

Ripon-Made Products

Error Codes

Original Instructions

Keep These Instructions for Future Reference.

CAUTION: Read the instructions before using the machine.

(If this machine changes ownership, this manual must accompany machine.)



www.alliancelaundry.com

Part No. 3-23-3
August 2023

Table of Contents

Safety Information.....	6
Model Identification Key.....	8
Small Chassis Dryer – Error Codes for J, N, and W Control, with 3, 4, or 5 in 11th position of model number.....	9
Small Chassis Dryer – Error Codes for B Control, with 3, 4, or 5 in 11th position of model number.....	12
Small Chassis Dryer – Error Codes for N Control, with 6 in 11th position of model number.....	15
Small Chassis Dryer – Error Codes for B Control, with 6 in 11th position of model number.....	17
Topload Washer – Error Codes for B, K or Z Control, with B, H, K, N, or S in 1st position of model number, and 3 or 5 in 11th position of model number.....	19
Top Load Washer – Error Codes for B Control, with P in 1st position of model number, and 3 or 5 in 11th position of model number.....	23
Top Load Washer – Error Codes for N and W Control, with 3 in 11 position of model number.....	27
Top Load Washer – Error Codes for N and W Control, with 5 in 11th position of model number.....	31
Top Load Washer – Error Codes for K Control, with 6 in 11th position of model number.....	35
Top Load Washer – Error Codes for N Control, with 6 in 11th position of model number.....	38

Front Load Washer – Error Codes for N (4th position of model number) Control, with 6 in 11th position of model number.....	41
Front Load Washer – Error Codes for J, N, and W (4th position of model number) Control with 3, 4, or 5 in 11th position of model number.....	47
Front Load Washer – Error Codes for K or Z Control.....	54
Front Load Washer – Error Codes for B (4th position of model number) Control with 3, 4, or 5 in 11th position of model number.....	61
Stacked Washer Dryer – Error Codes for N Control, with 6 in 11th position of model number.....	67
Stacked Washer Dryer – Error Codes for J, N, and W Control with 3, 4, or 5 in 11th position of model number.....	75
Stacked Washer Dryer – Error Codes for B Control with 3, 4, or 5 in 11th position of model number.....	85
Stacked Washer Dryer – Error Codes for B Control, with 6 in 11th position of model number.....	94
Tumble Dryer - Error Codes for F Control.....	102
Tumble Dryer - Error Codes for B Control.....	108
Tumble Dryer - Error Codes for N Control - Vend.....	112
Tumble Dryer - Error Codes for N Control - OPL.....	120
Tumble Dryer - Error Codes for D Control.....	125
Tumble Dryer - Error Codes for V Control - Vend and OPL.....	129
Washer-Extractor – Error Codes for F control.....	137
Washer-Extractor – Error Codes for N control with N, 1, or 2 in 8th position.....	144

Washer-Extractor – Error Codes for N and W control with B and P in 1st position and C, D, E, F, H, L, Q, X, Y in 8th position and H in 1st position with T in 3rd position 154

Washer-Extractor – Error Codes for N or W control with S in 1st position..... 164

Washer-Extractor – Error Codes for N and W controls with H in 1st position and A, D G, E, H, J, and U in 3rd position..... 174

Washer-Extractor – Error Codes for Q control with N in 8th position. 182

Washer-Extractor – Error Codes for Q control with S in 1st position with C, D, E, F H, L, Q, T, and V in 8th position..... 191


Washer-Extractor – Error Codes for Q models with H in 1st position and T in 3rd position, models starting serial number 1905..... 200


Washer-Extractor – Error Codes for Q models with H in 1st position and T in 3rd position, models through serial number 1904..... 209


Washer-Extractor - Error Codes for V Control..... 218

Safety Information

Precautionary statements (“DANGER,” “WARNING,” and “CAUTION”), followed by specific instructions, are found in this manual and on machine decals. These precautions are intended for the personal safety of the operator, user, servicer, and those maintaining the machine.

	DANGER
Indicates an imminently hazardous situation that, if not avoided, will cause severe personal injury or death.	

	WARNING
Indicates a hazardous situation that, if not avoided, could cause severe personal injury or death.	


	CAUTION
Indicates a hazardous situation that, if not avoided, may cause minor or moderate personal injury or property damage.	

