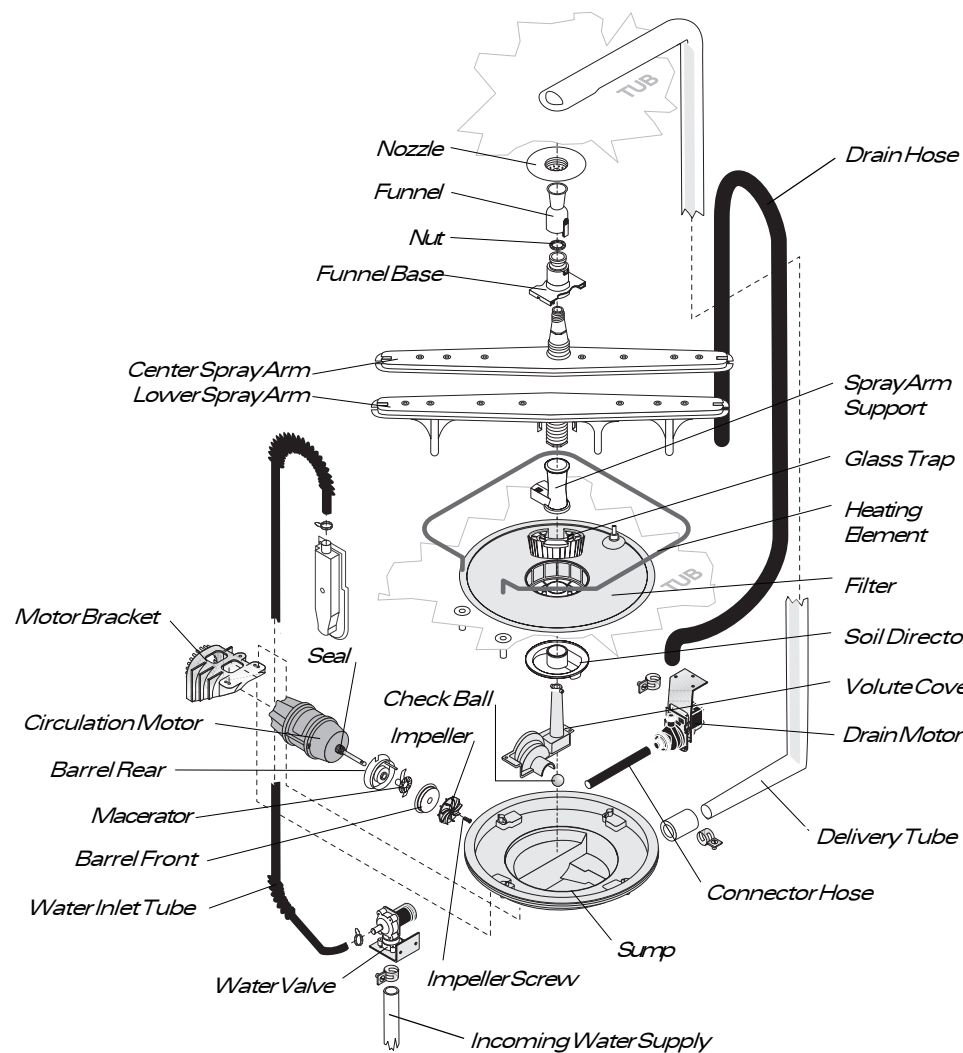


Exploded View of Wash System



Pump Assembly

The pump assembly is driven by a 1/12 HP, shaded pole motor. Rotation is in the counterclockwise direction at 3100 to 3200 RPM. The motor drives a pump which supplies 100 percent filtered water at a rate of approximately 12 GPM to one spray arm at a time. The spray arm's operation is alternated by small "pauses" of the motor during the wash cycle.

