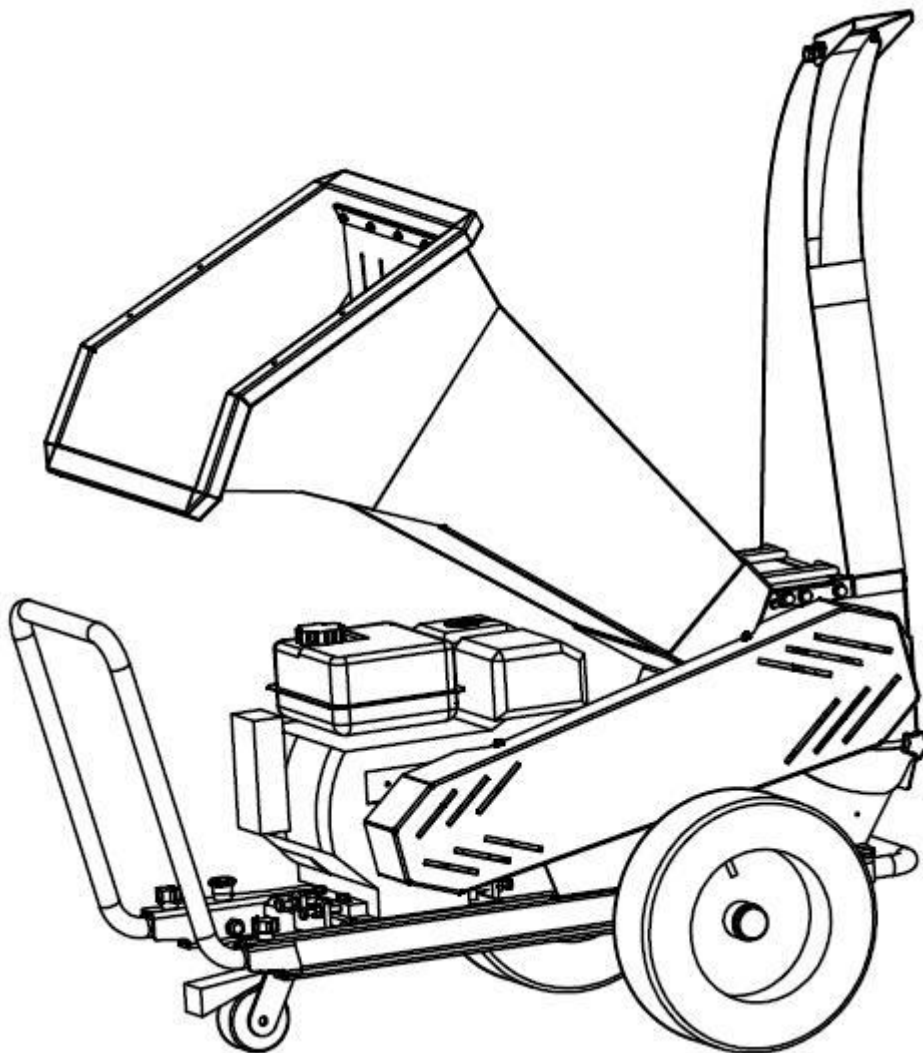


Chipper Shredder

User's Manual



BWM PRO 100 SERIES

Please read through this owner's manual carefully before using the product, to insure the safety of yourself and others.

*Due to continuing improvements, actual product may differ slightly from the product described herein.

Index

1. Safety Instructions	1
2. Technical Features	2
3. Installation Steps	3
4. Operating Instructions.....	6
4.1 Starting Machine:.....	6
4.2 Chipping:.....	7
4.3 Emergency Button:.....	8
4.4 Blocking of The Rotor:.....	8
4.5 Stopping Machine:	9
5. Basic Maintenance	9
5.1 Lubricating Oil	9
5.2 Chipper Parts Regularly Checking	10
5.3 Changing the blades:.....	10
5.4 Changing engine oil:.....	11
6. Transport and Storage.....	11
7. Troubleshooting.....	12
8. Spare Parts Diagram.....	13

1. Safety Instructions



1. The machine must not be used in any other way than described in the manual.



2. Use only original equipment and spare parts. If non genuine parts are used, there is increased risk of danger.



3. When using the machine, you are responsible for any third party in the area where the machine is in operation. Never use the machine in the presence of others, especially children or animals.



4. Do not allow minors to operate the machine.



5. The machine may only be lent to users who are familiar with operating the machine. Always keep the safety and operation manual attached with the machine.



6. Do not remove or add other parts after finishing installing the machine, e.g. removing the belt guard.



7. Check all the safety parts in their proper positions and remember to tighten all bolts and nuts before starting the machine.



8. Choose a flat work place. Machine can only be used in the outdoors or in well ventilated areas. It should be kept away from flammable and explosive objects.



9. When working with the machine wear close-fitting work clothes, sturdy work gloves, eye protector, ear muffs, dust proof mask and anti-skid shoes .



