

LITTLE SWAN

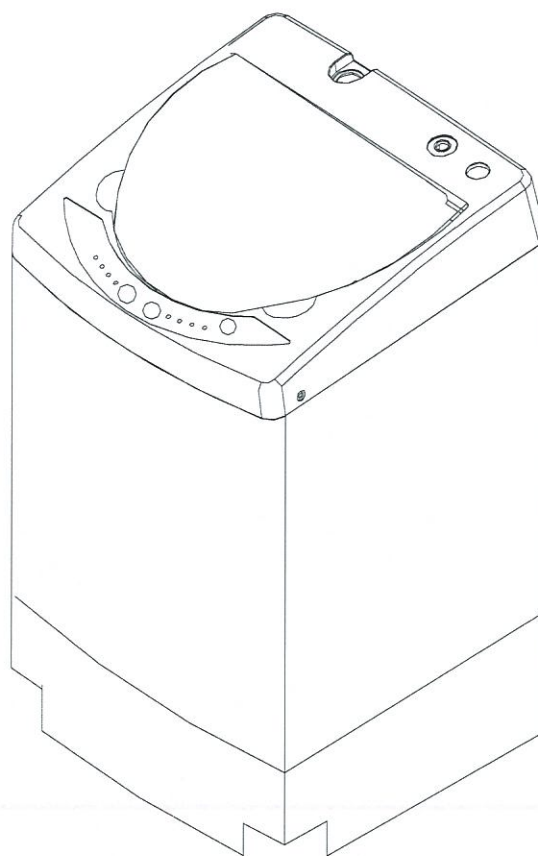
Alt. Gr.

Form. 88

3

SERVICE MANUAL

FULL-AUTOMATIC WASHING MACHINE
XQB22—22G



CONTENTS

Section A	Care and Cleaning	1
-----------	-------------------	---

Section B	Avoid Service Checklist	2
-----------	-------------------------	---

Section C	Installation	4
-----------	--------------	---

Section D	Simply Installation	5
-----------	---------------------	---

Section E	PARTS LOCATION AND THEIR FUNCTION	7
-----------	-----------------------------------	---

Section F	Teardown	10
-----------	----------	----

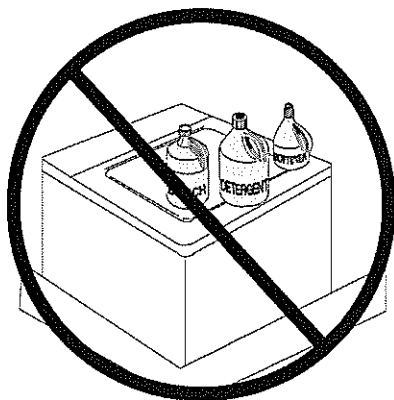
Section G	Common failure and Troubleshooting	11
-----------	------------------------------------	----

Section H	Common failures of Electric parts	13
-----------	-----------------------------------	----

Section I	Exploded views and replacement part list...	14
-----------	---	----

Section A Care and Cleaning

⚠ WARNING Use care with laundry products. They can damage finish on the washer.



Inside

- Remove items from the washer as soon as the cycle ends. Excess wrinkling, color transfer, and odors may develop in items left in the washer.
- Dry the washer top, the area around the lid opening, and the underside of the lid. These areas should always be dry before the lid is closed.
- Before cleaning the washer interior, **unplug the electrical power cord** to avoid electrical shock hazards.
- When extremely soiled items have been washed, a dirty residue may remain on the tub. Remove this by wiping the tub with a nonabrasive household cleanser. Rinse thoroughly with water.

The washer interior or tub may become stained from fabric dye. Clean these parts with a nonabrasive household cleanser. This prevents dye transfer to future loads.

Outside

- When washing is completed, wipe top and sides of washer with a damp cloth. Turn water faucets off to prevent pressure build-up in the hoses.
- As needed, clean the cabinet with mild soap and water. **Never use harsh, gritty or abrasive cleansers.** If top or lid becomes stained, clean with **diluted chlorine bleach. Rinse several times with clear water.**
- Remove glue residue from tape or labels with a mixture of warm water and mild detergent. Or, touch residue with the sticky side of the tape or label.

Winterizing Instructions

If the washer is stored in an area where freezing can occur or moved in freezing temperatures, follow these winterizing instructions to prevent damage to the washer:

1. Turn off water supply faucets.
2. Disconnect hoses from water supply and drain water from hoses.
3. Plug electrical cord into a properly grounded electrical outlet.
4. Set the WASH-DRAIN SELECTOR knob to DRAIN position, let washer drain for about 1 minute to drain out all water from wash tub.
5. If freezing **happens to**, put about 2 liter of warm water into the wash tub for 10 minutes. In the end drain out all water by **step 4.**
6. Set the WASH-DRAIN SELECTOR knob to NORMAL position, unplug electrical power cord, dry wash tub interior, and close lid.
7. Store washer in an upright position.

Where to put the washing machine:

- **Keep the washing machine away from heavy sun shine.**
- **Keep the washing machine away from moisture and rain.**
- **Avoid uneven and elastomeric ground.**

Section B **Avoid Service Checklist**

Before calling for service, review this list. It may save both time and expense. The list includes common concerns that are not the result of defective workmanship or materials in this washer.