Draining is accomplished by using a small separate synchronous drain pump mounted to the side of the sump. The drain pump is connected to the main pump by a small rubber hose. The drain check valve is located at the entrance to the drain pump. The drain is then routed up the side of the dishwasher and attached to the side of the tub. This drain loop insures that an air pocket cannot form near the drain pump and cause the pump to

900 Watt Heater

Refer to the cycle chart on the reverse side to determine when the heater is on during the wash cycle. The heater cycles ON and OFF for brief periods during the drying cycle.

airlock. The drain loop on the side of the tub must be kept in place after servicing.

The main pump can easily be removed by disconnecting the upper spray arm supply tube, the drain pump connector hose, and the wiring harness connections made at the circulation motor and the water heat thermistor located on the bottom of the pump.

Once the pump assembly is removed from the dishwasher, the motor/impeller assembly can be removed from the sump by taking out the three (3) T-20 Torx head screws from the aluminum motor bracket and then the three (3) T-20 Torx head screws from the volute cover. Using a large flat head screw driver inserted between the impeller screw and the sump's volute, the motor/impeller assembly can be gently pried out of the sump. Use the screw driver as a lever.

Voltage checks of the heaters should be made in the dry portion of the service test mode.

Standard Dry Air Flow

When the control advances to the "dry" portion of the cycle, a linear actuator retracts a valve, which opens a vent path through the console into the kitchen. This venting method eliminates discharging heated moisture into the motor compartment. The heated, moist air leaving the dishwasher through the console vent causes drier air to be drawn into the unit by way of intake vents located at the bottom of the door. The water on the dishes is evaporated into drier air and the venting process continues. The heating element is turned ON and OFF during the entire drying cycle.

Detergent and Rinse Aid Dispenser

The detergent and rinse aid dispenser is a one piece component consisting of a molded detergent cup and a built-in rinse aid dispenser.

The detergent cup has a spring loaded cover and the rinse aid dispenser has a removable cover.

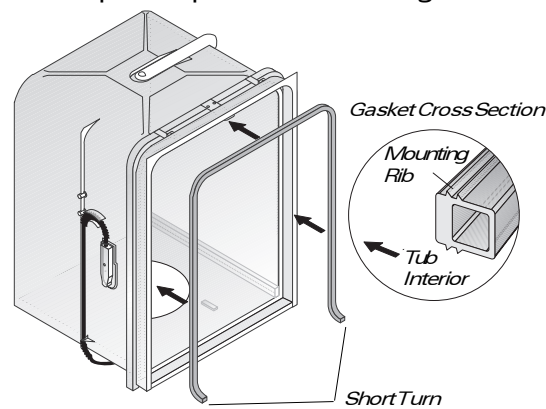
Liquid rinse aid is added to the dispenser up to the fill line indicator. The amount of rinse aid released can be adjusted by turning the arrow indicator from one, being the least amount, to four, being the greatest amount.

To replace dispenser:

- shut off electricity to dishwasher,
- remove outer door panel assembly,
- disconnect wiring to the actuator,

Tub and Door Seal

The door seal is pressed into the tub channel for an interference fit. Center the gasket (marked on back) at the tub top center and press in place



Product Specifications

Electrical

Rating	120 Volts, 60 Hz
Separate Circuit	15 amp min. - 20 amp max.
Motor (HP)	1/12
Motor (Amps)	3.4
Heater Wattage	900
Total Amps (load rated)	11.0
Temp Assure	140°F ± 5°F (60°C ± 3°C) [with outer door in place]
Temp Boost	144°F ± 5°F (62°C ± 3°C)
	Heated Wash/Heated Rinse
Hi-Limit Thermostat	200°F (93°C)

Power Dry Air Flow

The Power Dry configuration is the same as the Standard except it has a crossflow blower located in the air discharge path. The blower assists the heating element in producing power to drive the moist air out of the dishwasher.

- remove the six screws,
- remove the dispenser,
- replace and reinstall screws,
- rewire actuator.