10. Before and after using the machine, proper maintenance is necessary. This could avoid some incidents, and extend the life of the machine.



11. Before using the machine, please read the carefully the instructions and understand well.

product or property.



12. Safety labels



Read the instructions carefully before operating.



DANGER, pay attention to safety.



Keep hands away from the rolling parts.



Beware of cutting the fingers.



Keep a safe distance from the working machine.



Beware of objects thrown out of the machine.

2. Technical Features

Model: BWM PRO 100

Max. Chipping Capacity: 100mm

Chipping Fineness: Granulated detrital

Function: Chipping leaves, branches, crop straw and farming feeds and etc.

Max. Blade Speed: 2450rpm

Engine Type: OHV 4-stroke Briggs & Stratton or Honda

Displacement: 420cc

Max Output: 13HP/3600rpm

Fuel Volume:6.5L

Oil Volume: 1.1L (10W-30)

Starting System: Recoil (Optional electric start)

Fuel Type: Unleaded petrol

Efficacy: 1000-5000kg/h

Principal axis rotation direction: anticlockwise

Packing Size: 1180mm×750mm×1280mm

Attachment: User's manual and toolkit

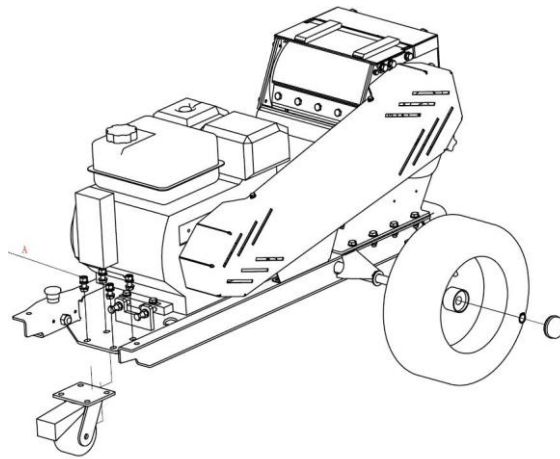
Note:

- ❖ The above maximum chipping capacity data comes from the testing of chipping bamboo with a 90% moisture content and paulownia with a 80% moisture content. Due to the range raw materials to be chipped and the difference in hardness and moisture content, the actual maximum chipping capacity may differ from the above data.

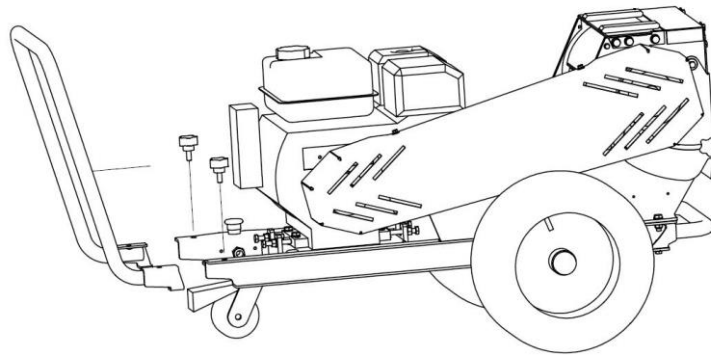
- ❖ The above blade maximum speed is achieved with the engine running at the maximum output.

3. Installation Steps

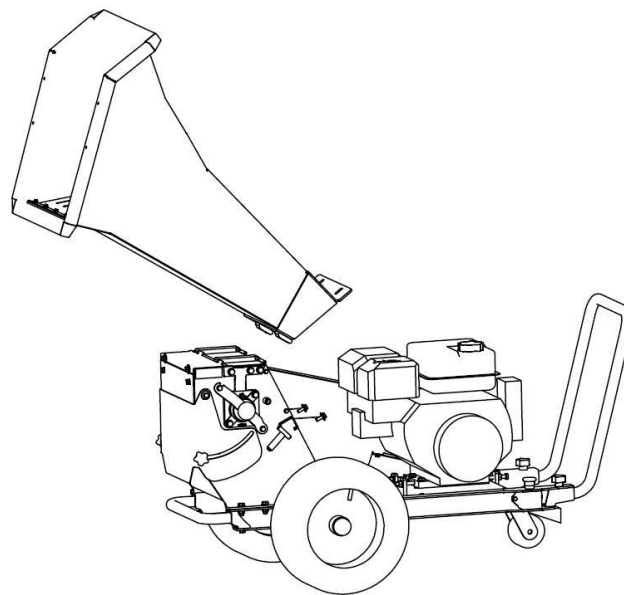
Step1 — Wheels and Front support wheel (make sure the bolts are bottom up)