Additional precautionary statements (“IMPORTANT” and “NOTE”) are followed by specific instructions.


IMPORTANT: The word “IMPORTANT” is used to inform the reader of specific procedures where minor machine damage will occur if the procedure is not followed.


NOTE: The word “NOTE” is used to communicate installation, operation, maintenance or servicing information that is important but not hazard related.

In the interest of safety, some general precautions relating to the operation of this machine follow.

	WARNING
<ul style="list-style-type: none"> • Failure to install, maintain and/or operate this product according to the manufacturer’s instructions may result in conditions which can produce serious injury, death and/or property damage. • Do not repair or replace any part of the product or attempt any servicing unless specifically recommended or published in this Service Manual and unless you understand and have the skills to carry out the servicing. • Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the product is properly grounded and to reduce the risk of fire, electric shock, serious injury or death. 	
W006R2	

IMPORTANT: During the lifetime of a tumble dryer, it may require service. The information contained in this manual was written and is intended for use by qualified service technicians who are familiar with the safety procedures required in the repair of a tumble dryer, and who are equipped with the proper tools and testing equipment.


	WARNING
<p>To reduce the risk of electric shock, fire, explosion, serious injury or death:</p> <ul style="list-style-type: none"> • Disconnect electric power to the tumble dryer before servicing. • Never start the tumble dryer with any guards/panels removed. • Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumble dryer is properly grounded. 	
W240R1	

	WARNING
<p>To reduce the risk of electric shock, fire, explosion, serious injury or death:</p> <ul style="list-style-type: none"> • Disconnect electric power to the washer before servicing. • Never start the washer with any guards/panels removed. • Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer is properly grounded. <p style="text-align: right;">W003</p>	

NOTE: The **WARNING** and **IMPORTANT** instructions appearing in this manual are not meant to cover all possible conditions and situations that may occur. It must be understood that common sense, caution and carefulness are factors which **CANNOT** be built into this tumble dryer. These factors **MUST BE** supplied by the person(s) installing, maintaining or operating the tumble dryer.

NOTE: The **WARNINGS** and **IMPORTANT INSTRUCTIONS** appearing in this manual are not meant to cover all possible conditions and situations that may occur. Common sense, caution and care must be exercised when installing, maintaining or operating the machine.


Always contact your dealer, distributor, service agent or the manufacturer about any problems or conditions you do not understand.


	WARNING
<p>To reduce the risk of electric shock, fire, explosion, serious injury or death:</p> <ul style="list-style-type: none"> • Disconnect electric power to the dryer before servicing. • Close gas shut-of valve to gas dryer before servicing. • Never start the Dryer with any guards/panels removed. • Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the dryer is properly grounded. <p style="text-align: right;">W001R1</p>	

Locating an Authorized Service Person

Alliance Laundry Systems is not responsible for personal injury or property damage resulting from improper service. Review all service information before beginning repairs.

Warranty service must be performed by an authorized technician, using authorized factory parts. If service is required after the warranty expires, Alliance Laundry Systems also recommends contacting an authorized technician and using authorized factory parts.

	WARNING
<p>Repairs that are made to your products by unqualified persons can result in hazards due to improper assembly or adjustments subjecting you, or the inexperienced person making such repairs, to the risk of serious injury, electrical shock, or death.</p> <p style="text-align: right;">W007</p>	

	CAUTION
<p>If you or an unqualified person perform service on your product, you must assume the responsibility for any personal injury or property damage which may result. The manufacturer will not be responsible for any injury or property damage arising from improper service and/or service procedures.</p> <p style="text-align: right;">W008</p>	

Model Identification Key

Model Identification

Refer to *Figure 1* for a model identification key to determine which digit is the control digit.

