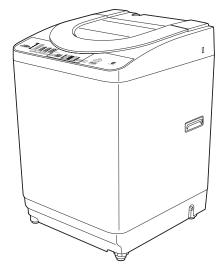
Order No. PHAT0610018C3

Service Manual Fully Automatic Washing Machine



Ashing Machine NA-F80G5 NA-F80X5 NA-F90G5 NA-F90X5 Export

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by Δ in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

Specification

Model		NA-F80G5	NA-F80X5	NA-F90G5	NA-F90X5	
	220V/50Hz	-	-	-	-	
Rate Voltage and Frequency	230V/50Hz	Singapore	-	-	Singapore (IEC)	
	240V/50Hz	Malaysia	Malaysia	Malaysia	Malaysia	
Rate Power Consumption	220V/50Hz	-	-	450	-	
	230V/50Hz	440	-	-	460	
	240V/50Hz	450	450	470	470	
Standard Water O	Consumption	172	Liter	177	Liter	
Standard Capacit	y	8]	Kg	9	Kg	
Water Supply Pre	essure		0.03 to 1Mpa (0	$0.3 \text{ to } 10 \text{ kgf/cm}^2$)		
Outer Dimension 643 mm X 637 mm X 1042 mm						
Weight			41	Kg		



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Contents

Page

1. Specification	3
2. Features and Technical Information4	1-5
3. Installation	3-7
4. Operations Panel	3
5. Wiring Diagram	9
6. Table of Errors 1	10
7. Troubleshooting 1	11–14
8. Location of Parts and Replacement Parts List 1	15-21

Usage :	For repairs and change of spare part only for washing machine type Panasonic Model NA-F80G5/NA-F80X5/NA-F90G5/NA-F90X5
Instruction for	r Usage : The work repair and changing of spare part should be operated by a skilled technician from the distribution agents, or Panasanic' s standard service center.
Warning :	Switch off electrical power before commencing work to avoid a potential short circuit or injury.

1. Specifications

NA-F80G5 / NA-F80X5

Voltage (AC)	230 V/50Hz : Singapore (IEC)						
voltage (AC)	240 V/50Hz : Malaysia						
External	Width	Depth	Height				
Dimension	643 mm	637 mm	1042 mm				
Water Consumption (Normal Program)	172 liter						
Water Pressure	0.3-10 Kg.f/cm ² (8-25 liter/min)						
Pulsator (r.p.m)	110 r/min						
Spin Tub (r.p.m)	740 r/min						
Machine Weight	1 Kg						
Colour	Grey						

NA-F90G5 / NA-F90X5

	220 V/50Hz : Indonesia, Iran (PGF)						
Voltage (AC)	230 V/50Hz : Singapore (IEC)						
voltage (IIe)	240 V/50Hz : Malaysia						
External	Width	Depth	Height				
Dimension	643 mm	637 mm	1042 mm				
Water Consumption (Normal Program)							
Water Pressure	0.3-10 Kg.f/cm ² (8-25 liter/min)						
Pulsator (r.p.m)	110 r/min						
Spin Tub (r.p.m)	740 r/min						
Machine Weight	41 Kg						
Colour	Grey, Silver						

Standard Water Consumption Model NA-F80G5 / NA-F80X5

Wash Level	Water	Clothes	Weight
High	74 liters	8.0 Kg	66 liters
<high lower=""></high>	69 liters	6.0 Kg	62 liters
Medium	62 liters	5.0 Kg	57 liters
<medium lower=""></medium>	58 liters	4.2 Kg	53 liters
Low 1	52 liters	3.5 Kg	49 liters
<lower 1="" lower=""></lower>	48 liters	2.5 Kg	45 liters
Low 2	42 liters	1.5 Kg	40 liters
<lower 2="" lower=""></lower>	38 liters	1.1 Kg	35 liters
Low 3	32 liters	0.8 Kg	30 liters
<lower 3="" lower=""></lower>	16 liters	0.3 Kg	16 liters

Motor Power	Input 320 Watts	Output 180 Watts						
Safety Switch	Checking u	Checking unbalance/ tub lid						
Alarm	Ų	Rings when finish washing or unusual						
Thermoprotector		Motor						
Water Inlet Hole		0						
Fabric softener dispenser	0							
Filter	0							
Automatic power- cut switch	0							
Accessories	Ta Drain p	ipe (1.2 m) ab joint bipe (80 cm) vention screen						

Motor Power	Input 320 Watts	Output 180 Watts				
Safety Switch	Checking unbalance/ tub lid					
Alarm	Rings when fi	nish washing or				
	un	usual				
Thermoprotector	М	otor				
Water Inlet Hole		0				
Fabric softener dispenser	0					
Bleach dispenser	0					
Filter	0					
Automatic power- cut switch	0					
Accessories	Tat Drain pij	be (1.2 m) b joint pe (80 cm) ntion screen				