OCCURRENCE	POSSIBLE CAUSE	SOLUTION
NOISE		
"Clunking" or gear sounds.	A certain amount of "clunking" or gear sounds are normal in a heavy-duty washer.	This is normal.
Rattling and clanking noise.	Foreign objects such as coins or safety pins may be in tub or pump.	Stop washer and check tub. If noise continues after washer is restarted, objects may be in pump. Call your authorized servicer.
	Belt buckles and metal fasteners are hitting wash tub.	To prevent unnecessary noise and damage to tub, fasten fasteners and turn items inside out.
Squealing sound or hot rubber odor.	Washer is overloaded.	Do not overload washer. Stop washer and reduce load.
Thumping sound.	Heavy wash loads may produce a thumping sound.	This is usually normal. If sound continues, washer is probably out of balance. Stop washer and redistribute wash load.
Vibrating noise.	Washer is not resting firmly on floor.	Move washer so it rests firmly on floor.
	Wash load unevenly distributed in tub.	Stop washer and rearrange wash load.
	Some laundry outside the spin tub.	Put laundry into the spin tub.
	Spin tub inner cover pressed well.	Take out some laundry, make the spin tub inner cover flat.
OPERATING		
Washer does not start.	Electrical power cord may not be plugged in or connection may be loose.	Make sure plug fits tightly in wall outlet.
Water in washer does not drain or drains slowly.	Drain hose is kinked or clogged.	Clean and straighten the drain hose.
	Drain pump is clogged.	Take dirt out or call your authorized servicer.

OCCURRENCE	POSSIBLE CAUSE	SOLUTION
Washer won't spin.	Lid is not completely closed.	Close lid completely.
Residue left in tub.	Heavily soiled items.	Wipe tub with a nonabrasive household cleanser, then rinse. Shake or brush excess dirt and sand from items before washing.
Wash load too wet after spin.	Washer is overloaded.	Do not overload washer.
	Load is out of balance.	Rearrange load to allow proper spinning.
	Drain hose is kinked.	Straighten drain hose.
Water does not enter washer or it enters slowly.	Water supply is not adequate in area.	Check another faucet in the house. Wait until water supply and pressure increase.
	Water supply faucets are not completely open.	Fully open water faucets.
	Water is being used elsewhere in the house.	Water pressure must be at least 30 psi (260 kPa). Avoid running water elsewhere while washer is filling.
	Water inlet hoses are kinked.	Straighten hoses.
Water level does not cover load.	Improper water level selection (for models with water level).	Select higher water level.
	Washer is overloaded.	Do not overload washer.
Water leaks.	Fill hose connection at faucet or washer.	Check and tighten hose connections. Install rubber sealing washers provided.
	House drain pipes are clogged.	Unclog drain pipes. Contact plumber if necessary.
	Water pressure is bigger.	Turn on water faucet smally.

Section C INSTALLATION

INSTRUCTIONS

Before beginning installation, carefully read these instructions. This will simplify the installation and ensure the washer is installed correctly and safely. Leave these instructions near the washer after installation for future reference.

NOTE: The electrical service to the washer must conform with local codes and ordinances •

ELECTRICAL REQUIREMENTS

CIRCUIT - Individual, properly polarized and grounded 15 amp. branch circuit fused with 15 amp. time delay fuse or circuit breaker.

OUTLET RECEPTACLE - Properly grounded 3-prong receptacle to be located so the power supply cord is accessible when the washer is in an installed position.

GROUNDING REQUIREMENTS

⚠ WARNING Improper connection of the equipment grounding conductor can result in a risk of electrical shock. Check with a licensed electrician if you are in doubt as to whether the appliance is properly grounded.

1. Powersupply cord with 3-prong grounding plug
Dont, under, any circumstances, cut, remove
or by pass the grounding prong..
2. The **washer** **MUST** be grounded. In the event of a malfunction or breakdown, grounding will reduce the risk of electrical shock by a path of least resistance for electrical current.
3. Since your washer is equipped with a power supply cord having an equipment-grounding conductor and a grounding plug, the plug **MUST** be plugged into an appropriate, copper wired receptacle that is properly installed and grounded in accordance with all local codes and ordinances or in the absence of local codes, with the National Electrical Codes. If in doubt,
call a licensed electrician. **DO NOT** cut off or alter the grounding prong on the power supply cord. In situations where a two-slot receptacle is present, it

is the owner's responsibility to have a licensed electrician replace it with a **properly grounded** three prong grounding type receptacle.

4. For added personal safety, connect a separate Ground wire from atop panel hinge screw on the rear of the washer to a grounded cold water pipe **DO NOT** ground to a gas supply pipe or hot water pipe.
5. **Grounded cold water pipe MUST** have metal continuity to electrical ground it **MUST** not be interrupted by plastic, rubber, or other electrical insulating connectors such as hoses, fittings, washers, gaskets (including water meter or pump). Any electrically insulated connector should be **jumped with copper wire securely clamped to bare metal at both ends.**
6. If a grounded water pipe **is not** available, a **Ground rod MUST be used** Drive the rod into the ground outside the dwelling and connect a **grounding wire between the grounding screw and the grounding rod** it may take to Ground.

⚠ WARNING Destroy the carton and plastic bags after the washer is unpacked. Children might use them for play. Cartons covered with rugs, bedspreads, or plastic sheets can become airtight chambers causing suffocation. Place all materials in a garbage container or make materials inaccessible to children.

⚠ WARNING The instructions in this manual and all other literature included with this washer are not meant to cover every possible condition and situation that may occur. Good safe practice and caution **MUST** be applied when installing, operating and maintaining any appliance.

Maximum benefits and enjoyment are achieved when all the Safety and Operating instructions are understood and practiced as a routine with your laundering tasks.