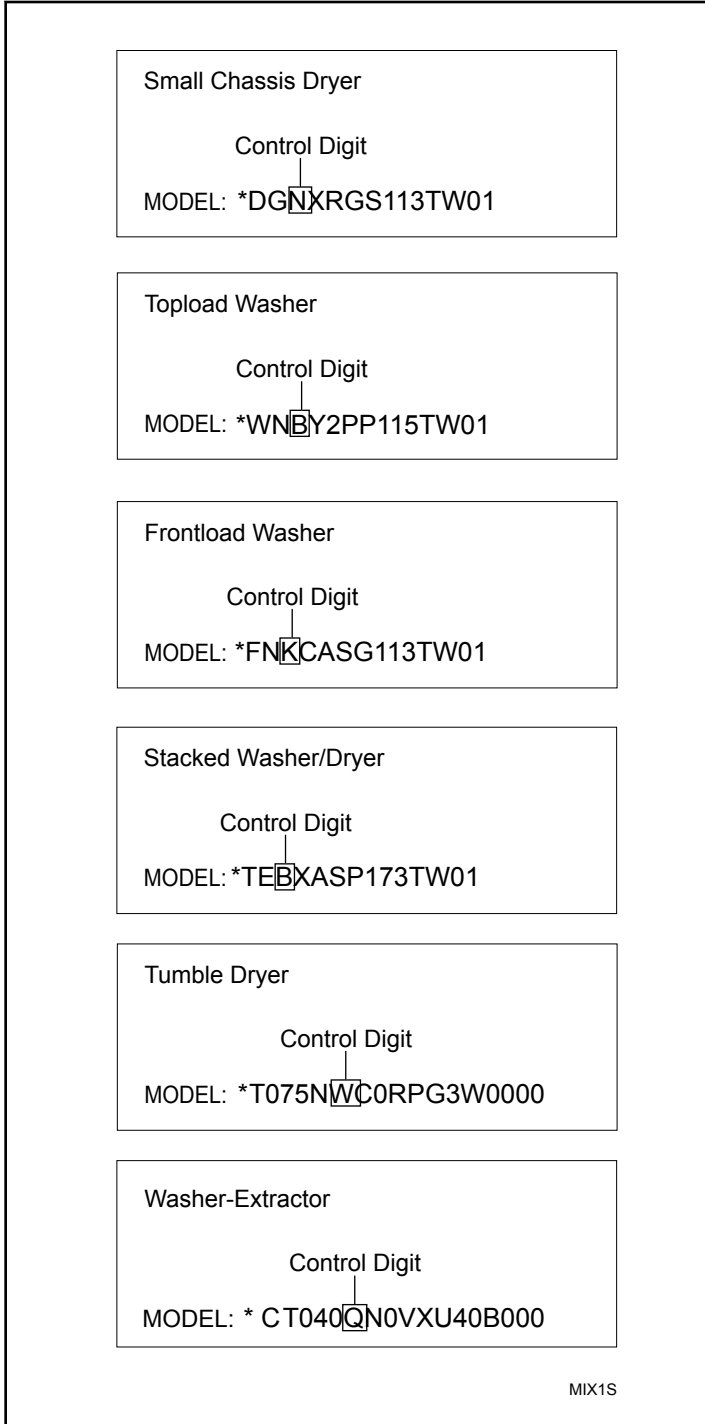


Figure 1

Small Chassis Dryer – Error Codes for J, N, and W Control, with 3, 4, or 5 in 11th position of model number

Error Codes

communication errors. Errors beginning with *EC* refer to card reader errors. All other errors refer to machine errors.

Following is a list of possible error codes for an electronic control. Errors beginning with *EI* refer to external device Infra-red

Display	Description	Cause/ Corrective Action
<i>EI 01</i>	Transmission Failure	Communication failure. Re-aim external device and try again.
<i>EI 02</i>	Device Time-out	Communication failure. Re-aim external device and try again.
<i>EI 03</i>	Invalid Command Code	Incorrect machine type. Before downloading, ensure data is for current machine type.
<i>EI 04</i>	Command Packet Time Out	Communication failure. Re-aim external device and try again.
<i>EI 05</i>	Invalid or Out-of-Range Data	Incorrect machine type. Before downloading, ensure data is for current machine type and values entered are within the minimum and maximum limits.
<i>EI 09</i>	CRC-16 Error	Communication failure. Re-aim external device and try again.
<i>EI 0A</i>	Framing Error	Communication error. Re-aim external device and try again.
<i>EI 0C</i>	Time-out Exceeded	Communication error. Re-aim external device and try again.
<i>EI 0E</i>	Encryption Error	Incorrect machine type. Before downloading, ensure data is for current machine type.
<i>EI 0F</i>	Invalid Wake-up or Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
<i>EC02</i>	Time-out Error	Communication failure. Try card again.
<i>EC03</i>	Invalid Command Code	Incorrect machine type. Before downloading, ensure data is for current machine type.

