



Henan Master Machinery Co., Ltd

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OPERATION MANUAL



FPC90 Vibratory Plate Compactor

PERFORMANCE · EFFICIENT · RELIABLE



Master sincerely thanks you for selecting the Plate Compactor Machine. For your Safety and proper operation, before you start to operate or carry out any maintenance on this equipment, **YOU MUST READ and STUDY** this manual carefully. Be sure to always keep it ready for reference

Produced By Henan Master Machinery Co.,Ltd

Dear Customer,

Thanks for choosing Master machine.

To ensure the safety and proper use of the machine, please read the instruction book carefully before use.

Also, please fill this card and save it for warranty use.

Buyer Name		Purchase Time	
Tel		Contact Person	
Address			
Product Name	Plate Compactor		
MODEL	FPC90		
Motor Model			
Note			

FOREWARD

- ◇ For your own safety and protection from bodily injuries, carefully read, understand and follow the safety instructions in this manual.
- ◇ Please operate and maintain your machine in accordance with the instructions in this manual.
- ◇ Defective machine parts are to be replaced as soon as possible.
- ◇ Keep this owner's manual handy, so you can refer to it at any time.
- ◇ No part of this publication may be reproduced without written permission.
- ◇ We expressly reserve the right to technical modifications- even without express due notice - which aim at improving our machines or their safety standards.

FEATURE

This machine are ideal for curbs, gutters, around tanks, forms, columns, footings, guard railings, drainage ditches, gas and sewer works and building construction. The asphalt models are suitable for hot or cold asphalt applications in confined areas.

Optimally suited for a variety of compaction applications due to high travel speeds and ease of maneuverability. Guide handle with patented vibration dampening increase operator comfort and reduces fatigue. The large capacity water tank and the wide filler opening improve productivity. Tough ductile iron base plate is extremely durable even under extremely conditions and provides for long service. Optional wheel kit offer easier moving and transport.

SAFETY PRECAUTIONS

Familiarity and proper training are required for the safe operation of equipment. Equipment operated improperly or by untrained personnel can be dangerous ! Read the operating instructions contained in both this manual and the engine manual and familiarize you with the location and proper use of all controls.

WARNING

NEVER allow improperly trained people to operate this equipment. People operating this equipment must be familiar with the potential risks and hazards associated with it.

NEVER touch engine or muffler while forward plate is operating or immediately after it has been turned off. These areas get hot and may cause burns.

NEVER use accessories or attachments, which are not recommended for this equipment. Damage to equipment and/or injury to user may result.

NEVER operate machine with the belt guard missing. Exposed drive belt and pulleys create potentially dangerous hazards that can cause serious injuries.

NEVER leave machine running unattended.

ALWAYS read, understand, and follow procedures in Operator's Manual before attempting to operate equipment.

ALWAYS wear protective clothing when operating equipment. For instance, goggles or safety glasses will protect eyes from damage caused by flying debris.

ALWAYS close fuel valve on engines equipped with one, when screed is not being operated.

ALWAYS store equipment properly when it is not being used.

Equipment should be stored in a clean, dry location out of the reach of children.

ALWAYS operate screed with all safety devices and guards in place and in working order.

ALWAYS operate plate along even forms. Avoid objects protruding from concrete such as stakes or plumbing that would interfere with screed operation.

PERIODIC MAINTENANCE SCHEDULE

The Periodic Maintenance Schedule below lists basic maintenance intervals for the engine and forward plate. The layman with everyday hand tools may carry out items listed.