Step2 — Handle assembly

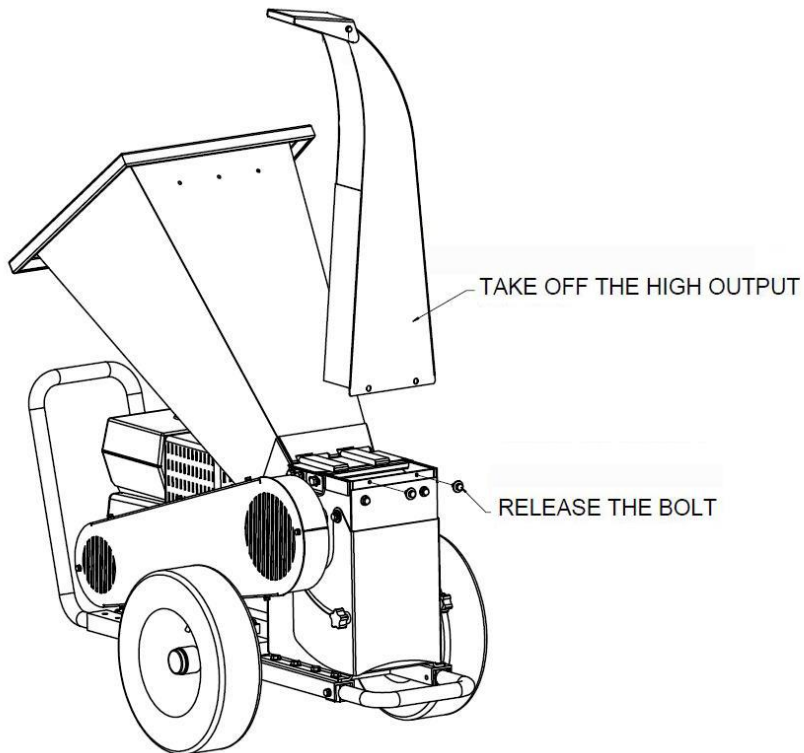


Step3 — Feeding hopper assembly

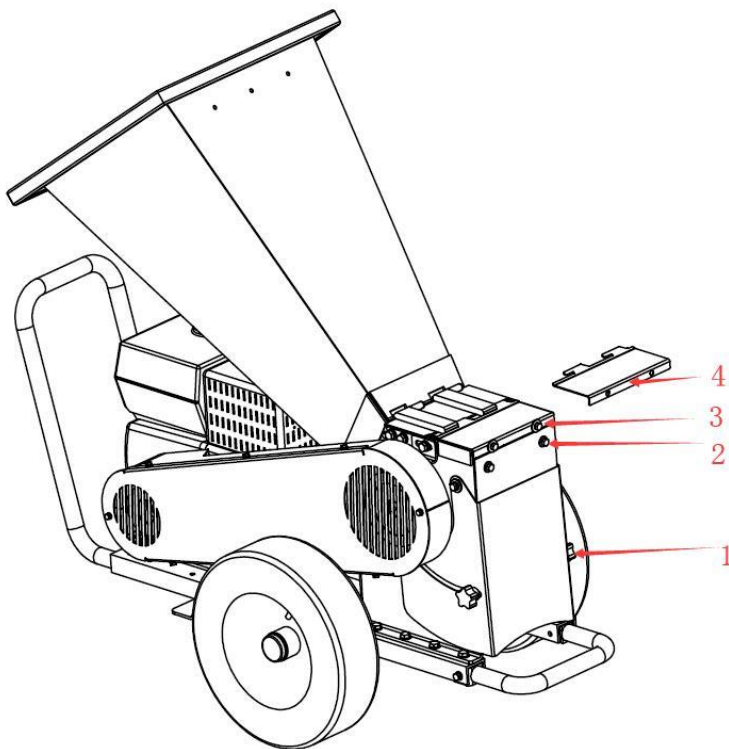


Step4 — How to use lower output

- Take off the high output



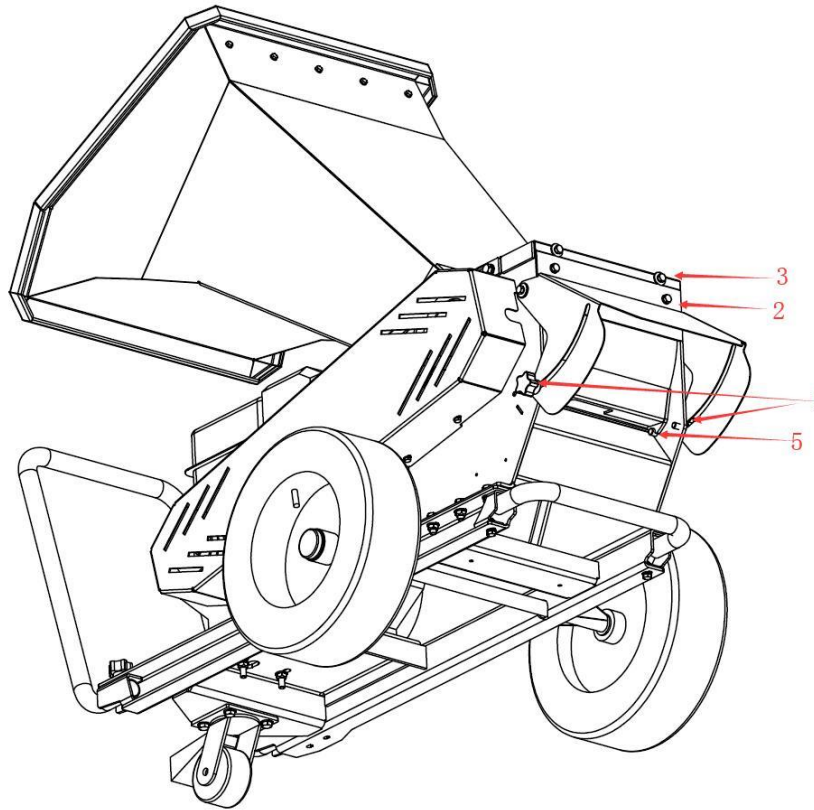
- Cover the high output when it is moved. Put cover 4 and tighten the bolts 3