Table 1 *continues...*

Display	Description	Cause/ Corrective Action
<i>EC05</i>	Invalid or Out-of-Range Data	Incorrect machine type. Before downloading, ensure data is for current machine type and values entered are within the minimum and maximum limits.
<i>EC 11</i>	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
<i>EC 18</i>	No Communication	Card reader initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
<i>EC 19</i>	No Card Reader Communication and No Card Reader Initialization	Communication failure. Power down, power up, check connections, harness and try again. If error persists, replace control or card reader.
<i>EC36</i>	Audit Card Removed Prematurely	Re-insert Audit Card and wait until machine prompts for card removal.
Right most decimal point Lit	Network Communication Error	Communication problem. Wait for 1.5 minutes for error to clear. If error doesn't clear, power-down and power-up the machine. Check all network connections. If error persists, replace control or network board.
<i>ALArn</i>	Break-in Alarm Error	Service the service door or coin vault switches.
<i>aFF</i>	Break-in Alarm Shutdown Error	Service the service door or coin vault switches.
<i>Err</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E 5H</i>	Shorted Thermistor Error	Dead short in thermistor circuit. Check wiring harness and remove any lint build-up around thermistor. If problem persists, replace thermistor or output board.
<i>E aP</i>	Open Thermistor Error	Physical open in thermistor circuit. Check wiring harness and remove any lint build-up around thermistor. If problem persists, replace thermistor or output board.
<i>E id</i>	Board ID	Incorrect replacement control. Replace user control or output board with correct part.

Table 1 *continues...*

Display	Description	Cause/ Corrective Action
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dipswitch #1 to the same setting as the previous control. If reworking the machine to use a different supply voltage, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>E nr</i>	Output Board Not Ready	Hardware failure. Replace output board.
<i>E b5</i>	Output Board Communication	Hardware failure. Replace output board.
<i>E nHH</i>	Machine ID	Communication failure. Power down, power up and try again. If error persists, check connection between user control and Machine ID chip, or try replacing the user control or the Machine ID chip.
<i>E Co</i>	Output Board Communication	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.
<i>E 59</i>	Door Input Acquisition	Hardware failure. Replace output board.
<i>E 60</i>	Centrifugal Switch Input Acquisition	Hardware failure. Replace output board.
<i>E 61</i>	High Limit Thermostat Input Acquisition	Hardware failure. Replace output board.
<i>E ro</i>	Locked Rotor	The motor is not sensed as rotating when it should be. Check that nothing is obstructing motor rotation, check connection between user control and output board, or try replacing the user control or the output board.
<i>E n5</i>	Motor Output Shorted	Hardware failure. Replace output board.

Table 1

Small Chassis Dryer – Error Codes for B Control, with 3, 4, or 5 in 11th position of model number

Error Codes

communication errors. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Following is a list of possible error codes for an electronic control. Errors beginning with **E**, refer to external device Infra-red

Display	Description	Cause/ Corrective Action
<i>E .01</i>	Transmission Failure	Communication failure. Re-aim external device and try again.
<i>E .02</i>	Device Time-out	Communication failure. Re-aim external device and try again.
<i>E .03</i>	Invalid Command Code	Incorrect machine type. Before downloading, ensure data is for current machine type.
<i>E .04</i>	Command Packet Time Out	Communication failure. Re-aim external device and try again.
<i>E .05</i>	Invalid or Out-of-Range Data	Incorrect machine type. Before downloading, ensure data is for current machine type and values entered are within the minimum and maximum limits.
<i>E .09</i>	CRC-16 Error	Communication failure. Re-aim external device and try again.
<i>E .0A</i>	Framing Error	Communication error. Re-aim external device and try again.
<i>E .0C</i>	Time-out Exceeded	Communication error. Re-aim external device and try again.
<i>E .0E</i>	Encryption Error	Incorrect machine type. Before downloading, ensure data is for current machine type.
<i>E .0F</i>	Invalid Wake-up or Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
<i>EC02</i>	Time-out Error	Communication failure. Try card again.
<i>EC03</i>	Invalid Command Code	Incorrect machine type. Before downloading, ensure data is for current machine type.