To replace actuator:

- shut off electricity to dishwasher,
- disconnect wiring to the actuator,
- place a flat head screw driver under the actuator body and between the dispenser housing and terminal side, twist and lift up on the actuator being careful not to damage the retainer snap-fits,
- replace with new actuator by pressing into place,
- rewire actuator.

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 on.	<ol style="list-style-type: none"> 1. Fuse (blown or tripped). 2. 120VAC supply wiring connection faulty. 3. Electronic control board defective. 4. No 12VAC power to control. 5. Motor (inoperative, check resistances). 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 breaker. 2. Repair or replace wire fasteners at dishwasher junction box. 3. Replace control board. 4. Replace transformer. 5. Replace motor/impeller assembly. 6. Replace door switch. 7. Replace latch assembly. 8. Replace console assembly. 9. Replace console assembly.
Motor hums but will not start or run.	<ol style="list-style-type: none"> 1. Motor (bad bearings or locked rotor). 2. Motor stuck due to prolonged non-use. 	<ol style="list-style-type: none"> 1. Replace motor. 2. Rotate motor fan or impeller.
Motor trips out on internal thermal overload protector.	<ol style="list-style-type: none"> 1. Improper voltage. 2. Seal faces binding. 3. Motor shaft binding. 4. Motor windings shorted. 5. Glass or foreign items in pump. 	<ol style="list-style-type: none"> 1. Check voltage. 2. Rotate motor fan or impeller, or replace. 3. Clear blockage or replace. 4. Replace motor/impeller assembly. 5. Clean and clear 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 dispenser. 4. Replace thermostat.
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 actuator.
Dishwasher will not pump out.	<ol style="list-style-type: none"> 1. Drain restricted. 2. Electronic control board defective. 3. Defective drain pump. 4. Air lock in drain hose. 5. Blocked impeller. 6. Open windings. 7. Wiring or terminal defective. 	<ol style="list-style-type: none"> 1. Clear restrictions. 2. Replace control board. 3. Replace pump. 4. Make sure hose is attached in proper position on side of tub. 5. Check for blockage, clear. 6. Replace windings. 7. Repair or replace.
Dishwasher will not fill with water.	<ol style="list-style-type: none"> 1. Water supply turned off. 2. Defective water inlet fill valve. 3. Check fill valve screen for obstructions. 4. Defective float switch. 5. Electronic control board defective. 6. Wiring or terminal defective. 7. Float stuck in "UP" position. 	<ol style="list-style-type: none"> 1. Turn water supply on. 2. Replace water inlet fill valve. 3. Disassemble and clean screen. 4. Repair or replace. 5. Replace control board. 6. Repair or replace. 7. Clean float.
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. 3. Drain hose not connected to side of tub. 	<ol style="list-style-type: none"> 1. Repair to proper height. 2. Install air gap at counter top. 3. Reattach drain hose.
Detergent left in dispenser.	<ol style="list-style-type: none"> 1. Detergent allowed to stand too long in dispenser. 2. Dispenser wet when detergent was added. 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 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.

SERVICE DATA SHEET

P/N: 154320701

FRIGIDAIRE

Model:
FDB836

This information 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. Frigidaire Company cannot be responsible, nor assume any liability, for injury or damage of any kind arising from the use of this Service Data Sheet.

Notes

NOTE 1: TempAssure operation is in progress. This is a fixed cycle event. Cycle timing is interrupted while the water is heated to a preset temperature. At either the preset temperature, or a default escape time, normal cycle timing resumes. The escape time is 15 minutes. The pump motor is generating lower and upper spray action during this interval. The sequence is: 3 second pause, 60 second wash, 0.6 second pause, 60 second wash. The termination of the TempAssure event is preset to occur on the upper spray arm action.

