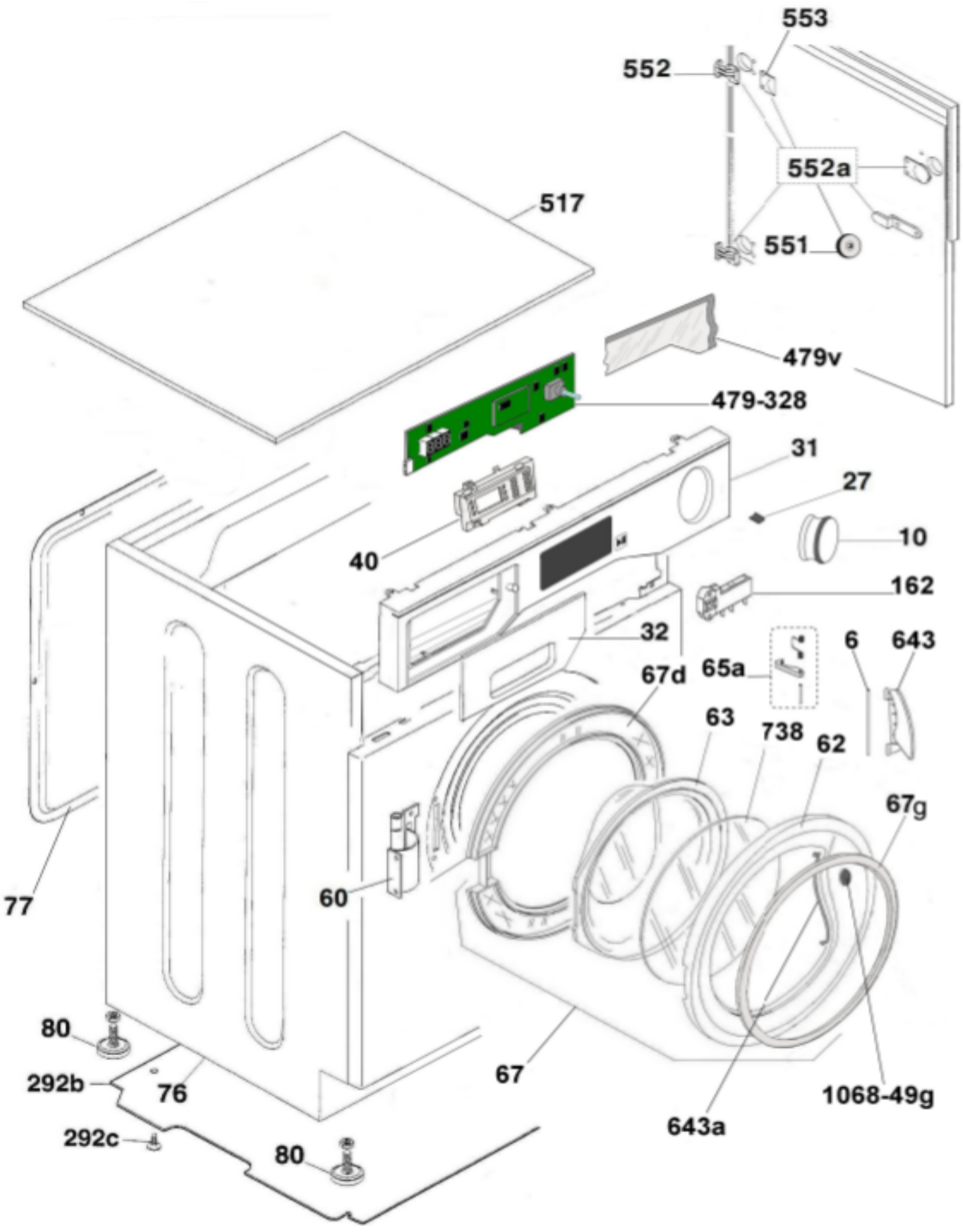
Caple
WMI4000
Built-In Washing Machine

Technical Manual

