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WASHING MACHINE SERVICE MANUAL

CAUTION

READ THIS MANUAL CAREFULLY TO DIAGNOSE TROUBLECORRECTLY BEFORE OFFERING SERVICE.

MODEL : WD-3274RHD / WD-3276RHD

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1. SPECIFICATION

ITE	M	WD-3274RHD / WD-3276RHD					
POWER S	UPPLY	120V~, 60Hz					
PRODUCT	WEIGHT	156 ¹ / ₂ lbs. (71 kg)					
	WASHING	140W					
ELECTRICITY	SPIN	300W					
CONSUMPTION	FAN MOTOR	25W					
	DRAIN MOTOR	40W					
	WASH HEATER	1000W					
	DRY HEATER	1200W					
REVOLUTION	WASH	45rpm					
SPEED	SPIN	No spin/400/800/1000/1400 rpm					
OPERATION W	ATER PRESSURE	4.5 ~ 145 PSI (30 ~ 1000 KPa)					
CONTR	OL TYPE	Electronic					
WASH CA	APACITY	15 ² / ₅ lbs. [7.0 kg]					
DRY CAF	PACITY3.0kg	8 ⁴ / ₅ lbs. [4.0 kg]					
DIMEN	SION	23 ⁵ / ₈ x 23 ⁵ / ₈ x 33 ¹ / ₂ in. (600 x 600 x 850mm)					
WASH PR	OGRAM	Cotton, Perm. Press, Wool/Silk, Rinse+Spin, Sanitary					
WASH/DRY F	PROGRAM	Cotton, Perm. Press, Rinse+Spin, Sanitary					
OPTI	ON	Dry only, Extra Rinse, Extra Wash					
DOOR SWI	TCH TYPE	Bi-Metal type					
WATER	LEVEL	8 steps (by sensor)					
RESERV	ATION	From 3 hours to 19 hours					
SENSING OF THE L	AUNDRY AMOUNT	Adapted					
FUZZY L	OGIC	Adapted					
DISPLAY OF THE R	REMAINING TIME	Adapted					
ERROR DIA	AGNOSIS	10 items					
POWER AU	JTO OFF	Adapted					
CHILD I	_OCK	Adapted					
AUTO RE	START	Adapted					
RAP	ID	Adapted					

2. FEATURES & TECHNICAL EXPLANATION

2-1.FEATURES







SPIN

TIME DELAY

Automatic process from washing to drying.

Automatic process from washing to drying can be selected easily.

Washing capacity : 15 $^{5}\!\!/_2$ lbs.; c7.0 kg ; d Drying capacity : 8 $^{4}\!\!/_5$ lbs.; c4.0 kg ; d

More economical by Intelligent Wash System Intelligent Wash System detects the amount of load and water temperature, and then determines the optimum water level and washing time to minimize energy and water consumption.

Direct Drive system

The advanced Brushless DC motor rotates the Drum directly without belt and pulley.

Child-Lock

The Child-Lock system has been developed to prevent children from pressing any button to change the program during operation.



Low noise speed control system

By sensing the amount of load and balance, automaticaly distributes load evenly to minimize the spinning noise level.



Auto Restart

Although the washing machine is turned off by a power failure, it restarts automatically where it stopped when power is supplied again. And it will be the same if the machine unplugged and is plugged in again.

2-2.DETERMINE WASHING TIME BY FUZZY LOGIC

To get the best washing performance optimal time is determined by sensing of water temperature, selected washing temperature and laundry amount.



2-3.WATER LEVEL CONTROL

- This model adopts a pressure sensor which can sense the water level in the tub.
- Water supply is stopped when the water level to the preset level, then the washing program proceeds.
- Spinning does not proceed until the water in the tub reduces a certain level.

3. PARTS IDENTIFICATION



ACCESSORIES



4. INSTALLATION

- 1 Before servicing ask trouble the customer, what the trouble is.
- 2 Check the adjustment (power supply is 120V~ remove the transit bolts....)
- 3 Check the troubles referring to the troubleshooting.
- 4 Decide service steps referring to disassembly instructions.
- 5 Then, service and repair.
- 6 After servicing, operate the appliance to see whether it works O·K or NOT.

■ STANDARD INSTALLATION

The appliance should be installed as follows.



■ HOW TO CONNECT INLET HOSE

- Check that the rubber washer is inside of the valve connector.
- Connect the inlet hose firmly to prevent leak.



■ CONNECT DRAIN HOSE





% The drain hose should be placed under 100cm from the floor.

■ CONNECT POWER PLUG





7 TEST OPERATION



Option

Extra Wash

- If the laundry is heavily soiled, "Extra Wash" course is effective.
- Extra Wash is available in Sanitary, Cotton and Perm. press.