NOTE 2: Heat Delay operation is in progress. This is an optional cycle event. Cycle timing is interrupted while the water is heated to the preset temperature. At either the preset temperature, or a default escape time, normal cycle timing resumes. The escape time is 15 minutes. The pump motor is generating lower and upper spray action during this interval. The sequence is: 3 second pause, 60 second wash, 0.6 second pause, 60 second wash. The termination of the TempAssure event is preset to occur on the upper spray arm action.

NOTE 3: This interval time is controlled by the 'CYCLE VARIABLE TABLE'.

NOTE 4: TempAssure operation is in progress. This is a fixed cycle event. Cycle timing is interrupted while the water is heated to a preset temperature. At either the preset temperature, or a default escape time, normal cycle timing resumes. The escape time is 15 minutes. The pump motor is generating lower and upper spray action during this interval. The sequence is: 3 second pause, 60 second wash, 0.6 second pause, 60 second wash. The termination of the TempAssure event is preset to occur on the upper spray arm action.

NOTE 5: Heat Delay operation is in progress. This is an optional cycle event. Cycle timing is interrupted while the water is heated to the preset temperature. At either the preset temperature, or a default escape time, normal cycle timing resumes. The escape time is 15 minutes. The pump motor is generating lower and upper spray action during this interval. The sequence is: 3 second pause, 60 second wash, 0.6 second pause, 60 second wash. The termination of the TempAssure event is preset to occur on the upper spray arm action.

NOTE 6: Temperature Maintain: This interval holds the wash temperature at the preset temperature ($\pm 1^\circ\text{C}$) for 5 minutes. The heater is free to cycle ON and OFF during this interval. The pump motor is generating lower and upper spray action during this interval. The

Color Code

'CYCLE VARIABLE TABLE'

INTERVAL	Event time in seconds										Degrees F								
	7	9	11	13	15	17	19	21	47	110	112	114	116	#1	#2	#4	#5		
POTS & PANS	60	30	60	30	60	30	60	30	60	30	150	0	75	75	75	140	145	144	147
NORMAL WASH	60	30	60	30	60	30	60	30	60	30	150	0	75	75	75	140	145	144	147
SHORT (BOTH)	60	30	60	30	60	30	60	30	60	30	150	0	75	75	75	127	132	127	132
SHORT (UPPER)	60	60	60	60	60	60	60	60	60	65	120	0	240	60	240	-	-	132	137

Diagnostic Cycle Test Procedure

While in power failure mode (flashing HI-TEMP WASH & NO HEAT DRY): Water/Service Test - press and hold, for 3 seconds, NO HEAT DRY and START/CANCEL pads. Press 'START' to manually advance diagnostic events.

If not in power failure mode: Cancel any cycle and, with the door latched, press for 3 seconds HI-TEMP WASH and START/CANCEL pads.

OPERATION

To start----- Close and latch door. Press START/CANCEL pad.

To delay start-----Close and latch door. Press DELAY START pad to select 4 hour delay time.

To select a new cycle or option-----Press desired cycle and/or option pad. The indicator lights will change. Press START/CANCEL within 15 seconds to begin cycle.

To cancel cycle-----Press START/CANCEL. Dishwasher will drain for 90 seconds,

DISPLAY CODES (LED)

ADD-A-DISH ----- Dishes may be added now. The indicator light will switch off after the detergent dispenser activates and will remain off for the remainder of cycle.

WASHING ----- Wash portion of cycle.

RINSING ----- Rinsing portion of cycle.

DRYING ----- Drying portion of cycle.

