

GRIZZLY

OPERATOR'S INSTRUCTION MANUAL

MODEL: 360 000

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

360 000 36" SWEEPER

Thank you for purchasing this quality **GRIZZLY** product. With proper use and care this Sweeper 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 THE SOLE PURPOSE OF GROUND SWEEPING AND SWEEPING GRAVEL. 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 or 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

There are two lift rings, one located near each end of the brush mount assembly. Both rings should be connected to lift hooks or slings for hoisting. A third lift hook should connect to the handle for a balanced load. Do not hook hoist cable to any other part of machine as damage or injury could result. Always inspect ring for wear or damage and make sure the hoist, cable, hook etc. are in good running order or damage or injury may result.



Fig. 2

WEIGHT: 240 LBS

SAFETY PRECAUTIONS

- Do not allow other people to be near the machine during operation (except operator)
- Other workers on the job site must wear eye protection when in the vicinity of the Sweeper.
- Be certain all guards, shields and covers are secure and tight before starting.
- Never operate a sweeper 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.
- Never reach into the brush area when the engine is operating. Keep hands and feet away from the brush and belts.
- Wear safety footwear, eye protection and snug fit clothing.
- Operate the Sweeper only from the “Walk Behind” position.
- Operate on flat, level roofs only.
- Use only **GRIZZLY** brushes.
- Keep away from electrical lines.
- Use caution when handling fuel. Gasoline is very flammable. Shut off engine, and allow cooling before refuelling. Clean up gasoline before restarting.
- Guard all openings on the roof.
- Do not allow anyone to walk in front of the Sweeper.
- Do not operate within 10 feet of roof edge (or within 6 feet, if operating parallel to the edge).
- Never lilt the machine during sweeping.
- 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.
- Do not walk backward while operating.
- Remove large debris before sweeping.
- The owner or operator must see that all warning decals are in place and legible. Write to **GRIZZLY** Equipment for replacement decals and instructions.
- Wet down the roof with water before sweeping to keep dust to a minimum.
- Make certain the operator and others in the vicinity wear a respirator and other protective gear as conditions warrant.

OPERATION

Before Operation

Check to see that engine is serviced properly. Handle gasoline with extreme caution. Make certain belt guards, chain guards and brush cover are in place and secure and that there are no signs of damage or wear of these parts. Never operate machine with damaged or missing guards. Serious injury may otherwise result.

The Controls

The brush direction control lever is located just to the left of engine (looking from operator's position). (See Fig. 3) When actuated, the lever can be set in any of three positions for sweeping left, right or straight ahead.

The throttle lever is located on the handle bar (see Fig. 4). When properly adjusted, this lever serves as automatic choke at full throttle, and remote shut off when at close throttle. Operator must test remote shut off before depending on it.

The wheel engagement lever is located next to the right side of the handle bar (see Fig. 5). The sweeper will move forward when the operator pulls on this lever.

On the left side of the handle bar is located a similar lever (see Fig. 6). This lever engages both the wheels and the brush. When properly adjusted the wheels and the brush engage at the same time



Fig. 3 Brush direction control

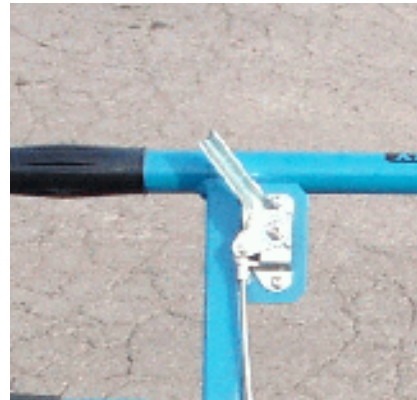


Fig. 4 Throttle control



Fig. 5 Wheel engagement lever



Fig. 6 Wheel and brush engagement lever

WARNING; IF BRUSH ENGAGES BEFORE WHEELS, THE CONTROLS MUST BE ADJUSTED. IF MACHINE “CREEPS” WITH NEITHER LEVER ENGAGED, THE CONTROLS MUST BE ADJUSTED. NEVER OPERATE MACHINE WITH IMPROPERLY ADJUSTD CONTROLS. CREEPING COULD CAUSE MACHINE TO GO OFF ROOF. THE BRUSH MOVING WITHOUT THE DRIVE WHEELS CAN CAUSE THE MACHINE TO MOVE BACKWARDS WHICH COULD RESULT IN DEATH OR SERIOUS INJURY IF OPERATOR IS FORCED OFF ROOF.

Adjusting the controls

WARNING; NEVER ADJUST CONTROLS OF SWEEPER WHILE ENGINE IS RUNNING.

To make wheels engage sooner, the cable routed to wheel engagement lever must be shortened. If cable is too tight, causing machine to creep, the cable must be lengthened. Make adjustment by loosening cable clamp, adjusting and re-tightening.

Brush engagement cable is adjusted in the same way (the cable routed to left control lever). Tightening the cable will engage brush sooner, loosening will engage brush later.

Cable adjustments should rarely be necessary. Replace damaged cable.

