

Electrolux SERVICE DATA SHEET

Fully Integrated Stainless Steel Dishwasher
 Model #: EDW5500DSS
 EHP Part #: 165 400 716

NOTE: The information contained in the service data sheet is intended for use by persons having electrical and mechanical training and a level of knowledge of these subjects generally considered acceptable in the appliance repair trade. Electrolux Home Products Inc cannot be responsible, nor assume any liability for injury or damage of any kind arising from the use of this data sheet.

Product Specifications

Electrical Rating	120V, 60 Hz
Separate Circuit	15 amp min. – 20 amp max
Wash Motor (current)	1.8 A
Heater Power	1200 W
Total Current (Load Rated)	12 A

Water Supply

Suggested minimum incoming water Temperature	120°F (49°C)
Pressure (min - max)	20 – 120 PSI
Connection (NPT)	3/8"
Consumption (Normal Cycle)	4.9 – 7.3 U.S Gal. 18.5 – 30 L

Water valve flow rate (U.S GPM)	1.08
Water fill time (Static Fill)	67 s

Wash Motor

The wash motor is a permanent split capacitor motor that operates on 120V ac 60Hz and maximum current draw is 1.8A. The wash motor has speed control and is run at different speeds during different parts of the cycle. The speed is varied by the dishwasher controller and the wash motor operates between 310 – 2800 RPM..

The dishwasher controller monitors the speed of the wash motor through a tachometer mounted on the rear of the motor. The tachometer is an AC generator, which provides feedback to the dishwasher controller for regulating the motor speed.

Inline Heater

The heater is 1200W and will only energize during a wash cycle when the wash motor is on. Water is heated as it passes through the heater. The heater has a thermal limiter set at 200°F and will reset once the temperature falls to ~170°F.

Smart Sensor

The dishwasher controller uses a 10KΩ thermistor to monitor the temperature of the water in the dishwasher. The turbidity or soil sensor consists of an infrared emitter and detector. The emitter is supplied a DC voltage. The detector output voltage ranges from 0 – 4 V dc. Where a 0 V output corresponds to dirty water.

Dry Fan

When the drying portion of the wash cycle is reached, the dishwasher controller activates the drying fan. The motor forces saturated air across cool baffles in the condensate duct, resulting in the removal of moisture from the air. The cooler air and condensed water is returned to the tub through the condensate vent (air vent).

Detergent and Rinse Aid Dispenser

The dispenser consists of both a detergent and rinse aid dispenser in one housing, controlled by the use of a wax motor actuator. The first time the actuator is energized in the cycle detergent is dispensed. The second time the actuator is energized the rinse aid is dispensed.

The rinse aid can be adjusted to meet the customer's needs. This is done by removing the cap from the dispenser and adjusting the arrow inside to a higher number to increase the amount of rinse aid dispensed during the cycle. A sensor triggers the dishwasher controller to display "LO" when the rinse aid level is low. The indicator will display "LO" for 5 cycles then switch off if rinse aid is not added. This only affects the drying performance and does not effect the operation of the dishwasher.

Pressure Switch Assembly

The pressure switch assembly consists of a low water level switch and a high level switch. The low level switch is used to maintain the water level in the sump for the fill cycles. The high-level pressure switch is a back-up or safety switch and is connected in series with the drain pump. If the low level switch fails and too much water is added, the high-pressure switch activates and the drain pump will be energized. The pressure switches can be easily replaced by sliding them from the plastic support.

Drain Pump

The dishwasher contains an independent drain pump. It is of a wet rotor design to prevent leaks. The drain pump is mounted directly to the rear of the sump. The pump cover can be removed for cleaning. The discharge end of the pump has a check valve to prevent water and odours from entering the dishwasher from the house drain system. The intake of the pump is connected to the sump by a short connecting hose.

Inlet Water Valve

The inlet water valve is an electronically controlled shut off valve that is used to allow water to enter the dishwasher. The valve has a flow restrictor to regulate the water flow to 1.08 GPM at an operating water pressure of 20 – 120 psi. The inlet valve is wired to the dishwasher controller and is opened and closed by the control.

Checking the components of the dishwasher

To check the various components used in the dishwasher, the first step is to remove the outer door and expose the dishwasher controller.

NOTE: The inner door has sharp edges, be careful when removing the outer door.