Section D Simply installation

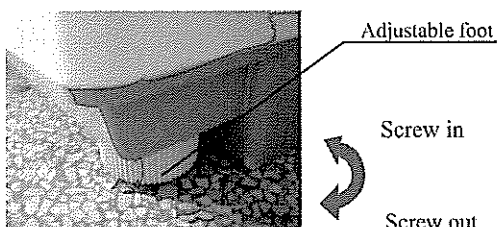
The washing machine should be placed inside the room with a flat floor, which is convenient for water supply and drain, has low moisture and no direct sunshine, and does not freeze in winter.

Please adjust the washing machine even according to the instructions below to make the washing machine run steadily in low noise.

1. Screw in or screw out the adjusting foot to make the four feet placed even on the floor.
2. When the floor is slanting or uneven, it is not easy to make even only by the adjusting foot. Then the rubber band can be added to the unflat place.
3. Use gradienter to check whether the washing machine is placed flat.

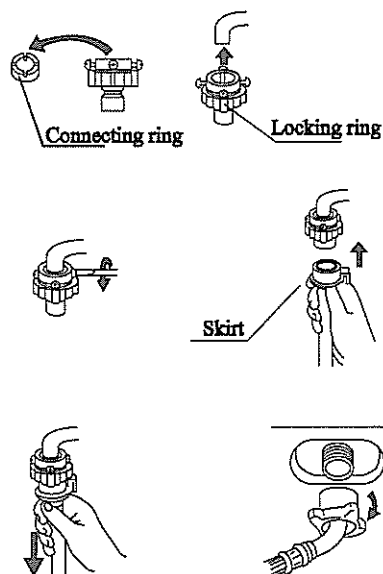
Notices:

If the washing machine is not placed flat it may cause great vibration or automatic check and rectification or other abnormal



Installation of water inlet hose

1. Check the tap mouth. Make sure every part of the tap mouth is on the same surface. If not, make it smooth with the given file
2. Loosen the locking ring slightly; Screw four screws into universal connector at the same distance.
3. Put the tap deeply into the universal connector then screw in the screws.
4. Screw tight the locking ring clockwise at the most.
5. Pull the skirt of one end of the water inlet hose downwards, and then plug in the universal connector. A sound of "KA-TA" means proper connection.
6. Grasp the water inlet hose by hand and pull it downwards to see whether it is secured
7. Screw the nut on the other end.

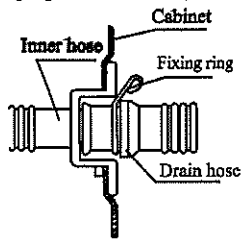


Notices:

1. After end of inlet hose installation, do not immediately switch on the power. Open the tap and let water go over both ends of the inlet hose and check whether occur the leakage. If the inlet hose is difficult to install because of the tap, you can invite the experienced person for help.
2. The color of the hot water inlet hose ends

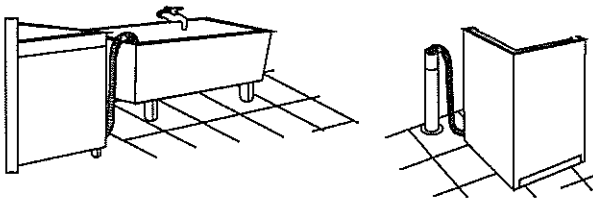
Installation of drain hose

Nip the fixing ring with hand to make it loose and engaged on the drain hose and put the drain hose into the leading skirt of drain hose in the bottom of the washing machine to the end at the most (soak the head of the drain hose in warm water, it will make the engagement easy).



Notices:

- Drain fault is caused when the drain hose is blocked.
- Drain hose must be placed at least 75cm



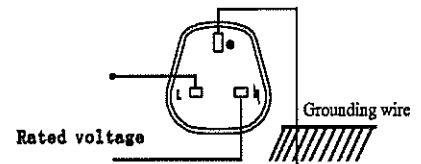
Power source and grounding

The washing machine employs alternative current with the rated voltage. Conform with the power source of the Cables. A special power socket for the washing machine had better be set beside the washing machine for convenience and safety. The method of connection of the

Notices:

The socket and the grounding wire must be installed by an electrician to prevent incorrect installation or use of the socket, and to guarantee the safety of use of electricity.

The power wire of the washing machine employs Y connection and the replacement of the power wire should be carried out by professionals.



Simple operation

1. Before operation, please open the Lid.
2. Put the clothes into washing tub and Close the lid.
3. Put the detergent into the water inlet case.
4. Plug the cord into the socket, switch on the power.
5. Turn on the tap connected to the two water inlet hoses.
6. Press "Power" button.
7. Press "Start/Pause" button. The washing machine will go into operation automatically as programmed.

SECTION E PARTS LOCATION AND THEIR FUNCTION

Electronic program controller
Located in the top frame, the electronic program controller offers power and instructions to components of the washer.

The electronic program controller controls washing model and program mainly by driving motor , tractor and pump.

The controller rectifies washer by feedback of safety switch , and confirms water level with the setting by water level switch.

Water level switch

The water level switch is located in the top frame. It is made up of a button and gear assembly that allows the user to adjust the water level in the tub.

The adjustable pressure switch, plastic hose are connected to the outer tub.

When the tub does not have water in it , the air in the plastic hose is at atmospheric pressure then the switch inputs an analog variable to electronic program controller. as water enters the tub the air in the tube is compressed; accordingly the switch inputs another analog variable to electronic program.

Safety switch

The safety switch assembly is a safety device that removes power from the motor circuits when the cover is lifted during spinning. The safety switch is mounted to the bottom of the top frame.