Table 2 *continues...*

Display	Description	Cause/ Corrective Action
<i>EC05</i>	Invalid or Out-of-Range Data	Incorrect machine type. Before downloading, ensure data is for current machine type and values entered are within the minimum and maximum limits.
<i>EC 11</i>	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
<i>EC 18</i>	No Communication	Card reader initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
<i>EC 19</i>	No Card Reader Communication and No Card Reader Initialization	Communication failure. Power down, power up, check connections, harness and try again. If error persists, replace control or card reader.
<i>EC36</i>	Audit Card Removed Prematurely	Re-insert Audit Card and wait until machine prompts for card removal.
Right most decimal point Lit	Network Communication Error	Communication problem. Wait for 1.5 minutes for error to clear. If error doesn't clear, power-down and power-up the machine. Check all network connections. If error persists, replace control or network board.
<i>ALii</i>	Break-in Alarm Error	Service the service door or coin vault switches.
<i>oFF</i>	Break-in Alarm Shutdown Error	Service the service door or coin vault switches.
<i>Errr</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E 5H</i>	Shorted Thermistor Error	Dead short in thermistor circuit. Check wiring harness and remove any lint build-up around thermistor. If problem persists, replace thermistor or output board.
<i>E oP</i>	Open Thermistor Error	Physical open in thermistor circuit. Check wiring harness and remove any lint build-up around thermistor. If problem persists, replace thermistor or output board.
<i>E id</i>	Board ID	Incorrect replacement control. Replace user control or output board with correct part.

Table 2 *continues...*

Display	Description	Cause/ Corrective Action
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dipswitch #1 to the same setting as the previous control. If reworking the machine to use a different supply voltage, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>E nr</i>	Output Board Not Ready	Hardware failure. Replace output board.
<i>E b5</i>	Output Board Communication	Hardware failure. Replace output board.
<i>E nHH</i>	Machine ID	Communication failure. Power down, power up and try again. If error persists, check connection between user control and Machine ID chip, or try replacing the user control or the Machine ID chip.
<i>E Co</i>	Output Board Communication	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.
<i>E 59</i>	Door Input Acquisition	Hardware failure. Replace output board.
<i>E 60</i>	Centrifugal Switch Input Acquisition	Hardware failure. Replace output board.
<i>E 61</i>	High Limit Thermostat Input Acquisition	Hardware failure. Replace output board.
<i>E ro</i>	Locked Rotor	The motor is not sensed as rotating when it should be. Check that nothing is obstructing motor rotation, check connection between user control and output board, or try replacing the user control or the output board.
<i>E n5</i>	Motor Output Shorted	Hardware failure. Replace output board.

Table 2

Small Chassis Dryer – Error Codes for N Control, with 6 in 11th position of model number

Error Codes

Following is a list of possible error codes for an electronic control. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Display	Description	Cause/ Corrective Action
<i>EC02</i>	Time-out Error	Communication failure. Try card again.
<i>EC03</i>	Invalid Command Code	Incorrect machine type. Before downloading, ensure data is for current machine type.
<i>EC05</i>	Invalid or Out-of-Range Data	Incorrect machine type. Before downloading, ensure data is for current machine type and values entered are within the minimum and maximum limits.
<i>EC 11</i>	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
<i>EC 18</i>	No Communication	Card reader initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
<i>EC 19</i>	No Card Reader Communication and No Card Reader Initialization	Communication failure. Power down, power up, check connections, harness and try again. If error persists, replace control or card reader.
<i>EC36</i>	Audit Card Removed Prematurely	Re-insert Audit Card and wait until machine prompts for card removal.
Right most decimal point Lit	Network Communication Error	Communication problem. Wait for 1.5 minutes for error to clear. If error doesn't clear, power-down and power-up the machine. Check all network connections. If error persists, replace control or network board.
<i>ALArn</i>	Break-in Alarm Error	Service the service door or coin vault switches.
<i>oFF</i>	Break-in Alarm Shutdown Error	Service the service door or coin vault switches.

