



**OPERATIONS & PARTS MANUAL**

**FOR MODELS:**

- BE-MTR2

PURCHASE DATE	MODEL NO.	SERIAL NUMBER
DEALER		

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## INTRODUCTION

### **⚠ IMPORTANT**

This is a motorized rotary cultivator that works the soil by means of rotating tines. It is pedestrian-controlled, but not self-propelled, with a gasoline-fueled internal combustion engine to power the tines. It shall not be used for any other purpose.

For your own safety, always follow these basic precautions when using this appliance.

1. Read the user Manual carefully for operating instructions. Read all instructions in this manual before use.
2. DO NOT use this product for anything other than its intended purpose.
3. DO NOT use attachments other than those available from the manufacturer.
4. DO NOT alter this product in any manner; doing so is dangerous and will void all warranties.
5. DO NOT allow children or adults weighing under 100 lbs. to operate this unit.
6. DO NOT allow your body, loose clothing, drawstrings, scarves, hats or other materials to touch the power head, or tines at any time.
7. DO NOT operate under the influence of drugs or alcohol.
8. DO NOT continue to use this product in the event of mechanical or electrical failure.
9. The tines are very sharp. Use extreme caution when cultivation or replacing the tines.
10. This product produces considerable cutting force that is felt by the operator. Make sure your feet are firmly planted and the handles are firmly held while operating this product.
11. During operation, the tines unit could possibly stop. Be prepared at any time to release the buttons.
12. Check tines shaft screws before and after each use to make sure they are tight.
13. Disconnect and insulate spark plug wire before maintenance and/or changing blades
14. Do not put hands or feet near or under rotating parts
15. Never operate machine in wet grass. Always be sure of your footing; keep a firm hold on the handle and walk; never run.
16. Never pick up or carry the machine while the engine is running
17. Keep all screws, nuts and bolts tight.

TECHNICAL DETAILS	
Engine type	2-stroke
Engine Displacement	51.7cc
Engine power	1.3kw/7000rpm
Fuel tank capacity	36 ounces
Mixing ratio gasoline: Oil	30:1
Tilling Width	10" maximum
Tilling depth	10" maximum
Tine speed	256rpm
Weight	14 kg

### PREFACE

The mini rotating plough machine has character of reasonable constructions, beautiful outlook, etc. For better convenient operation, please strictly complying the following items:

1. Before operating the machine, please read the manual carefully, keeping the manual for reading at any moment.
2. The machine was designed for garden, Not using in other.
3. When machine is operation, prohibit touching the gear wheel.

In order to improve the quality, the changes of some parts which are changed according to the market will not be informed separately. Please give enough understanding.

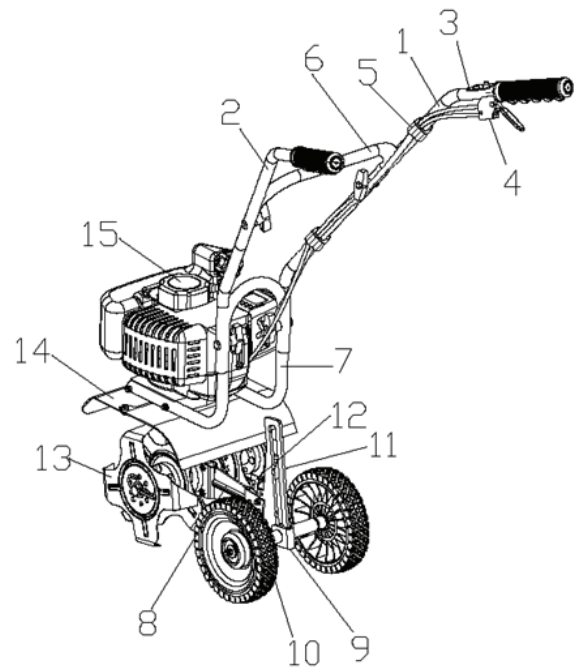
## SAFETY

Special safety precautions must be observed when working with the machine.