- Release knob 1 and open low deflector. screw off bolts 2. **HOLD THE INSIDE**

PLATE AND PULL UP, MAKE THE PLATE OFF THE POSITION PIN(5). THEN PULL OUT THE BOTTOM SIDE.

if you want to use the high output for loading, you can close the low output in return.




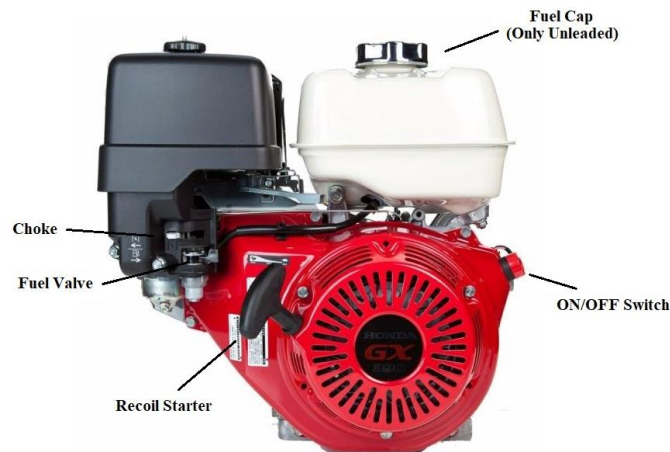
In the process of installation, do not place hands or any other body parts within a radius of cutter wheel rotary. Do not touch the blades with your hands or any other body parts. Considering the heavy weight of the machine, please do not try to install it by oneself in case of the possible injury. **All bolts, nuts and washers have been fixed on the machine in the factory, please remove them before assembly and put back on the machine at the same locations.**

4. Operating Instructions

4.1 Starting Machine:

- ❖ Before starting the engine, make sure the correct engine oil is added first (see chapter 5.4). Ensure the machine is on stable level ground.

- ❖ Turn switch to 'ON' position.
- ❖ Turn the choke lever to  position and open the fuel valve.
- ❖ Make sure emergency switch is off.
- ❖ Pull the starting cord until the engine starts. Push the choke lever off.
- ❖ Turn the throttle lever to fastest position. (must use highest speed while chipping)
- ❖ If engine is hot, it is not necessary to use the choke when restarting.



4.2 Chipping:



Always wear gloves and safety goggles when using the shredder.

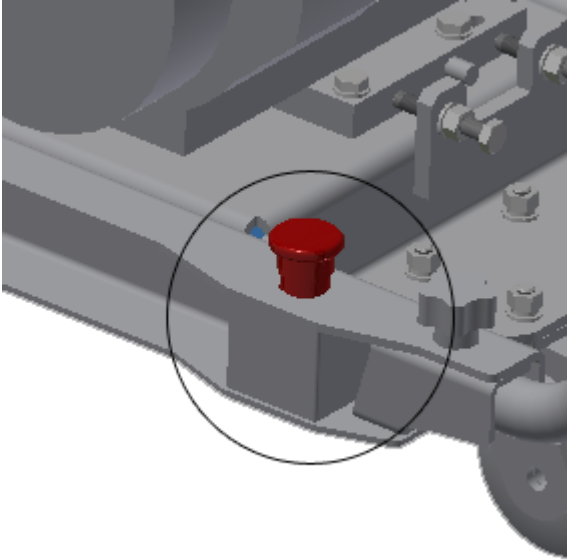
Make sure use highest speed while chipping, when chipping branches with a big diameter, always feed the bigger ends into the chute first.

Advice: The hardness of the wood depends on the wood type, the time between pruning and chipping and how dry the branches are. The machine performs best if the branches are chipped right after pruning.