Standard Water Consumption Model NA-F90G5 / NA-F90X5

Wash Level	Water	Clothes	Weight
High	74 liters	9.0 Kg	68 liters
<high lower=""></high>	69 liters	6.0 Kg	62 liters
Medium	62 liters	5.0 Kg	57 liters
<medium lower=""></medium>	58 liters	4.2 Kg	53 liters
Low 1	52 liters	3.5 Kg	49 liters
<lower 1="" lower=""></lower>	48 liters	2.5 Kg	45 liters
Low 2	42 liters	1.5 Kg	40 liters
<lower 2="" lower=""></lower>	38 liters	1.1 Kg	35 liters
Low 3	32 liters	0.8 Kg	30 liters
<lower 3="" lower=""></lower>	16 liters	0.3 Kg	16 liters

2. Features and Technical Information

Model NA-F80G5 / NA-F80X5 / NA-F90G5 / NA-F90X5

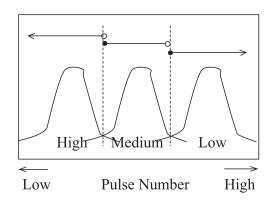
Program	Time					
Normal	approx. 47-56 min					
Mini	approx. 20 min					
Speedy	approx. 26-32 min					
Blancket	approx. 55 min					
Delicate	approx. 29-32 min					
Tub Hygiene	approx. 150 min					
Soak 1 hour	approx. 107 min					
Soak 8 hour	approx. 527 min					

Product special features

Dial indicating detergent level after sensing wash level Pre-set timer Fabric softener dispenser Detergent dispenser Automatic power-off when finish Dial indicating unusual sign (LED will blink) Alarm ON-OFF Overflow sensing device

Weight Sensor

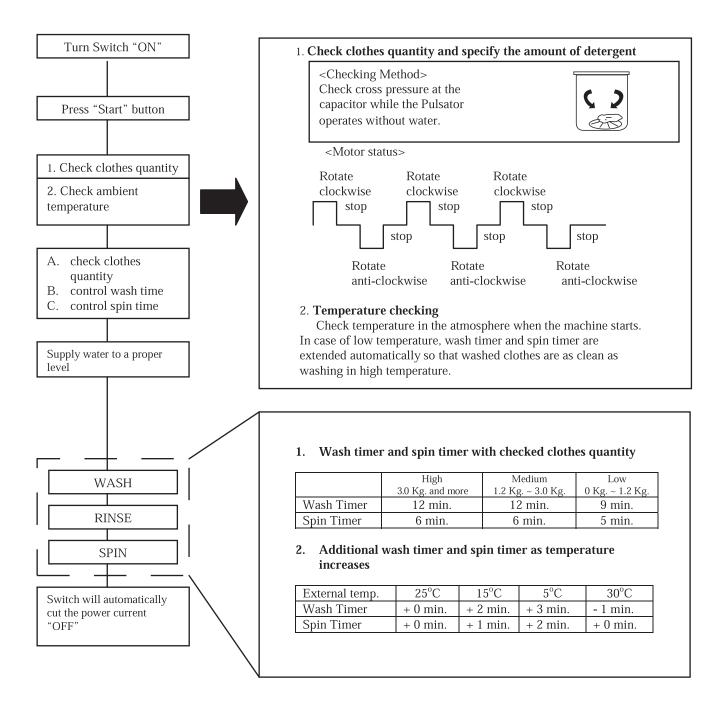
The weight is sensed by the moving force of the Pulsator, which changes a capacitor pole and releases a signal wave. The wave is changed into a pulse number from which the clothes weight is sensed. Prior to weight sensing for Normal and Strong program, the machine runs without water by spinning the Pulsator to left and right for 4.2 seconds (NO 0.3 second -OFF 0.4 second). The motor stops (OFF), a water system counts the pulse number, then calculates the accumulated pulse numbers for drawing water into the tub over a defined level. The dial will indicate High wash level.



2. Features and Technical Information

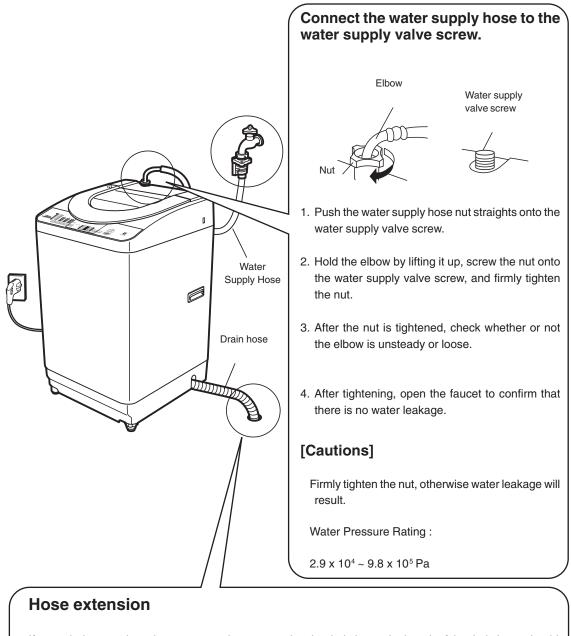
Function Control with Fuzzy sensor

Clothes quantity checking, wash level indication and detergent consumption indication with Fussy Logic system

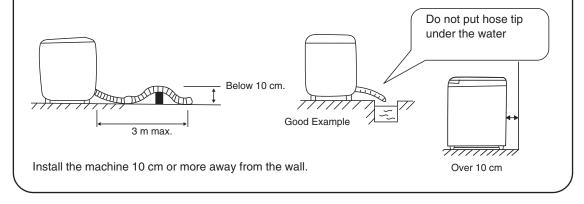


3. Installation

3.1 Checking of Placement

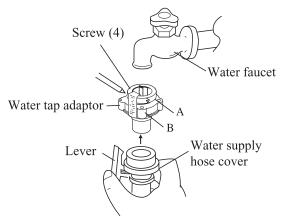


If extended external part is necessary when connecting the drain hose, the length of the drain hose should be less than 3 m and the height should be below 10 cm.