WMI4000 Built-In Washing Machine



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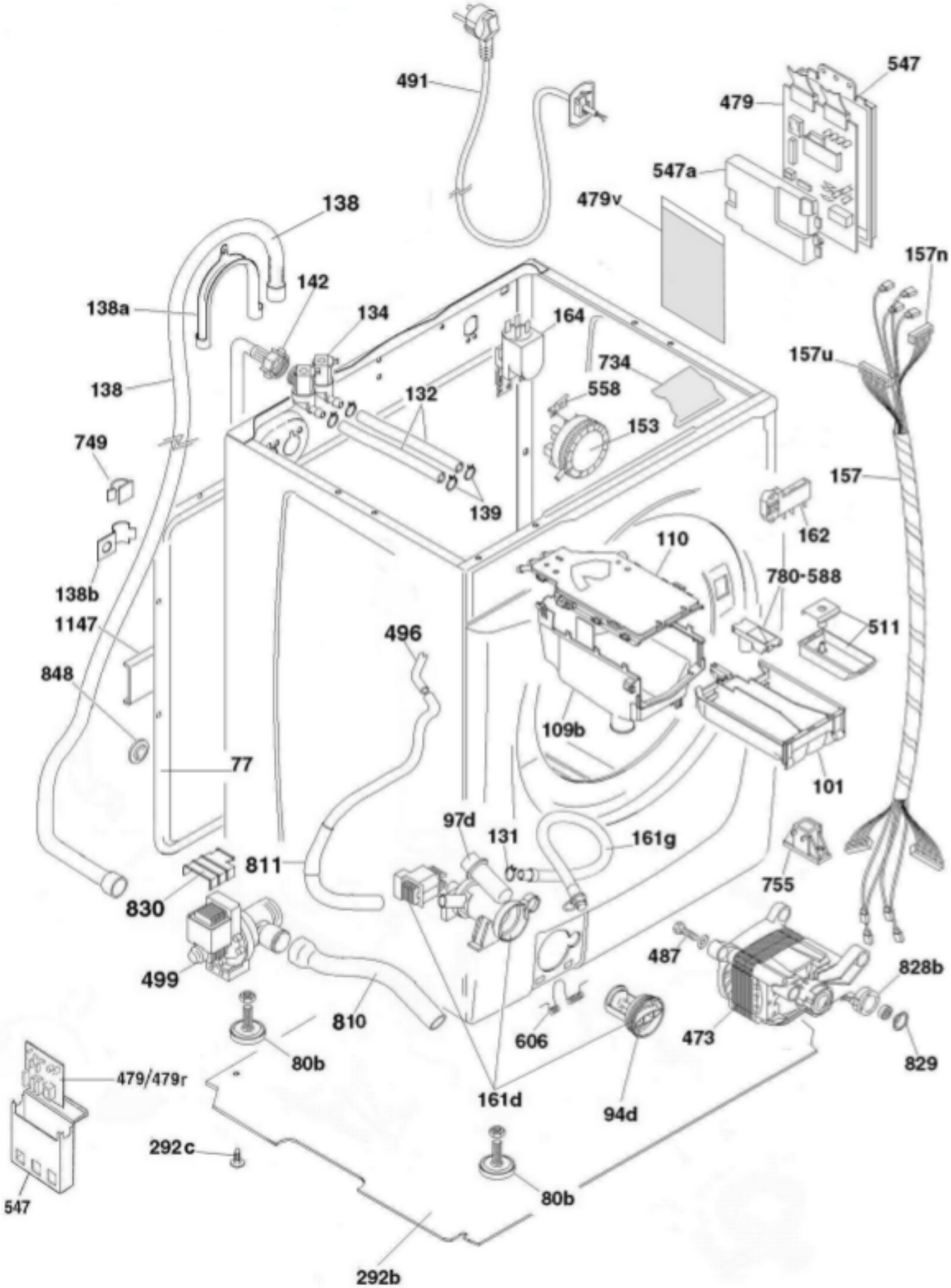