Once the dishwasher controller is exposed the following table can be used to check the dishwasher components using a multi meter and measuring the resistance of the various components.

Component Name	Component Connector locations	Resistance (Ω)
Wash Motor	P3-4 & P-1	14
Wash Motor Tachometer	P3-10 & P3-11	246
Drain Pump	P3-6 & P3-8	26
Inlet Valve	P3-5 & P3-8	1126
Dispenser	P3-2 & P3-8	1665
Thermistor	P2-7 & P2-6	10000
Dry Fan	P3-3 & P3-8	2088

Operation of the Dishwasher

To operate the machine please refer to the Use & Care Manual.

Static Fill

At the start of each cycle the dishwasher begins with a fill. The drain pump will operate for 30 seconds to remove any water in the dishwasher. Next the inlet valve is energized for a timed fill (67 s). During this fill period the level pressure switch will set at ~22 seconds then continue filling until the timed fill ends.

Dynamic Fill

The inlet valve is energized and the dishwasher begins to fill. Once the level pressure switch is set the wash motor starts. The motor will operate at low speed (310 RPM) then increase speed at a rate of 100 RPM per second until it reaches a maximum speed of 2800 RPM.

Display Codes (readout)

LO	Low liquid in the rinse aid dispenser
PF	A power failure has occurred
HO	Water heating delay
CL	Close and latch the door
'01 – 24	Hour(s) delay before the dishwasher will start.
CF	Clean Filters

Display Codes (LED)

SANITIZED	The sanitized criteria has been met. Indicator light will switch off when the door is opened.
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Water / Service Test

The Water / Service test is a special function used to step through the various functions of the dishwasher. To enter the water / service test hold down the High Temp & Start buttons together for three seconds while the dishwasher is in idle mode. The dishwasher will start the water / service test stepping through the test cycle per the chart below. Pushing the Start / Cancel button will advance the dishwasher to the next step.

Step	Description	Time	Water Valve	Wash Motor	Drain Pump	Heater	Dispenser	Fan
1	Fill/Dispense	59	1	0	0	0	1	0
2	Fill/Dispense/Wash	21	*	1	0	0	1	0
3	Wash/Heat	45	0	1	0	1	0	0
4	Pause	0.6	0	0	0	0	0	0
5	Wash/Heat	75	0	1	0	1	0	0
6	Wash/Heat/Dispense	80	0	1	0	1	1	0
7	Drain	90	0	0	1	0	0	0
8	Dry	90	0	0	1	0	0	1
		460.6						

* Dynamic fill, valve is open until pressure switch is closed

Serviceability of Parts

a) The following parts can be serviced or replaced by removing the front cover access panel. To remove the access panel, undo the screw holding the junction box cover. Disconnect the mains power from the dishwasher. Remove the four screws securing the access panel to the dishwasher.

● **SMART SENSOR**
 Is located on the right hand side of the sump. It is clipped into place by the sump.

● **PRESSURE SWITCH ASSEMBLY**
 The pressure switch assembly is located on the right hand side of the dishwasher closest to the wrap. With the front cover access panel removed it is possible to replace or service the individual pressure switches (Not the entire assembly). By sliding the switches down (towards the ground) they will be released from the pressure switch support.

● **WATER INLET VALVE**
 The water inlet valve is located on the left hand side of the dishwasher secured to the side plate with two screws. By removing these screws the water inlet valve can be removed.

b) To service the wash motor, drain pump, inline heater and fan dry unit, the dishwasher must be disconnected and removed from the enclosure. Carefully lay the dishwasher on its back to service the wash motor, drain pump and inline heater.