Pulsator

The pulsator is located in the center of the inner tub. The pulsator is driven by the shaft of the transmission and rotates back and forth to move the clothes through the water.

Bleach dispenser

The bleach dispenser is mounted on the inner tub.

Water inlet valve

The water valve is mounted to the rear top frame. The water inlet valve is two solenoid operating valves - a hot water valve and a cold water valve.

Drain pump (nought)

The drain pump is mounted on the Bottom of the out tub, it is controlled by electronic program controller.

The motor

The motor is mounted to transmission mounting plate. The motor is a capacity start, bi-directional motor, it drives the transmission by a belt.

The tractor

The tractor is mounted to transmission mounting plate, it is controlled by electronic program controller. When the tractor run, it change clutch to enter into spinning status.

Suspension rod complete

Suspension rod complete is composed of metal rod, plastic shell and damping spring. It is the key damping device.

Clutch

The top of the transmission is centered in the outer tub by a bearing and seal assembly

Inner tub

The inner tub is mounted to the top of the clutch. In the process of wash, it stands still. When spin, it runs simultaneously at one-way direction with pulsator.

Belt

The belt connects motor pulley with clutch.

Assembly of electric capacitor and inductance

The assembly of electric capacitor and inductance is mounted at the .
Back of the washer
Cabinet, It is mainly used to start motor

The emergency warning function

No.	Description
	<p>If error occurs, the buzzer will beep for 10 seconds, the type of trouble light will turn on and if doesn't operate the machine .at the same time, the buzzer will repeat the beeps every 14min and 50 seconds. If consumer doesn't operate the machine with one hour, the controller will turn off the power switch automatically.</p> <p>The following describes the error and recommended treatment.</p>
E0	Power trouble
E1	Inlet water for more than 1 hour.
E2	Drain water for more than 5 minutes.
E3	The lid has been opened.
E4	The tub bumps the safety switch three times.
E8	The water level sensor fails.

SECTION F TEARDOWN

This section will describe how to remove components from a top load washer. Unless stated, the procedure will be the same on all top load washers. Unless stated, reverse the procedure to reinstall the component.

⚠ WARNING Always remove electrical power from the washer when working in an area where electrical power is present.

removing the top lid

open the top lid, demount the pin fixed on the top lid with tools, then remove the top lid by gentle way

removing the top frame

first open the screw cap, then demount the screw with screwdriver open the back cover, then demount the safety switch based on different condition

removing the back cover

use cross-style screwdriver to demount the three screws fixed on the back cover, then the back cover can be removed without difficulty

Removing the safety switch

Demount the screw with Screwdriver, open the back Cover, then, press one end of the fastener of the safety switch, then draw it out from the slot.

removing control panel

for some models, the control panel and the top lid is an integrated part and can not be disassembled. Most of the models, the control panel can be removed. First, open screw cap with screwdriver, demount the two screws. Second push the control panel from left to right

removing the motor and pulley

First of all, outer tub assembly should be removed. Demount the two fastening screw on the motor then the motor is demounted, at the same, the motor pulley is removed for it is connected with the axis of the motor

SECTION G Common failure and Troubleshooting

Failure	Inspection	Recommended
No power	<ul style="list-style-type: none"> (1). not plug the power cord (2). No power supply on the wall socket. (3). power switch fails (4). fuse burnt (5). controller fails (6). powercord fails 	<ul style="list-style-type: none"> (1) plug again (2) wait for power supply (3) replace power switch (4) replace fuse (5) replace controller (6) replace powercord
No water in	<ul style="list-style-type: none"> (1). no power supply or fuse burnt? (2). no water supply or water pressure too low? (3) winding of inlet valve damaged? (4). the filter on the inlet valve is blocked with dirt (5). [start/pause] is not pressed after pressing the power switch? 	<ul style="list-style-type: none"> (1) wait for power supply or replace fuse (2) wait for water supply or water pressure resume (3) replace inlet valve (it is normal that slight electromagnetic noise can be heard while valve is energized) (4) clean dirt on the filter (5) Press [start/pause] again
No washing action	<ul style="list-style-type: none"> (1) pressure switch fails (2) controller fails (3) the capacitor fails (4) the motor fails (5) belt is broken (6) the pulley wheel of the clutch cracks (7) Pressure hose on the tub falls off (8) Pressure hose leakage, clogged or bent. (9) Impeller breaks away from the washing axial (10) low power voltage (11) transmission gear of the clutch is damaged 	<ul style="list-style-type: none"> (1) replace the pressure switch (2) replace controller (3) replace the capacitor (4) replace the motor (5) replace the V-belt (6) replace the pulley wheel of the clutch (7) Re-connect the pressure hose (8) replace the pressure hose; adjust the hose (9) fit or replace the impeller (10) wait until the voltage resumes normal (11) replace the clutch
No draining	<ul style="list-style-type: none"> (1) pump fails (2) controller fails (3) pump is clogged 	<ul style="list-style-type: none"> (1) replace the pump (2) replace the controller (3) take the dirt out

