SERVICE MANUAL

Dishwasher

DW60FC1, DW60FC2, DW60FC4 & DW60FC6
models

AA

Fisher&Paykel

FEATURED PRODUCT & CONTACT ADDRESSES

BRAND	MODEL	DESCRIPTION	CA (NEW LOGO)	CA	MARKET
Fisher & Paykel	DW60FC1X1		81637	81129	AA
Fisher & Paykel	DW60FC1W1		81636	81130	AA
Fisher & Paykel	DW60FC2X1		81634	81124	AA
Fisher & Paykel	DW60FC2W1		81635	81123	AA
Fisher & Paykel	DW60FC4X1		81632	81126	AA
Fisher & Paykel	DW60FC4W1		81633	81125	AA
Fisher & Paykel	DW60FC6X1		81630	81128	AA
Fisher & Paykel	DW60FC6W1		81631	81127	AA

Model Image:

NZ

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IMPORTANT !

PLEASE RETAIN THIS MANUAL FOR FUTURE REFERENCE.

1.1 Health & Safety

Note: When servicing the Dishwasher, Health and Safety issues must be considered at all times. Specific safety issues are listed below with their appropriate icon. These are illustrated throughout the service information to remind service people of the Health and Safety issues.

1.1.1 Electrical Safety

Ensure the mains power has been disconnected before servicing the Dishwasher. If the mains supply is required to be on to service the Dishwasher, make sure it is turned off when removing any electrical component or connection to avoid electrical shock.

1.1.2 Electrostatic Discharge

An anti-static strap is to be used as electrical static discharge (ESD) protection when servicing electronic components.

1.1.3 Good Working Practices

Ensure the work area is in a tidy and orderly condition at all times so as not to cause a hazard while service work is being completed. Always clean and tidy the Dishwasher and work area after service is completed.

1.1.4 Isolate Water Supply

Turn off the water connection tap before servicing.

1.1.5 Water Leak Check

Check for water leaks as part of the testing after the service has been completed.

1.1.6 Insulation Test

Megger test to check insulation.
Warning: Short together the phase and neutral pins on the plug so as not to damage any electronic circuitry.

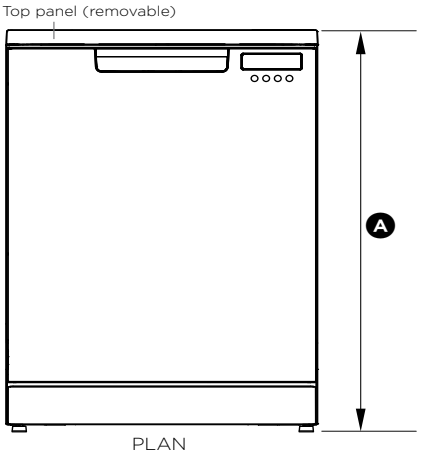
1.1.7 Solvent and Excessive Heat Damage

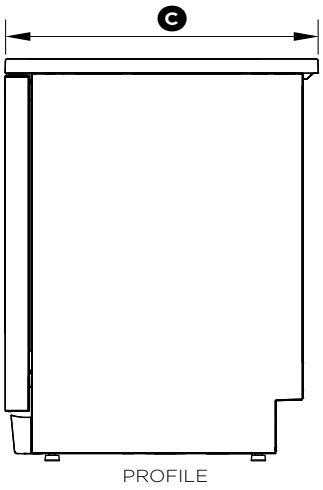
Solvents and excessive heat can damage plastic surfaces.

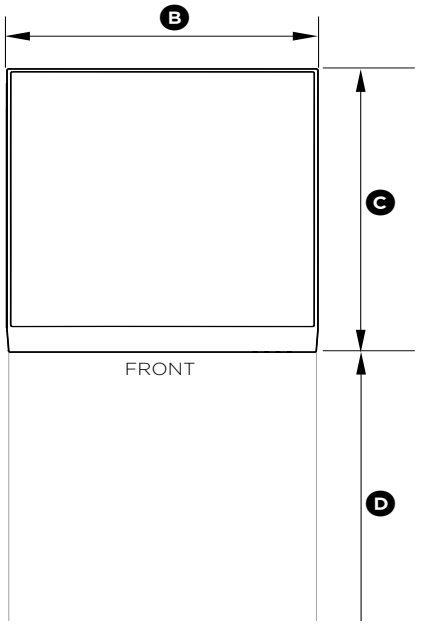
1.1.8 Sheet Metal Edges

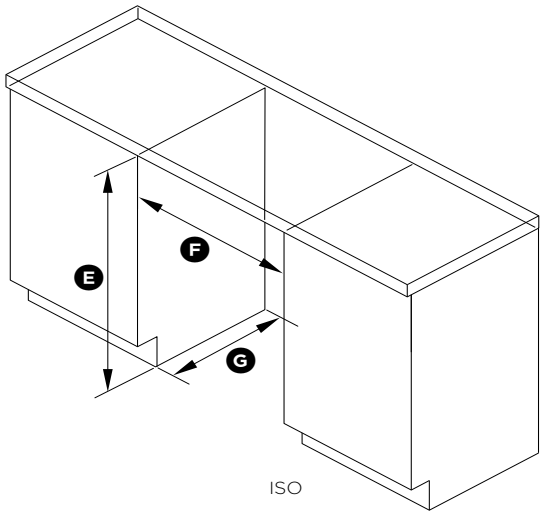
When working around cut sheet metal edges use appropriate gloves or protection to eliminate the chance of receiving a laceration.

2.1 Product Dimensions









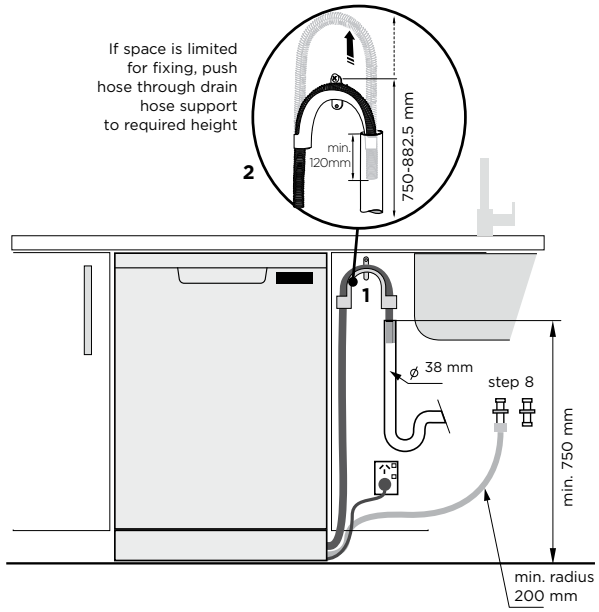
PRODUCT DIMENSIONS	MM
Ⓐ Overall height of product with top panel in place with top panel removed*	 850 - 870** 820 - 840**
Ⓑ Overall width of product	597
Ⓒ Overall depth of product	600
Ⓓ Depth of open door (measured from front of kickstrip)	595

CABINETRY DIMENSIONS	MM
Ⓔ Inside height of cavity with top panel in place with top panel removed*	 855 - 875** 825 - 845**
Ⓕ Minimum inside width of cavity	600
Ⓖ Minimum inside depth of cavity	605

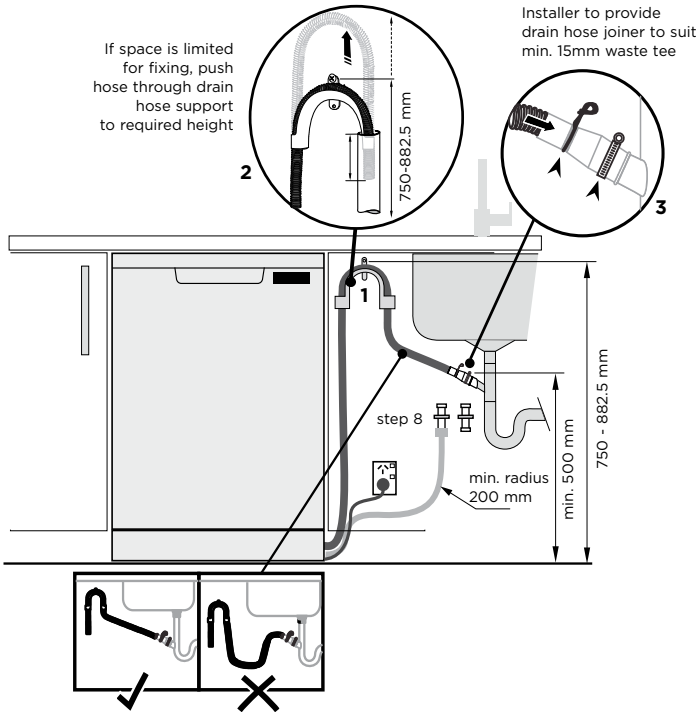
* The top panel may be removed to suit underbench cavity height. See instructions opposite.
**Depending on feet height adjustment.