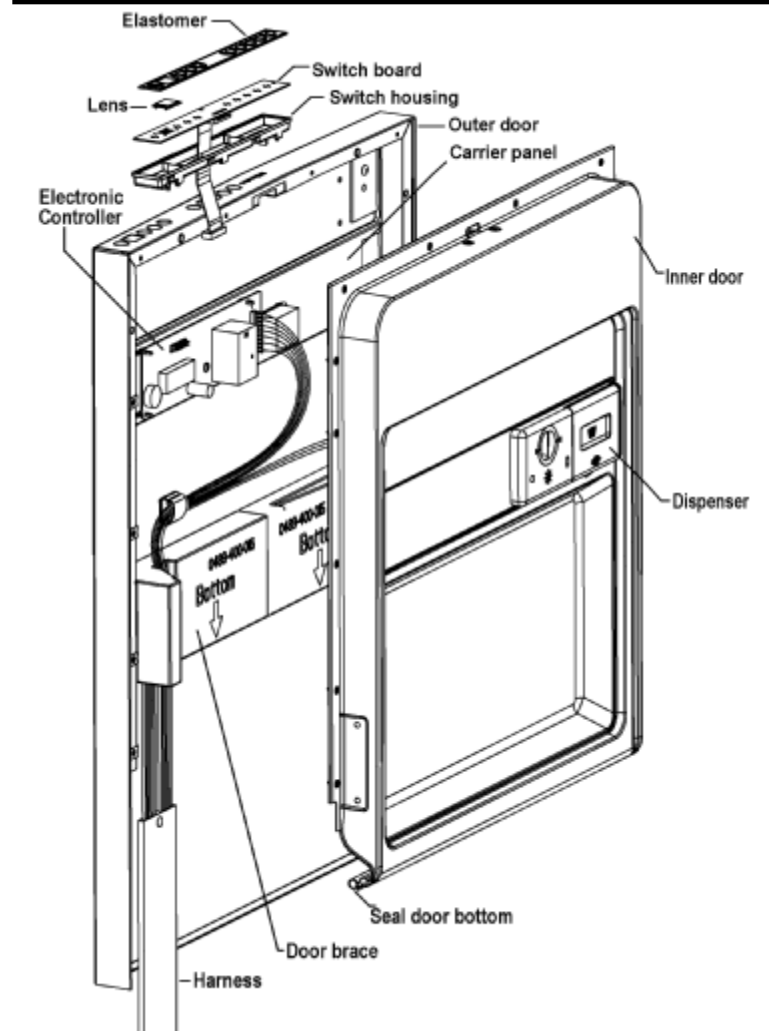
c) To service / replace the fan dry unit the outer wrap must be removed from the dishwasher.

Filtration System

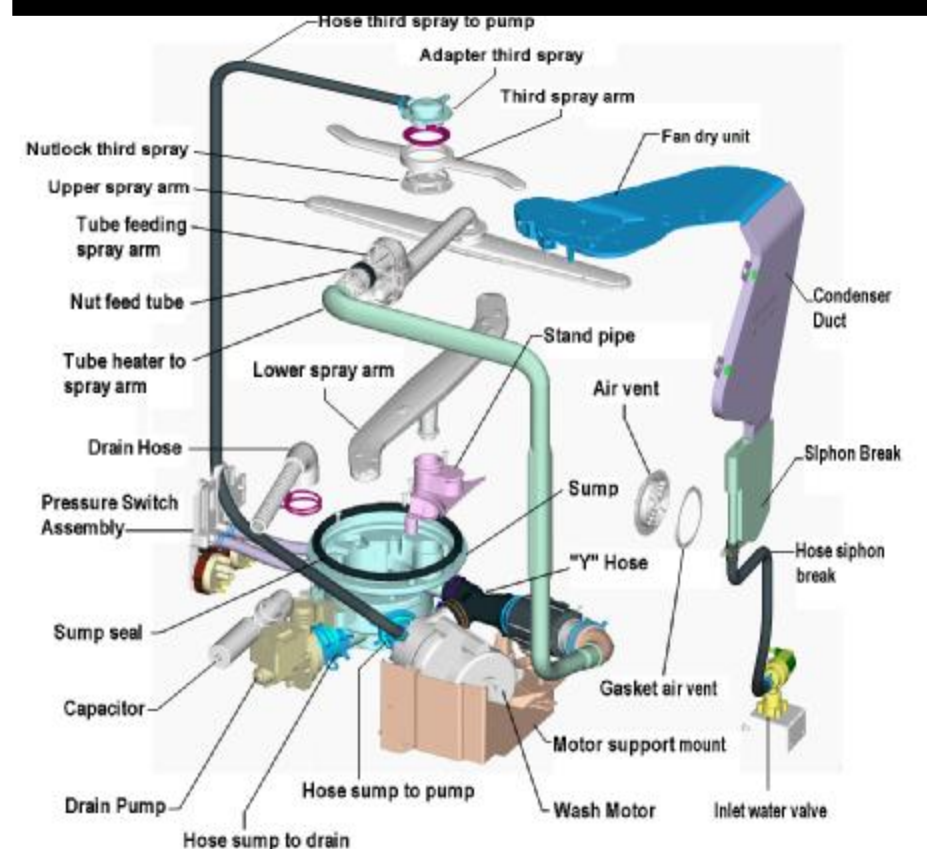
To clean the filters rotate the cup by the handle counter-clockwise 90 degrees and lift out. The stainless steel primary filter can then be removed and cleaned. Ensure that there is no food or obstructions in the filters before replacing.