1. Demand for protective clothing
  - Clothing must be sturdy and snug-fitting;
  - Wear flanged cap, wear dirt/fog-proof glasses;
  - Wear Long boots or no-slippery shoes, prohibited wear slip-on shoes to operate.
2. Do not operate the machine in no accordance with these
  - Person without knowledge of the machine;
  - Over-tired or patients;
  - Drunk;
  - Children.
3. Avert fire
  - Stop the machine when fill the fuel, prohibited fire and smoke;
  - Keep away fuel from the fire.
4. Preparation before operating
  - Check whether the screws and nuts are loose: check whether the passage is good.
  - Inspected all control rod and safe devices whether they are assembled right.
  - Prohibited using the machines which have fault.
5. Start-up
  - Make sure there is no others in the work area;
  - When the machines recoiled start, you must keep away from tines and close upon it, prevent it from moving, and make sure it is safe.
6. Safe operation
  - When use the machine, please keep right posture, close upon the handle;
  - When operating, forbid anybody enter the work area;
  - While the weather raining, please take care of the slippery ground;
  - When the tines is locked, please power off the machine, start again after clean it off;
  - When scarifying, please move ahead and counter-march is prohibited;
  - When change the work area, stop the machine, then check whether the screws and nuts are loose.
7. Examine and Repair
  - Make sure the professional person maintains the machine;
  - Should inspect the machine termly, if appear abnormity when operating, must stop the machine for repairing at once;
  - Need for repairing or service, please contact our SuperHandy customer service center by 1-866-493-0524 for assistance.

## STRUCTURE

REF	DESCRIPTION
1	Right handle
2	Left handle
3	Stop switch
4	Throttle lever assembly
5	Fasten buckle
6	Middle handle
7	Down handle
8	Back bracket
9	Wheel adjuster base
10	Wheel
11	Wheel adjuster plate
12	Depth skid
13	Blade
14	Mud guard
15	Engine



### **⚠ WARNING**

1. DO NOT STORE ENGINE INDOORS WITH FUEL IN THE TANK. FUEL AND FUEL VAPORS ARE HIGHLY FLAMMABLE.
2. NEVER MIX FUEL AND OIL DIRECTLY IN ENGINE FUEL TANK. USE ONLY NONMETAL, PORTABLE FUEL CONTAINERS APPROVED BY THE UNDERWRITER'S LABORATORY (U.L.) OR THE AMERICAN SOCIETY FOR TESTING & MATERIALS (ASTM).
3. AN ADULT MUST ALWAYS HANDLE AND FILL THE ENGINE WITH FUEL.
4. ALWAYS HANDLE GAS IN A WELL VENTILATED AREA, OUTDOORS, AWAY FROM FLAMES OR SPARKS.
5. DO NOT START ENGINE IF FUEL IS SPILLED. WIPE OFF EXCESS FUEL AND ALLOW TO DRY. REMOVE ENGINE FROM AREA TO AVOID SPARKS.
6. NEVER RUN ENGINE INDOORS. EXHAUST FUMES ARE DEADLY.
7. FAILURE TO FOLLOW THESE WARNINGS CAN CAUSE DAMAGE TO EQUIPMENT AND INJURY TO PERSONNEL.