No spinning	<ul style="list-style-type: none"> (1) the door switch fails (2) the door cover is not closed (3) tractor fails (4) pawl of the clutch is not opened (5) the belt is loosening (6) the capacitor fails (7) the motor fails (8) the controller fails (9) the friction spring of the clutch fails (10) clothes is not evenly distributed during spin 	<ul style="list-style-type: none"> (1) replace the door switch or close the door cover (2) close the door cover (3) replace the tractor (4) re-adjust the position of the pawl (5) adjust the tightness of the belt (6) replace the capacitor (7) replace the motor (8) replace the controller (9) replace the friction spring of the clutch (apply 1# extreme pressure lithium based grease on both inner and outer walls of the spring) (10) put clothes uniformly
much noise during wash	<ul style="list-style-type: none"> (1) the clutch fails (2) much noise from the motor (3) the belt is broken (4) lack grease at top and bottom of the suspension rod 	<ul style="list-style-type: none"> (1) replace the clutch (2) replace the motor (3) replace the belt (4) add grease (ZN-91) at top and bottom of the suspension rod
much noise during spin	<ul style="list-style-type: none"> (1) clothes is not evenly distributed when spin (2) the balance ring leaks salt water (3) the adjustable feet are not well-adjusted (4) unlevel ground (5) the clutch fails (6) much noise from the motor (7) the nut for impeller is loosening (8) the pulley wheel of motor is loosening (9) grease lack at top and bottom of the suspension rod 	<ul style="list-style-type: none"> (1) put clothes uniformly (2) replace the balance ring (3) adjust the adjustable feet (4) level the machine (5) replace the clutch (6) replace the motor (7) replace or fasten the nut (8) fasten the screw of the motor pulley wheel (9) add grease (ZN-91) at top and bottom of the suspension rod

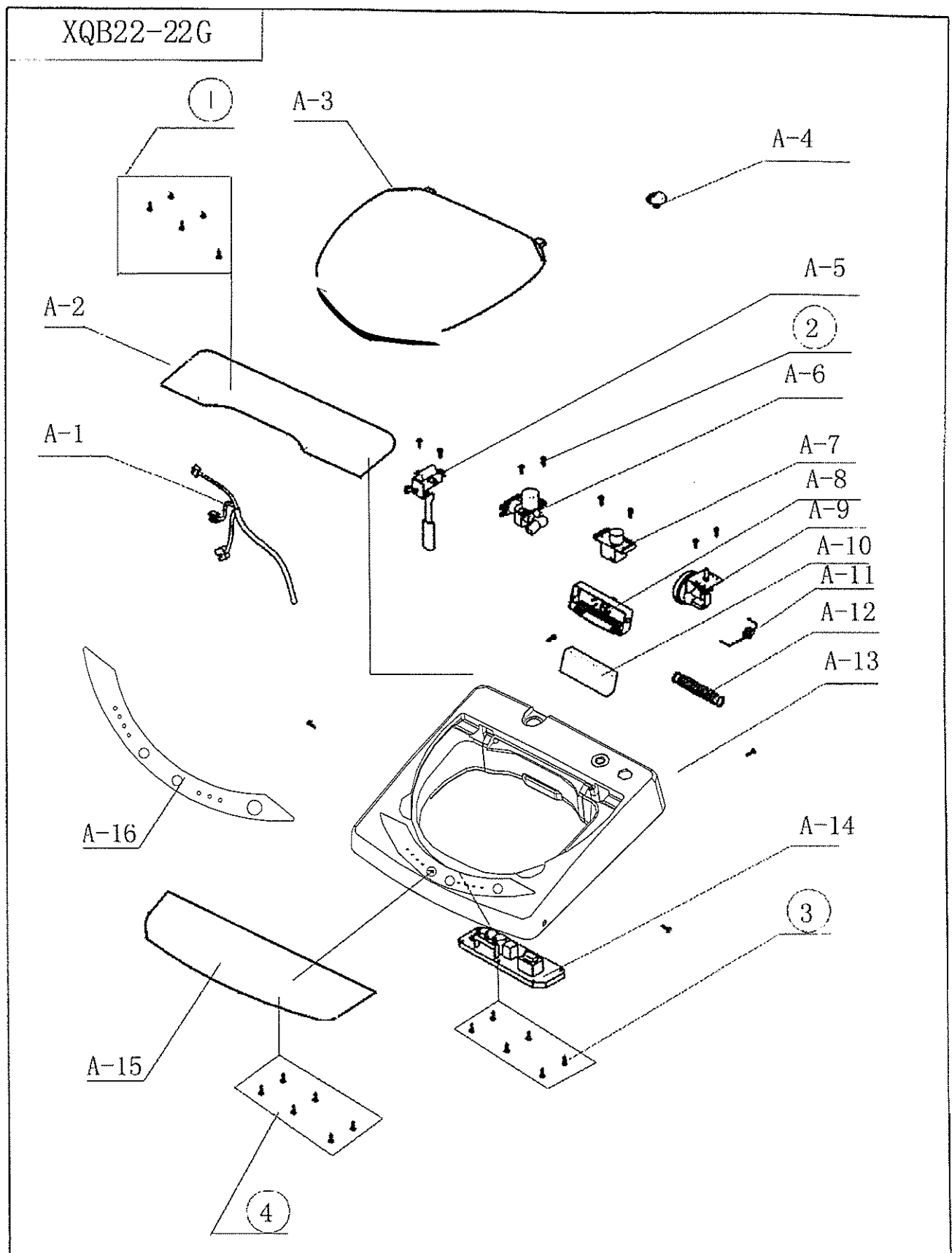
SECTION H Common failures of Electric parts

