

# GRIZZLY

## OPERATOR'S INSTRUCTION MANUAL

MODEL: 320 000

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

### 320 000 HYDRAULIC ROOF REMOVER

Thank you for purchasing this quality **GRIZZLY** product. With proper use and care this Roof Remover 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.



**Fig. 1**

### CAUTION

INTENDED USE; THIS MACHINE IS INTENDED TO BE USED ON FLAT, LEVEL SURFACE ONLY FOR THE SOLE PURPOSE OF REMOVING OLD ROOFING MATERIAL. 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 SERIOUS INJURY OR DEATH.

## **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

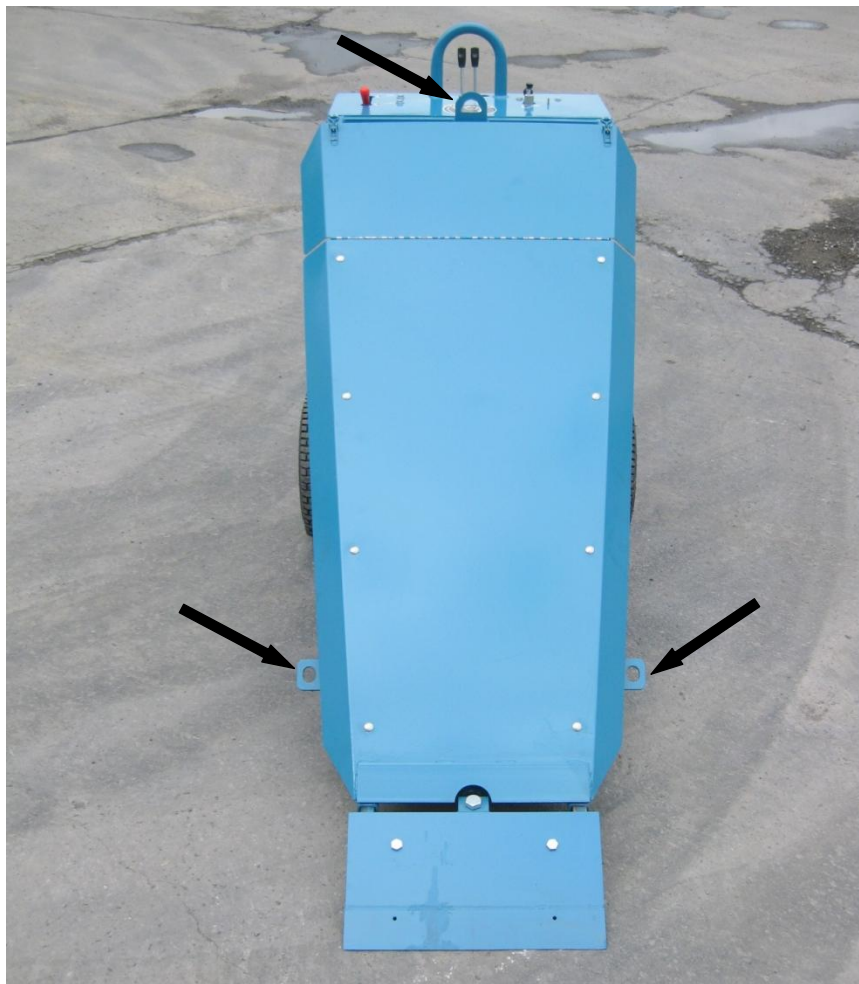
**WARNING:** ALWAYS CHECK DECK LOAD LIMITS WITH BUILDER, OWNER, OR ARCHITECT BEFORE DECIDING TO USE ON THE ROOF.

### 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 three lift rings; they are located at the top on the front of the dash and on either side of the chassis at the front of the machine. Make certain that the cable, chain or sling is setup in a way that you get a balanced load. Hoist roof remover by the lift rings only or damage or injury could result. Always inspect rings for wear or damage and make sure the hoist, cable, hook etc. are in good condition or damage or injury may result.

