GRIZZLY

OPERATOR'S INSTRUCTION MANUAL

MODEL: ___**380 000**_____ 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.

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INTRODUCTION

380 000 CYCLONE

Thank you for purchasing this quality **GRIZZLY** product. With proper use and care the Cyclone 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 BLOWING AWAY DEBRIS AND EVAPORATING MIST, DEW AND WATER. 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 RING

There is one centered lift ring on the machine (see Fig. 2). Always lift machine by this ring using the proper hook and cable. Do not attempt to lift the machine by any other part. 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: **125 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 Cyclone.
- Check hoses and fittings before operating. Never operate with damaged hoses or fittings.
- Never operate a Cyclone 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.
- Wear safety footwear, eye protection and snug fit clothing.
- Moving parts can cause injury. Keeps hands, feet and clothing away from air intake and all other moving parts on machine and engine. Never put hands or feet in air exhaust outlet while machine is running.
- Operate on flat, level roofs only.
- Keep away from electrical lines.
- Use caution when handling fuel. Gasoline is very flammable. Always shut off engine and close valve on LP-Gas cylinder and allow time for cooling before refuelling. Clean up gasoline before restarting.
- Never leave machine unattended while the engine is running.
- Machine may be pushed back by the air pressure if left running unattended.
- Guard all openings on the roof.
- Do not allow anyone to walk in front of the Cyclone or to its side depending where the air is being blown.
- Do not operate within 10 feet of roof edge (or within 6 feet, if operating 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.
- Do not walk backward while operating.
- The owner or operator must see that all warning decals are in place and legible. Write to **GRIZZLY** Equipment for replacement decals and instructions.
- Make certain the operator and others in the vicinity wear a respirator and other protective gear as conditions warrant.

CAUTION; **BLOWER HOUSING BECOMES VERY HOT. KEEP AWAY FROM HOUSING WHEN BURNER IS ON. ALLOW ENGINE TO RUN UNTIL EXHAUST AIR IS COOL AFTER SHUTTING OFF GAS. ALWAYS HAVE A FIRE EXTINGUISHER NEARBY.**

CAUTION; **NEVER OPERATE TORCH WITHOUT BLOWER.**

CAUTION; **NEVER LIFT MACHINE WITH LP-GAS CYLINDER ATTACHED.**

OPERATION

Before Operation

Check to see that engine is serviced properly. Read Kohler operation and safety instructions. Handle gasoline with extreme caution.

Check oil level in engine. Fill to proper level with 10W30 motor oil. (Refer to Kohler instructions.)

Check all hoses and connections to ensure they are tight.

Engine Start-up

Check to see that engine is serviced properly. Read "Kohler Owner's Manual". Check oil level and fuel level. Check to see that spark plug is tight.

Proper Operation

Start engine and let it warm up for a few minutes at idle, increase speed to desired level, machine will blow ambient air to the side by default. If you wish to blow air forwards, move air deflector to the right (see Fig 3). If sufficient air is being blown, the deflector will hold in place and will automatically come back when the throttle is lowered.

Fig. 3

To shut engine off, bring throttle back to idle for a few minutes and put engine switch to the off position (see Fig. 4).

Fig. 4

IMPORTANT; ENGINE MUST BE RUNNING AT IDLE BEFORE STOPING IT OR IMPELLER MAY SHEAR OFF THE CRANKSHAFT.

USING BLOWER

CAUTION: **PROPANE IS HIGHLY FLAMMABLE, USE EXTREME CARE.**

1. Follow instructions and safety precautions as furnished by engine manufacturer.
2. Always be sure LP-Gas connections are secure and working properly, and your tank is secured in an upright position. Be sure to keep hose out of the way of the operator.
3. Close ¼ turn valve (see Fig. 5).
4. Open valve on LP-Gas tank.

NOTE; Maximum recommended operating pressure is 20 P.S.I. DO NOT EXCEED THIS PRESSURE.

5. Using soapy water, check all connections and fittings for leaks. DO NOT USE MATCH OR FLAME.
6. Start engine and adjust to low speed.
7. Open ¼ turn valve slightly (see Fig. 5).
8. Light burner with spark lighter. DO NOT USE MATCHES OR CIGARETTE LIGHTER. (If burner does not light, open ¼ turn valve a little at a time until it does light) (see Fig. 6).
9. Adjust throttle on engine to fastest operating speed.
10. Adjust ¼ turn valve to obtain desired flame (see Fig. 5).

NOTE; Never operate dryer with engine on low speed with ¼ turn valve fully open.

11. To stop operations: Close valve on LP-Gas tank and allow engine to run until exhaust air is cool.
12. Reduce engine speed to idle for a few minutes before shutting engine off (see Fig. 4).

Fig. 5

Fig. 6

CAUTION: **MAKE SURE TO TURN GAZ OFF IF FLAME IS EXTINGUISHED OR WHEN YOU WANT TO STOP MACHINE.**

MAINTENANCE

CAUTION: **DISCONNECT SPARK PLUG WIRE BEFORE WORKING ON MACHINE.**

Engine Service

For the engine read "Kohler Owner's Manual". Engine oil should be changed in conformity with "Kohler Owner's Manual". Keep the cylinder head clean so that it can cool the engine properly. Frequent oil changes will significantly prolong life of engine. SAE 10W30 is recommended by Kohler (see Kohler Engines Owner's Manual). Unleaded gasoline is also recommended to increase valve life.

If service or repair of engine is needed, contact an authorized Kohler centre. You will need the model, and serial number of your engine.

GRIZZLY equipment warranty does not cover the engine, which is covered by a separate warranty from Kohler.

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.