Table 3 *continues...*

Display	Description	Cause/ Corrective Action
<i>Err</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E 5H</i>	Shorted Thermistor Error	Dead short in thermistor circuit. Check wiring harness and remove any lint build-up around thermistor. If problem persists, replace thermistor or output board.
<i>E oP</i>	Open Thermistor Error	Physical open in thermistor circuit. Check wiring harness and remove any lint build-up around thermistor. If problem persists, replace thermistor or output board.
<i>E id</i>	Board ID	Incorrect replacement control. Replace user control or output board with correct part.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dipswitch #1 to the same setting as the previous control. If reworking the machine to use a different supply voltage, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>E nr</i>	Output Board Not Ready	Hardware failure. Replace output board.
<i>E b5</i>	Output Board Communication	Hardware failure. Replace output board.
<i>E Co</i>	Output Board Communication	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.
<i>E 59</i>	Door Input Acquisition	Hardware failure. Replace output board.
<i>E 60</i>	Centrifugal Switch Input Acquisition	Hardware failure. Replace output board.
<i>E 61</i>	High Limit Thermostat Input Acquisition	Hardware failure. Replace output board.
<i>E ro</i>	Locked Rotor	The motor is not sensed as rotating when it should be. Check that nothing is obstructing motor rotation, check connection between user control and output board, or try replacing the user control or the output board.
<i>E n5</i>	Motor Output Shorted	Hardware failure. Replace output board.

Table 3

Small Chassis Dryer – Error Codes for B Control, with 6 in 11th position of model number

Error Codes

Following is a list of possible error codes for an electronic control. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Display	Description	Cause/ Corrective Action
<i>EC02</i>	Time-out Error	Communication failure. Try card again.
<i>EC03</i>	Invalid Command Code	Incorrect machine type. Before downloading, ensure data is for current machine type.
<i>EC05</i>	Invalid or Out-of-Range Data	Incorrect machine type. Before downloading, ensure data is for current machine type and values entered are within the minimum and maximum limits.
<i>EC 11</i>	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
<i>EC 18</i>	No Communication	Card reader initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
<i>EC 19</i>	No Card Reader Communication and No Card Reader Initialization	Communication failure. Power down, power up, check connections, harness and try again. If error persists, replace control or card reader.
<i>EC36</i>	Audit Card Removed Prematurely	Re-insert Audit Card and wait until machine prompts for card removal.
Right most decimal point Lit	Network Communication Error	Communication problem. Wait for 1.5 minutes for error to clear. If error doesn't clear, power-down and power-up the machine. Check all network connections. If error persists, replace control or network board.
<i>ALi</i>	Break-in Alarm Error	Service the service door or coin vault switches.
<i>oFF</i>	Break-in Alarm Shutdown Error	Service the service door or coin vault switches.

Table 4 *continues...*

Display	Description	Cause/ Corrective Action
<i>Err</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E 5H</i>	Shorted Thermistor Error	Dead short in thermistor circuit. Check wiring harness and remove any lint build-up around thermistor. If problem persists, replace thermistor or output board.
<i>E oP</i>	Open Thermistor Error	Physical open in thermistor circuit. Check wiring harness and remove any lint build-up around thermistor. If problem persists, replace thermistor or output board.
<i>E id</i>	Board ID	Incorrect replacement control. Replace user control or output board with correct part.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dipswitch #1 to the same setting as the previous control. If reworking the machine to use a different supply voltage, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>E nr</i>	Output Board Not Ready	Hardware failure. Replace output board.
<i>E b5</i>	Output Board Communication	Hardware failure. Replace output board.
<i>E Co</i>	Output Board Communication	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.
<i>E 59</i>	Door Input Acquisition	Hardware failure. Replace output board.
<i>E 60</i>	Centrifugal Switch Input Acquisition	Hardware failure. Replace output board.
<i>E 61</i>	High Limit Thermostat Input Acquisition	Hardware failure. Replace output board.
<i>E ro</i>	Locked Rotor	The motor is not sensed as rotating when it should be. Check that nothing is obstructing motor rotation, check connection between user control and output board, or try replacing the user control or the output board.
<i>E n5</i>	Motor Output Shorted	Hardware failure. Replace output board.