Exploded View of Door Assembly



Exploded View of the Hydraulic System



Trouble Shooting Tips

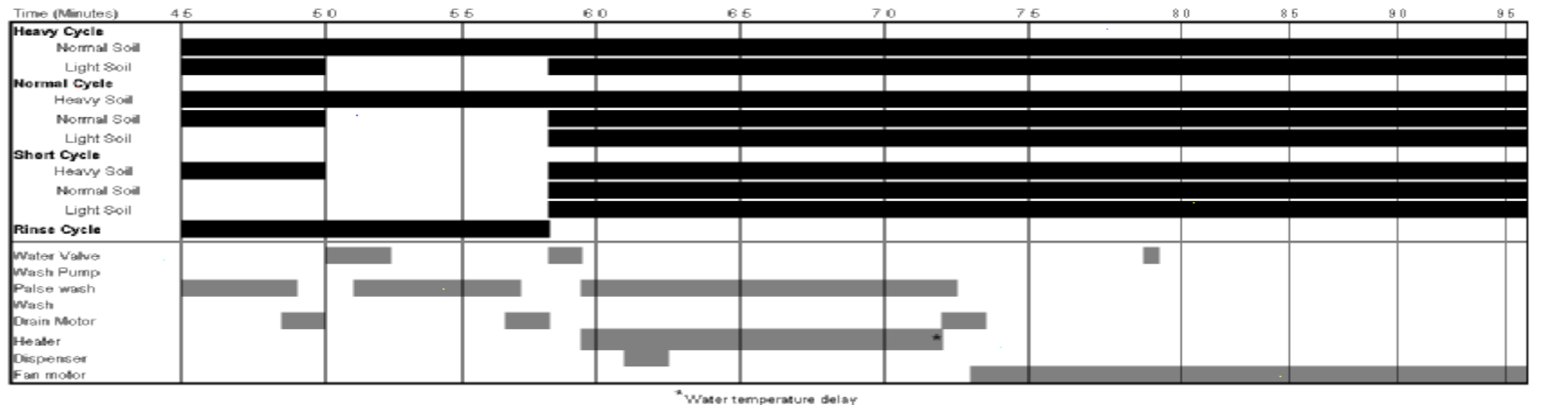
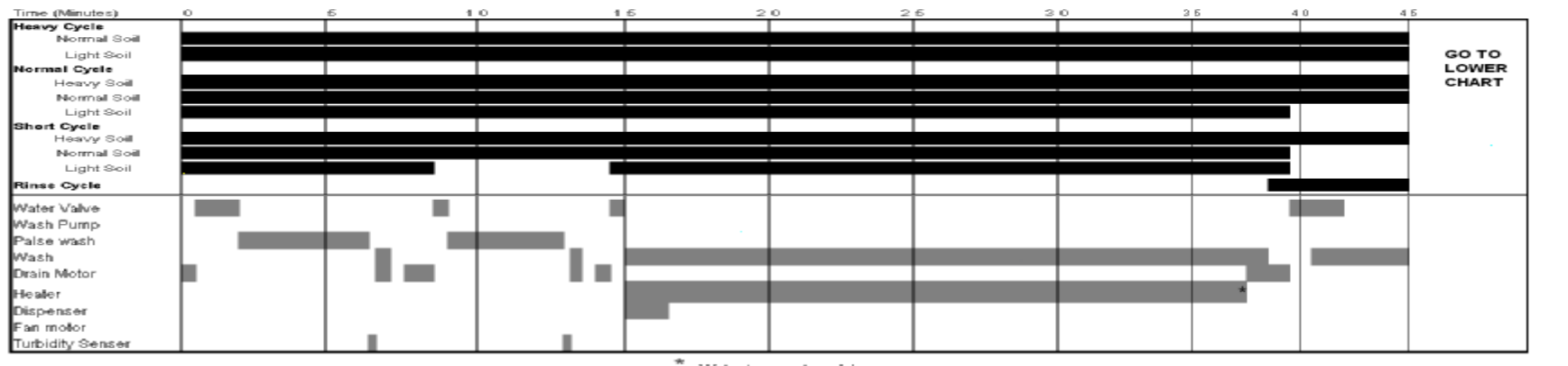
WARNING

