half of the non-fatal accidents result in serious injury.
Unprotected and unguarded roof edges and roof openings create extremely hazardous conditions.
Ladders with cracked, loose or missing steps: with side rails broken or cracked and not attached firmly to the steps; with broken, loose or missing locks, or coated with grease, oils or hardened bitumen can lead to serious injury. Ladders should always be inspected to make sure they're properly maintained and constructed and that they're long enough to extend three feet above the roof's surface.
Improperly balanced or unstable hoists overturn and will often carry the worker along. Rolls of roofing felt should never be used as counterweight. Workers should know the load capacity; it should be posted.

BURNS

Skin contact with hot asphalt and hot coal tar pitch usually results in second and third degree burns. They usually involve deeper portions of the skin and are easily infected.
An estimated 16 percent of all injuries are burns from hot stuff. The major causes of burns have been from:
Kettle flashes

- Kettle splashes from dropping pieces of coal pitch or asphalt into the kettle
- Slips and trips while carrying hot bitumen in open containers
- Splashes involving transfer operations like from the hot pipe outlet to a hot lugger, from a hot lugger to a mop cart or a pail, or from the kettle to a pail.

HEAVY LIFTING

Sprains and strains, a majority of which involve the back, are the most common roofing injury and one of the most severe. Almost 30 percent of these injuries result in 10 or more days away from work.

FIRE/EXPLOSION

Two conditions must be met in order for fires and explosions to occur. First, there must be an ignition source, a welding arc, spark, cigarette, flame or simply a hot spot as in a kettle or tanker. Secondly, there must be the right mixture of vapours (from asphalt, pitch, solvents) and oxygen.

For kettles and tankers, fire/explosion conditions arise when:

- oversized burners are used to fire the kettle, causing localized overheating of the heating tubes creating a hot spot
- the temperature of the bitumen is brought up to the desired operation temperature too quickly allowing the level of bitumen to drop to the level of the firing tubes, allowing excessively high surface temperatures
- heating the bitumen to its flash point (for asphalt, about 525°-540°; for pitch, about 450°-475°)
- the temperature of the bitumen is hot enough to reach the auto-ignition level
- in tankers, the vent pipe is clogged or plugged so that flammable vapours can build up to explosive levels

Many solvents evaporate quickly at roof temperatures. Explosive mixtures of vapours can be readily formed within confined spaces like high parapet walls, in atriums or in any space where little or no ventilation exists. And any kind of spark or flame can ignite the vapours.

ELECTROCUTION

Low voltage electricity can cause shock, muscle contractions, breathing difficulty, irregular heartbeat, severe burns and death. The route that the current takes through the body affects the degree of injury. Current flowing from one finger to another would not pass vital organ, while from one hand to another would pass through the heart and lungs.
Electrical tools should be properly grounded. The electrical cord should end in a three-prong grounding contact, or the wires should be enclosed in a metal case with a special grounding attachment.
Employers are required to provide ground fault circuit interrupters for all outlets on construction sites that are not part of the permanent wiring of the building. This is actually a fast-acting circuit breaker, which can shut off electricity in a fraction of a second.
Aluminum or other metal ladders pose a serious electrical hazard around electrical equipment and energized lines.

FALLING OBJECTS

Tools, bricks, materials, buckets, boxes, pallets or almost anything dropped from a sufficient height can cause severe damage. Head injuries, one of the highest compensated injuries to workers, often include brain damage.
Workers need protective head gear when working beneath people, tools and equipment.

FLYING OBJECTS

Objects can be projected by machines, from welding or grinding operations and can be windblown. Tear-off operations, where power cutters, power brooms and power spudders are generally used, are the major source of flying substances.
The part of the body most often injured is the eyes.

UNGUARDED MACHINERY

Exposed blades and chains on powered machinery like hoists and roof cutters can severely lacerate and crush parts of the body. Guards should always be fitted over moving parts to protect workers.