If the engine is slowing down while chipping, reduce the feeding rate of the branches. Blunt blades may also be the problem. (see chapter 5.3 on how to change the blades)
If the machine becomes jammed, stop the engine immediately. Remove the blocked materials and restart the engine. (see chapter 4.4)

4.3 Emergency Switch:

The emergency stop button is located on left side of chassis. Push the emergency stop button by pressing the button and the engine will stop immediately. To release the emergency stop button, turn the red button. Within half a turn, the button is released (pump up) and you can restart the machine

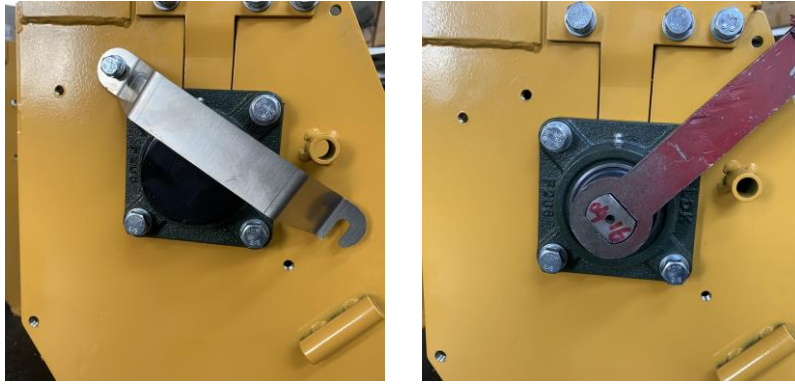


4.4 Rotor Jammed:

The rotor may be blocked due to blunt blades, incorrect usage of emergency button while chipping, machine not completely emptied before stopping the engine, or engine has stopped due to overloading of the chipper with too much branches and etc.

Please follow the steps below to unblock the rotor.

- ❖ Switch off the engine, and remove the feeding chute.
- ❖ Remove the bearing cover holder from the bearing housing by loosening one bolt.
- ❖ Turn the rotor shaft in counter clockwise direction by rotor spanner.
- ❖ Use a branch or a stick to remove any blocked materials in the drum. Do not use your hands.



4.5 Stopping Machine:

Make sure the machine is completely emptied before stopping the engine (otherwise rotor may be jammed when using it for next time).

Tips: Keep the machine running for another 1-2 minute after feeding the last branch, then turn the throttle lever slowly to the lowest position before stopping the engine.

5. Basic Maintenance



Allow the machine to cool down before making any inspections or any maintenance. (If the machine is equipped with an electrical start system, remove the key from the contact and disconnect the battery)

5.1 Lubricating Oil

The main shaft bearing needs lubricating oil. After a period of usage, it is necessary to grease the bearing. How often to lubricate is determined by the environment and the frequency of usage. The bearing needs to be greased after 50 hours of operation as insufficient lubricating oil can damage the bearing.

5.2 Chipper Parts Regularly Checking

Check all the parts regularly (1-2 times a month) including bearing, blades, belt and etc. Make sure the blades are sharp. Replace the blades as soon as the chipping performance begins to deteriorate. Blunt blades will impact working efficiency and cause damage to the machine.

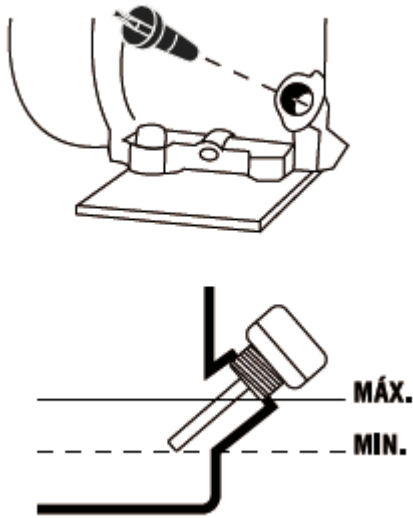
5.3 Changing the blades:

- ❖ Stop the engine (Put the on/off switch in the “off” position) and disconnect the safety switch cable.
- ❖ Remove the feeding chute. (Two people required)
- ❖ Put a block of wood into the hole (see Fig.1). Pull the starter cord some more until the rotor is blocked. Now it is safe to unscrew blade bolts. Always use gloves when handling the blades.
- ❖ Remove the blade anvil (see Fig.2).
- ❖ Give a really good clean of chipper blades and anvil and make sure there is no dirt.
- ❖ Put anvil back to the chipper and screw on (make sure to keep anvil bolts loose as you need to adjust it later).
- ❖ Use thread locker on blade bolts (make sure you don't use too much, normally just a small dip) and screw on the blades (make sure all bolts are tightened).
- ❖ After installing the blades, check the gap between the blades and the anvil. The gap should be no smaller than 0.5mm and not bigger than 1mm. (See Fig.3)



5.4 Changing engine oil:

Unscrew the bolt to drain the engine oil. Screw the bolt on and add new engine oil.