The most routine adjustment on the sweeper is the long belt that drives the brush. This needs to be tightened periodically by loosening jam nut (A) and tightening belt adjustment screw (B) clockwise as shown in Fig. 7.

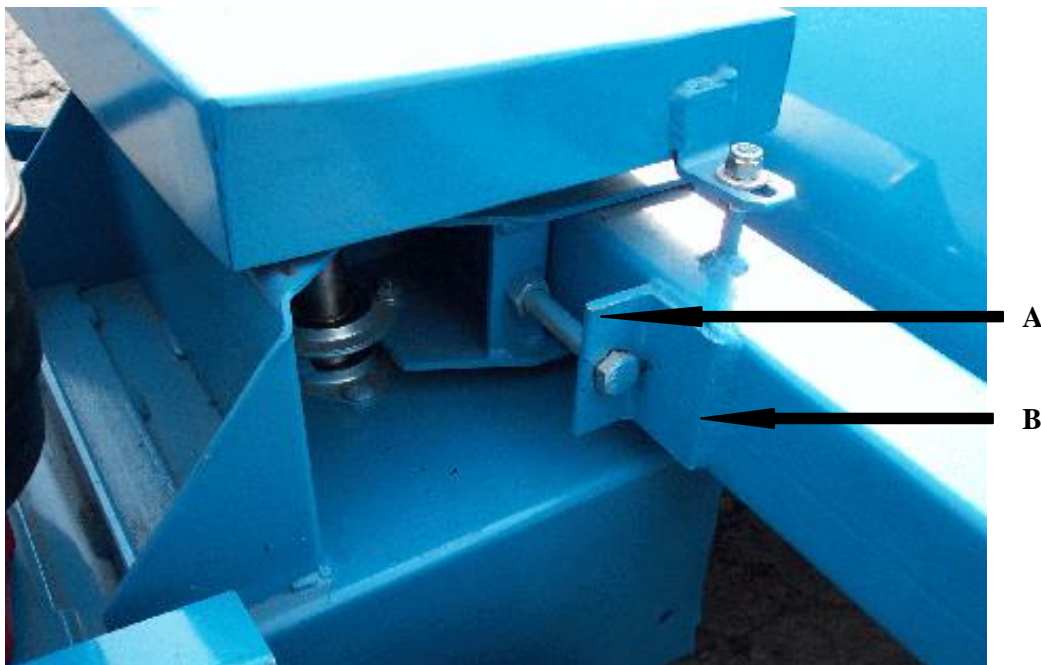


Fig. 7

PROPER OPERATION

After you have prepared for the job in the manner described, and persons who are to use the equipment understand its proper use and have read through this entire booklet, then the sweeper is ready for operation.

WARNING; NEVER SWEEP TOWARD PEOPLE OR BUILDINGS, VEHICLES OR OTHER OBJECTS THAT MIGHT BE DAMAGED BY FLYING DEBRIS. MAKE SURE PEOPLE ARE WELL CLEAR OF MACHINE.

WARNING; NEVER LIFT UP HANDLE WHEN BRUSH IS MOVING AS THIS WILL CAUSE SWEEPER TO MOVE BACKWARDS, WHICH COULD RESULT IN DEATH OR INJURY IF OPERATOR IS FORCED OFF ROOF.

CAUTION; Do not touch muffler during use or just after. Severe burns may result.

When sweeping, proceed forward at a rate it can sweep. To get a good sweeping job, avoid “plowing”.

WARNING; WHEN SWEEPER IS LEFT UNATTENDED SHUT OFF THE ENGINE.

To disengage brush and wheels, simply release the controls.

WARNING; NEVER ATTEMPT TO OVERRIDE “DEADMAN” SAFETY CONTROLS.

Engine Start-up

Check to see that engine is serviced properly. Read Briggs and Stratton owner’s manual. Check oil level and fuel level. Check to see that spark plug is tight.

After reading through all of the instructions, the 360 000 sweeper should be ready for operation. When operating machine for the first time, position the machine on the ground or in an open level area away from obstructions and roof edges. Start engine and allow to warm up for five minutes. Practice manoeuvring the machine by operating the controls as described earlier.

MAINTENANCE

- See that engine is serviced properly. If service is needed contact an authorized Briggs and Stratton dealer, you will need model type and code of your engine.
GRIZZLY equipment warranty does not cover the engine, which is covered by a separate warranty from Briggs and Stratton.
- Always check tire manufacturer’s recommendations for correct tire pressure before inflating. (Correct tire pressure should be imprinted on the side of the tire.)
- Check bolts and nuts for tightness every day.

- Check covers, guards, handles etc. for cracks, wear, warpage, tightness etc., replace if damaged or in doubt.
- Grease all bearings at least weekly.
- Adjust belt tension as needed, check periodically.
- Grease and adjust chains as needed.
- Make sure one-way bearings on wheels are operating properly or replace.
- Replace worn-out brush with **GRIZZLY** brush only.
- Replace tire when tread is worn, good traction is crucial to the safe operation of the sweeper.

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.