Table 4

Topload Washer – Error Codes for B, K or Z Control, with B, H, K, N, or S in 1st position of model number, and 3 or 5 in 11th position of model number

Error Codes

NOTE: Fatal Errors will show *out of order* along with the error on the display.

Following is a list of possible error codes for an electronic control. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Error Codes		
Display	Description	Cause/Corrective Action
ECHH	Payment System Error	The Front-end control communicates with the Payment System in order to perform vending transactions. If an error should occur, which, terminates communication during a transaction, the LED Display will show ECHH for a control generated error, where the HH represents an error code.
EC02	Time-out Error	Communication failure. Try card again.
EC03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
EC05	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Re-check the programming option's value and try again.
EC 11	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
EC 18	No Communication	Card reader is initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
EC 19	No Card Reader Communication	Communication failure. Power down, power up and try again. If error persists, replace control or card reader.
Right most decimal point Lit	Water Leak Detection Error or Slow Drain Detection Error	Water leak test has detected a water leak during a cycle or slow drain is detected in the drain step of a running cycle. The decimal point will remain lit after the error display has expired. Clear the decimal point by pressing the START keypad three times within five seconds or by cycling the power to the machine.
Right most decimal point blinking	Machine ID Error	Machine ID is no longer communicating with the control. Check Machine ID connection.
E FL	Fill Error	Fill level is not reached within 30 minutes (or other programmed length of time) in any fill step.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>Err</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E id</i>	Board ID	Incorrect replacement control. Replace user control or output board with the correct part.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dip switch #1 to the same setting as the previous control. If reworking the machine to use a different voltage supply, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>E nr</i>	Drive/Output Board Not Ready	Hardware failure. Try cycling power to machine before replacing output board.
<i>E b5</i>	Drive/Output Board Shorted	Hardware failure. Try cycling power to machine before replacing output board.
<i>En</i>	Machine ID Errors	
<i>En 31</i>	Product Byte #1 Mis-Match	Product family does not match between the Machine ID Control and Front End Control. Replace Machine ID Control with one meant for current Front End Control platform.
<i>En 32</i>	Product Byte #2 Mis-Match	Machine type does not match between the Machine ID Control and Front End Control (frontload washer vs. dryer). Replace Machine ID Control and/or front end control with one meant for current machine type.
<i>En 33</i>	Product Byte #3 Mis-Match	Control level does not match between the Machine ID Control and Front End Control (A4 vs. A2). Replace Machine ID Control with a properly configured A level for the control being attached. Use Factory Test Procedure to determine front end control's control level.
<i>En 39</i>	Corrupted Data on Machine ID Control	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>En 3E</i>	Machine control cannot be configured with the Machine ID Control in the machine	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>En 3F</i>	Cannot communicate with the Machine ID Control	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E Co</i>	Drive/Output Board Communication Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E dr</i>	Drain Error	If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and turn on the Machine Error Tone for 15 seconds.
<i>E 5d</i>	Slow Drain Error	If a slow drain is detected in the Drain step of a running cycle, the machine control will light the right-most decimal point. The decimal point will remain illuminated after the slow drain error display has expired, to draw the attention of the owner or attendant. The decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds, or by cycling the power to the machine.
<i>E Ld</i>	Water Leak Drain Error	Error will display if there is a leak after the lid is opened at the End of Cycle for 1 minute. Clears after 1 minute or until a key is pressed. If the water level has dropped more than an acceptable amount in a during a water leak drain check, the control will save a water leak drain error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
<i>E nF</i>	No Water Flow Error	If the control does not reach a water level of 0.5 inches within the programmed time it may mean the hose to the pressure sensor has a leak or no water is flowing into the machine. The control will enter Machine Error mode. The control will turn off all outputs and turn on the Machine Error Tone for 15 seconds. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E oF</i>	Overflow Error	The machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent. This error is triggered when an unsafe high water level is detected in the machine and water is unable to drain.
<i>E PS</i>	Pressure Sensor Error	If the control does not detect a valid water level sensor input for thirty (30) seconds, or if the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Mode, or Overflow Mode, the control will enter Machine Error Mode. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E LF</i>	Water Leak Fill Error	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
Display is dim		Look for loose pins and damaged wires on harness from user control to drive board.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E EP</i>	Thermal Protect Error	This error occurs when the motor thermal protect opens. If a cycle is running, the audio will sound for five seconds and the cycle will stop for two minutes. If the motor thermal protect is closed and the lid was not opened during the duration of the error, the cycle will resume automatically. If the lid was opened, the display will show <i>PUSH, SErE, E EP</i> indicating that the START keypad must be pressed to resume the cycle.
<i>E dxx</i>	Drive/Output Board Error	A machine error tone will sound for 15 seconds. Fatal error condition detected by drive board where xx represents an error code. Power down machine to clear. Call a service technician if error persists.