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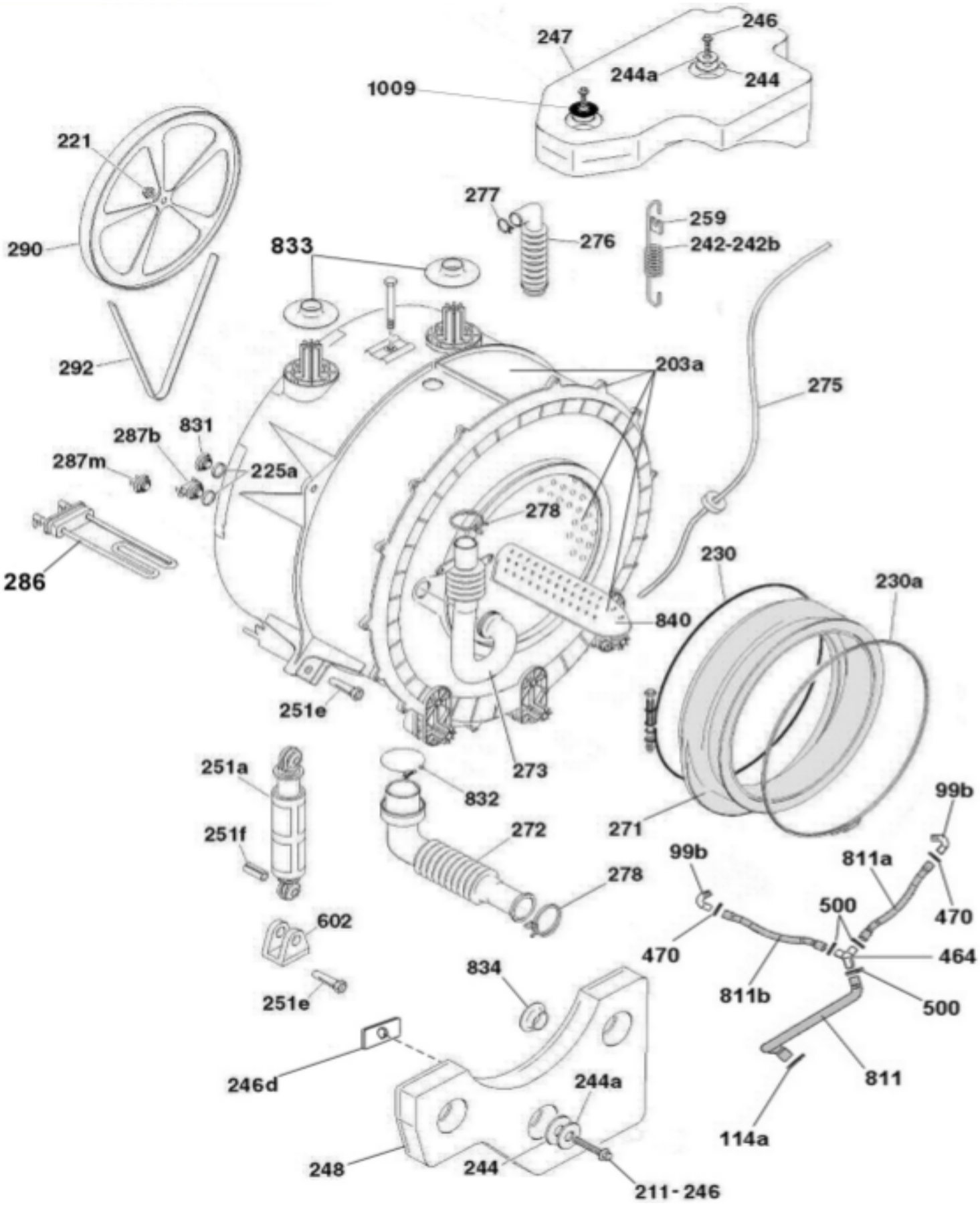