3. Installation

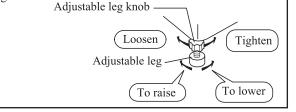
■ 3.2 Connect the water supply hose



3.3 Install Washing Machine to steady

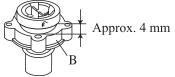
Adjust Hight of leg

- 1. Turn the adjustable leg knob towards (Loosen) direction to loose it.
- 2. Turn the adjustable leg to adjust the levelness.
 - 2.1 When increasing height, turn adjustable leg towards (Loosen) direction.
 - 2.2 When decreasing height, turn adjustable leg towards (Tighten) direction.
- 3. Turn the adjustable leg knob towards (Tighten) direction to tighten it.



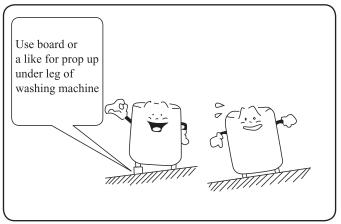
[Note]

- Firmly tighten part B of the water tap adaptor, otherwise water leakage will result.
- When the hose must be reinstalled (after you remove, for example), turn B to the left until about 4 mm of the thread becomes visible, then carry out the procedure described above.

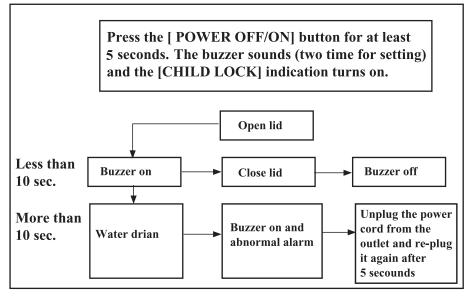


- If a water tap adaptor is already connected, replace with the attached new one.