Routine Service Intervals	Before each use	After first 20 hours	Every two weeks or 50 hrs	Every month or 100 hrs	Every year or 300 hrs
Check fuel level	•				
Check engine oil level	•				
Check fuel lines	•				
Inspect air cleaner elements. Replace as needed.	•				



Check and tighten external hardware.	•				
Check and tighten belt		•	•		
Clean air cleaner elements.			•		
Check shock mounts			•		
Change engine oil		•		•	
Clean cooling system				•	
Check and clean spark plug				•	
Clean sediment cup				•	
Check and adjust valve clearances.					•
Change eccentric block lubricate					•

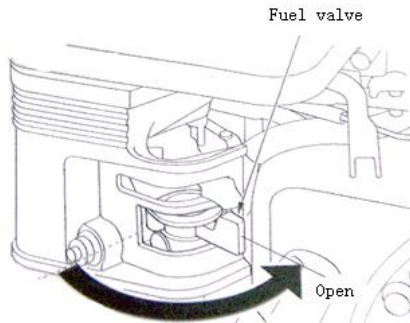
Notice! A new belt must be checked after 5 hours use.

FUEL RECOMMENDATIONS

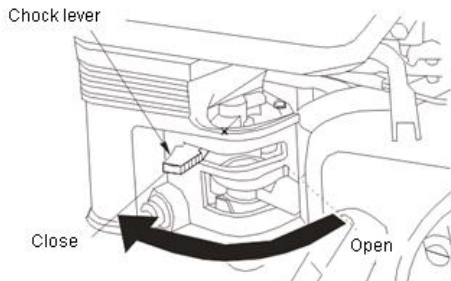
Use unleaded gasoline with a pump octane rating of 90 or higher. Never use stale or contaminated gasoline or an oil/gasoline mixture.

STARTING THE ENGINE

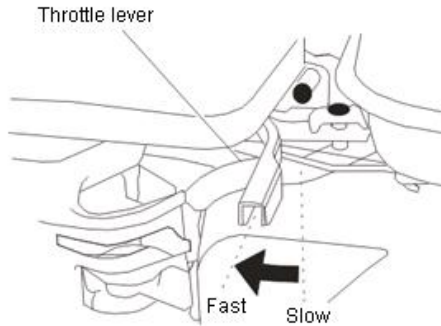
- a. Move the fuel valve lever to the ON position.



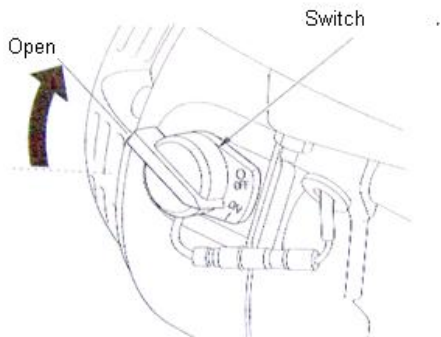
- b. Move the choke lever to the CLOSE position. If the engine is warm or the air temperature is high, move the control lever away from the OPEN position as soon as the engine starts.



- c. Move the throttle lever away from the SLOW position, about 1/3 of the way to toward the FAST position.

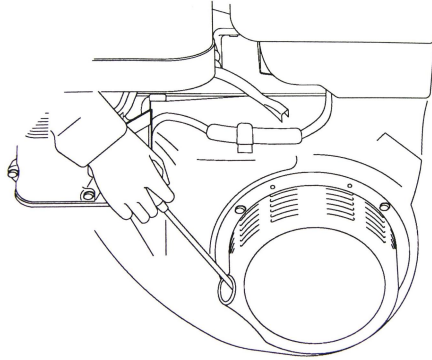


d. Turn the engine switch to the ON position.

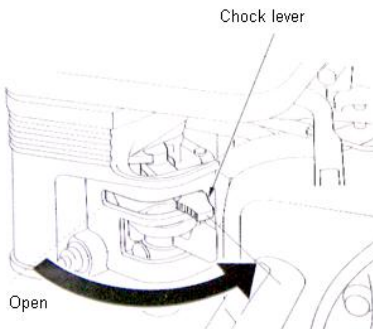


e. Pull the starter grip lightly until you feel resistance, then pull briskly. Return the starter grip gently.