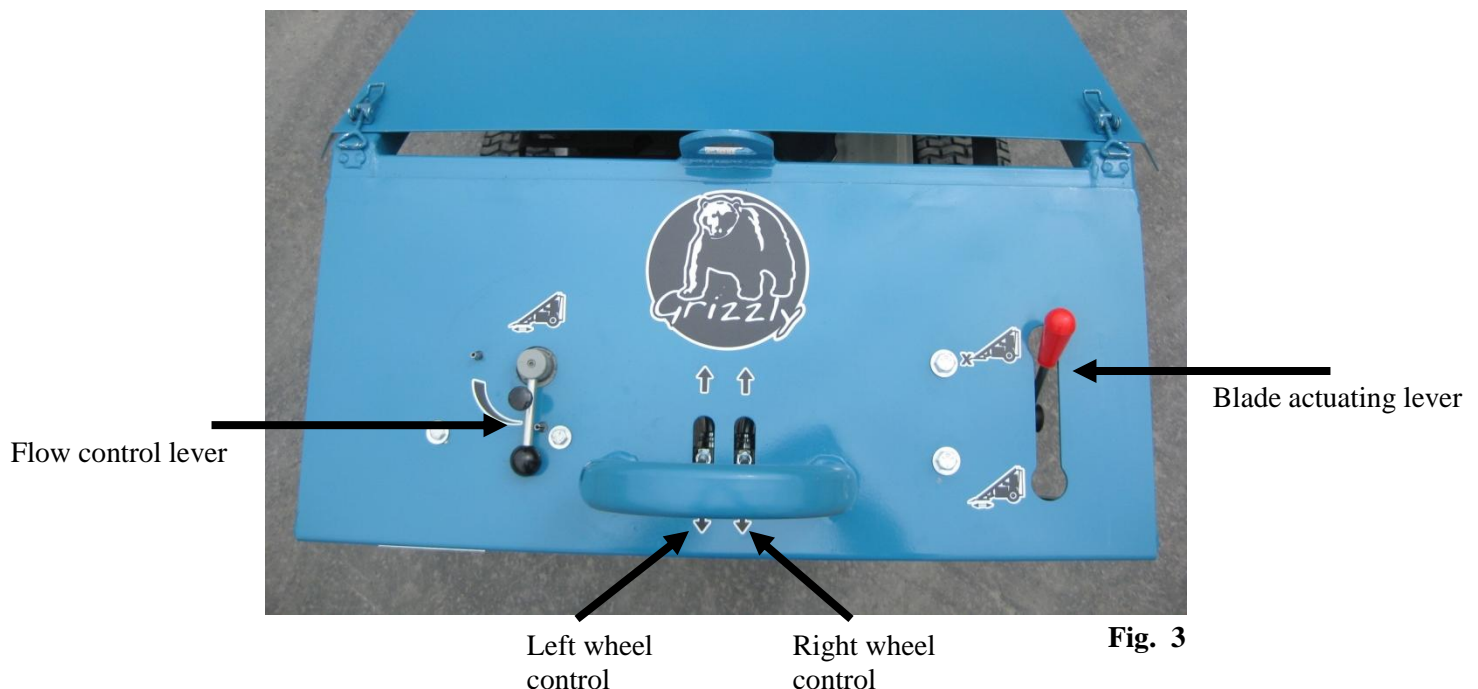


**Fig. 2**

**WEIGHT:**           **600 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 Roof Remover.
- Be certain all guards, shields and covers are secure and tight before starting.
- Never operate a Roof Remover 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.
- Operate on flat, level roofs only.
- 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 Roof Remover.
- 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 working condition.
- Reverse only to allow repositioning to go forward again.
- Reverse slowly and stand as far back from machine as possible.
- Debris should be picked up as soon as possible after removal to allow a safe and clean work surface.
- 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.



## OPERATION

### Before Operation

Check to see that engine is serviced properly. Handle gasoline with extreme caution. Never operate machine with damaged or missing parts. Serious injury may otherwise result. Check machine for leaks, wear on hoses and parts. Repair and or replace before use.

### The Controls (Fig. 3)

The throttle control is located on the engine (refer to the Honda operator's manual)

Direction is controlled by the two levers at the center of the dash. Left lever controls the left wheel and right lever controls the right wheel. Pushing forward on these levers will make the machine move forward and pulling back will make the machine move backward. Moving only one of these handles will make the machine turn. Use caution when turning as the machine will pivot on the wheels and the front end will swing to the right or left rapidly. Make sure there are no people or obstacles nearby.

The back and forth motion of the blade is controlled by the lever on the right hand side of the dash. Pulling on this lever will engage the motion, pushing on it will stop it. Engage this lever swiftly, never leave it midway as the oil will have no way to go and the relief valve will screech.

The lever on the left side of the dash controls the flow of hydraulic oil to the blade. Moving this lever to the left when the blade is activated, will increase the number of hits per minute, moving it to the right will decrease the number of hits per minute, allowing the operator to adjust to the specific roof being removed.

The flow control lever on this machine will divert oil flow from the wheels to the blade. The more flow you use for hitting with the blade the slower the speed of the wheels. This is ideal because you can operate this machine according to the type of roof to be removed. If all the flow is directed to the blade, the wheels will have no motion and if all the flow is directed to the wheels the blade will not actuate.