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Ref	Description	Code	Begin	End
10	Timer/select. knob	43015707		
14h	Therm/potent. knob spring	41013044		
31b	Control panel with Sensor	43030125		
32	Dispenser drawer front	43030097		
40	Light Guide - Digital Display	43013959		
49g	Trade mark plate	40014409		
60	Hinge	43010993		
62	Porthole outer frame	43012588		
63	Porthole glass	41040031		
65a	Door catch with spring service pack	49040858		
67	Porthole door complete	43031993		
67d	Porthole door inner frame	43012569		
77	Rear panel	43024295		
80b	Foot	43025155		
94d	Filter w/knob without screw	41021233		
97d	Filt hous w/filter cartridge	49007894		
101	Detergent dispenser	43001056		
109b	Dispenser bottom section	41035312		
110	Dispenser top section	43012978		
114a	Hose clip	92470061		
132u	Fill hose 170 mm.	43010141		
134	Solenoid valve	41018989		
138	Drain hose	92693373		
138a	Drain house elbow	92689587		
138b	Hose clamp	43023852		
142	Fill hose	92250869		
153d	Analog pressure sensor (APS)	41042893		
157	Wiring harness	41044799		
157o	Pressure switch harness	43013966		
158	Mains block	91623678		
161d	Drain/recycle pump complete	43014233		
162	Door safety device	41046787		
164	Anti jamming filter radio	91200098		
203a	Tub complete	43008783		
230	Tub gasket clip	41042927		
230a	Tub gasket clip	41018408		
233a	Pulley fixing screw	41021881		
242	Support spring.	43005963		
242f	Springs & shock absorb. mounting diagram	43010410		
244a	Balance weight washer	40001133		
245	Self-locking washer	92438720		
246	Bolt	41021829		
246d	Lower balance weight bracket	41011359		
247	Upper balance weight	43010676		
248	Lower balance weight	43000493		
251a	Telescopic shock absorber	41017170		
251e	Shock absorber pin	41017173		
251f	Antinoise bush	41017169		
259	Support	92673961		
271	Door gasket	43019185		

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Ref	Description	Code	Begin	End
272	Discharge pipe	41021741		
273	Fill pipe	41034869		
275	Pressure Switch Hose	43019381		
278	Hose clip	41021255		
278a	Hose clip d44	92470137		
280	Hose clip	92470202		
286a	Heater+NTC	41039772		
287m	NTC probe	49015420		
290	Drum pulley	41024467		
292	Drive belt	41039460		
292b	Bottom panel	43014187		
292c	Clips	43000134		
473	Commutator motor	41040979		
479v	Power Card Protection	41003174		
479w	Electronic Control NFC BLE Not Programed	N/A		
479y	Electronic Control NFC BLE Programmed	49116234		
487	Special bolt	92419548		
491c	Mains cable x UK	41034522		
517	Upper cabinet closure	43017253		
548	Spacer bloch	43012723		
551	Magnetic closure	43012724		
552	Hinge	43011965		
552a	Built-in's hinges service pack	43031999		
553	Hinge plaque	43012722		
602	Shock-absorb.conn.bracket	41017172		
643	Door handle assembly	43000463		
643a	Handle plate - profile	43031994		
643b	Handle spring	41018445		
734	Timer protection	43024585		
780	Siphon for water softner	41018421		
832	Discharge pipe circlip	91408004		
834	Lower counterweight supp.	92898923		
840	Drum shovel	41021913		
998a	Eeprom File NFC	43032294		
999	Electrical diagram	41043569		
1009	Disc spring	41036197		

WMI4000 Error codes

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Fault reasoning and suggested checks

This document can be used to fault find on washing machines and washer dryers where an error code is showing on the board or display. The usual electrical safety and functional checks should be completed to verify and rectify the fault. This list is not exhaustive and items will be added as new faults are diagnosed.

The purpose of this document is to allow engineers to accurately diagnose the fault and fit the correct part to the machine. This will avoid unnecessary part fitment and reduce material costs.