2.2 Plumbing Options

Dishwasher and Ø 38 mm Standpipe



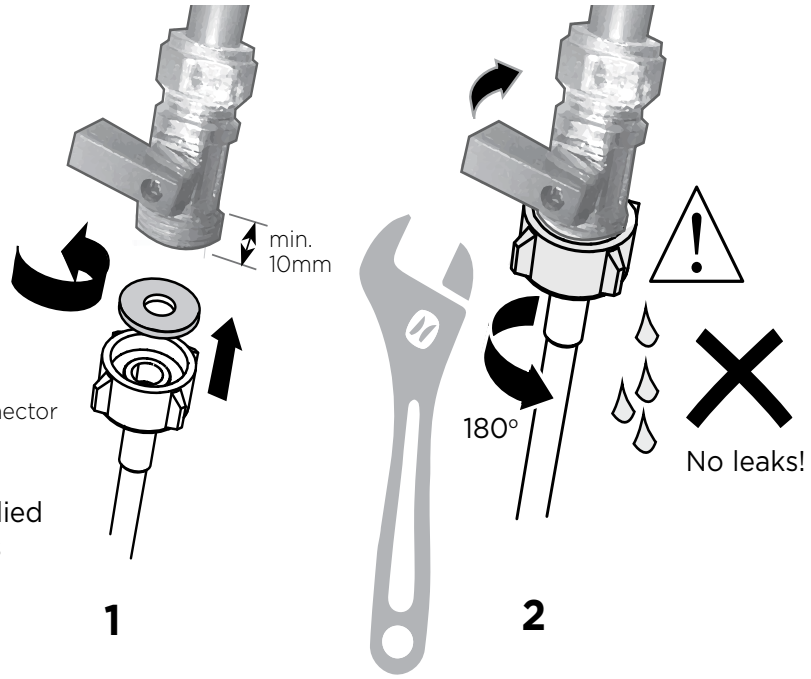
Dishwasher using drain hose joiner onto sink trap/waste tee



Ensure drain hose is routed straight to joiner. Remove *excess* drain hose material if necessary. **Do not shorten the inlet hose.**

IMPORTANT!
Do not connect the drain hoses to a Waste Disposal Unit, as this type of connection may lead to a blockage in the drain hoses.

2.3 Water Connection



Ensure the supplied rubber washer is fitted inside the coupling.

Tighten coupling with spanner.

Plumbing -- Water inlet connection

IMPORTANT!

- **The appliance should be connected to the water main using the new water inlet hose supplied. Old hoses should not be used.**
- **Do not shorten the inlet hose.**

① Take note of water connection requirements.
- The dishwasher has a single valve water connection.
- We recommend a cold water connection for best performance and energy efficiency.
- The incoming water temperature should not exceed 25°C.

② Take note of the permitted water pressure extremes.
- Lowest: 0.3 bar = 3 N/cm2 = 30kPa
- Where pressure is below 1 bar, contact a qualified plumber.
- Highest: 10 bar = 100 N/cm2 = 1MPa
- Where pressure is above 10 bar, a pressure reduction valve must be installed. Contact a qualified plumber.

③ Connect the water inlet hose to an accessible water tap with a 3/4" BSP connector. Ensure that there is no kink in the inlet hose that could restrict the flow of water. A 90° bend requires a minimum height of 200mm for a kink-free curve.
- Ensure incoming water is clear. If the water pipes have not been used for a long period of time, let the water run to make sure it is clear with no impurities. Not doing so may result in the water inlet hose getting blocked and damaging the appliance.
- If required, use a filter insert to filter out deposits from the piping. The filter insert is available from your Authorised Service Centre or Customer Care.

④ Tighten the hose coupling a further half turn after seal contact.

⑤ Check that the connection does not leak.

2.4 Component Specification

Component	Models			
Electrical Data	DW60FC1	DW60FC2	DW60FC4	DW60FC6
Voltage	230-240	230-240	230-240	230-240
Wattage	1900-2050	1900-2050	1720-2050	1720-2050
Amps (max)	10	10	10	10
Wash Pump				
voltage	230-240	230-240	220-240	230-240
wattage	65	65	82	95
Resistance	127+- 5% Ω	127+- 5% Ω	127+-5% Ω	47+-5% Ω
Outlet pressure (mbar)	300	300	300	340
Pump rate (litres/min)	52	52	52	35
Drain Pump				
Voltage	220-240	220-240	220-240	220-240
Wattage	25	25	25	25
Resistance	202 Ω	202 Ω	202 Ω	202 Ω
Thermal protection	145 +-5 ℃	145 +-5 ℃	145 +-5 ℃	145 ℃
pump rate (litres/min)	20 (L/Min)	20 (L/Min)	20 (L/Min)	20 (L/Min)
Inlet Valve				
Voltage	220-240	220-240	220-240	220-240
Wattage	6	6	6	6
Resistance	4.5K Ω	4.5K Ω	4.5K Ω	4.5K Ω
Flow rate (litres/min)	2.5 L/Min	2.5L/Min	2.5L/Min	2.5L/Min
Heating Element				
Voltage	230	230	230	230
Wattage	1800	1800	1800	1800
Resistance	29.4 Ω	29.4 Ω	29.4 Ω	28.7 Ω
Over heat protection (self reset)	100 +-5 ℃	100 +-5 ℃	100 +-5 ℃	100 +-5 ℃
Over heat protection (non reset)	206 +-10 ℃	206 +-10℃	206 +-10℃	206 +-10℃
Turbidity Sensor				
	No	Yes	No	
Temperature Sensor				
Temperature (max/min)	100-0	100-0	100-0	100-0℃
Resistance range (+-1%)	10K Ω @25 ℃	10K Ω @25 ℃	10K Ω @25 ℃	10K Ω @25 ℃
Flow Meter				
Pulse rate (per litre)	218 +-6	218 +-6	218 +-6	218 +-6

2 SPECIFICATIONS

Component	DW60FC1	DW60FC2	DW60FC4	DW60FC6
Detergent Dispenser				
Coil resistance	1320 Ω	1320 Ω	1320 Ω	1320 Ω
Main wash bucket (g) max	35	35	35	35
Pre wash bucket (g) max	5	5	5	5
Rinse Aid				
Max volume (ml)	150	150	150	150
Adjustment setttings	7	7	7	7
Dosage consumptions ml				
rA0	0	0	0	0
rA1	1.0 +-0.2	1.0 +-0.2	1.0 +-0.2	1.0 +-0.2
rA2	2.0 +-0.4	2.0 +-0.4	2.0 +-0.4	2.0 +-0.4
rA3	3.0 +-0.6	3.0 +-0.6	3.0 +-0.6	3.0 +-0.6
rA4	4.0 +-0.8	4.0 +-0.8	4.0 +-0.8	4.0 +-0.8
rA5 (default)	5.0 +- 1.0	5.0 +- 1.0	5.0 +- 1.0	5.0 +- 1.0
rA6	6.0 +- 1.2	6.0 +- 1.2	6.0 +- 1.2	6.0 +- 1.2
Spray Arm Rotations				
Upper	25 rpm	25	25	28 rpm
Lower	27 rpm	27	27	29 rpm
Product Features				
place setting	14	14	14	15
max plate height (upper)	14cm	14cm	14cm	14cm
max plate height (lower)	19-26cm	19-26cm	19-26cm	19-26cm
water consumption (L)	11.2	11.2	9.8	10.0
Energy Efficency	3.5 star	3.5 star	4 star	4 star
Energy Consumption kWh/y	275	275	230	230
Wash Programs	6	6	8	10
Spray levels	3	3	3	3
Drying fan	No	No	No	No

2.5 Wash Profiles

Wash profiles for FC4, FC2, FC1 models.

DW60FC1, DW60FC2

	AUTO	NORMAL	NORMAL ECO*	FAST	HEAVY	RINSE
Stages	pre-wash	pre-wash			pre-wash	rinse 45°C
	main wash 45-68°C	main wash 60°C	main wash 45°C	main wash 45°C	main wash 68°C	
	post-rinse	post-rinse	post-rinse		post-rinse	
	final rinse 70°C	final rinse 70°C	final rinse 43°C	final rinse 55°C	final rinse 70°C	
	drying	drying	drying	drying	drying	

DW60FC4

	AUTO	NORMAL	NORMAL ECO*	FAST	HEAVY	RINSE
Stages	pre-wash	pre-wash			pre-wash	rinse 45°C
	main wash 45-68°C	main wash 60°C	main wash 46°C	main wash 45°C	main wash 68°C	
	post-rinse	post-rinse	post-rinse		post-rinse	
	final rinse 70°C	final rinse 70°C	final rinse 45°C	final rinse 55°C	final rinse 70°C	
	drying	drying	drying	drying	drying	

DW60FC6

	AUTO	HEAVY	NORMAL	NORMAL ECO*	FAST	DELICATE	RINSE
Stages	pre-wash	pre-wash	pre-wash	pre-wash		pre-wash	rinse 45°C
	main wash 45-68°C	main wash 68°C	main wash 60°C	main wash 47°C	main wash 45°C	main wash 40°C	
	post-rinse	post-rinse	post-rinse	post-rinse		post-rinse	
	final rinse 70°C	final rinse 70°C	final rinse 70°C	final rinse 40°C	final rinse 55°C	final rinse 55°C	
	drying	drying	drying	drying	drying	drying	

*reference programme for energy label compliance with AS/NZS 2007

2.6 Noise levels

The noise levels are as follows for each model:
DW60FC6 43dB
DW60FC4, 2, 1 47dB

2.7 Product Weight

The unpacked weight of the DW60 model is:
53kg.