## ASSEMBLING AND ADJUSTMENT

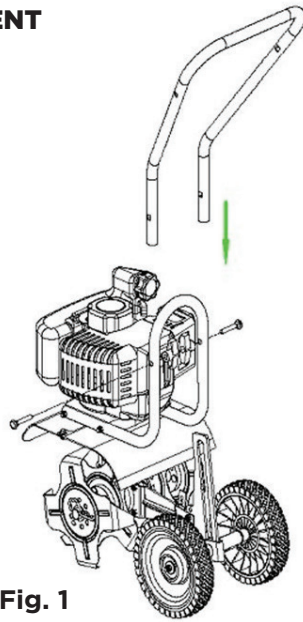


Fig. 1

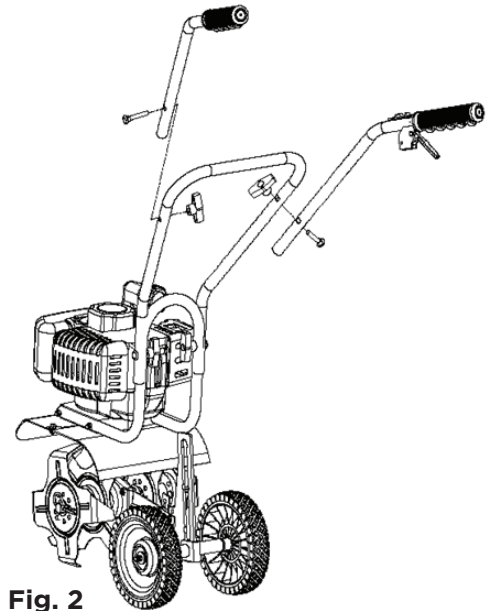


Fig. 2

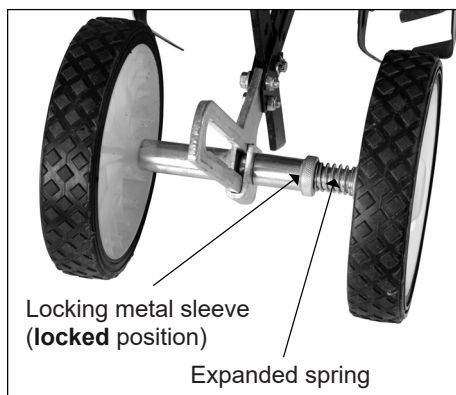
### Assembly of middle and down handles. (Fig.1)

As fig 1 shows, insert the middle handle to down handle until the holes match, and then fasten the two handles by the bolts and nuts.

### Assembly of left / right handle.

As above Fig 2. first, match the left/right handle holes to the middle handle holes, fasten the bolts and nuts. Adjusting Wheels and depth skid. There are three grooves in the wheel adjuster plate (No.11), the wheels on the cultivator can be adjusted to one of three positions. Adjust Wheels Up Or Down do as follows:

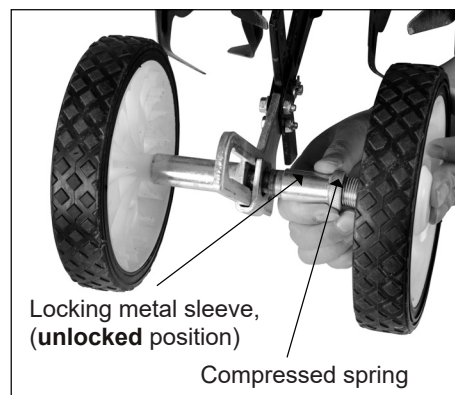
1. Pull the locking metal sleeve against the spring, away from the wheel adjuster plate (No.11) until it releases from one of the three grooves in the wheel adjuster plate (No.11). Fig 3



Locking metal sleeve  
(locked position)

Expanded spring

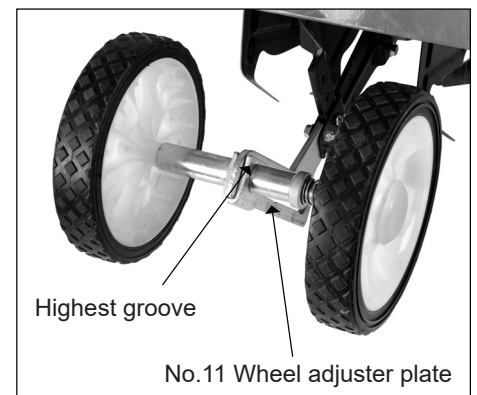
Fig. 3



Locking metal sleeve,  
(unlocked position)