CAUTION! Do not allow the starter grip to snap back against the engine. Return it gently to prevent damage to the starter.

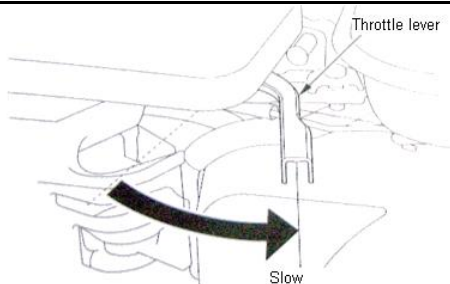


f. If the chock lever or chock rod (applicable types) has been moved to the CLOSED position to start the engine, gradually move it to the OPEN position as the engine warms up.

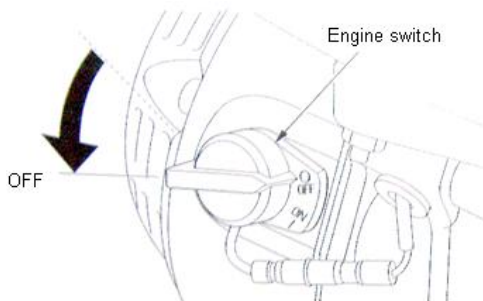


STOPPING THE ENGINE

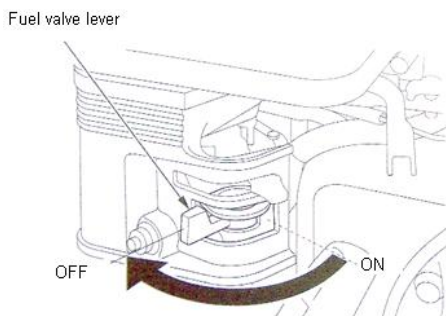
a. Move the throttle lever to the SLOW position.



b. Turn the engine switch to the OFF position.



c. Turn the fuel valve lever to the OFF position.



OPERATION

Set-up the engine and operate the plate at a fully speed. Operator need push the plate gently when it compact on a slope. According to different kinds of soil, operator has to compact 3 times or 4 times to achieve the highest compaction performance.

Be sure soil moisture is suitable, for too wet or too dry soil will reduce compaction performance.

Compacting asphaltum need open the water tank. The plate could achieve better compaction performance by 2 times or 3 times work.

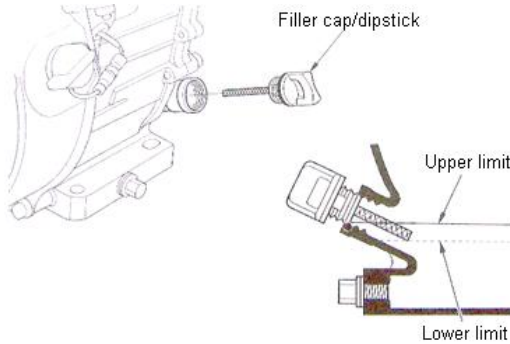
Notice! Never operate the plate on the concrete ground or some thing like this.

LUBRICATION

1. Engine oil lever check

Check the engine oil level with the engine stopped and in a level position.

1. Remove the filler cap/dipstick and wipe it clean.
2. Insert and remove the dipstick without screwing it into the filler neck. Check the oil level shown on the dipstick.
3. If the oil level is low, fill to the edge of the oil filler hole with the recommended oil.
4. Screw in the filler cap/dipstick securely.



2. Engine oil change

Drain the used oil while the engine is warm. Warm oil drains quickly and completely.

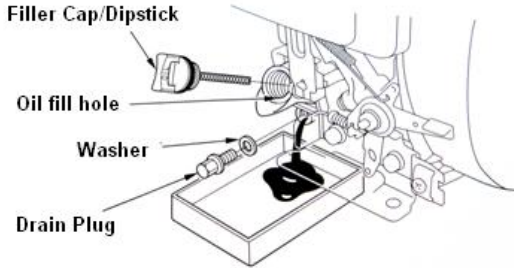
1. Place a suitable container below the engine to catch the used oil, then remove the filler cap/dipstick, drain plug, and washer.
2. Allow the used oil to drain completely, then reinstall the drain plug, washer, and tighten drain plug securely.