3.1 Model & Serial Number Location & Identification

There is a service label situated on the side of the inner door. This shows the serial number, model number and product code.
Example:

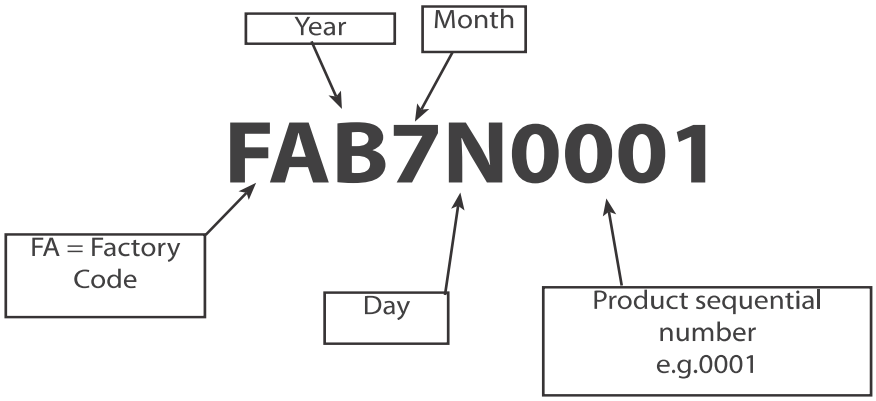
Fisher&Paykel **Automatic Household Dishwasher**

Power supply:230-240V
50Hz
1900-2050W

Model:DW60FC6W1
Product: 81128
A/13763EA

Serial No.:FAE5D0001

The serial number will show the day, month and year of manufacture, use the following chart to work this out.



Year

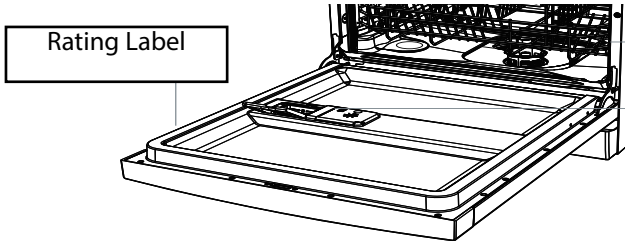
2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
8	9	A	B	C	D	E	F	G	H

Month

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	2	3	4	5	6	7	8	9	A	B	C

Day

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	28	29	30	31
1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X

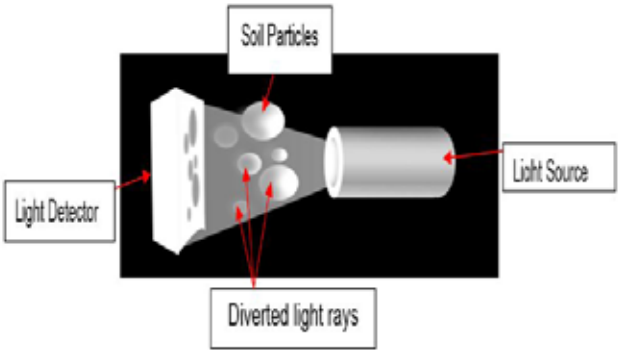


4.1 Flood Protection

Float and microswitch. The drain pump will run when the flood switch is activated and a fault code is displayed to the customer.

4.2 Turbidity Sensor

A highly sensitive submersible optical sensor, which monitors water environment and determines the best programme to use (based on how dirty the water is). Light is passed from the light transmitter to the light detector. The light detected will depend on how dirty the water is and the product will select a cycle to suit the environment.



4.3 Door Microswitch

The door switch is single pole, double throw, 250V AC, 50 Hz, 10A

4.4 Diverter Valve

FC1 & 6 models only.
There is a diverter valve which supplies water independently to the upper and lower spray arms. This diverter valve is power by a synchronous 4w 240V motor.

4.5 End of Cycle

At the end of the cycle, the product will beep 6 times and will automatically turn off after a few seconds.

4.6 Pausing the Cycle

When the wash cycle is paused, if the machine is not restarted within 7 minutes then the pause beep sound will be sounded. This pause sound is then repeated every 90 seconds until the wash cycle is restarted.

4.7 Dry Cyle

The dry cycle is a static dry, so the door is opened at the end of the cycle to help improve the drying process.

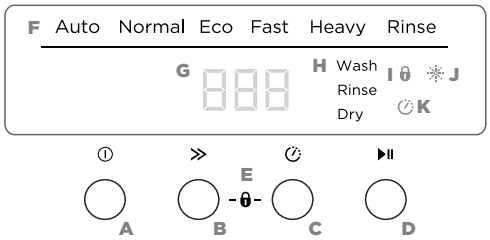
In the C6 models, there is a Extra Dry wash modifier, which increases the wash temperature and increases the length of the dry cycle.

4.8 Drain Hose

The drain hose is routed from the drain pump to the side weir chamber, which is used as an air break. From the weir chamber the hose is routed through the rear panel to the drain.

5.1 Control Panel

DW60FC1



Controls Description

A **Off/On**
Press ⏻ to turn the dishwasher on or off.

B **Wash programme selector**
Press ≫ to scroll through the wash programmes.

C **Delay start**
Press ⏲ to enter delay start.
(See 'Setting delay start')

D **Start**
Press ⏯ to start the wash.
To pause:
Press ⏯ again or open door.

E **Keylock**
- Keylock disables all the buttons so that a wash cannot accidentally be started.
- Keylock can be activated or canceled at any stage, including while a wash programme is running.

To activate:
Press and hold ≫ and ⏲ together for a second until you hear a beep. The keylock indicator will come on and remain lit until keylock is canceled.

To cancel:
Press and hold ≫ and ⏲ together for four seconds until you hear a beep. The keylock indicator will flash and then go out.

F **Wash program indicators**
These show which programme is selected.

G **Display**
This shows:
- the time remaining (minutes)
- the delay start time (hours)
- Fault code numbers
(see section 'If there is a fault code')

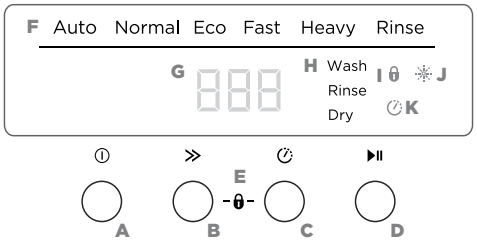
H **Wash progress indicators**
Shows the stage of the wash cycle currently in progress.

I **Keylock indicator**
If lit: keylock is activated.

J **Rinse aid indicator**
If lit: Rinse aid dispenser requires filling.

K **Delay start indicator**
If lit: start is delayed.

DW60FC2



Controls Description

A **Off/On**
Press ⏻ to turn the dishwasher on or off.

B **Wash programme selector**
Press ≫ to scroll through the wash programmes.

C **Delay start**
Press ⏲ to enter delay start.
(See 'Setting delay start')

D **Start**
Press ⏯ to start the wash.
To pause:
Press ⏯ again or open door.

E **Keylock**
- Keylock disables all the buttons so that a wash cannot accidentally be started.
- Keylock can be activated or canceled at any stage, including while a wash programme is running.

To activate:
Press and hold ≫ and ⏲ together for a second until you hear a beep. The keylock indicator will come on and remain lit until keylock is canceled.

To cancel:
Press and hold ≫ and ⏲ together for four seconds until you hear a beep. The keylock indicator will flash and then go out.

F **Wash program indicators**
These show which programme is selected.

G **Display**
This shows:
- the time remaining (minutes)
- the delay start time (hours)
- Fault code numbers
(see section 'If there is a fault code')

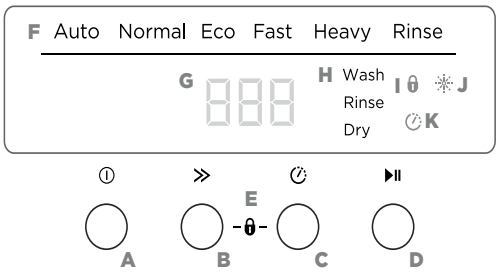
H **Wash progress indicators**
Shows the stage of the wash cycle currently in progress.

I **Keylock indicator**
If lit: keylock is activated.

J **Rinse aid indicator**
If lit: Rinse aid dispenser requires filling.

K **Delay start indicator**
If lit: start is delayed.

DW60FC4



Controls Description

A Off/On
Press ⏻ to turn the dishwasher on or off.

B Wash programme selector
Press » to scroll through the wash programmes.

C Delay start
Press ⏲ to enter delay start.
(See 'Setting delay start')

Start
D Press ⏯ to start the wash.
To pause:
Press ⏯ again or open door.

E Keylock
- Keylock disables all the buttons so that a wash cannot accidentally be started.
- Keylock can be activated or canceled at any stage, including while a wash programme is running.

To activate:
Press and hold » and ⏲ together for a second until you hear a beep. The keylock indicator will come on and remain lit until keylock is canceled.

To cancel:
Press and hold » and ⏲ together for four seconds until you hear a beep. The keylock indicator will flash and then go out.

F Wash program indicators
These show which programme is selected.

G Display
This shows:
- the time remaining (minutes)
- the delay start time (hours)
- Fault code numbers
(see section 'If there is a fault code')

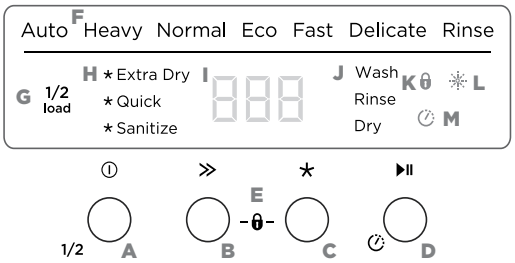
H Wash progress indicators
Shows the stage of the wash cycle currently in progress.