**WARNING: ALWAYS DISENGAGE LEVER WHEN ROOF REMOVER IS NOT IN OPERATION. NEVER LEAVE THE ROOF REMOVER UNATTENDED WITH LEVER ENGAGED.**

**WARNING: IT IS STRONGLY RECOMMENDED TO DIVERT ALL THE FLOW TO THE WHEELS BEFORE ENGAGING OR DISENGAGING THE BLADE ACTUATING LEVER.**

## **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 roof remover is ready for operation.

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

### **Engine Start-up**

Check to see that engine is serviced properly. Read Honda 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 320000 Roof Remover 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 warming 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 Honda dealer, you will need model type and serial number of your engine.  
**GRIZZLY** equipment warranty does not cover the engine; it is covered by a separate warranty from Honda.
- 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 machine for cracks, wear, warpage, tightness, etc., replace if damaged or in doubt.
- Grease all bearings and blade arms every two hours of operation.
- Grease and adjust chain as needed.
- Replace tire when thread is worn, good traction is crucial to the safe operation of the Roof Remover.
- Replace hydraulic oil and filter yearly or sooner if needed, use AW32 hydraulic oil. Dispose of oil and filter at an approved facility.



## **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.

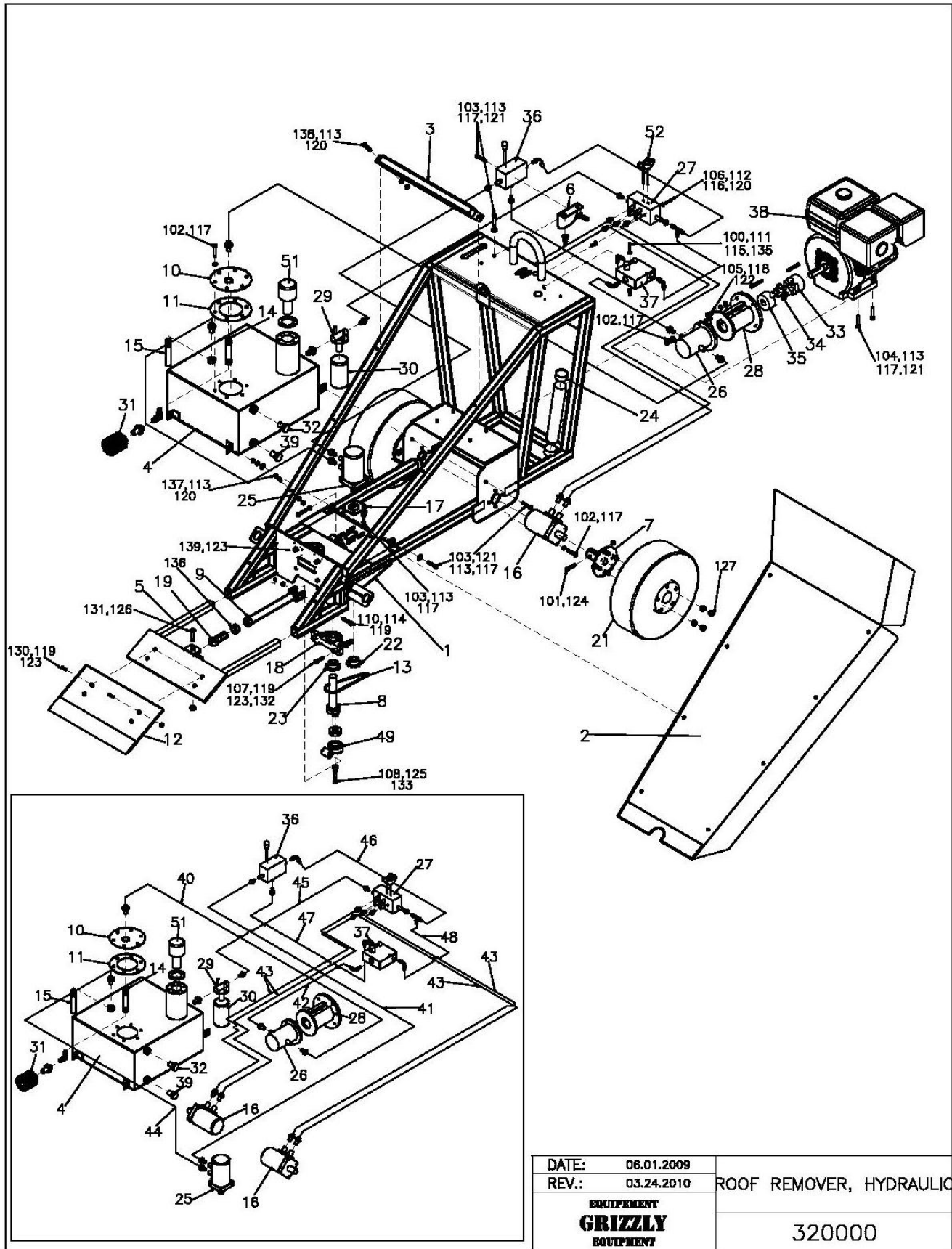
### **Flying Objects**

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.