Notice! Please dispose of used motor oil in a manner that is compatible with the environment. We suggest you take used oil in a sealed container to your local recycling center or service station for reclamation. Do not throw it in the trash, pour it on the ground, or down a drain.

3. With the engine in a level position, fill to the outer edge of the oil filler hole with the recommended oil.

Notice! Running the engine in a low oil level can cause engine damage.

4. Screw in the filler cap/dipstick securely.



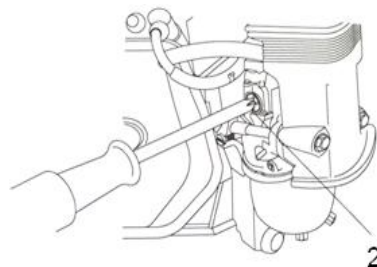
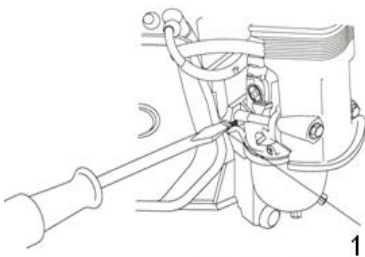
CARBURETTOR ADJUSTMENT

1. Start the engine outdoors, and allow it to warm up to operating temperature.
2. With the engine idling, turn the highest idle rpm screw in or out to the setting that produces the highest idle rpm.
3. Turn the throttle stop screw to obtain the standard idle speed.

Caution: Do not tighten the highest idle rpm screw against its seat as this will damage the highest idle rpm screw or seat. After the highest idle rpm screw is correctly adjusted, turn the throttle stop screw to obtain the standard idle speed.

Standard idle speed: 1400 ± 150 r/min

Max. engine idle speed: 3600 ± 100 r/min



1. Highest idle rpm screw

2.

Throttle stop screw

SPARK PLUGS

Recommended spark plugs: BPR6ES (NGK). For good performance, the spark plug must be properly gapped and free of deposits.

Notice! An incorrect spark plug can cause engine damage.

- a. Disconnect the spark plug cap, and remove any dirt from around the spark plug area.
- b. Remove the spark plug with a 13/16-inch spark plug wrench.
- c. Inspect the spark plug. Replace it if the electrodes are worn heavy carbon buildup is found, or if the insulator is cracked or chipped.
- d. Measure the spark plug electrode gap with a suitable gauge. The gap should be 0.028-0.031 in (0.70 - 0.80 mm). Correct the gap, if necessary, by carefully bending the side electrode.
- e. Check that the spark plug washer is in good condition. Install the spark plug carefully, by hand, to avoid cross-threading.
- f. After the spark plug seats, tighten with a 13/16-inch spark plug wrench to compress the sealing washer.
- g. When installing a new spark plug, tighten 1/2 turn after the spark plug seats to compress the washer.
- h. After the spark plug seats, tighten with a 13/16-inch spark plug wrench to compress the sealing washer. If reinstalling the used spark plug, tighten 1/8 - 1/4 turn after the spark plug seats. If installing a new spark plug, tighten 1/2 turn after the spark plug seats.
- i. Attach the spark plug cap.

NOTICE! The recommended spark plug has the correct heat range for normal engine operating temperatures. A loose spark plug can overheat and damage the engine. Over tightening the spark plug can damage the threads in the cylinder head.