I Keylock indicator
If lit: keylock is activated.

J Rinse aid indicator
If lit: Rinse aid dispenser requires filling.

K Delay start indicator
If lit: start is delayed.

DW60FC6



Controls Description

A Off/On
Press ⏻ to turn the dishwasher on or off.
Half load selector 1/2
Press and hold ⏻ for a second until you hear a beep. The half load indicator will come on.

B Wash programme selector
Press » to scroll through the wash programmes.

C Wash modifier selector
Press ✶ to scroll through the wash modifier options. (See 'Setting wash modifiers')

D Start
Press ⏯ once to start the wash.
To pause:
Press ⏯ again or open the door carefully.
Delay start ⏲
Press and hold the button for a second to enter delay start.
(See 'Setting delay start')

E Keylock
- Keylock disables all the buttons so that a wash cannot accidentally be started.
- Keylock can be activated or canceled at any stage, including while a wash programme is running.

To activate:
Press and hold » and ✶ together for a second until you hear a beep. The keylock indicator will come on and remain lit until keylock is canceled.

To cancel:
Press and hold » and ✶ together for four seconds until you hear a beep. The keylock indicator will flash and then go out.

F Wash program indicators
These show which programme is selected.

G Half load indicator
If lit: half load function is activated

H Wash modifier indicators
If lit: wash modifer is activated

I Display
This shows:
- the time remaining (minutes)
- the delay start time (hours)
- Fault code numbers
(see section 'If there is a fault code')

J Wash progress indicators
Shows the stage of the wash cycle currently in progress.

K Keylock indicator
If lit: keylock is activated.

L Rinse aid indicator
If lit: Rinse aid dispenser requires filling.

M Delay start indicator
If lit: start is delayed.

5.2 User preference

These allow you to:

- Change the rinse aid setting or turn rinse aid on or off.
- Turn the beeps on or off.

To change the rinse aid setting

① Press ⏻ to turn the dishwasher on.
② Press and hold ≫ and ⏯ together for five seconds to enter the user preference menu. The display will show the current Rinse Aid setting.

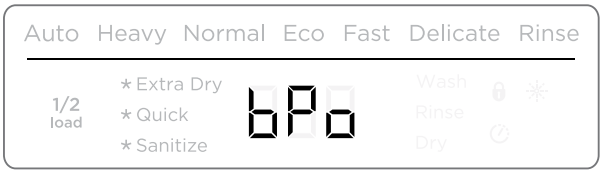
③ Press ≫ to scroll between rA1 (minimum dispense) to rA6 (maximum dispense) or rA- (rinse aid off).

④ Press ⏯ to move on to the next setting or press ⏻ to exit the user preference menu.

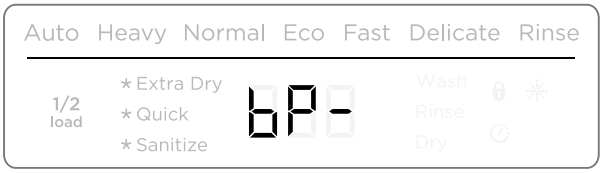
To turn the Beeps on or off

This turns off all sounds on the dishwasher (except for fault alerts).

① Make sure the dishwasher is on.
② Press and hold ≫ and ⏯ together for five seconds to enter the user preference menu. The display will show the current Rinse Aid setting.
③ Press ⏯ to scroll to the Beeps menu.



④ Press ≫ to toggle between bPo (Beeps On) and bP- (Beeps Off)
⑤ Press ⏻ to exit the user preference menu.



5.3 Setting the Wash Modifiers (DW60FC6 Models Only)

Along with setting the wash programme, you may select one of the following the additional options:

- **Extra dry**: Increases the wash temperature and the length of the drying phase for improved drying performance. This is especially useful for plastic items.
- **Quick**: Uses additional water and energy for a faster wash time, while maintaining wash performance.
- **Sanitize**: Raises the water temperature during the rinse phase to sanitize dishes. Ideal for washing items such as baby bottles and preserving jars.

To set a wash modifier

① Make sure the dishwasher is on and detergent (and rinse aid if necessary) has been added.
② Press ≫ to select a wash programme.
③ Press ✶ to scroll through the wash modifier options.
- The selected wash modifier indicator will light up on the display.
- Press ⏯ to start the wash

Note:
- Only one modifier can be set at a time
- Not all modifiers are available for every wash programme. If a wash modifier is not available for the chosen wash program, then that modifier cannot be selected.

WASH PROGRAMME	MODIFIER AVAILABLE		
Auto	-	-	-
Heavy	Extra Dry	Quick	Sanitize
Normal	Extra Dry	Quick	Sanitize
Normal Eco	-	-	-
Fast	Extra Dry	-	Sanitize
Delicate	Extra Dry	Quick	-
Rinse	-	-	-

5.4 Using Sanitize

The sanitize wash modifier adjusts the wash programme to meet the conditions required by Section 6, NSF 184 for sanitization to occur.
While sanitize is running, the wash programme is monitored to ensure that these conditions are met.

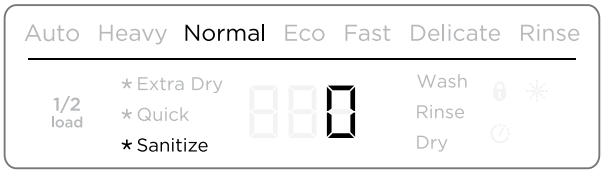
IMPORTANT!

- **For sanitization to occur, the temperature of the water needs to reach 70°C. Check that all items in the dishwasher are dishwasher safe before running the sanitize modifier.**
- **If the wash is interrupted or the water supply is turned off during the cycle, then the heating conditions for sanitization may not be met. You may need to run the cycle again to ensure sanitization of your dishes.**
- **Only cycles utilising the sanitize wash modifier are certified to meet the conditions required by Section 6, NSF 184. Other wash programs may not reach the temperatures required for sanitization to occur. See table on previous page for wash programs that have sanitize available**

At the end of a wash programme with sanitize, always check the display to make sure that sanitization has been successful.

If sanitization has been successful:

- The dishwasher will beep
- 0 will show in the display
- The sanitize indicator will remain lit.
- After 30 seconds the display will turn off.



If sanitization has not been successful:

- An alert will sound
- An alert code will show in the display
- The sanitize indicator will not be lit.

5.5 Setting a Half Load Option (FC6 models only)

- If you don't have a full load of dishes to wash, you can choose to use the 1/2 load option. This may be useful if, for example, you only wish to wash the breakfast dishes. The dishes should fill only half the dishwasher, but may be placed in both upper and lower baskets.
- This option is available with the following wash programmes and modifiers:

WASH PROGRAMME	MODIFIER AVAILABLE WITH 1/2 LOAD
Heavy	Extra Dry, Sanitize
Normal	Extra Dry, Sanitize
Normal Eco	-
Delicate	Extra Dry

To select 1/2 load

① Press ⏻ to turn the dishwasher on.
② Press ≫ to select a wash programme, and ✶ to select a wash modifier (if required).
③ Press and hold ⏻ for a second until you hear a beep. The half load indicator will light up.

To cancel 1/2 load

① Press and hold ⏻ for a second until you hear a beep.
- The half load indicator will go out.

Note: 1/2 load cannot be cancelled while a wash programme is running.

5.6 Setting Delay Start

This feature can delay the start of a wash programme by 1 to 12 hours.

① Load the dishes, add detergent and close the door.
② Press ⏻ to turn the dishwasher on.
③ Check that the display shows the wash programme you require. If not, see instructions for 'Changing the wash programme'.

④ *C1/C2/C4 models:* Press ⏲ .
C6 models: Press and hold ⏲ for a second.
- The delay start indicator ⏲ will light up and the display will show the delay time (hours).

⑤ Press ⏲ again for a second to increase the number of hours you wish to delay the wash by (1hr - 12hr in hour steps).
Note:
- Hold down ⏲ to scroll more quickly to your desired delay time.
- Scrolling past 12 hours will exit delay start.

⑥ Delay start is now set. The display will countdown in hours. The wash programme will automatically start when the delay time is over.

To cancel Delay start, press ⏻ .

Press ⏻ to exit delay start and cancel the delay time.

5.7 Water Hardness and Dishwashing

Hard water is water with a high concentration of minerals such as calcium and magnesium. In soft water, this concentration is low. Water hardness varies by geographical location.

How does water hardness effect dishwashing?

- Hard water can be detrimental to the performance of a dishwasher. Over time glassware washed in hard water will become opaque and dishes will become spotted or covered in a white film. Washing in very hard water can cuase parts in the disheasher to fail over time.
- Naturally soft or softened water has no detrimental effects if used witht he correct amount of detergent. However, excess detergent combined with hot, soft water may cause irreversible etching to glassware. Etching forst appears as a rainbow-coloured film and if allowed to continie, can make glassware permanently opaque.

How can you minimise any detrimental effects?

Contact the local council to find out about the water hardness in the area.

If the house has a hard water supply....

- Advise the customer to increase the amount of detergent being used.
- Ensure the customer is using a detergent with a high phosphate content. Phosphate softens the water and this improves wash results. The customer could try using multi-purpose tablets which are also designed to work in hard water areas.
- Ensure the customer is using rinse aid, and the rinse aid setting is adjusted to setting 5 to help improve wash performance.
- Advise the customer to use a dishwasher cleaner/descaler regularly, which will help remove limescale deposits in the dishwasher.