No.	failure	Possible Cause	Check/Repair
1	no motor running or abnormal noise	the controller has no signal output	replace the controller
		the capacitor fails	replace the capacitor
		Clutch friction spring gets stuck.	Replace the clutch friction spring
		the axial sleeve of the motor worn out	replace the motor
		the motorwinding is short or open circuit	replace the motor
		others	
2	No capacity or insufficient capacity	the capacitor fails	replace the capacitor
3	non-stop water entering or no water entering	Pressure switch hose leakage	Re-connecting the hose or replace it
		Pressure switch doesn't activated.	replace the pressure switch
		the controller fails	replace the controller
		winding of the valve short or open circuit	replace the valve
		Hydraulic part of the valve fails	replace the valve
		filter of the valve blocked	clean the filter
		others	
4	No activation or not reset	The clutch pawl gets stuck	Adjust the clutch pawl
		the controller fails	replace the controller
		Failure inside the motorized activator	replace the activator
		others	
5	No setting or resetting	Pressure sensor hose leakage	Re-connecting the hose or replace it
		the controller fails	replace the controller
		failure inside the water level sensor	replace the water pressure sensor
		others	
6	Leaking or No draining	Pressurize abating of water pump	replace the drain valve
		the drain valve is blocked with dirt	take dirt out
		the short circuit or open circuit of Water pump	replace the drain valve
		failure inside the water level sensor	replace the water pressure sensor
		the controller fails	replace the controller
		others	

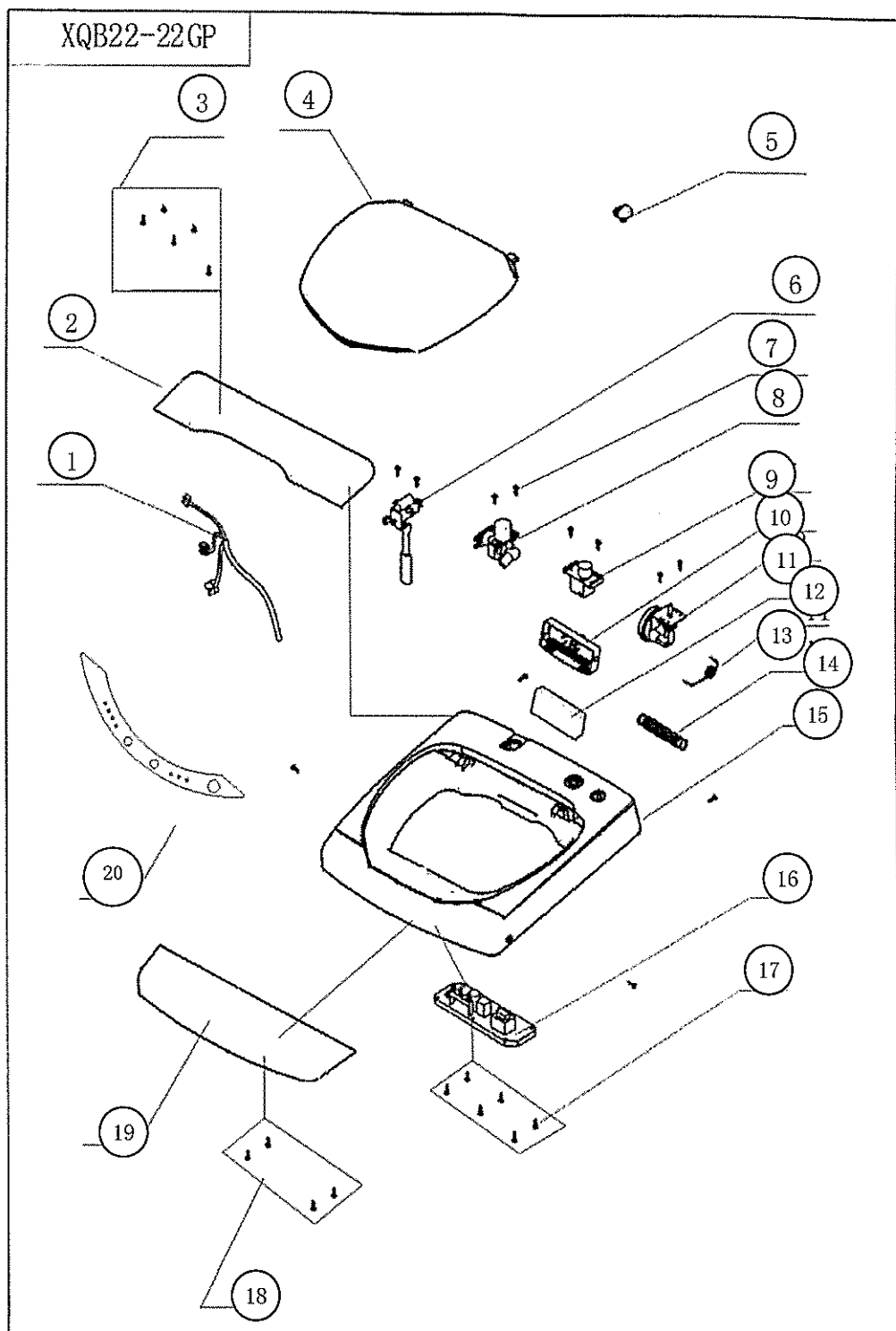
SECTION I Exploded views and replacement part list