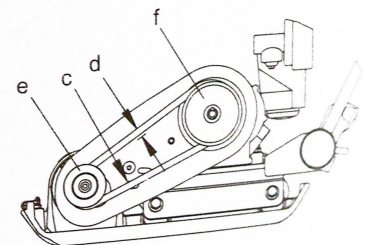
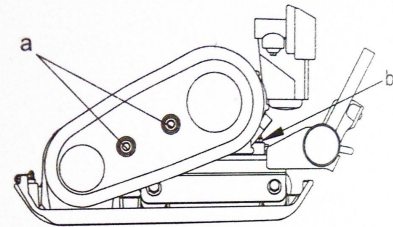
AIR FILTER SERVICE

A dirty air filter will restrict air flow to the carburetor, reducing engine performance. If you operate the engine in very dust areas, clean the air filter more often than specified in the MAINTENANCE SCHEDULE.

WARNING! Never use gasoline or low flammable point solvents for cleaning the air cleaner element. A fire or explosion could result.

NOTICE! Operating the engine without an air filter element, or with a damaged air filter element, will allow dirt to enter the engine, causing rapid engine wear.

1. Remove the wing nut from the air cleaner cover, and remove the cover.
2. Remove the wing nut from the air filter, and remove the filter.
3. Remove the foam air filter element from the paper filter.
4. Inspect both air filter elements, and replace them if they are damage.
5. Paper air filter element: Tap the filter element lightly several times on a hard surface to remove excess dirt, or blow compressed air through the filter element from the inside out. Never try to brush the dirt off; brushing will force dirt into the fibers.
6. Foam air filter element: Clean in warm soapy water, rinse, and allow to drying thoroughly. Or clean in nonflammable solvent and allow to drying. Dip the filter



element in clean engine oil, and then squeeze out all excess oil. The engine will smoke when started if too much oil is left in the foam.

ADJUST BELT

A new machine or a new belt should be check after 20 hours use, and then check the belt every 50 hours. The processes as follow:

1. Remove two bolts (a) on the belt guard and remove the belt guard.
2. Remove four bolts (b) which they are fixed engine.
3. A forward movement engine will loose the belt and backward movement engine will tight the belt.
4. Put hand on the middle of the belt, press the belt 10-13mm deep (d).
5. Tight all bolts to 20.5Nm.

ECCENTRIC SHAFT LUBRICATE

The bearing of eccentric shaft is at high working speed with splash lubrication.

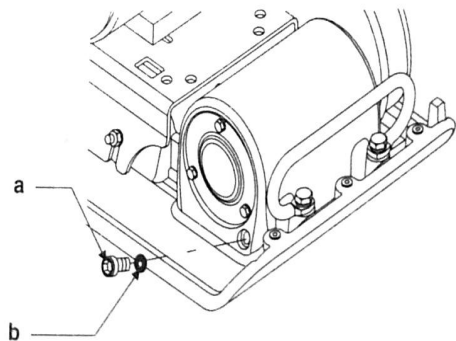
Notice! Correct oil level and periodic maintenance are very important.

Check the oil level by every 50 hours. Put the plate on the level ground, remove the drain bolt (a) and seal (b). Fill oil when it needed.

Every 300 hours change the eccentric shaft oil: Remove the bolt (a), slant the plate and drain the oil.

Notice! For the environment protection, please collect the used lubrication in the container. Fill 240ml oil in it.

Notice! Much more oil is forbidden which will low the efficiency and damage the belt.



CLEAN THE PLATE BASE

Clean up the base. If the engine working on a nasty environment, Clean up the dust in the cylinder, cylinder head radiator fin, flywheel, covers, revolves the strainer and the silencer region.

SOUND SPECIFICATIONS

The required sound specifications, called-for by the EC-Machine Regulations per appendix 1, paragraph 1.74f.

—Sound pressure level at the operator's location $L_{PA}=96\text{dB (A)}$

—Sound power (L_{WA})= 102Db (A)

The sound values were determined according to ISO 3744 for the sound power level (L_{WA}) and alternately, ISO 6081 for the sound pressure level (L_{PA}) at the operator's location.

The weighted effective value of acceleration, determined according to ISO8662, Part 1, is $3,5\text{m/s}^2$.