If the house has a naturally soft water supply....

- Advise the customer to avoid using too much detergent. Advise the customer to follow the set instructions in the user guide on detergent quantities.
- Ensure the dishwasher is not overloaded and water can reach all the dishes within the dishwasher.

IMPORTANT!

If the water hardness supply to the dishwasher is above 250ppm/14.6gpg, then F&P suggest to fit a household water softener to the incoming water supply. This will ensure optimum performance of the dishwasher.

6 DIAGNOSTICS

6.1 Service Mode

There are 5 levels within the service mode menu:

Menu 1 E = Error code service memory, which displays current & previous 2 error codes and component testing
Menu 2 L = LED test and error code service memory clearing
Menu 3 P = Assembly line test cycle (fast test cycle)
Menu 4 C = Turbidity sensor calibration
Menu 5 S = Show room mode

To switch between the main menu levels when you enter service mode, press the Program Selector ⏩ button, and the display will show, E, L, P, C or S in the display.
Once a main menu is selected and entered, you can not scroll between other main menus, you must exit the service mode and re enter to get to the next main menu selection.

Use the following sequence to enter service mode:

Turn the power on at the On/Off ⏻ button, so the wash display is showing but do not start a cycle.
Press and hold the On/Off ⏻ button and the Start/Pause ⏯ button simultaneously for 5 seconds.

The display will show a letter 'E' when the service mode is entered.

To enter a menu selection, press the Start/Pause ⏯ button once to enter the sub menu. The display will show E and a number, this is sub menu 1 and is the current fault code shown in the memory. If E0 is shown, then there is no current fault code. (Refer p24 for all fault code detail).

To check the previous 2 fault codes, (sub menu 2 & 3) in the fault code menu, press the Delay Start ⏲ button to scroll, the wash indicators will show which position you are in:

Sub Menu 1 - Heavy + Normal LED's = Current fault code (error code 1)
Sub Menu 2 - Auto + Normal LED's = Previous fault code (error code 2)
Sub Menu 3 - Auto + Heavy LED's = Previous fault code (error code 3)

The fault code will be shown in the LED display. (refer page 24 for detailed fault codes)

To scroll to the next sub menu option, use the Delay Start ⏲ button. The display will show the following letters and the following components will be activated:

Sub Menu	LED Display	Component
4	A3	Water softener regeneration valve (not used in NZ/AU models)
5	A4	Drain pump (will be activated and run for 2 min)
6	A5	Inlet valve (will be activated and run for 1 minute)
7	A6	Heating element (will be activated, ensure there is water in the base before starting. The wash pump will operate for 5 sec, then the heating element and wash pump will work for 5 sec)
8	A7	Wash pump (will be activated for 2 min)
9	A8	Diverter (will be activated if fitted, the wash motor will work under standard speed, the upper spray arm will work for 15 sec, then the lower spray arm will work for 15 sec. It will keep alternating for 2 min)
10	A9	Dispenser (will be activated. The coil will work for 10 sec)

NOTE: The software diagnostics used are generic and will have components that are not used in the AA market. These components will show on the display, but will not run. The service mode will also time out if no buttons are pushed.

Menu L:
Turn the power on at the On/Off ⏻ button, so the wash display is showing but do not start a cycle.
Press and hold the On/Off ⏻ button and the Start/Pause ▶II button simultaneously for 5 seconds.

To get to menu (L), press the Program Selector ⏩ button, the display will show the letter L in the display, to enter the menu press the Start/Pause ▶II button.

In this menu the following will happen:
- All indicators inside the user interface will be illuminated
- A buzzer will sound
- The error code memory will be cleared/reset
- The wash cycle repeat mode flag will be cleared/reset

Menu P:
Turn the power on at the On/Off ⏻ button, so the wash display is showing but do not start a cycle.
Press and hold the On/Off ⏻ button and the Start/Pause ▶II button simultaneously for 5 seconds.

To get to menu (P), press the Program Selector ⏩ button, the display will show the letter P in the display, to enter the menu press the Start/Pause ▶II button.

This is the factory wash test cycle, when entered the product will do the following:
- Display 16 (min) on the display
- Fill with water (4.5L)
- Wash and heat
- Drain wash water
- Turn off

Menu C:
Turn the power on at the On/Off ⏻ button, so the wash display is showing but do not start a cycle.
Press and hold the On/Off ⏻ button and the Start/Pause ▶II button simultaneously for 5 seconds.

To get to menu (C), press the Program Selector ⏩ button, the display will show the letter C in the display, to enter the menu press the Start/Pause ▶II button.

The display will show 3, and in this menu the product will automatically calibrate the turbidity sensor. Start the calibration by pushing the Start/Pause ▶II button. The wash icon will illuminate and the product will calibrate the turbidity sensor.

It does this by checking the fresh fill water against the pre programmed setting in the contoller.

Menu S:
Turn the power on at the On/Off ⏻ button, so the wash display is showing but do not start a cycle.
Press and hold the On/Off ⏻ button and the Start/Pause ▶II button simultaneously for 5 seconds
To get to menu (S), press the Program Selector ⏩ button 4 times, the display will show the letter S in the display, to enter the menu press the Start/Pause ▶II button.

C1, 2 & 4 models

Once in menu S, press the Delay Start ⏲ button to turn the show room mode on, 51 will show in the display. To turn the show room mode off, press the Delay Start ⏲ button again, and 50 will show in the display

C6 model

Once in menu S, press the Wash Modifier Selection button to turn the show room mode on, 51 will show in the display. To turn the show room mode off, press the Wash Modifier Selection ✶ button again, and 50 will show in the display.

Note:
The show room mode survives a power off, so will need to be manually turned off in the display to enable correct operation of the dishwasher.

7 FAULT DIAGNOSTICS

7.1 User Alert Codes

If the dishwasher faults, it will show a fault code to the customer on the display panel or in the LCD depending on the model.

FAULT CODE	POSSIBLE CAUSE	WHAT TO CHECK
A10 - WATER SUPPLY	Water supply turned off	1.Check tap is turned on. 2.Check inlet valve filter not blocked. 3.Check flow meter harness connected. 4.Check water pressure isn't too low. 5.Check fill hose is not kinked. 6.Check inlet valve coil resistance.
A11 - WATER SUPPLY	No signal from flow meter for first 10 seconds of fill	
A12 - WATER SUPPLY	No signal from flow meter after re-fill command	
A20 - WATER LEVEL	The dishwasher did not drain sufficiently	1.Check the drain connection - check drain spigot is drilled out. 2.Check the drain hose is not blocked/kinked. 3.Check the drain pump is operating. 4.Replace the controller.
	No signal from turbidity sensor in the first 0.9L fill.	1.Check turbidity sensor - drain tub and refill. 2.Check turbidity sensor harness. 3.Replace turbidity sensor.
F30 - OVER FLOW ALARM	Water in base pan	1.Check for leaking hose or sump. 2.Check for jammed inlet valve.
	Flow meter has counted 9 litres of water	1.Check fill level is correct. 2.Check flow meter harness. 3.Replace the controller.
F40 - FLOWMETER	Flow meter failed consistency checks	1.Check flow meter harness connected correctly. 2.Check water is turned on at tap. 3.Check the inlet valve resistance.
F41 - FLOWMETER	After turning off the fill valve, the flow meter has sensed water flowing through the flow meter.	1.Check inlet valve is shutting off correctly. 2.Check the flow meter and harness
		3. Replace the controller
F42 - FLOWMETER	A flow rate higher than 4 litres/min was detected.	1.Check incoming water pressure is not too high. 2.Check inlet valve, replace if faulty. 3.Replace the flow meter.
F50 - COMMUNICATION ERROR	Communication error.	1.Check harness connectors between the controller and user interface.
F51 - COMMUNICATION ERROR	Communication error with BLDC motor.	1.Check motor harness connections. 2.Check motor operation in diagnostic test mode. 3.Replace the controller.
F52 - COMMUNICATION ERROR	Communication error with user interface.	1.Communication between main board and interface failed, check harness. 2.Replace the user interface board.
A60 - HEATING TEMPERATURE INCREASE	During the heating stage, no temperature increase has been detected within 3 minutes. Note: this alarm is not shown in the display to the user, is only seen in service mode.	1.Check thermal fuse on element. 2.Check heater element resistance. 3.Check the harness connections. 4.Replace the controller.