**BLOW OUT**



DATE:	06.01.2009	ROOF REMOVER, HYDRAULIC
REV.:	03.24.2010	
EQUIPMENT <b>GRIZZLY</b> EQUIPMENT		320000

ITEM	NR.	QTE.	DESCRIPTION	ITEM	NR.	QTE.	DESCRIPTION
1	320001	1	FRAME	100	910058	2	BOLT,HEX.
2	320003	1	COVER	101	910108	2	BOLT,HEX.
3	320004	1	COVER REINFORCEMENT	102	910152	18	BOLT,HEX.
4	320009	1	OIL TANK	103	910153	12	BOLT,HEX.
5	320010	1	BLADE ADAPTOR PLATE	104	910156	4	BOLT,HEX.
6	320011	1	SUPPORT, DIVERTER	105	910204	2	BOLT,HEX.
7	320012	2	HUB, WHEEL	106	910109	2	BOLT,HEX.
8	320025	1	CRANKSHAFT	107	910256	4	BOLT,HEX.
9	320026	1	CONNECTING ROD	108	910252	1	BOLT,HEX.
10	320030	1	OIL TANK COVER	109	910058	2	BOLT,HEX.
11	320031	1	GASKET, TANK	110	910260	1	BOLT,HEX.
12	320033	1	BLADE	111	912000	4	WASHER
13	320034	1	CHAIN	112	912001	4	WASHER
14	930733	1	NIPPLE	113	912002	28	WASHER
15	320036	1	RETURN NIPPLE	114	912005	7	WASHER
16	320037	2	MOTOR, WHEEL	115	912501	2	LOCK-WASHER
17	332064	1	SPACER, MOTOR	116	912502	10	LOCK-WASHER
18	923183	2	BEARING	117	912503	38	LOCK-WASHER
19	923252	1	ROD END BEARING	118	912504	2	LOCK-WASHER
20	934040	1	LINK	119	912505	1	LOCK-WASHER
21	935016	2	WHEEL	120	913005	10	NUT,HEX.
22	936310	1	SPROCKET	121	913007	12	NUT,HEX.
23	936311	1	SPROCKET	122	913009	2	NUT,HEX.
24	940009	2	PLASTIC CAP	123	913011	5	NUT,HEX.
25	946201	1	MOTOR, HYDRAULIC	124	913505	2	LOCK-NUT
26	946245	1	PUMP, HYDRAULIC	125	913511	1	LOCK-NUT
27	946261	1	VALVE, HYDRAULIC	126	913517	1	LOCK-NUT
28	946281	1	BELL HOUSING	127	915301	10	NUT,HEX.
29	946290	1	RETURN FILTER ADAPT.	129	921308	1	KEY
30	946291	1	FILTER, 10 MICRON	130	911250	4	CARRIAGE BOLT
31	946302	1	STRAINER	131	911400	1	CARRIAGE BOLT
32	946323	1	SIGHT GLASS	132	912004	4	WASHER
33	946360	1	COUPLING	133	912024	2	WASHER
34	946361	1	INSERT	135	913003	2	NUT,HEX.
35	946364	1	COUPLING	136	913320	1	NUT,HEX.
36	946380	1	DIVERTER, 3 WAY	137	911107	6	CARRIAGE BOLT
37	946383	1	FLOW CONTROL	138	911109	2	CARRIAGE BOLT
38	950340	1	ENGINE				
39	947999	1	TANK DRAIN PLUG				
40	320040	1	HYD.HOSE				
41	320041	1	HYD.HOSE				
42	320042	1	HYD.HOSE				
43	320043	4	HYD.HOSE				
44	320044	1	HYD.HOSE				
45	320045	1	HYD.HOSE				
46	320046	1	HYD.HOSE				
47	320047	1	HYD.HOSE				
48	320048	1	HYD.HOSE				
49	320028	1	BEARING HOLDER				
50	947206	2	COLLAR				
51	946300	1	FILLER BREATHER BAYONET				
52	410011	2	LEVER, VALVE				

DATE:	06.01.2009	ROOF REMOVER, HYDRAULIC
REV.:	01.20.2010	
<b>EQUIPMENT GRIZZLY EQUIPMENT</b>		320000