The noise and vibration data were determined while the machine was cutting concrete at a depth of 30mmwith the engine running at nominal speed.

STORAGE

If plate would be storage over 30 days:

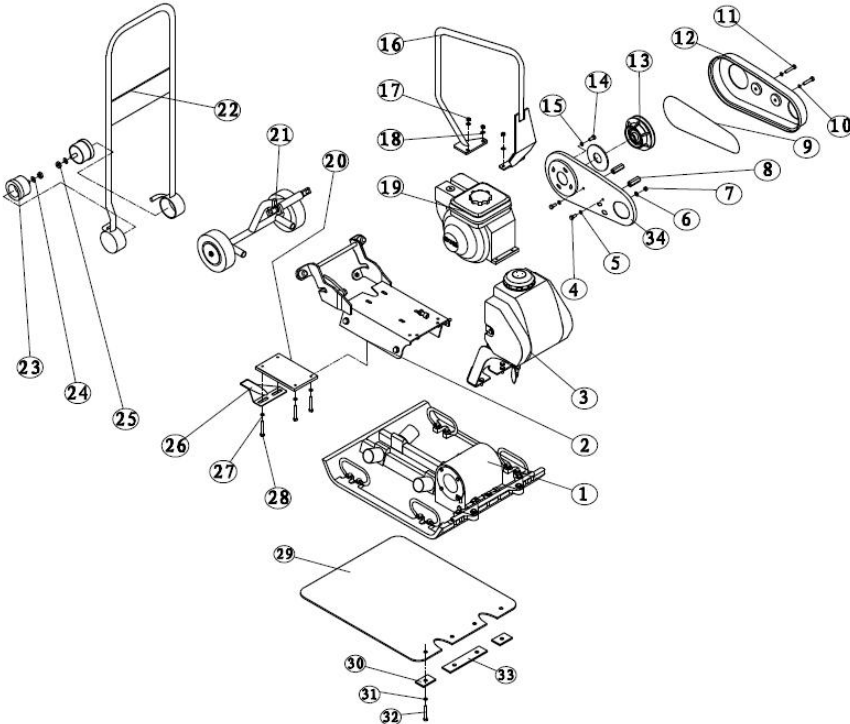
1. Clean up the dust on the plate base.
2. Clean up the engine parts.
3. Clean and change air cleaner.
4. Change the engine oil and follow the engine manual operation.
5. Covers plate compactor and the engine, and keep in clean dry place.

TRANSPORT

1. Turn off the engine fuel valve when being transported on vehicles.
 2. Make sure lifting has enough force lift machine (see nameplate on the machine).
 3. The machine must be level and fixed when being transported
- Notice! Make sure drain fuel and oil when being transported.

Diagram

1. Plate Compactor assembly





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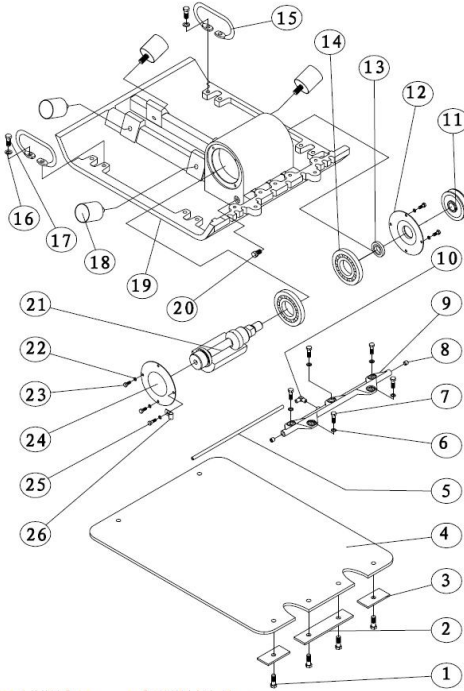
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Item	Part NO.	Part name	Qty
1	101	Eccentric assembly	1
2	102	Plate assembly	1
3	103	Water Tank	1
4	104	Bolt M8×20	2
5	105	Washer 8	2
6	106	Gasket 8	1
7	107	Nut M8	1
8	108	Belt guard mount	2
9	109	Belt A-33	1
10	110	Washer 8	2
11	111	Bolt M8×40	2
12	112	Belt guard	1
13	113	Clutch drum	1
14	114	Bolt 5/16"×20	4
15	115	Washer 8	4
16	116	Lifting Handle	1
17	117	Nut M8	4
18	118	Gasket 8	4
19	119	Engine GX160	1
20	120	Console	1