Exploded views

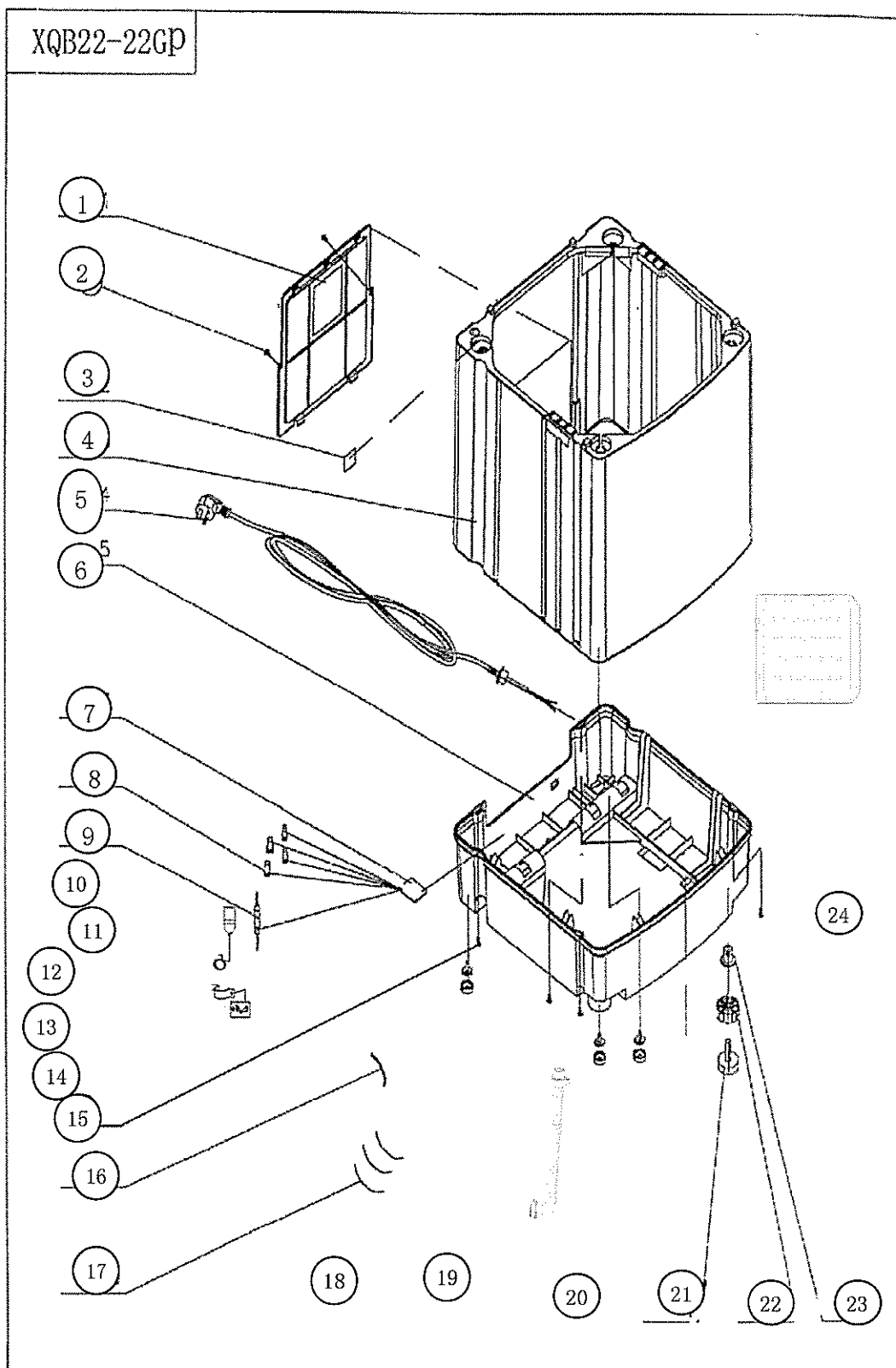
A. WORKTABLE PARTS



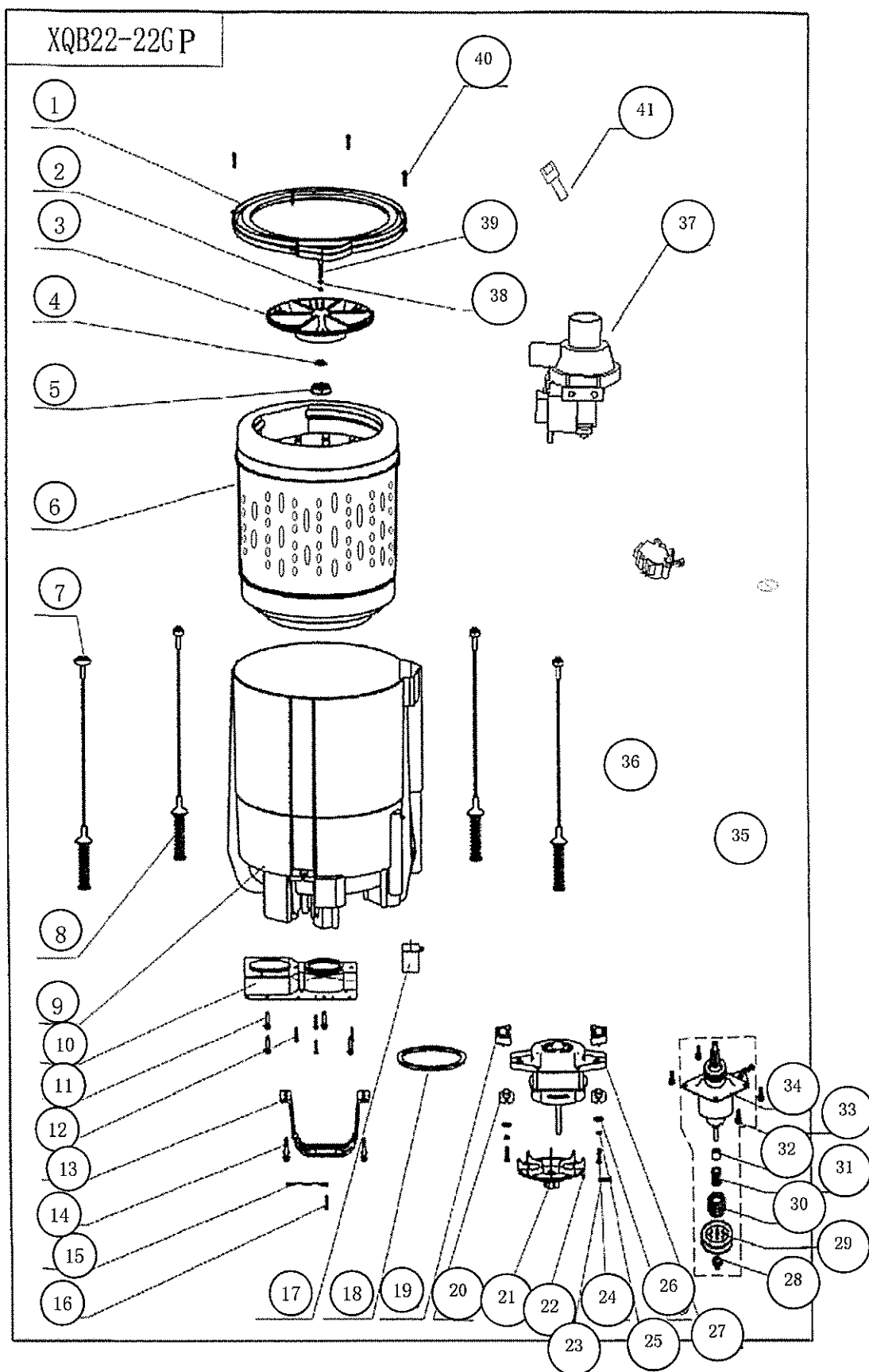
A. 工作台部装



B.BODY PARTS



C. 脱盛水部装



No.	Part Name	Quantity	BOM code	Remark
A-1	INTERNAL WIRE AND CONNECTOR	1		
A-2	BACK SHEET	1		
A-3	TAPPING SCREW	5		
A-4	LID	1		
A-5	PRESSURE SWITCH KNOB	1		
A-6	LID SWITCH	1		
A-7	TAPPING SCREW	2		
A-8	WATER INLET VALVE	1		
A-9	POWER SWITCH	1		
A-10	NOZZLE	1		
A-11	PRESSURE SWITCH	1		
A-12	NOZZLE SUBASSEMBLY	1		
A-13	TWIST SPRING	1		
A-14	WATER INLET HOSE	1		
A-15	WORKTABLE	1		
A-16	PCB	1		
A-17	TAPPING SCREW	6		
A-18	TAPPING SCREW	4		
A-19	FRONT SHEET	1		
A-20	CONTROL PANEL PLATE	1		

No.	Part Name	Quantity	BOM code	Remark
B-1	REAR COVER PLATE	1		
B-2	TAPPING SCREW	2		
B-3	electric parameter sticker	1		
B-4	upper CABINET	1		
B-5	POWER LINE	1		
B-6	nether CABINET	1		
B-7	INSULATING BAG	1		
B-8	INSULATING CONNECTOR	1		
	INSULATING CONNECTOR	6		
B-9	FUSE SUBASSEMBLY	1		
B-10	MOTOR CAPACITOR SUBASSEMBLY	1		
B-11	CAPACITOR CLAMP	1		
B-12	WASHER 4	1		
B-13	SPRING WASHER	1		
B-14	SCREW M4X18	1		
B-15	TAPPING SCREW	4		