Tips:

- For Honda GX390 model, add 1.1 litre (1100mL) of genuine Honda 10W30 engine oil.
- For Briggs & Stratton 13.5HP model, add 1.1 litre (1100mL) of genuine Briggs & Stratton SAE30 engine oil.

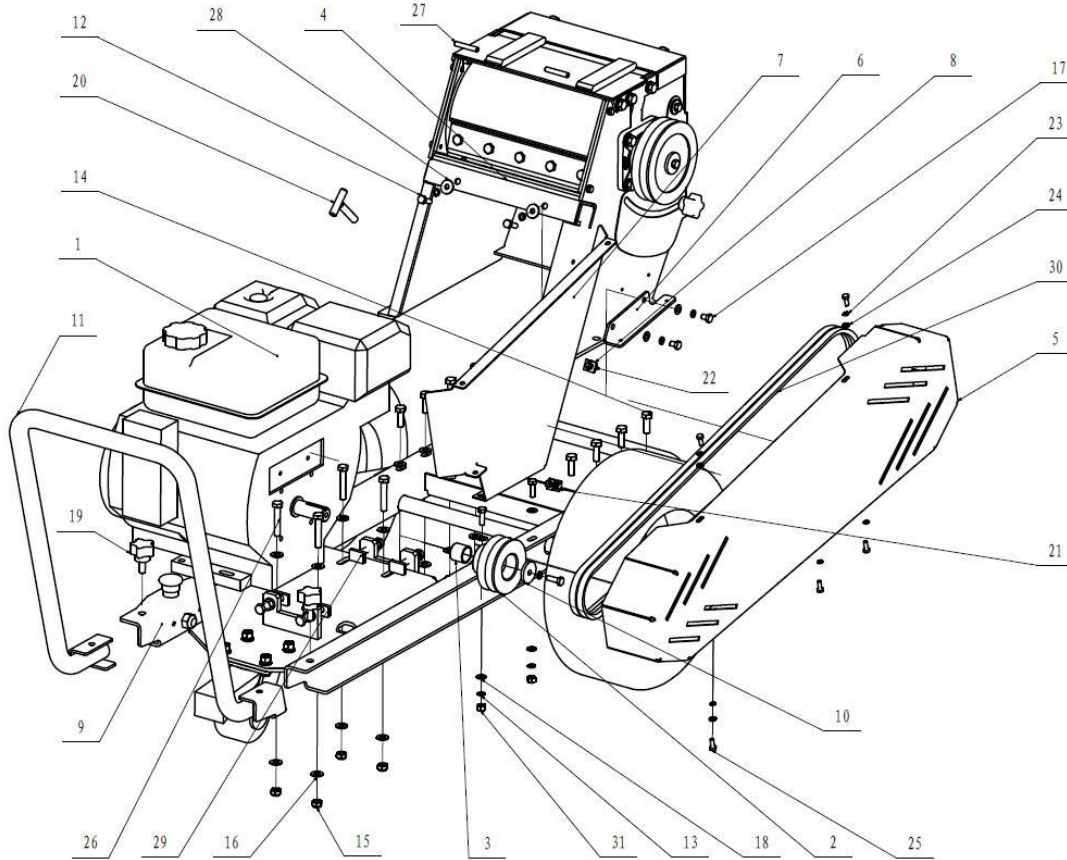
6. Transport and Storage

1. To move the machine around, grab onto the handle firmly and push or drag the machine. Pay extra attention when moving around rough terrain or sloping areas.
2. To transport the unit, the discharge chute can be removed and the unit will fit into a van or utility vehicle, tied in an upright position. Ensure the unit is never tipped to its side when engine oil is filled as it can flood the engine.
3. For storage, keep the machine out of reach of children. Store the machine in a well ventilated place. Drain the fuel into a petrol tank if not using is for an extended period of time.