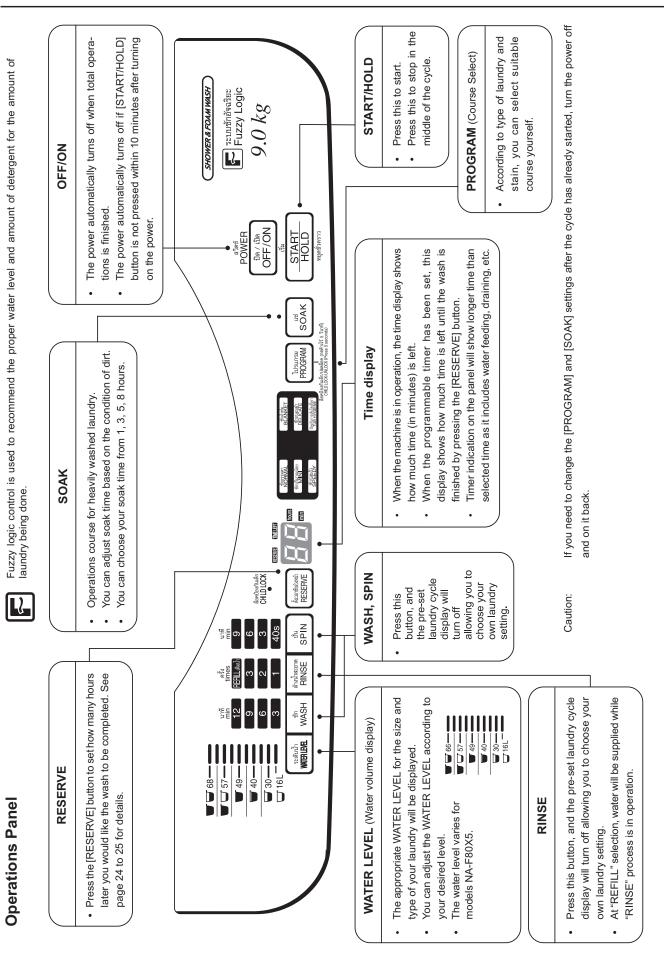
If the floor is largely inclined



3.4 CHILD LOCK Program

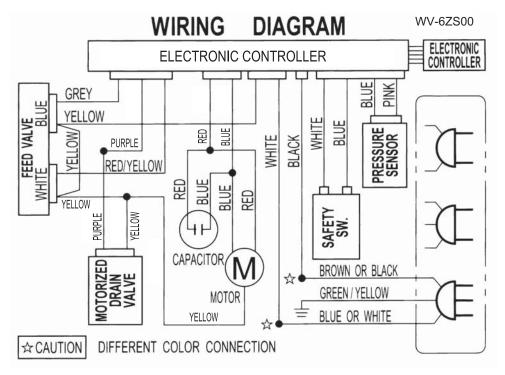


4. Operations Panel

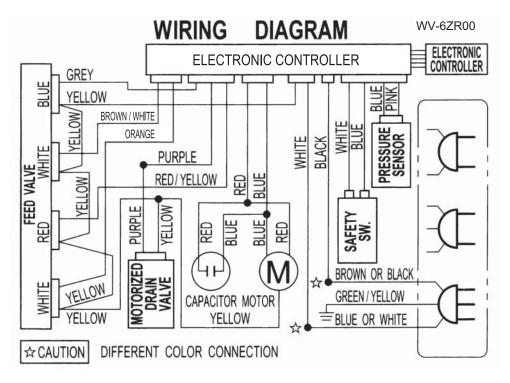


5. WIRING DIAGRAM

5.1 MODEL NA-F80G5 / NA-F90G5



5.2 MODEL NA-F80X5 / NA-F90X5



6. TABLE OF ERRORS

Error Indication

If the following indications appear on the display panel (buzzer sounds, U and H Characters appear).

	~ ~ ~ ~ ~							
	Check if abnormalities listed below are seen in the external water hose.							
	Is the hose connected?							
	Is it clogged with lint?							
1177	Is it crushed? Restart with open-							
<i>U11</i>	Is the tip soaked in water?							
	Is a part of hose at a height of over 10 cm midway?							
	• Is the extension hose longer than 3 m?							
	Is the hose being used too small?							
	Check if the lid is opened.							
(U12)	Close the lid.							
\square	Is the washing machine is an unsteady position, or is it on an inclined floor surface?							
<i>U13</i>	 Is the laundry unevenly distributed in the tub? 							
	 Arrange the laundry evenly in the tub, then close the lid. 							
\frown	Check if you have forgotten to connect the water hose and							
<i>U14</i>	to turn on the faucet.							
	Is the water supply cut off?							
(U99)	Check if lid is open when draining operation of the [CHILD LOCK] program is ON.							
<i>HO1</i>	 In case of H displays such as "H01", with no buzzer sounds pull out the power plug, and contact your dealer for service. 							

7. TROUBLESHOOTING

7.1 Table of Troubleshooting

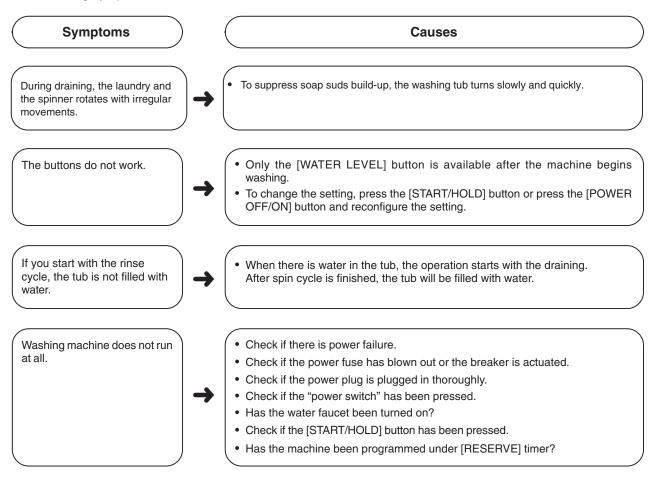
Problem	Corresponding device	l panel	Water Inlet Valve	Water level sensor	switch	lotor	tor	Mechanism case	Holding spring	Packing valve	Others
(have to	check)	Control panel	Control Water I	Water]	Safety switch	Gear motor	Capacitor	Mechar	Holding	Packing	
Machine	No light at the dial	0									
doesn't work	Dial light is on	0	0								
Unusual	No sound of water from inlet valve	0	0								
amount of	There is sound of water from inlet valve										Check water supply
water inside machine	Not enough water flow										Check water supply
machine	Water never stops flowing in	0	0	0							
Washing	Pulsator does not spin (no sound of motor)	0									Motor
system doesn't work	Pulsator does not spin (there is sound of motor)						0	0			Belt, Motor
	Pulsator spins only one way	0						0			Pulley, Motor
	Pulsator spins slowly	0									Belt, Motor
Unusual	No draining	0									
draining	Drains slowly	0				0				0	
Unusual	No spinning (no sound of motor)									0	
spinning	No spinning (Pulsator spins)	0			0						
system	No force in spinning (tub spins slowly)							0			
Unusual loud	Loud noise during washing										Belt, Motor
noise	Loud noise during dry spinning							0			Check installation
Water leak	Water leaks from drain pipe							0	0		Something clogged
	Water leaks at the bottom of machine										Drain pipe A, Pulsator
Incorrect	Water is supplied during spinning										Unbalanced tub, leaning
working	Rinses more than 3 times				0				0		Unbalanced tub, leaning
	Pulsator spins despite no water				0						Air pipe clogged
	Cannot change function program	0		0							Description of usage
	Water does not flow out of a filter										Description of usage
	No overflow during water filling as rinsing										Description of usage
	Selected washing program cannot be memorized										Description of usage
	Fabric softener flows away too fast										Description of usage
	Pulsator spins in short range as washing and rinsing										Description of usage
	Works at low wash level then supplies water again										Description of usage