FAULT CODE	POSSIBLE CAUSE	WHAT TO CHECK
A61 - No Temp Increase	During heating phase the temperature will not increase min. 1°C in between a heating time of 3 minutes.	1. Check the harness between heater element and main board.
		2. Measure the wattage when heater is actiavtes in service mode "A6".
		3. Measure the resistance of heating element.
		4. Change the wash pump.
		5 .Check the mainboard.
A62 - TEMPERATURE >80 DEG C	Only for FC6 model - water temp too hot.	1.Check the water temperature in the dishwasher when the error alarm happened.
		2. Check the trubidity sensor.
		3. Check the harness between turbidity sensor and mainboard/heater element and mainboard.
		4. Check the wash pump & intergrated heating element.
		5. Check the mainboard connections.
A70 - TEMPERATURE SENSING AT NTC.	Poor harness connection.	1.Check turbidity sensor harness. 2.Replace turbidity sensor, should be 10K Ohm under 25 degree C. 3.Replace controller.
	Turbidity sensor failed.	
	Main controller failed.	
A80 - TURBIDITY SENSING	Turbidity sensor out of range	1.Check turbidity sensor contacts. 2.Complete turbidity sensor calibration in service mode (refer section 6). 3.Replace turbidity sensor.
A81 - TURBIDITY SENSOR OUT OF RANGE	Turbidity sensor	1.Turbidity sensor in sump has dirty optical lens, clean the lens contacts. 2.Check turbidity sensor harness connection. 3.Replace turbidity sensor.
A82 - TURBIDITY SENSOR WITHOUT STABLE SIGNAL	Turbidity sensor	1.Turbidity sensor in sump has dirty optical lense, clean the lens contacts. 2.Check turbidity sensor harness. 3.Replace turbidity sensor.
F90 - C6 MODEL ONLY	Checksum communication	1.Turn the product electrical supply off at the wall to reset and try another cycle.
		2.Replace the controller if fault persists.
FA0 - Frequency consistency checks	The frequency of the input power is incorrect.	1.Check incoming electrical supply.
FA2 - Frequency consistency checks		2.Replace the controller.
AD0 - Door incongruence	Door lock signal	1.Check harness connection.
		2.Replace the controller.
AE0 - Diverter position	The position for the upper or lower sprayarm cannot be reached within 30 sec after start of the diverter motor	1.Try to confirm whether the lower and upper spray arms can work properly when activate the A8 in service mode.
		2.Try to check the harness between the diverter and mainboard.
		3. Change the diverter valve.
		4. Change the mainboard.

FC6 model Only

FAULT CODE	POSSIBLE CAUSE	WHAT TO CHECK
FC0 - Motor Alarm (shown in display to customer)	abort of wash cycle	1.Check the wiring harness connections between motor and controller.
		2.Replace the main board.
EE0	deverter motor failed to start	1.Check the wiring harness connections between the motor and controller.
		2.Replace the deverter motor
Shown in Service Mode Menu E:		
EC1	motor driver device error	1.Check the wiring harness connections between the motor and controller.
		2.Replace the main board.
EC2	PWM signals inconsistency of BLAC motor	1.Check the wiring harness connections between the motor and controller.
		2.Replace the main board.
EC3	motor winding test failed	1.Check the wiring harness connections between the motor and controller.
		2.Replace the main board.
		3.Replace the wash pump.
EC4	BLAC motor too hot	1. Visual check of the wash pump, is it blocked?
		2.Replace the wash pump.
EC5	lost control of motor	1.Check the wiring harness connections between the motor and controller.
		2.Replace the main board.
		3.Replace the wash pump.
EC6	Resistance measurement of BLAC motor failed	1. Replace the main board.
EC7	DC voltage too low for resistance measurement	
EC8	Invalid current during resistance measurement	
EC9	Motor current plausibility check failed	
ECA	Motor current offset out of range	

7.2 Troubleshooting

PROBLEM	POSSIBLE CAUSE	WHAT TO DO
Dishwasher will not start	No power	Ensure the dishwasher is plugged in and power supply is on at the wall. Check fuse/electrical supply
	The door is not closed	Check the door is closing. Check door switch.
	Start/Pause button has not been pressed	Check button is operating.
	Water tap is not turned on	Ensure tap is turned on. Check valve operation.
	Blocked strainer in the water hose	Check water supply to valve and clean out filter if required.
	Keylock is activated	Check keylock has not been activated.
Buttons beep and do not respond	Keylock is activated	Cancel Keylock feature.
	Door is not closed	Check door is closed.
Water in base of dishwasher after cycle has finished	Drain hose is kinked	Check drain hose is not damaged.
	Pump is jammed	Check pump operation and drain flow.
	The drain filter is blocked	Check drain filter.
Foam inside dishwasher	Incorrect detergent used	Ensure the customer is using the correct detergent.
	Too much egg in the wash load	Advise customer to use more detergent to help reduce foaming.
	Rinse aid dosage level too high	Check rinse aid level.
	Rinse aid spill not been wiped up	Advise all spills should be wiped up as will foam with cold water.
Poor wash performance	Spray arm jammed	Check spray arm is free to rotate and there is no obstruction.
	Spray arm clogged with food particles	Check the spray arms are clean and water can spray through nozzles.
	Detergent not being dispensed into wash	Check detergent dispenser is operating and not clogged.
	Not enough detergent being used for soil level	Advise customer to increase detergent level.
	Incoming water hardness very high	increase detergent level.
		Advise customer to try a 3 in 1 detergent tablet, as these can help improve wash performance in hard water situations.
	Dishes incorrectly loaded	advise customer to follow stacking recommendations in user guide.
	Incorrect wash cycle being used	Advise to use wash cycle that suits soil level.

PROBLEM	POSSIBLE CAUSE	WHAT TO DO
Plastic items discoloured (stained)	Not enough detergent being used	Increase detergent based on soil level
	Not pre rinsing tomato based soils.	Pre rinse tomato based soils
White stains left on dishes	Not enough detergent	Increase detergent level based on soil level
	Rinse aid dosage too low	Increase rinse aid level
Dishes/cutlery have not dried	Rinse aid level too low	Increase rinse aid level
	Items removed too soon after wash	Advise to open door at the end of the wash to aid with drying
	Rinse aid dispenser is low or not operating	Check rinse aid is full, or that the dispenser is working
Glasses have a dull appearance	Rinse aid setting too low	Increase rinse aid setting
	Rinse aid empty	Fill Rinse aid
Traces of rust marks on cutlery	Cutlery is not completly rustproof	Wash cutlery by hand.
Glasses clouded and discoloured, milky coating	Hard water situation	Use more detergent
	Glasses are not dishwasher proof	Wash by hand
Water marks left on glasses and cutlery	Rinse aid level too low	Increase rinse aid setting
	Incorrect wash cycle for wash load	Try a hotter wash cycle
	Rinse aid empty	Fill rinse aid

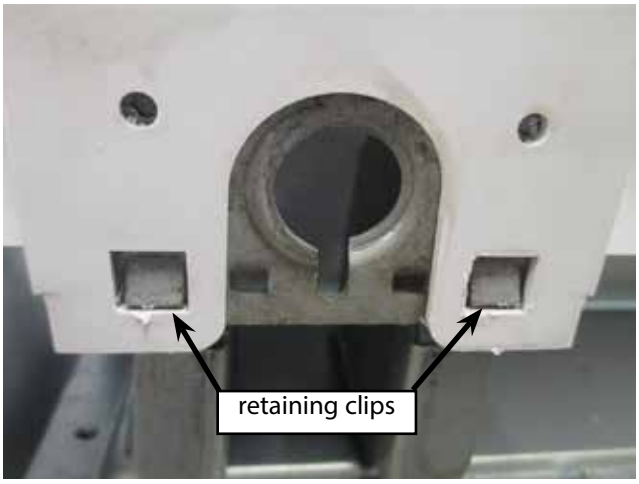
8 SERVICING THE COMPONENTS

Warning!

When servicing the DW60 dishwasher, ensure all health and safety requirements are followed. When removing outer panels or making any component adjustments, ensure the power is switch off to the appliance.
For some servicing procedures, the dishwasher may need to be disconnected and removed from the joinery. Ensure you take precautions to ensure you do not damage floor linings with sharp edges.

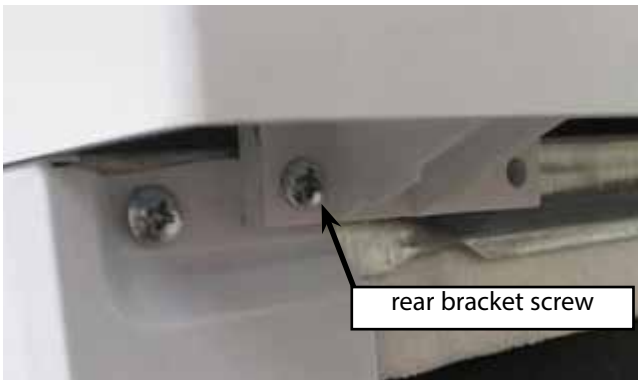
8.1 Removing the Front KickStrip Panel

- Pull the product slightly from the joinery, and tilt backwards.
- Unclip the tabs on both sides. Removing the levelling foot may make this easier.
- With the clips disengaged pull the kickstrip panel forward to release it.



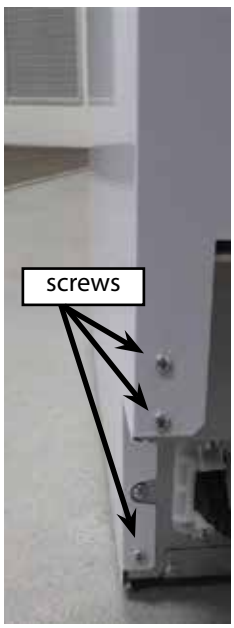
8.2 Removing the Top Panel

- Remove the product from the joinery to gain access to the rear screws.
- Remove the screws from each rear bracket.
- Slide the top panel backwards approx 10mm to release the side tags.
- Lift the top panel clear.



8.3 Removing the Side Panels

- Remove the front kickstrip panel (refer section 8.1)
- Remove the top panel (refer section 8.2).
- Remove the top screws securing the side panel to the chassis.
- Remove the rear and front screws retaining the side panel.
- The side panel will now be removed.