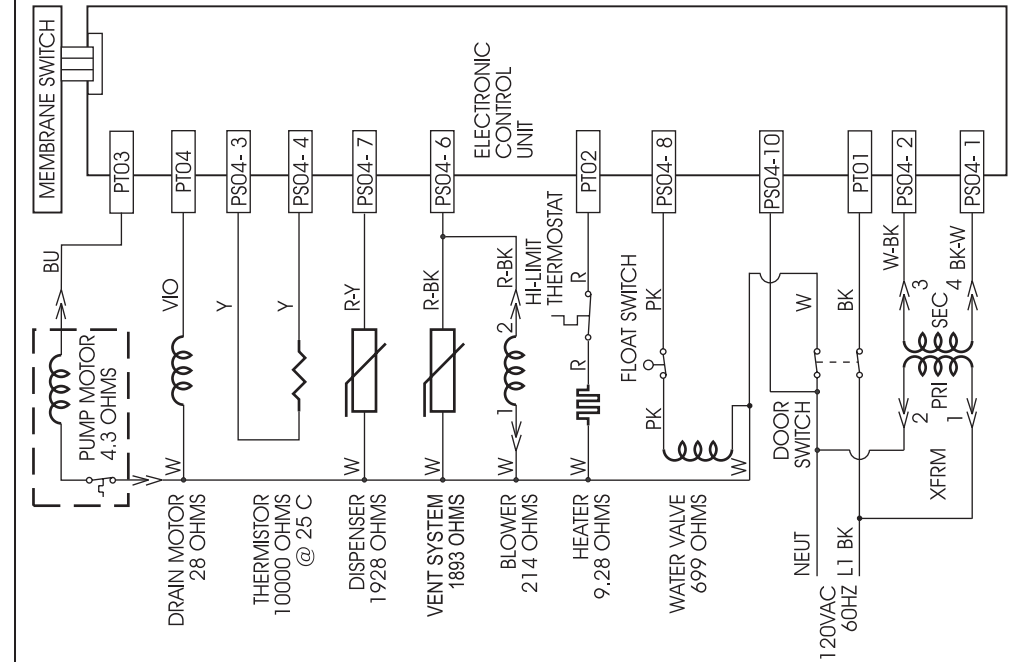
CLEAN ----- Shows completion of cycle. Indicator light will switch off when door is opened.

OPTION LED's Flashing ---- HI-TEMP WASH and NO HEAT DRY LED's flashing indicates power failure has occurred. Press START/CANCEL pad and reselect

Diagnostic Test

Time Seconds	LEDs	OUTPUTS
END		
90		
75		
10		
60		
5		
30		
0.6		
90		
30		
60		
1		
Diagnostic		
ADD-A-DISH		
WASHING		
RINSING		
DRYING		
CLEAN		
INTERVAL		
WASH MOTOR		
DRAIN MOTOR		
FILL VALVE		
HEATER		
DISPENSER		
VENT		
BLOWER		

Wiring Diagram



Cycle Selection Options

CYCLES	Event time in seconds										Degrees F																																																																																																																																
	7	9	11	13	15	17	19	21	47	110	112	114	116	#1	#2	#4	#5																																																																																																																										
POTS & PANS	60	30	60	30	60	30	60	30	60	30	150	0	75	75	75	140	145	144	147																																																																																																																								
NORMAL WASH	60	30	60	30	60	30	60	30	60	30	150	0	75	75	75	140	145	144	147																																																																																																																								
SHORT (BOTH)	60	30	60	30	60	30	60	30	60	30	150	0	75	75	75	127	132	127	132																																																																																																																								
SHORT (UPPER)	60	60	60	60	60	60	60	60	60	65	120	0	240	60	240	-	-	132	137																																																																																																																								
WASH MOTOR																																																																																																																																											
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CLEAN																																																																																																																																											
DURATION (IN SECONDS)	20	87	180	30	150	87	3	3	3	3	3	3	3	3	3	3	3	3	3																																																																																																																								
INTERNAL FUNCTION	START DRAIN	1-FILL	1-WASH LO	1-WASH/DRAIN	1-DRAIN	2-FILL	2-WASH LO	2-PAUSE	2-WASH HI	2-WASH HI	2-PAUSE	2-WASH LO	2-PAUSE	2-WASH HI	2-PAUSE	2-WASH LO	2-PAUSE	2-WASH HI	2-PAUSE																																																																																																																								
INTERNAL NUMBER	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	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	CLEAN	END