Troubleshooting

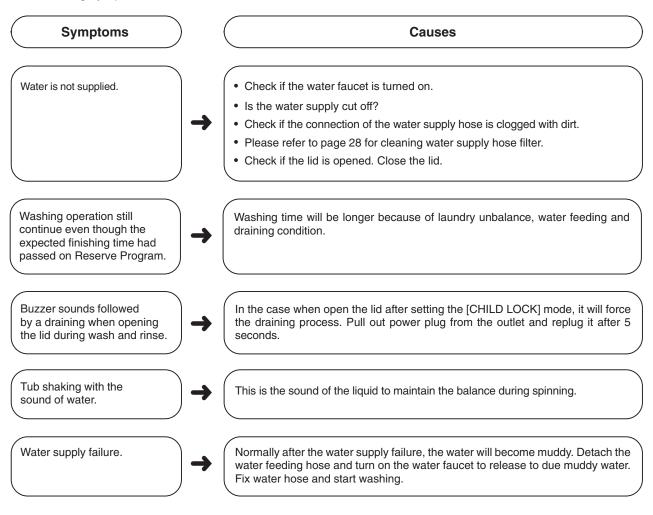
The following symptoms are not trouble.

Symptoms	Causes
Machine begins filling water in the middle of the wash.	• When the laundry amount is large at the HIGH water level, the machine sometimes fills automatically. When level goes down, the machine fills automatically.
The water level is too high for the amount of laundry being washed.	• When the laundry is already soaked with water before the wash is started, or if there is water in the tub before the wash is started, the water level will sometimes be higher.
The water level is too low for the amount of laundry being washed.	With light laundry made of synthetic or blended fabric, the water level will sometimes be lower.
Midway during spinning, the operation suddenly changes to rinsing.	• When the laundry is unbalanced during spin, rinsing and automatic correction of unbalanced laundry will begin. Later spinning will return to normal condition.
Water does not flow through the lint filter. Double Cascade does not operate.	• When the water level is set to very low, water sometimes will not flow through the lint filter. Double Cascade does not operate when these settings have been selected.
Softener spills out from softener drawer.	 Keep the level of the softener indicated to prevent the softener from flowing immediately. If you close the softener drawer forcefully, softener may spill out of the drawer.

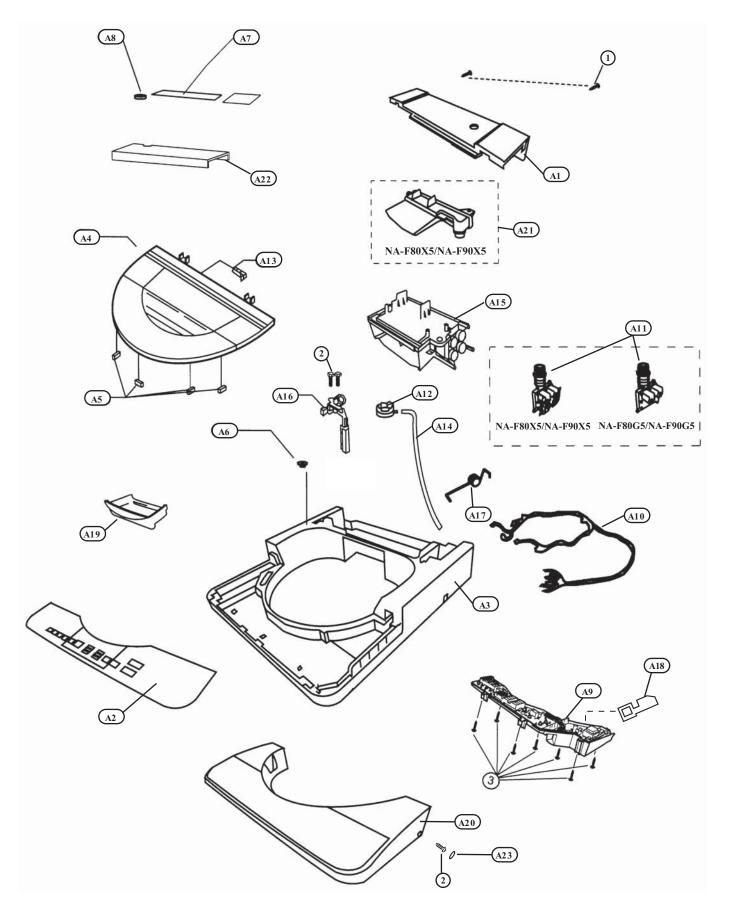
The following symptoms are not trouble.



The following symptoms are not trouble.