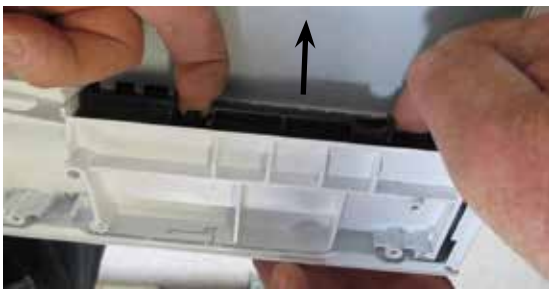
8.4 Removing the Outer Door Panel

- Remove the 12 screws, 4 metal type down each side of the door panel, and 4 plastic screws along the top.
- The outer panel will now pull forward to release. (Take care as display harness is still attached).
- Disconnect the display harness by depressing the connector lock and remove harness.
- The door outer is now free to remove.

Note: the 2 screws around the door latch do not need to be removed.

8.5 Removing the Display Module

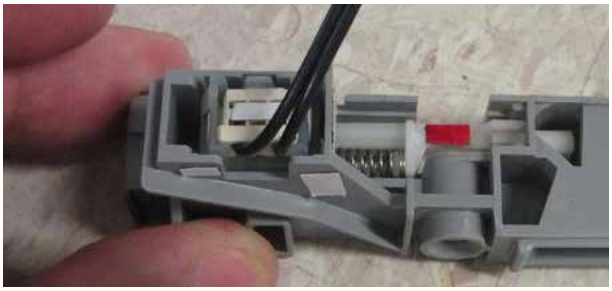
- Remove the outer door panel as per section 8.4
- To remove the display module, unclip the lock bracket from the panel by depressing the clips and levering the bracket upwards to release.



- The display module can now be slightly lifted upwards and removed from the door panel.
- To remove the button chain, lift the plastic slide in the middle, and lift upwards to remove from the side clips.

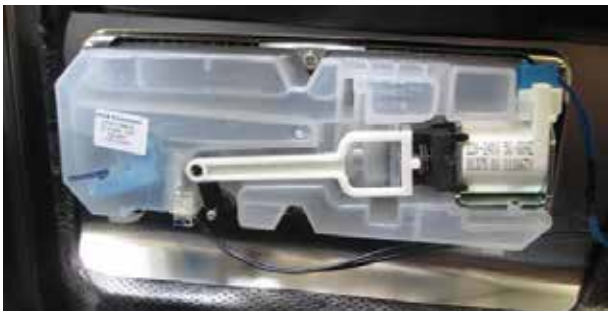
8.6 Removing the Door Latch

- Remove the door panel, refer to section 8.4
- Remove the 2 screws retaining the door lock to the inner door panel.
- Remove the harness to the door switch.



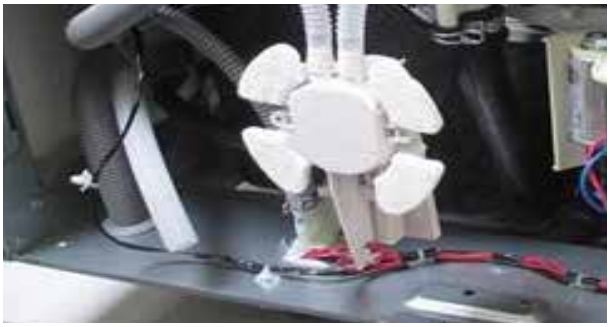
8.7 Removing the Dertergent Dispenser

- Remove the outer door panel, refer section 8.4.
- Remove the harnesses to the detergent dispenser.
- Remove the 6 screws retaining the detergent dispenser brackets.
- The detergent dispenser will now be able to be removed through the inner door panel from the inside.



8.8 Removing the Flood Switch

- Remove the product from the joinery.
- Remove the base panel retaining screws. There are 2 screws securing the flood switch to the base panel.
- Remove the wiring to the microswitch.
- Remove the 2 hoses which are overflow tubes from the front of the chassis.
- The flood switch is now free to remove.
- Reassemble in reverse order.



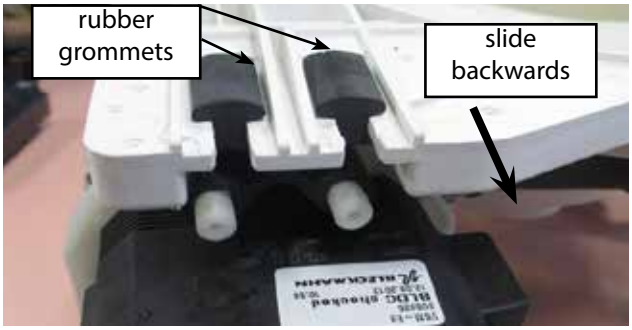
8.9 Removing the Drain Pump

- Remove the product from the joinery.
- Remove the base panel from the machine, and disconnect the flood switch assembly.
- Remove the wiring harness to the drain pump.
- Depress the clip and rotate the drain pump anticlockwise to release.
- When reassembling the drain pump, ensure the lock clip engages to secure the pump.

8.10 Removing the Wash Pump & Heater Assembly

The FC6 model uses a different wash pump, but the same principle is used to service.

- Disconnect and remove the product from the joinery.
- Remove the screws securing the base panel from the machine, and disconnect the flood switch assembly and remove base panel completely.
- Sometimes laying the product on it's back is the easiest option to service, however ensure no hoses are damaged and the floor is covered to stop any possible damage.
- Remove the wiring harness and earth wires to the wash pump and element assembly.
- Remove the hose clamps securing the supply hose from the sump and supply hose to the spray arms.
- Pull the hoses off the sump fittings.
- The wash pump is hung from 2 rubber grommets. To release the wash pump slide the pump backwards to release.



8.11 Removing the Turbidity/Temperature Sensor

- Remove the product from the joinery.
- Remove the base panel from the machine, and disconnect the flood switch assembly.
- Remove the wiring harness to the turbidity sensor.
- Remove the 2 screws securing the turbidity sensor to the sump.
- Pull the sensor out to release from the sump.
- Reassemble in reverse order.

8.12 Removing the Diverter Valve

FC4 &6 models only

- Remove the product from the joinery.
- Remove the base panel from the machine, and disconnect the flood switch assembly to remove the base panel completely.
- Remove the wiring harness to the diverter valve.
- Remove the clamp securing the diverter valve to the sump.
- Pull the valve off the sump spigot.
- When reassembling ensure the o-ring is fitted correctly to ensure sealing.
- Use a standard hose clamp to secure diverter valve to the sump, reconnect the wiring.

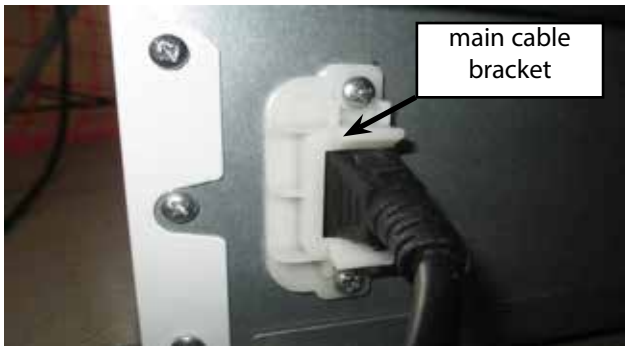
8.13 Removing the Flow Meter

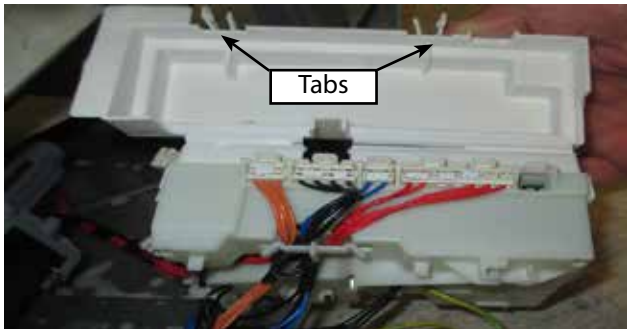
- Remove the product from the joinery.
- Remove the side panel, refer section 8.3
- Remove the harness to the flow meter.
- Remove the hoses to the flow meter.
- Remove the vent cap from the inside of the wash tub. The assembly will now remove from the chassis.

8.14 Removing the Controller

- Remove the product from the joinery.
- Remove the right hand side panel, refer section 8.3.
- Remove the bracket securing the mains cable and remove the cable from the controller.
- Remove the controller securing screw through the chassis rail, and remove the earth harness to allow the controller to be pulled out far enough to gain access to the wiring harnesses.
- Remove the wiring harnesses at the front of the controller.
- Open the top of controller by releasing the tabs, and disconnect the wiring harnesses.
- Unplug the mains cable at the rear of the controller.

NOTE: There are controller differences between models, so important you order the correct controller part number from the product parts manual.