21	121	Wheel	1
22	122	Guide Handle	1
23	123	Shock mount	2
24	124	Gasket 12	2
25	125	Nut M12	2
26	126	Oil drain	1
27	127	Washer 8	4
28	128	Bolt M8×55	4
29	129	Dampening pad(options)	1
30	130	Dampening pad board I(options)	2
31	131	Washer 10 (options)	4
32	132	Bolt M10X25 (options)	4
33	133	Dampening pad board II	1
34	134	Belt enclosure cover	1

2. Eccentric assembly



Item	Part NO.	Part name	Qty
1	10101	Bolt M10×30	4
2	10102	Shockmount plate II	1
3	10103	Shockmount plate I	2
4	10104	Mount	1
5	10105	Rubber Hose	1
6	10106	Washer 8	5
7	10107	Bolt M8×20	5
8	10108	Screw M10×10	2



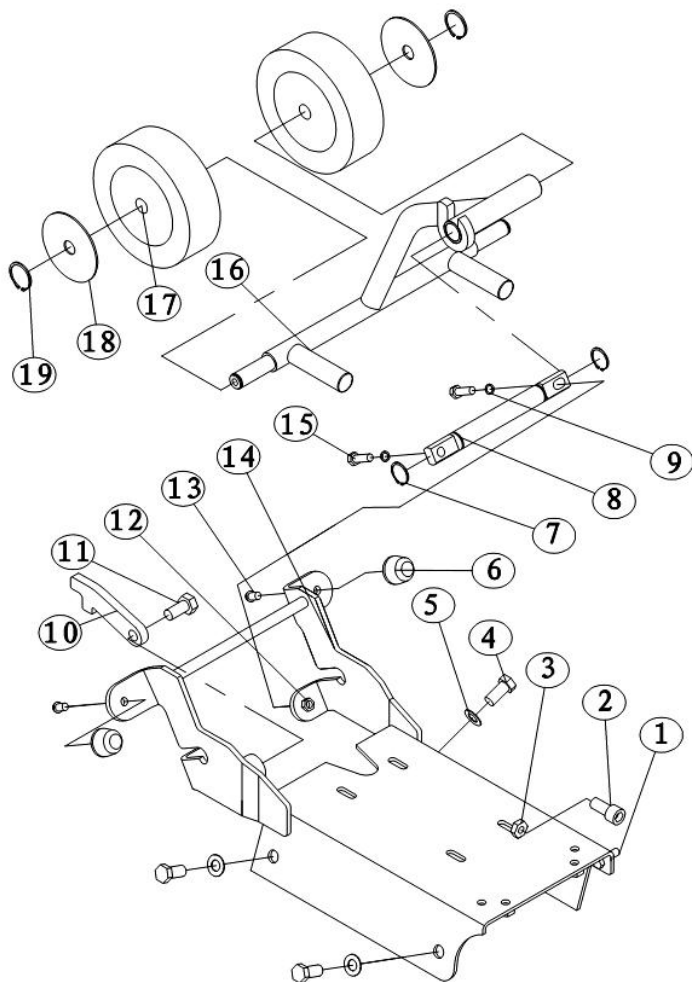
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9	10109	Waterspout	1
10	10110	Clamp	1
11	10111	Pulley	1
12	10112	End cap	1
13	10113	Seal FB30×42×7	1
14	10114	Bearing 6903C(1.5t)	2
15	10115	Lifting handle	4
16	10116	Washer 10	8
17	10117	Bolt M10×20	8
18	10118	Mount	4
19	10119	Base plate	1
20	10120	Plug M10×1×16	1
21	10121	Shaft	1
22	10122	Gasket 6	8
23	10123	Bolt M6×16	7
24	10124	Cap	1
25	10125	Bolt M6×20	1
26	10126	Clamp	1