8.1 Location of Parts - A NA-F80G5/NA-F80X5 NA-F90G5/NA-F90X5



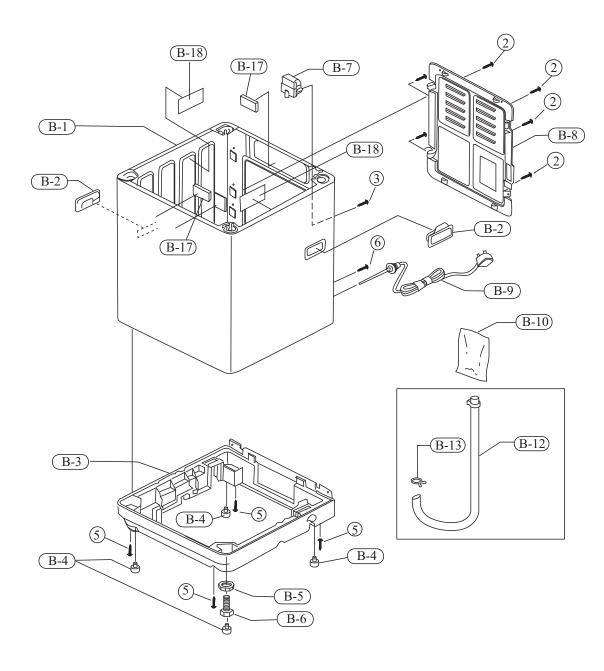
8.2 Replacement of Parts List - A

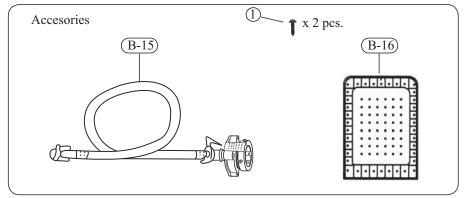
Ref									
No.	Part Name & Descriptic	Part Number	NA-F	80G5	NA-F9	1	NA-F80X5	NA-F	30X5
			Mal	Sin	Mal	Indo	Mal	Mal	Sin
A1	Panel A	AXW01306XB0A	1	1	1	1	1	1	1
A2	Panel face B	AXW01466ZR5A						1	1
		AXW01466ZR5J			1	1			
		AXW01466ZT5A					1		
		AXW01466ZT5J	1	1					
A3	Body B	AXW01026XB0A					1	1	1
		AXW01026XB0J	1	1	1	1			
A4	LidUnit	AXW001G6ZR0A						1	1
		AXW001G6ZT0A					1		
		AXW001G6ZS0A			1	1			
		AXW001G6ZU0A	1	1					
A5	Lid Packnig	AXW01646UP00	1	1	1	1	1	1	1
A6	Leveller	AXW03536DKA0	1	1	1	1	1	1	1
A7	Spinner lid label	AXW11176ZR50						1	1
		AXW11176ZR5A	1	1	1	1	1		
A8	Feeding port packing	AXW02676UP00	1	1	1	1	1	1	1
A9	Controller Unit	AXW024C6ZR16						1	1
		AXW024C6ZS16			1	1			
		AXW024C6ZT16					1		
		AXW024C6ZU16	1	1					
A10	Connecter Lead wire unit	AXW014A6ZR00		-			1	1	1
		AXW014A6ZS00	1	1	1	1		-	<u> </u>
A11	Feed Valve	AXW292120806				<u> </u>	1	1	1
		AXW292120906	1	1	1	1		-	<u> </u>
A12	Pressure sensor unit	AXW024T02800	1	1	1	1	1	1	1
		AXW024T03300	1	1	1	1	1	1	1
A13	Lid Hinge Shaft	AXW01936UP00	1	1	1	1	1	1	1
A14	Sub drain hose unit	AXW002Q6XB00	1	1	1	1	1	1	1
A15	Detergent case unit	AXW021B6XB00				· ·	1	1	1
/ 10		AXW021B6XC00	1		1	1			<u>├</u>
A16	Safety switch	AXW166123400	1	1	1	1	1	1	1
/ 10	Callety Switch	AXW166122910	1	1	1	1	1	1	1
Δ17	Lid hing spring	AXW11166XB00	1	1	1	1	1	1	1
	Insulation Spacer A	AXW04866ZR00	1	1	1	1	1	1	1
A19	Detergent case B	AXW21516XB0A		1	- 1		1	1	1
713	Detergent case D	AXW21516XC0J	1	1	1	1	1	1	⊢∸
A20	Panel face A	AXW21516AC05	1	1	1	1			├──
720		AXW01456XB05		I		<u> '</u>	1	1	1
A21	Nozzel unit	AXW01456XB0A					1	1	1
A21 A22	Penel B	AXW008E6XB00 AXW01406XB0L			1	1		1	⊢⊢
AZZ								1	1
A 00	Danal R	AXW01406XB0A					4	I	\vdash
A22	Panel B Wringer Dert Frame Decknig	AXW01406XB0K		4	4	4	1		—
A23	Wringer Port Frame Packnig	AXW01636XB0J	1	1	1	1	4	4	
		AXW01636XB0A					1	1	1

SCREWS

No	Part Name	Part Number	NA-F80G5		NA-F9	0G5	NA-F80X5	NA-F	90X5
1	Special Tapping Screw	XTWAXW 469J	1 1		1	1	1	1	1
2	Special Tapping Screw	XTB4+15CFJ	1	1	1	1	1	1	1
3	Special Tapping Screw	XTB4+12CFJ	1	1	1	1	1	1	1