Extra Rinse

• This option can be used to add a rinse for people with sensitive skin. Selecting the Extra Rinse button is also recommended when washing heavily soiled fabrics which needs a lot of detergent, or when the wash load contains towelling fabrics that have a greater tendency to retain detergent.

Rinse hold

- If you desire to leave fabrics in the machine without spinning after rinse to prevent them wrinkling, you may select rinse hold by pressing the spin button.
- If you want to drain and spin, when Rinse Hold function is proceed, Press the Start/Pause button to cancel the Rinse Hold function and select spin speed or program. Press the Start/Pause button again to start program.
- If you want to drain only, select the no spin.
- If lamp turns on, that function has been selected.



Water temperature selector

- Press the button to select water temperature.
- The water temperature [WARM/COLD \rightarrow WARM/WARM \rightarrow HOT/COLD \rightarrow TAB COLD/COLD \rightarrow COLD/COLD] selected in Cotton or Perm. Press.
- [HOT/COLD] is selected for Sanitary only.
- By pressing the button while operating the washer,
- the present temperature is displayed.

Child - lock

- Child Lock system can be set and canceled by pressing both [SPIN] and [TIME DELAY] button simultaneously.
- Once Child Lock is set, all button are inoperable.
- Child Lock system can be set anytime even during Power-off and operation.
- It is automatically cancelled when an operational error occur.



6. WIRING DIAGRAM / PROGRAM CHART



*():Wash/Dry

F	PR	GRAI	MC	<u>CH/</u>	AR'	T (I	KG	D2	<u>-P</u>	JT)				^	Wa	ater	S	lbb	bly :	: VV	•S	/ Ir	nter	mi	tter	nt S	spir	ו : ו	•S	10	lista	angle : D• I
	YCLE			W	ash	ing										F	lins	е							Ģ	Snin				А		
		-	Pre			Mai		n					1	Vorr	nal							Rin	se+	-					F	U T		
		\mathbf{N}		g		_		was	shing		1	1			2				3				4	4						N	ō	
C 0 U		T E P	S•W	washin	drain	s.	S•W	heating	washing	drain	s. ∙	S•W	rinse	drain	S•I	S•M	rinse	drain	s•	N•S	rinse	drain	S•I	S•M	rinse	drain	spin	ЪЧ	DRY	D	O F F	Normal working Time
R			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	20	20	
S E		TIME (sec	120	(min)	60	240	120		(min)	60	240	120	180	60	240	120	180	60	240	120	180	60	240	120	180	60	480	180	"_	20	20	
С	otto	on	xux	8		0.000																							00.00			About 1:22(4:31)
Р	erm.	. Press		8		2000																							0707			About 1:17(4:25)
s	ani	tary		>	<	\leq																	EXEX	coxe	kirite				EXIED			About 1:37(4:46)
V	Voo	l/Silk		>	<	\langle												0.003		CK 100									Х			About 56
R	linse	e+Spin	xuxi	8		ann													w										2022			About 32
s	spin																												X			About 12

: Basic Cycle

* Pre-Setting Time : Water Supply - 120 sec.

- 60 sec. Drain

* Basic time is minute in washing chart

* The actual program time can be varied with the load amount.

7. TROUBLESHOOTING

7-1.BEFORE PERFORMING SERVICE

- \blacksquare Be careful of electric shock or disconnecting the parts while trouble shooting.
- Voltage of each terminal in 120V~ and DC while applying an electric current.

7-2.QC TEST MODE.

¤ Pressing SPIN, and TEMP. button simultaneously.

¤ŁPower supply ON with pressing upper two button. Then buzzer sound twice.

¤ØPress the START/PAUSE button as follows.

[Press the START/PAUSE button more 4 times until stop spinning]

Pressing number of [START/PAUSE] button	Checking Point	Display Status
None	All lamps turn on	
1 time	Clockwise spin (right)	Drum rpm (About 40~52)
2 times	Low speed Spin	Drum rpm (About 70~90)
3 times	High speed Spin	Drum rpm (About 110~130)
4 times	Inlet valve for pre-wash operation	Water level frequency (25~65)
5 times	Inlet valve for main-wash operation	Water level frequency (25~65)
6 times	Inlet valve for dry operation	Water level frequency (25~65)
7 times	Counterclockwise spin (left)	Drum rpm (About 40~52)
8 times	Heater is in operation for 3 sec.	Water temperature
9 times	Draining pump operation	Water level frequency
10 times	Dry operation for 6 minutes	Auto off operation after 6 minutes

7-3.HOW TO KNOW THE WATER LEVEL FREQUENCY

* Press the OPTION and TEMP. button simultaneously.