Compressed spring

Fig.4



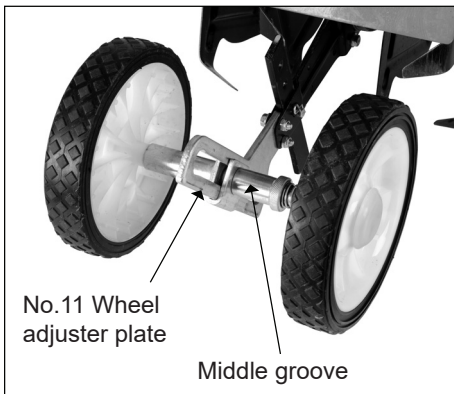
Highest groove

No.11 Wheel adjuster plate

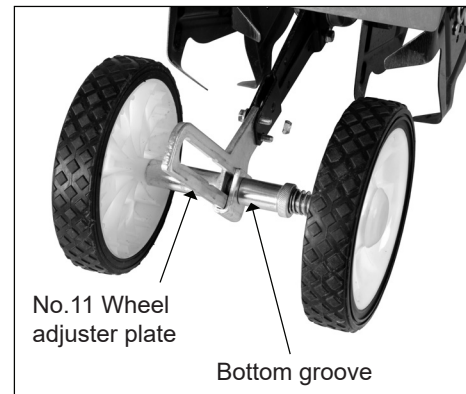
Fig.5

2. Slide the wheel set up or down to the desired position, and release the locking metal sleeve until it locks into desired groove in the wheel adjuster plate (No.11). wheel adjuster plate (No.11). Fig 4

- When working should put the wheels in the highest groove. Fig 5
- When not working, the wheels need putting in the middle or the bottom groove (depend on operators height). Fig 6 & Fig 7

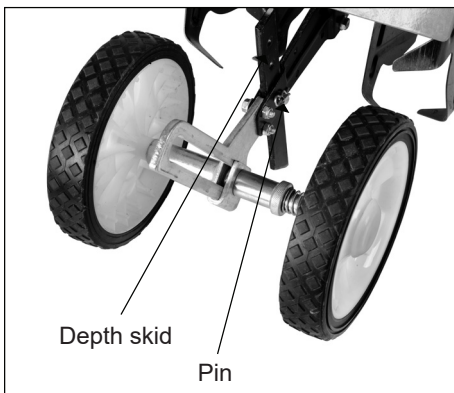


**Fig.6**

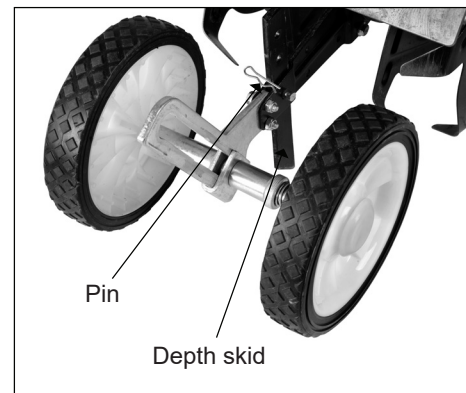


**Fig.7**

Adjust depth skid (No.12), there are several holes in the depth skid, you can adjust it according to self-request. Fig 8 & Fig 9



**Fig.8**



**Fig.9**

## OPERATION

### **⚠ WARNING**

Thoroughly inspect the area where the machine is to be used and remove all foreign objects.

Your equipment can propel small objects at high-speed causing personal injury or property damage. Stay away from breakable objects, such as house windows, automobile, greenhouses, etc.

Always wear safety goggles or safety glasses with side shields when operating the machine to protect your eyes from foreign objects which can be thrown from the unit. Always wear a protective hearing device.

It is advisable to wear protective headgear to prevent the possibility of being struck by small flying particles, or being struck by low hanging branches, twigs, or other objects which may be unnoticed by the operator.

If the equipment should start to vibrate abnormally, stop the engine, disconnect the spark plug wire and prevent it from touching the spark plug. Check immediately for cause. Vibration is generally a warning of trouble. If the noise or vibrations of the machine increase, stop immediately and perform an inspection.

## **Adding oil**

Mixing rate between 93 # gasoline and two-stroke oil is 30:1

Attention:

- Forbid to use pure gasoline or the mixture oil rate above 30:1
- Adding fuel must be done under the instruction of the fireproofing

## **Start up**

1. Press the button of carburetor 5-6 times, until some fuel in the tube, then close the broker;  
Note: If engine is in high temperature , you should put the choker on the original position.
2. Open the accelerograph 1/3-1/2;
3. Pull the starter smoothly, after starting the engine, open choker fully.  
Note:
  - Make sure there is nothing lock the gear wheels before starting
  - When the gear blade is running, make sure the gear blade do not come up against anything or anybody.