7. Troubleshooting

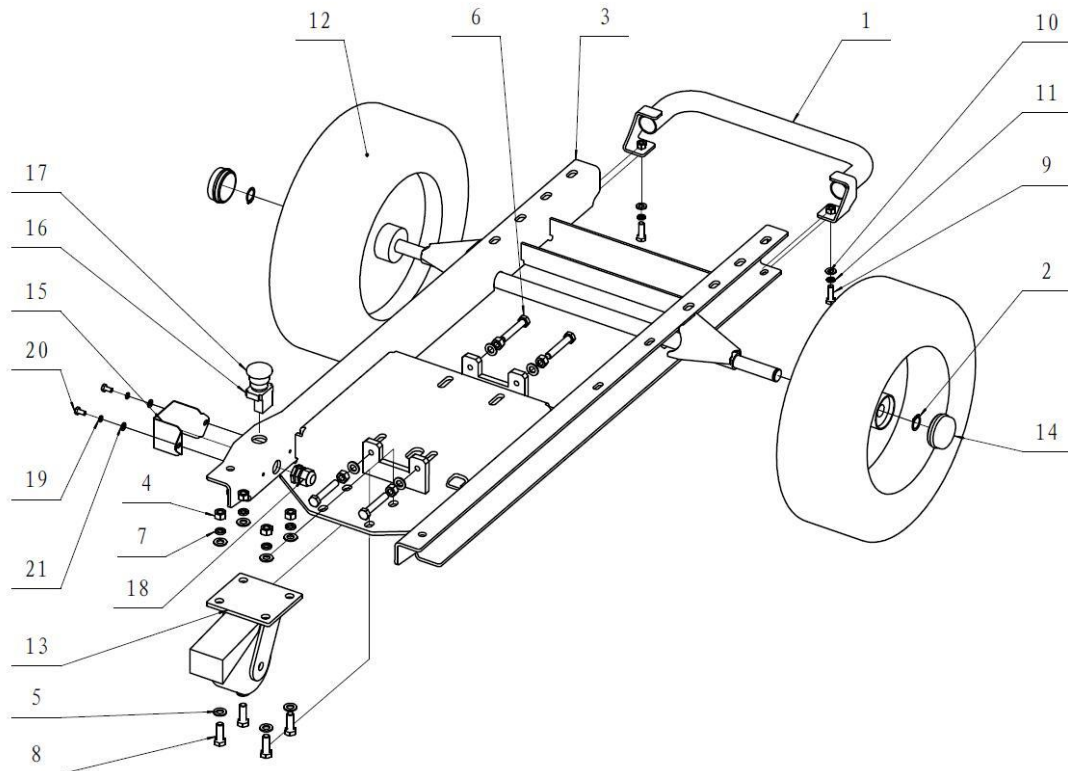
Problem		Solution
1	Engine cannot be started	Read the engine users' manual, check the fuel ON-OFF, see if it's ON, check if gets enough fuel and engine oil, check the emergency stop button.
2	Engine stops midway	Check if the engine is stopped by overloading, see if there is any blockage in the chipping chute. Check the emergency stop button.
3	Rotor blocked	Stop the machine, and remove the chute and the cap of bearing, turn the shaft of roller with a spanner to clear the blocked material (see chapter 4.4)
4	Strange noise	Stop the machine, check if the fastener got loose, if not, let the professionals to check.
5	Blunt blades	Bring the machine to a servicing centre for sharpening/replacement of blades. Or see chapter 5.3
6	Damaged belt	Open the belt cover and change the belt.
7	Chipped material too coarse	Need to adjust blade anvil. The gap should be no smaller than 0.5mm and not bigger than 0.95mm. (see chapter 5.3)