B-16	PLASTIC CABLE TIE	1		
B-17	IRON CABLE TIE	3		
B-18	MIDDLE PIPE tie-in	1		
B-19	UP DRAIN PIPE	1		
B-20	SNAP RING	1		
B-21	LEVELING LEG	1		
B-22	KNOB	1		
B-23	STATIONARY LEG	3		
B-24	BASE PLATE	1		

No.	Part Name	Quantity	BOM code	Remark
C-1	OUTER TUB COVER	1		
C-2	O-RING	1		
C-3	PULSATOR	1		
C-4	PULSATOR ADJUSTINGWASHI	1		
C-5	BIG NUT	1		
C-6	INNER TUB	1		
C-7	FRONT SUSPEND SYSTEM	2		
C-8	REAR SUSPEND SYSTEM	2		
C-9	OUTER TUB	1		
C-10	BASE PLATE	1		
C-11	SPECIAL TAPPING SCREW	4		
C-12	SPECIAL TAPPING SCREW	4		
C-13	BRACKET	1		
C-14	BOLT	4		
C-15	EARTH WIRE	1		
C-16	SPECIAL TAPPING SCREW	1		
C-17	CAPACITOR	1		
C-18	V-BELT	1		
C-19	UP CUSHION	2		
C-20	DOWN CUSHION	2		
C-21	MOTOR PULLEY	1		
C-22	NUT	1		
C-23	BOLT	1		
C-24	BOLT	2		
C-25	WASHER	2		
C-26	WASHER	2		
C-27	MOTOR	1		
C-28	SPECIAL NUT	1		
C-29	CLUTCH PULLEY	1		
C-30	RATCHET WHEEL	1		
C-31	EMBRACE SPRING	1		
C-32	CLUTCH CASE	1		
C-33	CLUTCH BOLT	4		
C-34	CLUTCH	1		
C-35	the lid of overflow	1		
C-36	MOTOR RETRACTOR	1		
C-37	DRAIN PUMP	1		

C-38	T.L.WASHER	1		
C-39	IMPELLER SCREW	1		
C-40	TAPPING SCREW	4		
C-41	FILTER	1		