## **Assignment**

Strictly control the rotating speed, the free-load forward speed should be at 0.5m / sec when the rotate speed arrive at 8000-9000/min.

To be ensure the quality of rotating blade, don't touch it to other objects, such as stone.

## **Stopping**

1. Put the throttle lever at the idle speed, make the engine run 2-3 minutes;
2. Turn off the stop switch.  
Note: In urgent case, turn off the throttle switch, and turn off the stop switch. Keep your hands far away from rotating blade, the gear is still turning after stopping the machine.

## **MAINTENANCE**

### **Maintenance body**

1. After the machine works for one or two hours or when stopping to add oil: you must check each screw and nut on the machine to make sure they are not loosen
2. Add the lube in the gear box when the machine works around 20 hours
3. When the blade or gear damaged, please repair or replace at once.

### **Maintenance engine**

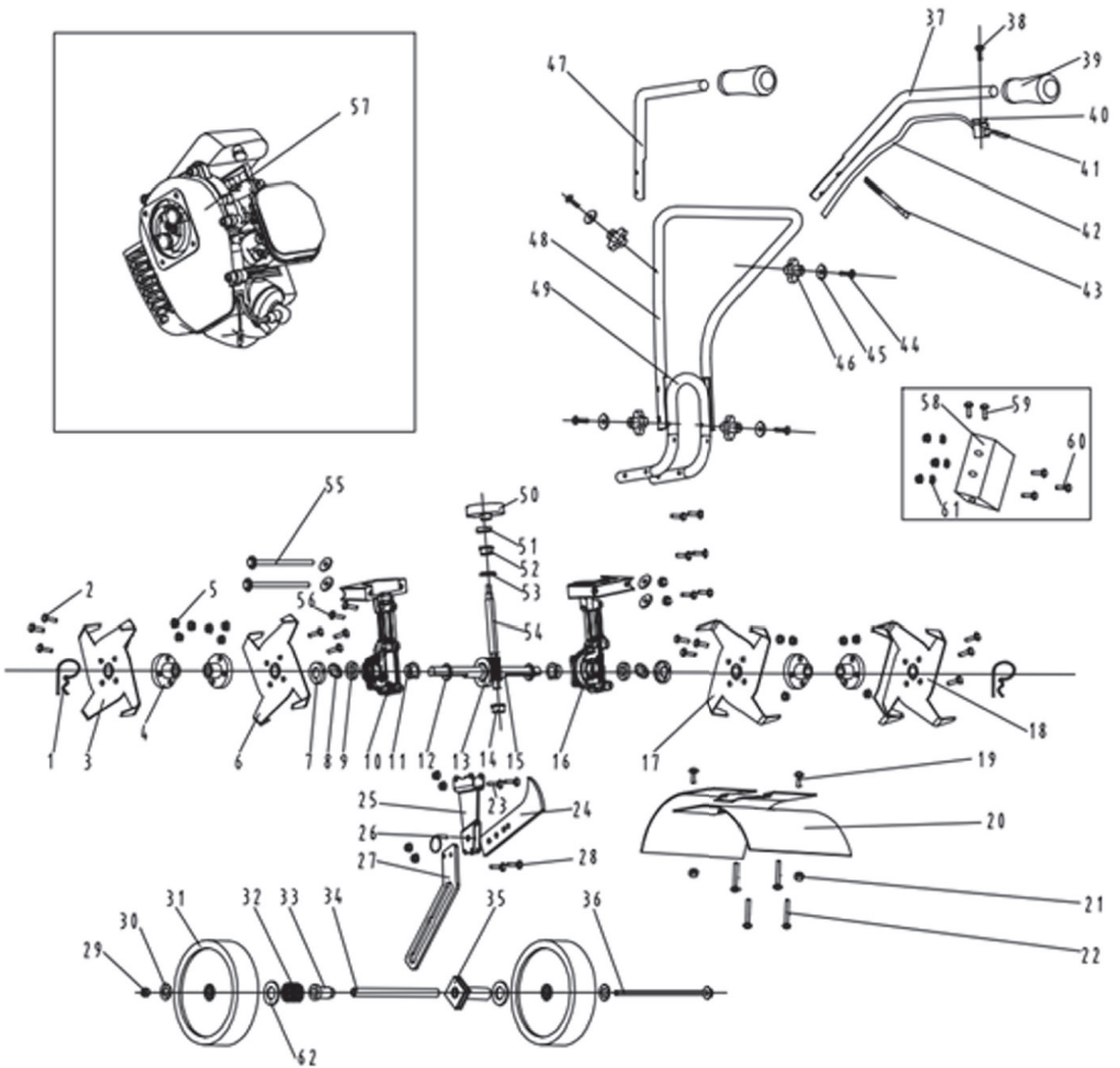
1. Maintenance spark plug  
Keep the spark plug cleaning, the electrode gap should be moderate suitable to ensure the engine working well. The correct gap should be around 0.028in, check frequently and adjust it when the gap is too long or too short.
2. Maintenance the air filter  
Air filter surface should be cleaned often, if the cleaner element were jammed, clean the element. Clean the filter body by gas. Drop a lie motor oil on the cleaner element, not attach it back to the inside cover until the oil dry. If the sponge is too dirty, please change a new one.



## TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSES	POSSIBLE SOLUTION
Engine will not start	Power switch off	Flip switch to ON position
	Spark plug wire disconnected	Connect spark plug wire to spark plug
	Out of fuel	Refuel
	Spark plug wet, faulty or improperly gapped	Clean, replace or gap spark plug
	Fuel line hose not positioned in bottom of gas tank	Push fuel line down into fuel in gas tank
Engine runs rough, floods during operation	Dirty air filter	Clean or replace air filter
	Choke partially engaged	Turn off choke
	Carburetor out of adjustment	Call customer service
Engine is hard to start	Stale fuel	Drain old fuel and replace with fresh. Use gas stabilizer at end of season
	Spark plug wire loose	Make sure spark wire is securely attached to spark plug
	Dirty carburetor	Clean carburetor, use gas stabilizer, new gas can
Engine misses or lacks power	Clogged gas tank	Remove and clean gas tank
	Clogged air filter	Clean or replace air filter
	Carburetor out of adjustment or bad	Call customer service
	Spark plug wet, faulty or improperly gapped	Clean, replace or gap spark plug
Engine runs, then quits	Gas cap not venting	Clean or replace gas cap, check vent
	Plugged fuel filter	Clean or replace fuel filter
	Carburetor out of adjustment or bad	Call customer service
Engine revs too high	Carburetor out of adjustment	Call customer service
Tines turn at idle	Idle speed too high	Adjust idle speed lower
	Broken clutch spring	Replace spring