The digits means water level frequency (10⁻¹ kHz)

ex) 241 : Water level frequency = 241 \times 10 $^{-1}\,\rm kHz$

 $=24.1 \, \text{kHz}$

7-4.HOW TO KNOW TO TEMPERATURE OF EACH THERMISTOR AT OPERATING CONDITION.

Thermistor in tub : Press the [WATER TEMP.] button.

■ Thermistor in dry duct : Press the [DRY] button.

■ Thermistor in condensing duct : Press the [SPIN] and [DRY] button simultaneously.

7-5.ERROR DISPLAY.

- If you press the START/PAUSE button when an error is displayed. any error except "PE _ will disappear and the machine will change into pause status.
- In case of *PE*, *FE*, *fE*,

	ERROR	SYMPTOM	CAUSE							
1	WATER INLET ERROR	(IE	 Not reached to the water level (2 level) within 4 minutes after water supplied or not reached to the preset water level within 25 minutes. 							
2	DRAIN ERROR	(DE)	 Not fully drained within 5 minutes. 							
3	OVERFLOW ERROR	<u>F</u> <u>F</u>	 Water is over flowing (over 8 level). i If FE is displayed, drain pump operates to drain water automatically. 							
4	SENSOR PRESSURE S/W ERROR	<u>F</u> E	The sensor pressure switch is out of order.							
5	DOOR OPEN ERROR	E)	 In case of operating the reservation function or the other function with door opened. Close the door, then the error display is resolved. The door switch is out of order. 							
6	IMBALANCE ERROR		The appliance is tilted.Laundry is gathered to one side.							
7	HEATING ERROR	E E	The THERMISTOR is out of order.							

	ERROR	SYMPTOM	CAUSE
8	CURRENT ERROR	EE	 MAIN PWB ASSEMBLY is out of order Replace the MAIN PWB ASSEMBLY Winding in the STATOR ASSEMBLY is short-circuited. Replace the STATOR ASSEMBLY <i>EE</i> is dispplayed during a high spin Replace the LEAD WIRE ASSEMBLY (MOTOR)
9	MOTOR ERROR	L E	 The connector in the LEAD WIRE ASSEMBLY is not connected to the connnector of STATOR ASSEMBLY Reconnect or repair the connector The hall sensor is out of order/defective. Replace the STATOR ASSEMBLY
10	DRY HEATOR ERROR	, <u>_;;-;;</u> _	 The Dry Heater is out of order Replace the Dry Heater The Connector of the Dry Heater is not connected properly to the connector in the Main PWB ASSEMBLY Reconnect or repair the connector The Dry fan motor is out of order Replace the fan Motor.

8. ERROR DIAGNOSIS AND CHECK LIST







8-2.FAULT DIAGNOSIS AND TROUBLE SHOOTING

CAUTION

- 1. Be careful of electric shock or disconnecting the parts while trouble shooting.
- 2. First of all, check the connection of each part terminal with wiring diagram.
- 3. If you replace the MAIN PWB ASSEMBLY, Put in the connectors correctly.





SOFTENER DOES NOT FLOW IN



ABNORMAL SOUND



HEATING WITHOUT WATER When pressing OPTION and SPIN at the same time after draining, is the water level frequency 248 ~ 262 or OPTION SPIN Replace the more? S.PRESSURE SWITCH NO When pressing SPIN, DRY buttons at the same time ASSEMBLY while wash, is the water level frequency between 230 - 243 ? : 🖵 YES 🖵 ſ ... Checking voltage between two pins as press the Replace the MAIN PWB 股 POWER button is the voltage 120V~? YES ASSEMBLY AC 120V

DRAIN MALFUNCTIONING







[dHE] ERROR DISPLAY



DRY HEATER TROUBLE



DRY FAN MOTOR TROUBLE



LOT OF VAPOR IN DRAWER WHEN DRYING



9. DISASSEMBLY INSTRUCTIONS

fR Disassemble and repair the parts after pulling out power cord from the outlet.

CONTROL PANEL





LU Unscrew the 2 screws on the top plate.

¥M The PLATE ASSEMBLY (Top) is pulled back and then upward to arrow direction.

¥NThe cover (Inner) is disassembled.

- ¥L The PWB ASSEMBLY (Display) connectors are disconnected.
- ¥M Pull out drawer, three screws are unscrewed.
- ¥N Press two upper hooks and pull the control panel forward.



- ¥⊥The PWB assembly (Display) is disconnected.
- ¥M When 1 screws are unscrewed on the PWB insulator and the PWB assembly (Display) is disassembled from the PWB insulator.