8.3 Location of Parts List - B





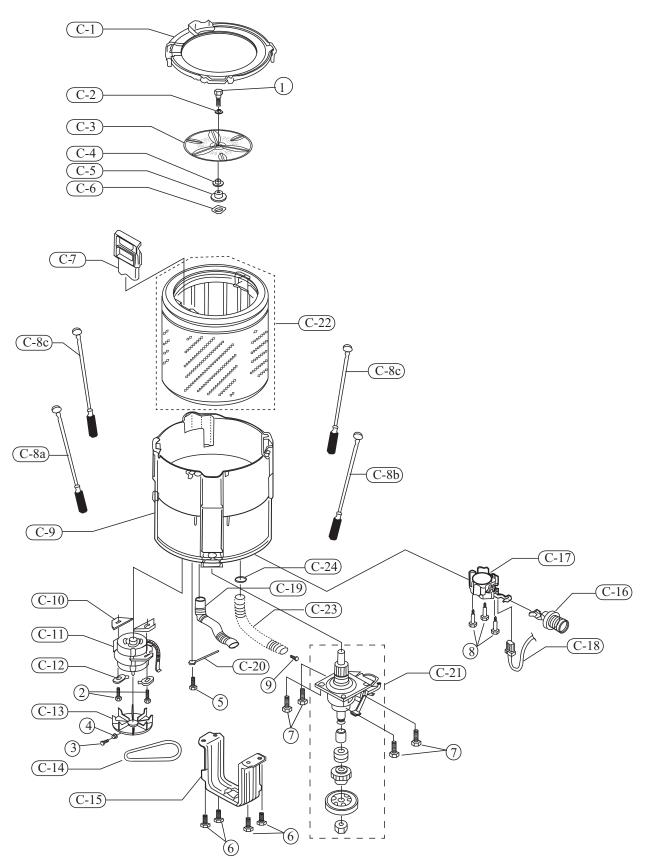
8.4 Replacement of Parts List - B

Ref									
			NA-F			90G5	NA-F80X5	NA-F9	90X5
No.	Part Name&Descriptic	Part Number	Mal	Sin	Mal	Indo	Mal	Mal	Sin
B 1	Body A Unit	AXW001A6XB0J	1	1	1				
B 1	Body A Unit	AXW001AXB0A					1	1	1
B 1	Body A Unit	AXW001A6XD0J				1			
B2	Grip	AXW01106UP0J	1	1	1	1	1	1	1
B 3	Base A	AXW03016XB00	1	1	1	1	1	1	1
B4	Leg Covering	AXW03396UP00	1	1	1	1	1	1	1
B 5	Adjustable Leg Thumb	AXW03436ZV00	1	1	1	1	1	1	1
B6	Adjustable Leg	AXW03356UP00	1	1	1	1	1	1	1
B7	Capacitor	AXW04037P907	1	1	1	1	1	1	1
B8	Back Panle	AXW01566ZV00	1	1	1	1	1	1	1
B9	Power Cord Unit	AXW004A72914							
B9	Power Cord Unit	AXW004A77254	1		1		1	1	
B9	Power Cord Unit	AXW004A73014				1			
B9	Power Cord Unit	AXW004A83400	1	1	1	1	1	1	1
B9	Power Cord Unit	AXW004A78115	1	1	1		1	1	1
B10	Chemical Cover	AXW04486UP10	1	1	1	1	1	1	1
B12	Flexible Hose B Unit	AXW002E6XB00	1	1	1	1	1	1	1
B13	Hose B and	AXW02546XB00	1	1	1	1	1	1	1
B15	Service Pressure Hose Unit	AXW012C6ZY00	1	1	1	1	1	1	1
B16	Bottom Cover	AXW 21586ZR 00	1	1	1	1	1	1	1
B17	Body A Protection	AXW 90466NTA0	1	1	1	1	1	1	1
B18	Body A Protection	AXW 90466AA5M	1	1	1	1	1	1	1

SCREWS

No.	Part Name	Part Number	NA-F80G5		NA-F90G5		NA-F80X5	NA-F9	0X5
1	Special Tapping Screw	XTTAXW444J	1	1 1		1	1	1	1
2	Special Tapping Screw	XTTAXW444J	1	1 1		1	1	1	1
3	Special Tapping Screw	XYNAXW438J	1	1	1	1	1	1	1
4	Special Tapping Screw	XTTAXW444J	1	1	1	1	1	1	1
5	Pan Head Screw	XSN5+10BNS	1	1	1	1	1	1	1