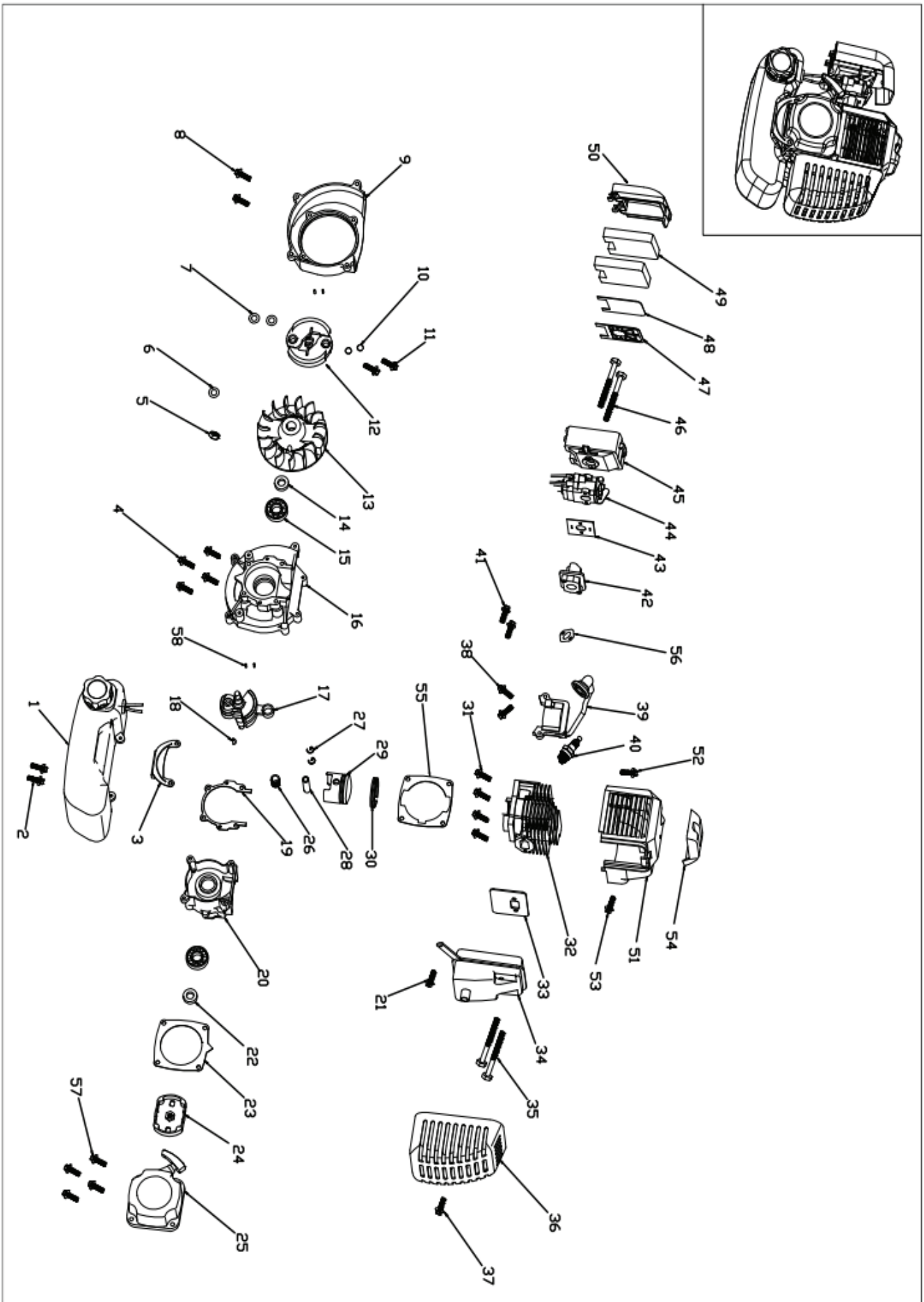
# TILLER EXPLODED VIEW AND PARTS LIST



REF	PART NO	DESCRIPTION	QTY
1	102.107B.001	Tear pin	2
2	102.107B.002	Bolt M6x20	14
3	102.107B.003	4 sided tiller blade	1
4	102.107B.004	Setting	4
5	102.107B.005	Screw M6	16
6	102.107B.003	4 sided tiller blade	1
7	102.107B.007	Oil seal shell	2
8	102.107B.008	Felt washer	2
9	102.107B.009	Oil seal	2
10	102.107B.010	Left crankcase	1
11	102.107B.011	Big copper cap	2
12	102.107B.012	Washer	2
13	102.107B.013	Turbo	1
14	102.107B.014	Small copper cap	1
15	102.107B.015	Tube cope	1
16	102.107B.016	Right crankcase	1
17	102.107B.003	4 sided tiller blade	1
18	102.107B.003	4 sided tiller blade	1
19	102.107B.019	Bolt M5x12	2
20	102.107B.020	Protected cover	2
21	102.107B.021	Screw M5	5
22	102.107B.022	Bolt M6x40	4
23	102.107B.023	Bolt M6x20	6
24	102.107B.024	Wheel	1
25	102.107B.025	Connect bat I	1
26	102.107B.026	Bolt assy	1
27	102.107B.027	Connect bat II	1
28	102.107B.028	Bolt M6x20	2
29	102.107B.029	Screw M8	3
30	102.107B.030	Washer 8	2
31	102.107B.031	Wheel	2