PWB ASSEMBLY (POWER)



 ${\tt YL}\xspace$ The back cover is removed.

¥MTwo screws are unscrewed.

¥NDisconnect connector from the wiring.

¥○Pull the PWB ASSEMBLY (Main) to arrow direction.

DISPENSER ASSEMBLY



¥L The PLATE ASSEMBLY (Top) and the cover (Inner) are disassembled.¥MPull the drawer to arrow direction.

 $\ensuremath{\mathbbm s}$ Two screws are unscrewed.



- ¥L The hose clamps (6EA) and the hose are disassembled.
- ¥MThe ventilation bellows are disassembled on the tub.

INLET VALVE



¥LDisconnect the wiring connector.

¥M Remove the valve by two screws of the valve holder.

f TWhen reconnecting the connector

VALVE ¥L(DRY)	YL/BK - BK
VALVE ¥M(LIQUID BLEACH)	GY/WH - BK
VALVE ¥N (NORMAL-WASH)	WH/BK - BK
VALVE (HOT)	BL/RD - BK

COVER LOWER



¥L Remove the lower cover to arrow direction after one screw is unscrewed.

DOOR





¥LOpen the door completely.¥MRemove the two screws from the hinge.

Removing method of remained water

¥LRotate the Cap(Remaining Hose) to arrow direction.

¥MPull it out from hose.

; First, prepare a bucket to put in the remained water.

GASKET ASSEMBLY



 \checkmark



- $\mathtt{YL}\xspace$ The cabinet gasket clamp is released.
- ¥M Two screws are unscrewed from the cabinet cover.

¥LOne screw is unscrewed from the lower cover.

¥M The lower cover is disassembled by pulling out.

 $\ensuremath{\mathtt{YN}}\xspace$ Three screws are unscrewed from the cabinet.



¥LThe control panel is removed.¥MScrew is unscrewed from the cabinet cover.







¥L Remove tub gasket clamp by loosening the screw.

¥L Remove dry gasket clamp by loosening the screw.

¥L When reassembling the gasket, put the drain hole of the gasket downward, then assemble.



LRemove the back cover.

¥M After loosening the bolt, Rotor, pull out the rotor.







⁽FRICTION DAMPER)

 \mathbf{YL} Remove the bolts at the Tub.

- ¥M The Hinge (Damper) at the base is pulled off pressing on the snaps at the sharp end.
- ¥N The hinge at the base is pulled off. (To arrow direction)



HEATER



¥LRemove pump outlet hose.¥MRemove tub pump bellows.¥NRemove cap (Remaining Hose).

¥0Disconnect the wiring.

¥PThree screws are unscrewed from the cabinet.

 $\ensuremath{\mathbbmath$\mathbbms$} Q \ensuremath{\mathsf{Remove}}$ the pump to arrow direction.

¥LLoosen the nut. ¥MRemove washing heater by pulling out.



When assembling the washing heater, insert the heater to heater clip on the bottom of tub.



¥LPull it out by holding the thermistor bracket.

fT If holding the wire and pulling out it, it may be broken.

DOOR HINGE ASSEMBLY



- ¥L Two screws are unscrewed on the door and the door is disassembled.
- ¥MThe cabinet cover clamp is removed and the gasket is released.
- $\ensuremath{\mathtt{YN}}\xspace Two screws are unscrewed on the door hinge.$
- ¥OThe door hinge is disassembled by pushing the door hinge arm inside the cabinet cover.

SWITCH ASSEMBLY, DOOR LOCK



¥L The cabinet cover clamp is removed and the gasket is released.

 ${\tt {\tt YM}} Two$ screws are unscrewed.

¥NThe door lock S/W is disconnected form the wiring connector and the strap.

WHEN FOREIGN OBJECT STUCK BETWEEN DRUM AND TUB



¥LRemove washing heater.

¥MRemove the foreign object(wire,coin,etc) by inserting long bar in the hole.



¥LRemove 5 screws and dry fan assembly. ¥MRemove 6 screws and dry duct upper.



¥LRemove 1 screw and dry heater. ¥MRemove thermostat.

CONDENSING DUCT





LRemove 2 screws from cabinet.

LRemove clamp and condensing duct.

10. EXPLODED VIEW AND PART LIST

10-1.THE PART LIST OF CABINET ASSEMBLY



10-2 THE EXPLODED VIEW OF CONTROL PANEL & DISPENSER ASSEMBLY



10-3 THE EXPLODED VIEW OF DRUM & TUB ASSEMBLY



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10-4 THE EXPLODED VIEW OF DRYER





AUG. 2002 PRINTED IN KOREA

P/No.:3828ER3013M