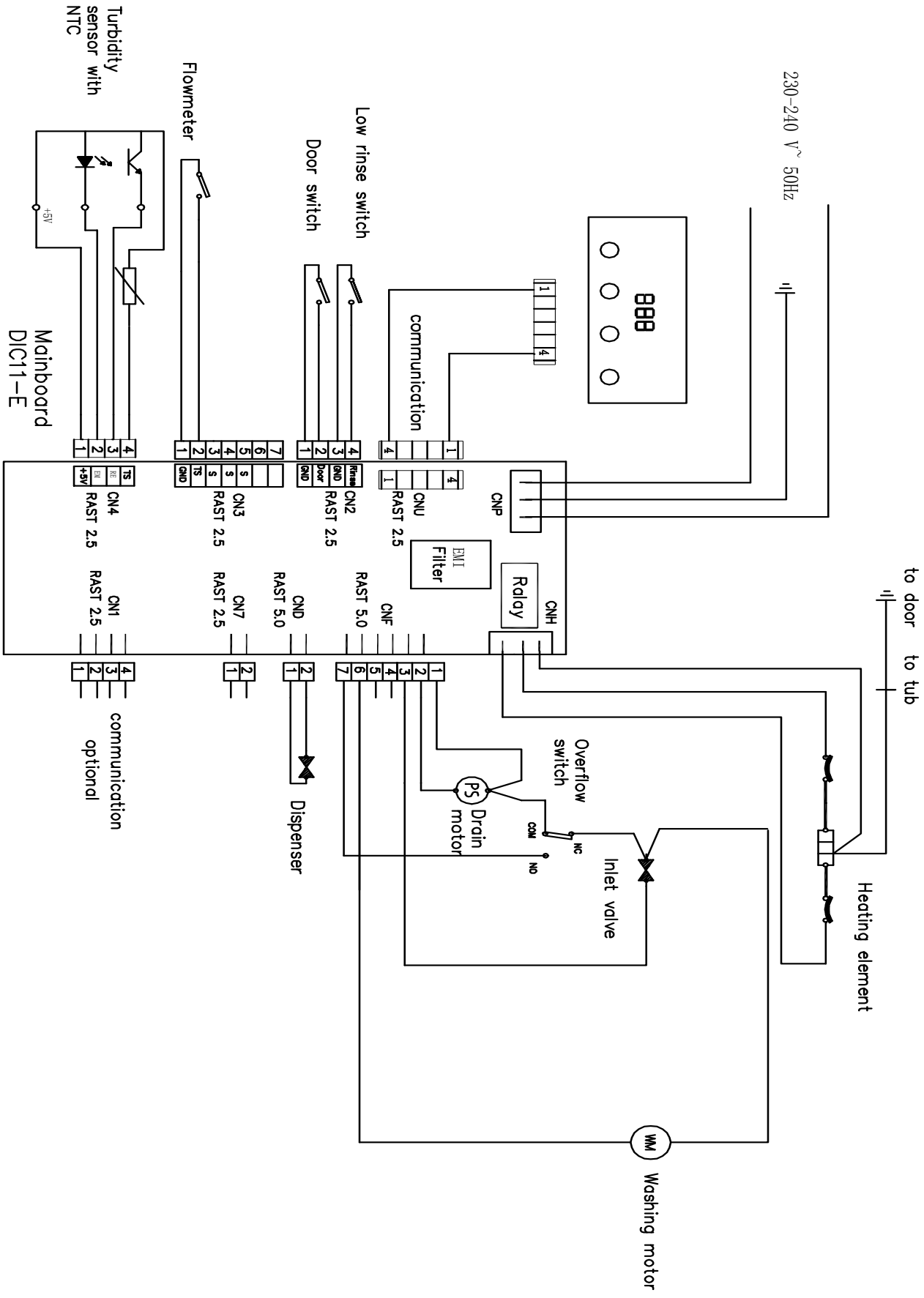




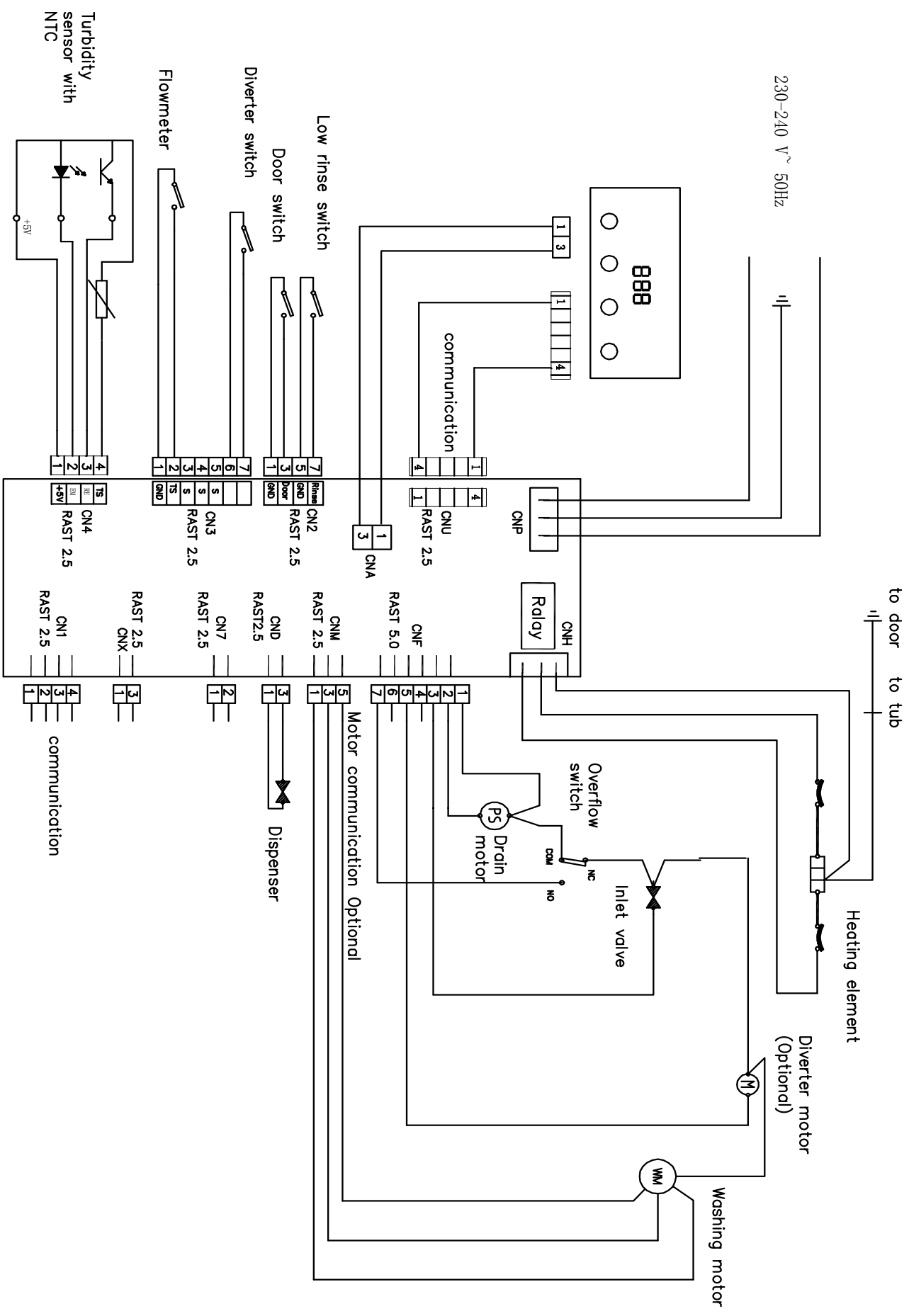
8.15 Removing the Water Valve

- Remove the product from the joinery.
- Remove the inlet hose to the water valve.
- Remove the 2 screws securing the inlet valve to the frame at the rear of the product.
- Remove the base panel from the machine, and disconnect the flood switch assembly to remove the base panel completely.
- Remove the supply hose and wiring harness from the water valve.
- Reassemble in reverse order, and ensure the inlet hose is tight on the valve and not leaking.

9.1 FC1, 2 & 4 Wiring Diagram



9.4 FC6 Wiring Diagram



MANUFACTURER'S WARRANTY

A 2 year Manufacturer's Warranty comes with this Product covering parts and labour for servicing within the country of purchase.

Fisher & Paykel undertakes to:
Repair or, at its option, replace without cost to the owner either for material or labour any part of the Product, the serial number of which appears on the Product, which is found to be defective within TWO YEARS of the date of purchase.

This warranty DOES NOT cover

A Service calls to which are not related to any defect in the Product. The cost of a service call will be charged if the problem is not found to be a Product fault.
For example:
1. Correcting the installation of the product.
2. Instructing on how to use the product.
3. Replacing house fuses or correct house wiring or plumbing.
4. Correcting fault(s) caused by the user.
5. Correcting damage caused by pests, e.g. rats, cockroaches etc.

B Defects caused by factors other than:
1. Normal domestic use or
2. Use in accordance with the Product's User Guide.

C Defects to the Product caused by accident, neglect, misuse or Act of God.

D The cost of repairs carried out by non-authorised repairers or the cost of correcting such unauthorised repairs.

E Normal recommended maintenance as set out in the Product's User Guide.

F Repairs when the appliance has been dismantled, repaired or serviced by other than an AUTHORISED CUSTOMER SERVICE CENTRE or the selling dealer.

G Pick-up and delivery.

H Transportation or travelling costs involved in the repair when the product is installed outside the AUTHORISED CUSTOMER SERVICE CENTRE'S normal service area.

Service under this manufacturer's warranty must be provided by an Authorised Service Agent. Such service shall be provided during normal business hours.
This Warranty is an extra benefit and does not affect your legal rights.

Product sold in Australia only

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law.
You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

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