REF	PART NO	DESCRIPTION	QTY
32	102.107B.032	Spring	1
33	102.107B.033	Bushing I	1
34	102.107B.034	Wheel Axle	1
35	102.107B.035	Bushing II	1
36	102.107B.036	Wheel bolt	1
37	102.107B.037	Right handle	1
38	102.107B.038	Bolt M5x30	3
39	102.107B.039	Rubber handle Sheath	2
40	102.107B.040	Rubber gasket	1
41	102.107B.041	Throtle hand assy	1
42	102.107B.042	Throtle line assy	1
43	102.107B.043	Tube	4
44	102.107B.044	Profiled bolt	4
45	102.107B.045	Washer 8	8
46	102.107B.046	Knob comp	4
47	102.107B.047	Left handle	1
48	102.107B.048	Machine fram I	1
49	102.107B.049	Machine fram II	1
50	102.107B.050	Knob comp	1
51	102.107B.051	Bearing	1
52	102.107B.052	Wheel bolt	2
53	102.107B.053	Piane bearing	1
54	102.107B.054	Washer	1
55	102.107B.055	Bolt M8x135	2
56	102.107B.056	Bolt M6x8	2
57	102.107B.057	Engine	1
58	102.107B.058	Electrical assing	1
59	102.107B.059	Bolt M6x12	2
60	102.107B.060	Bolt M5x12	1
61	102.107B.061	Washer 5	3
62	102.107B.062	Washer 12	2

**TILLER EXPLODED VIEW AND PARTS LIST**



REF	PART NUM.	DESCRIPTION	QTY
1	102.107B.001	Oil tank	1
2	102.107B.002	Allen screw M5*20	2
3	102.107B.003	Oil tank bracket	1
4	102.107B.004	Allen screw M5*35	4
5	102.107B.005	M8 nut	1
6	102.107B.006	Washer	1
7	102.107B.007	Washer	2
8	102.107B.008	Allen screw M5*20	2
9	102.107B.009	Left cover	1
10	102.107B.010	Spring washer	2
11	102.107B.011	Step screw M8*24	1
12	102.107B.012	Clutch	1
13	102.107B.013	Fly wheel	1
14	102.107B.014	15*30*7 oil seal	1
15	102.107B.015	6202 bearing	2
16	102.107B.016	Left case	1
17	102.107B.017	Crankshaft	1
18	102.107B.018	Woodruffkey	1
19	102.107B.019	Case washer	1
20	102.107B.020	Right case	1
21	102.107B.021	Allen screw M5*12	1
22	102.107B.022	12*22*7 oil seal	1
23	102.107B.023	Recoil starter aluminum gasket	1
24	102.107B.024	Start dial	1
25	102.107B.025	Recoil start	1
26	102.107B.026	Needle bearing	1
27	102.107B.027	Piston pin clip	1
28	102.107B.028	Piston pin	1
29	102.107B.029	Piston	1

REF	PART NUM.	DESCRIPTION	QTY
30	102.107B.030	Piston ring	1
31	102.107B.031	Allen screw M5*20	4
32	102.107B.032	Cylinder	1
33	102.107B.033	Muffler gasket	1
34	102.107B.034	Muffler	1
35	102.107B.035	Allen screw M6*60	2
36	102.107B.036	Muffler cover	1
37	102.107B.037	Allen screw M5*12	1
38	102.107B.038	Allen screw M5*25	2
39	102.107B.039	Ignition coil	1
40	102.107B.040	Spark plug	1
41	102.107B.041	Allen screw M5*30	2
42	102.107B.042	Intake manifold	1
43	102.107B.043	Carburetor paper gasket	1
44	102.107B.044	Carburetor	1
45	102.107B.045	Air filter	1
46	102.107B.046	Allen screw M5*55	2
47	102.107B.047	Air filter gasket	1
48	102.107B.048	Air filter net	2
49	102.107B.049	Air filter sponge	1
50	102.107B.050	Air filter cover	1
51	102.107B.051	Cylinder cover	1
52	102.107B.052	Allen screw M5*12	1
53	102.107B.053	Allen screw M5*20	1
54	102.107B.054	Cylinder cover cap	1
55	102.107B.055	Cylinder paper gasket	1
56	102.107B.056	Intake manifold paper gasket	1
57	102.107B.057	Allen screw M5*20	4
58	102.107B.058	Locating pin	4



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