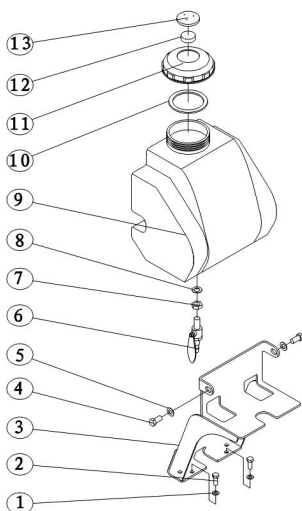
3. Wheel and plate assembly



Item	Part NO.	Part name	Qty
1	10201	Bolt M8×25	1
2	10202	Screw M12×25	1
3	10203	Nut M12	1
4	10204	Bolt M12×25	4
5	10205	Gasket 12	4
6	10206	Shockmount	2
7	10207	Retaining ring 20	2
8	10208	Shaft	1
9	10209	Gasket 8	2
10	10210	Detent	1
11	10211	Bolt M12×25	1
12	10212	Nut M8	2
13	10213	Screw M8×20	2
14	10214	Plate	1
15	10215	Bolt M8×25	2

16	10216	Wheel Frame	1
17	10217	Wheel	2
18	10218	Washer 16	2
19	10219	Retaining ring 17	2

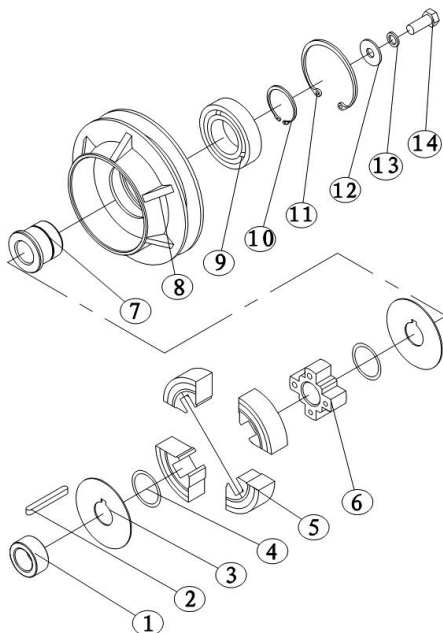
4. Water tank assembly



Item	Part NO.	Part name	Qty
1	10301	Gasket 8	4
2	10302	Bolt M8×20	4
3	10303	Bracket	1
4	10304	Bolt M10×20	2

5	10305	Washer 10	2
6	10306	Shutoff valve	1
7	10307	Nut M12	1
8	10308	Washer 12	1
9	10309	Water Tank	1
10	10310	Seal	1
11	10311	Cap-water tank	1
12	10312	Sponge	1
13	10313	Cover tank	1

5. Clutch assembly





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Item	Part NO.	Part name	Qty
1	11301	Spacer	1
2	11302	Key 4.78×4.78×44	1
3	11303	Lock Washer	2
4	11304	Spring	2
5	11305	Shoe-clutch	4
6	11306	Center block	1
7	11307	Cover	1
8	11308	Clutch drum	1
9	11309	Bearing 6006-2RS	1
10	11310	Retaining Ring 30	1
11	11311	Retaining Ring 55	1
12	11312	Washer 8	1
13	11313	Gasket 8	1
14	11314	Bolt 5/16"×20	1