Remember: As soon as you fit a part you are suggesting there is a fault with the machine when in reality it may be functioning correctly.

WMI4000 Error codes

Error Code	Fault	How to Simulate	Suggested tests
ERROR 1	Door-Lock Triac open circuit or PTC open circuit	Simulate error by removing wire from PTC of Door-Lock	1) Does door shut and click, Yes (2), No check door assembly and door lock 2) Does the door lock light flash yes (3), No Check selector control panel and module 3) Check continuity to door lock and pins 1-3 (500-1500Ω), okay (4), not okay, replace door lock 4) Check wiring from module to door lock (can be module blown due to rectifier failure) If uncertain manually engage door lock when a program has been selected to check if it operates
ERROR 2	Water valve activates for >308 seconds but Pressure switch contacts do not close.	Simulate error by switching off the water supply to the machine.	1) Is water entering the machine No go to 2, Yes (6) 2) Is there water at the valve, Yes (3), No check outlet from supply is on 3) Does the valve energise (humming noise or voltage at valve), Yes, Replace valve, No (4) 4) Is there continuity between the board and valve, Yes replace valve, No (5) 5) Repair or replace harness 6) Does the machine fill to wash level within 308 seconds. Yes (7) No (10) 7) Is the pressure switch at the wash level Yes (8), No (9) 8) Check the continuity between the module and pressure switch, if okay change the module 9) Check pressure system, Pipe, reservoir and if okay replace pressure switch 10)Check water pressure if low remove flow control washer, if okay check valve and pipes into dispenser

WMI4000 Error codes

Error Code	Fault	How to Simulate	Suggested tests
ERROR 3	Pump activated for > 360 seconds but Pressure switch contacts not reset to empty position. Can also be caused by a low insulation heater.	Simulate by blocking water drain tube, or removing wire from pump.	1) Is water draining from the machine Yes (2), No (5) 2) Check insulation resistance with water in machine (may need to run on quick wash for several minutes to engage heater), okay (3), not okay, find relevant component and replace (usually heater) 3) Check position of pressure switch is it resetting. No (4) Yes, check wiring between switch and module, if okay replace module. 4) Check for a blockage in the pressure system, if okay replace pressure switch 5) Is the pump running. No (6), Yes check filter and remove blockages 6) Check continuity of pump okay (7), O/C or S/C change pump checking for reasons for failure such as leaks 7) Check for continuity to pump. Not okay find break in cable, Okay change module.
ERROR 4	Overflow fault when pressure switch overflow contacts are closed. Pump ON until level V0 (Empty). Slim line machines see bulletin 00170/LB	Simulate by closing overflow contacts on pressure switch.	1) Check pressure switch is not at antiflood position. Okay (1), at antiflood (5) 2) Check pressure system pipe work and reservoir for blockages. Okay (3) 3) Check customers powder usage as oversudsing can cause antiflood. Okay (4) 4) Has the tub got a steam hose. Yes Change module, No fit steam hose, Bulletin 00040/LB 5) Remove pressure pipe does it reset. No, change pressure switch. Yes check pressure system for blockages.
ERROR 5	NTC water temperature open circuit or short circuit	Simulate by removing wire from NTC.	1) Check continuity from board to NTC, Okay Replace module. Not okay (2) 2) Check wiring and NTC, repair and replace as necessary.