8.5 Location of Parts List - C



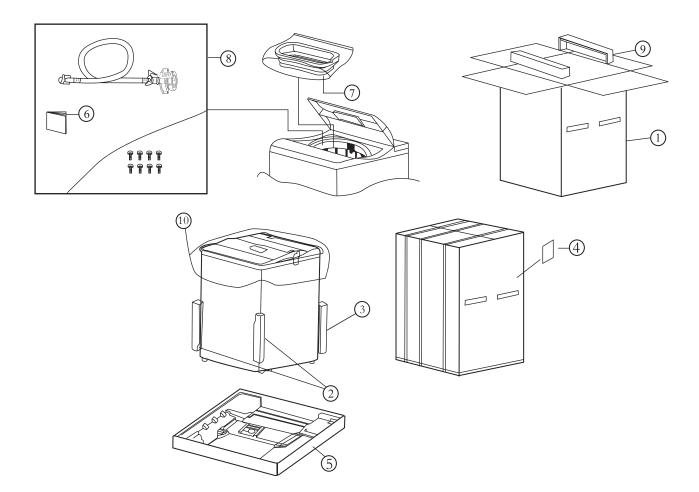
8.6 Replacement of Parts List - C

Ref					-				
			NA-F	80G5	G5 NA-F90G5		NA-F80X5	NA-F	90X5
No.	Part Name&Descriptic	Part Number	Mal	Sin	Mal	Indo	Mal	Mal	Sin
C 1	Outer Tub Cover	AXW 32246CH10	1	1	1	1	1	1	1
C 2	O-ring	AXW02576BM00	1	1	1	1	1	1	1
С3	Pulsator Unit	AXW005E6ZR0P							
C4	Shaft Bushing	AXW05046ZR00	1	1	1	1	1	1	1
C 5	Spinner Shaft Flange Nut	AXW15176RU00	1	1	1	1	1	1	1
C6	Spinner Flange Washer B	AXW151980200	1	1	1	1	1	1	1
C7	Filter Unit	AXW022A6RU00	1	1	1	1	1	1	1
C8a	Suspension Unit (F-R)	AXW034U6ZR50	1	1	1	1	1	1	1
C8b	Suspension Unit (F-L)	AXW034U6ZRA0	1	1	1	1	1	1	1
C8c	Suspension Unit (R-R/L)	AXW034U6ZR00	1	1	1	1	1	1	1
C 9	Outer Tub Cover	AXW12016CG10	1	1	1	1	1	1	1
C10	Motor Washer A	AXW04206JZ00	1	1	1	1	1	1	1
C11	Motor	AXW040157616	1	1	1	1	1	1	1
C12	Motor Washer B	AXW04216JZ00	1	1	1	1	1	1	1
C13	Motor Pulley	AXW04116XB00	1	1	1	1	1	1	1
C14	V-Belt	AXW041219850	1	1	1	1	1	1	1
C15	Spinner Plate B	AXW 32325TP10	1	1	1	1	1	1	1
C16	Valve Frame Unit	AXW009D6XB00	1	1	1	1	1	1	1
C17	Gear Motor	AXW 348201006	1	1	1	1	1	1	1
C17	Gear Motor	AXW 348202516	1	1	1	1	1	1	1
C18	Lead Wire Unit	AXW014B6UP00	1	1	1	1	1	1	1
C19	Over Flow Hose B	AXW02345TW0M	1	1	1	1	1	1	1
C 20	Earth Unit	AXW003F6UP00							
C21	Mechanism Case Unit	AXW020A6UA40	1	1	1	1	1	1	1
C 22	Tub Unit	AXW002A6ZR00	1	1	1	1	1	1	1
C 2 3	Flexible Hose A Unit	AXW 002D6E M00	1	1	1	1	1	1	1
C24	Hose Band	AXW02456UP00	1	1	1	1	1	1	1

SCREWS

No.	Part Name	Part Number	NA-F	NA-F80G5		90G5	NA-F80X5	NA-F	90X5
1	Special Screw	XSSAXW679							
2	Special Bolt	XVGAXW839J	1	1	1	1	1	1	1
3	Special Bolt	XVGAXW703J	1	1 1		1	1	1	1
4	Special Bolt	XNGAXW 701J	1	1 1		1	1	1	1
5	Special Bolt	XVGAXW411J	1	1	1	1	1	1	1
6	Special Bolt	XTWAXW 6517J	1	1	1	1	1	1	1
7	Special Bolt	XVGAXW812J	1	1	1	1	1	1	1
8	Special Tapping Screw	XTWAXW 6518J	1	1	1	1	1	1	1
9	Special Tapping Screw	XTWAXW 471	1	1	1	1	1	1	1

8.7 Location of Packing Part



8.8 Replacement of Packing Part List

No.	Part Name & Descriptic	Part Number	NA-F	80G5	NA-F	90G5	NA-F80X5	NA-F	90X5
INO.	i art Name & Descriptie		Mal	Sin	Mal	Indo	Mal	Mal	Sin
1	Protection case A	AXW90016ZU50	1						
		AXW90016ZT50					1		
	[AXW90016ZS50			1				
		AXW90016ZR50						1	
		AXW90016ZRA0							1
	Ī	AXW90016ZUA0		1					
2	Corner Cushion	AXW90156XB00	2	2	2	2	2	2	2
3	Corner Cushion	AXW90156UP10	1	1	1	1	1	1	1
4	Stock Card	AXW99186UP00	1	1	1	1	1	1	1
5	Protection case B Unit	AXW090B6XB00	1	1	1	1	1	1	1
6	Operation Instruction	AXW99016ZR50					1	1	1
		AXW99016ZS50	1	1	1				
		AXW99016ZS00			1				
		AXW99016ZR00			1				
	l f	AXW99016ZSA0				1			
7	Spin Tub Supporter	AXW90856XB00	1	1	1	1	1	1	1
8	Accessories Bag	AXW90576UP00	1	1	1	1	1	1	1
9	Body Cover	AXW90046XB00	1	1	1	1	1	1	1
10	Polyethylene Cover	AXW90606XB00	1	1	1	1	1	1	1