Personal Injury Hazard

Always disconnect the dishwasher from the electrical power source before adjusting or replacing components

Symptom	Check the Following	Remedy
Dishwasher will not operate when turned of	<ol style="list-style-type: none"> 1. Fuse (blown or tripped) 2. 120 VAC supply wiring connection faulty. 3. Electronic control board defective 4. No 12 VAC power to control 5. Motor (inoperative). 6. Door switch (open contacts) 7. Door latch not making contact with door switch 8. Touch pad circuit defective 9. No indicator lamps illuminate when START or OPTIONS are pressed 	<ol style="list-style-type: none"> 1. Replace fuse or reset the breaker 2. Repair or replace wire fasteners at dishwasher junction box. 3. Replace control board 4. Replace control board 5. Replace motor / impeller assembly 6. Replace latch assembly 7. Replace latch assembly 8. Replace touch pad assembly 9. Replace touch pad assembly
Motor hums but will not start or run.	<ol style="list-style-type: none"> 1. Motor (bad bearings) 2. Motor stuck due to prolonged non-use 	<ol style="list-style-type: none"> 1. Replace motor assembly. 2. Rotate motor impeller
Motor trips out on internal thermal overload protector	<ol style="list-style-type: none"> 1. Improper voltage 2. Motor windings shorted (check winding resistance) 3. Glass or foreign items in the pump 	<ol style="list-style-type: none"> 1. Check voltage 2. Replace motor / impeller assembly 3. Clean and clear the blockage
Dishwasher runs but will not heat	<ol style="list-style-type: none"> 1. Heater element (open). 2. Electronic control board defective 3. Wiring or terminal defective 4. Hi-limit thermostat defective 	<ol style="list-style-type: none"> 1. Replace heater element 2. Replace control board 3. Repair or replace 4. Replace heater element
Detergent cover will not latch or open	<ol style="list-style-type: none"> 1. Latch mechanism defective 2. Electronic control board defective 3. Wiring or terminal defective 4. Broken spring(s) 5. Defective actuator 	<ol style="list-style-type: none"> 1. Replace dispenser 2. Replace control board 3. Repair or replace 4. Replace dispenser 5. Replace dispenser
Dishwasher will not pump out	<ol style="list-style-type: none"> 1. Drain restricted 2. Electronic control board defective 3. Wiring or terminal defective 4. Defective drain pump 5. Blocked impeller 6. Open windings 	<ol style="list-style-type: none"> 1. Clear restrictions 2. Replace control board 3. Repair or replace 4. Replace drain pump 5. Check for blockage, clear 6. Replace drain pump
Dishwasher will not fill with water	<ol style="list-style-type: none"> 1. Water supply turned off 2. Defective water inlet valve 3. Check fill valve screen for obstructions 4. Electronic control board defective 5. Wiring or terminal defective 	<ol style="list-style-type: none"> 1. Turn water supply on 2. Replace water inlet valve 3. Disassemble and clean screen 4. Replace electronic control board 5. Repair or replace
Dishwasher water siphons out	<ol style="list-style-type: none"> 1. Drain hose (high) loop too low. 2. Drain line connected to a floor drain not vented 	<ol style="list-style-type: none"> 1. Repair to proper 32-inch minimum height 2. Install air gap at counter top.
Detergent left in dispenser	<ol style="list-style-type: none"> 1. Detergent allowed to stand to long in the dispenser 2. Dispenser wet when detergent was added to the dispenser 3. Detergent cover held closed or blocked by large dishes 4. Improper incoming water temperature to properly dissolve detergent 5. See detergent cover will not latch or open 	<ol style="list-style-type: none"> 1. Instruct customer / user 2. Instruct customer / user 3. Instruct customer / user on proper loading of dishes 4. Incoming water temperature of 120°F is required to properly dissolve dishwashing detergents

Wash Cycle Data



Wiring Diagram