WMI4000 Error codes

Error Code	Fault	How to Simulate	Suggested tests
ERROR 6 Used only on Power One	Unbalance Error- Not shown, only memory If unbalance detection fails (more than maximum number of attempts done or timeout set in EEPROM has elapsed) the error is raised.	Unbalance test	1) Check with the customer what types of load are being used. Load Okay (2), Not okay, Advise on correct loading 2) Check weights and spring position on machine, positions shown on giastech. Ok (3) 3) Consider changing the module after checking objects around the machine that could cause unbalance
ERROR 7	Door-Lock contacts are still closed 4 minutes after Door-Lock Triac is deactivated	Simulate by maintaining door-lock contacts closed.	1) Does the door lock remain shut after 4 minutes yes (2), No (6) 2) Was the machine on dry when the error occurred, Yes (3), No (4) 3) Check the firmware version on the board is SW KD60CB13B or above 4) Did the cycle complete (yes) Check insulation of motor and replace if necessary, No (5) 5) Check continuity to door lock and pins 1-3 (500-1500Ω), if okay change module 6)) Check continuity to door lock and pins 1-3 (500-1500Ω), if okay change module
ERROR 8	If no tacho signal 2.8 seconds after Motor Triac activated (for 7 successive attempts)	Simulate by removing tacho signal	1) Check wiring from module to motor plug, okay (2) 2) Check Belt is on pulley, Okay (3) 3) Check motor brushes, field and armature (also checking for carbon dust tracking across armature), Okay (4) 4) Change module
ERROR 9	Motor Triac short circuit	Simulate by Short-circuiting Motor Triac	1) Check triac on module, Okay (2) 2) Check customer is not overloading or using unblanced loads

WMI4000 Error codes

Error Code	Fault	How to Simulate	Suggested tests
ERROR 10	Unprogrammed module		1) Reprogram module 2) No dialogue between "Cuore" Control Module and Display board and/or Wiring.
ERROR 11	Drying NTC failure		1) Check wiring connection to NTC, Okay (2) 2) Check NTC resistance approx 4.85K okay (3) 3) Check firmware version on module (3 phase SW135, 3 phase 8 pulse, SW138)
ERROR 12	Drying Heater open circuit		1) Check wiring and safety stat on dryer (if TOC has tripped check airflow) 2) Check continuity of heater
ERROR 13	Communication failure between Main board and Display on P1. On Invensys communication failure between Main board and User Interface.		1) Check wiring and ribbon cable between main board and control board (clean if necessary), 2) Consider changing module and display module and or harness between module and control board.
ERROR 14	If temperature does not rise during heating phase (Open circuit heater). Error displayed AT END OF WASH CYCLE (often associated with E3)	Simulate by removing power to heater.	1) Check resistance of the heater element, Okay (2) 2) Is the machine a 3 phase, Yes (3), No (4) 3) Check the software is over version SW132, if not change board. 4) Check wiring from harness to module okay, change module

WMI4000 Error codes

Error Code	Fault	How to Simulate	Suggested tests
ERROR 15	Check sum error. Unprogrammed board		1) Is machine a 3 phase Yes (2), No Reprogram board or replace board 2) Is the software version "WashFTE05-009E -A" if yes this version is not programmable. Change the board , No, reprogram or change board
ERROR 16	Current Leakage from heater to earth (heater needs to be changed)	Simulate by adding a power resistor of 100K from heater terminals to earth	1) Check insulation of heater, this may need to be carried out on a program, Okay (2), not okay change heater 2) Check other components on the machine for low insulation, machine may need to be run, if all okay consider changing board
ERROR 17	If Tacho signal shows Motor speed is >0rpm 3 minutes after deactivating motor triac.	Simulate by supplying tacho signals for > 3 minutes	1) Check resistance of tacho is okay and not fluctuating. 2) Check wiring from module to motor
ERROR 18	Compatibility of board type.(SW >GA05A)	Simulate by fitting Digit interface board to a LED model	1) If Soft touch controls, showing number of times switched on - No Error or (2) 2) If Normal selector fitted Replace module

WMI4000 Error codes

Error Code	Fault	How to Simulate	Suggested tests
ERROR 20	Difficulty reading water level		1) Check APS pressure switch and connection 2) Check connection with the pressure bottle, check pressure system
	Not draining		1) Check all parts of the drainage system
ERROR 21	Unable to read water level		1) Check wiring and connection to APS pressure switch and module 2) Change the APS pressure switch
ERROR 22	Trouble with water Heating.		1) Check wiring to the heater 2) Check resistance of the heater 3) Check for voltage at the heater using the test cycle