8. Spare Parts Diagram

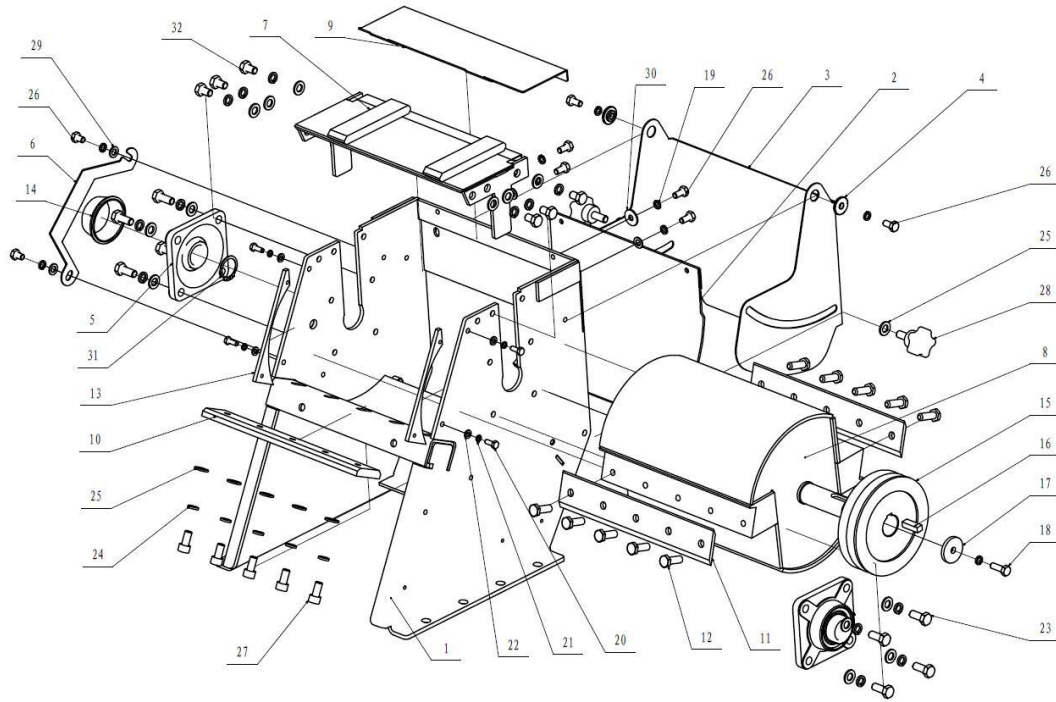


No	Name	Qty	No	Name	Qty
1	Engine	1	17	Bolt M8 x 16	2
2	Engine pulley	1	18	Washer M8	6
3	Engine shaft bush	1	19	Knob M10	2
4	Anvil	1	20	Rotor latch	1
5	Belt cover	1	21	Bolt M6 x 12	1
6	Belt cover holder	1	22	Nylon locknut M6	2
7	Belt cover support	1	23	Spring washer M6	6
8	Belt cover back holder	2	24	Washer 6	10
9	Frame	1	25	Bolt M6×16	7
10	Pulley washer	1	26	Bolt M10×55	4
11	Handle	1	27	Hinge pin	2
12	Bolt M8×25	5	28	Large washer M8	2

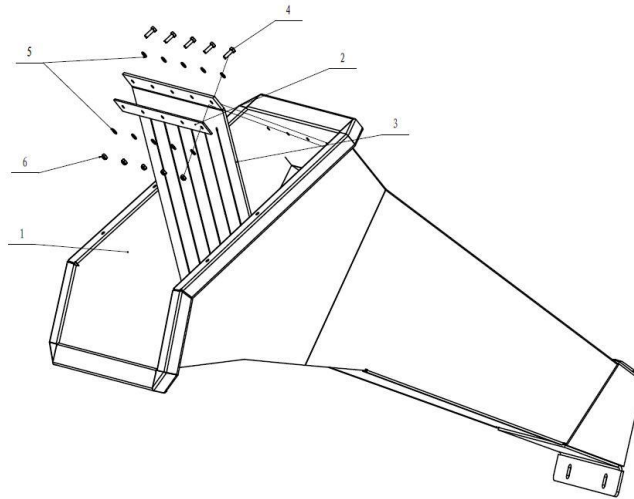
13	Spring washer M8	7	29	Cushion block	4
14	Bolt M10×30	8	30	V-Belt	2
15	Nylon locknut M10	12	31	Nut	2
16	Washer M10	24			



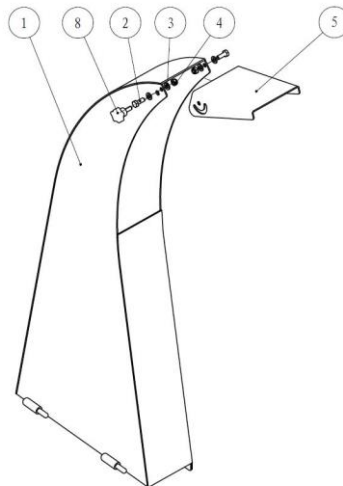
No	Name	Qty	No	Name	Qty
1	Bumper	1	12	Wheel	2
2	Circlip 20	2	13	Front wheel	1
3	Chassis	1	14	Wheel cover	2
4	Nut M10	8	15	Emergency switch cover	1
5	Washer M10	12	16	Emergency switch	1
6	Bolt M10×60	4	17	Knob	1
7	Spring washer M10	4	18	Connector	1
8	Bolt M10×30	4	19	Spring washer M6	2
9	Bolt M8×25	2	20	Bolt	2
10	Washer M8	2	21	Washer M6	2
11	Spring washer M8	2			



No.	Name	Qty	No.	Name	Qty
1	Rotor housing	1	17	Washer pulley	1
2	Low output cover	1	18	Bolt M8 x 25	1
3	Low output deflector	1	19	Washer M8	9
4	Washer deflector	2	20	Bolt M6 x 16	4
5	Bearing	2	21	Spring washer M6	4
6	Bearing cover holder	1	22	Washer M6	4
7	Rotor housing cover	1	23	Bolt M10 x 25	8
8	Rotor	1	24	Spring washer M10	19
9	High output cover	1	25	Washer 10	21
10	Anvil	1	26	Bolt M8 x 16	8
11	Blade	2	27	Inner hex bolt M10 x 20	5
12	Blade bolts	10	28	Knob M10	2
13	Rotor protector	2	29	Washer M8	4
14	Bearing cover	1	30	Large washer M8	2
15	Rotor pulley	1	31	Circlip M30	1
16	Key 10×8×30	1	32	Bolt M10×16	6



No	Name	Qty
1	Hopper	1
2	Washer rubber flap	1
3	Rubber flap	1
4	Bolt M6 x 20	5
5	Washer M6	10
6	Nut M6	5



No.	Name	Qty
1	Output	1
2	Bolt M6×16	2
3	Washer M6	4
4	Lock nut M6	2
5	Deflector	1
8	Knob M6	1

Customer Service:

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Email: kmowersorder@gmail.com

Website: WWW.BWMACHINERY.COM.AU

Spare parts are available from our dealers or our official website.