Top Load Washer – Error Codes for B Control, with P in 1st position of model number, and 3 or 5 in 11th position of model number

Error Codes

NOTE: Fatal Errors will show *out of order* along with the error on the display.

Following is a list of possible error codes for an electronic control. Errors beginning with **E**, refer to external device Infra-red communication errors. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Error Codes		
Display	Description	Cause/Corrective Action
E .01	Transmission Failure	Communication failure. Re-aim external device and try again.
E .02	Time-out Error	Communication failure. Re-aim external device and try again.
E .03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
E .04	Expecting Upload Request	Communication failure. Re-aim external device and try again.
E .05	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Re-check the programming option's value and try again.
E .09	CRC-16 Error	Communication failure. Re-aim external device and try again.
E .0A	Framing Error	Communication error. Re-aim external device and try again.
E .0C	Time-out Exceeded	Communication error. Re-aim external device and try again.
E .0E	Encryption Error	Communication error. Re-aim external device and try again. If the problem persists, check that the security code is correct.
E .0F	Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
EC\overline{H}H	Payment System Error	The Front-end control communicates with the Payment System in order to perform vending transactions. If an error should occur, which, terminates communication during a transaction, the LED Display will show EC\overline{H}H for a control generated error, where the HH represents an error code.
EC02	Time-out Error	Communication failure. Try card again.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>EC03</i>	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
<i>EC05</i>	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Re-check the programming option's value and try again.
<i>EC 11</i>	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
<i>EC 18</i>	No Communication	Card reader is initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
<i>EC 19</i>	No Card Reader Communication	Communication failure. Power down, power up and try again. If error persists, replace control or card reader.
Right most decimal point Lit	Network Communication Error	Communication problem. Wait for 1.5 minutes for error to clear. If error doesn't clear, power-down and power-up the machine. If error persists, replace control or network board.
Right most decimal point Lit	Water Leak Detection Error or Slow Drain Detection Error	Water leak test has detected a water leak during a cycle or slow drain is detected in the drain step of a running cycle. The decimal point will remain lit after the error display has expired. Clear the decimal point by pressing the START keypad three times within five seconds or by cycling the power to the machine.
Right most decimal point blinking	Machine ID Error	Machine ID is no longer communicating with the control. Check Machine ID connection.
<i>E FL</i>	Fill Error	Fill level is not reached within 30 minutes (or other programmed length of time) in any fill step.
<i>Err</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E id</i>	Board ID	Incorrect replacement control. Replace user control or output board with the correct part.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dip switch #1 to the same setting as the previous control. If reworking the machine to use a different voltage supply, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>E nr</i>	Drive/Output Board Not Ready	Hardware failure. Try cycling power to machine before replacing output board.
<i>E b5</i>	Drive/Output Board Shorted	Hardware failure. Try cycling power to machine before replacing output board.
<i>En</i>	Machine ID Errors	

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E_n 31</i>	Product Byte #1 Mis-Match	Product family does not match between the Machine ID Control and Front End Control. Replace Machine ID Control with one meant for current Front End Control platform.
<i>E_n 32</i>	Product Byte #2 Mis-Match	Machine type does not match between the Machine ID Control and Front End Control (frontload washer vs. dryer). Replace Machine ID Control and/or front end control with one meant for current machine type.
<i>E_n 33</i>	Product Byte #3 Mis-Match	Control level does not match between the Machine ID Control and Front End Control (A4 vs. A2). Replace Machine ID Control with a properly configured A level for the control being attached. Use Factory Test Procedure to determine front end control's control level.
<i>E_n 39</i>	Corrupted Data on Machine ID Control	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E_n 3E</i>	Machine control cannot be configured with the Machine ID Control in the machine	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E_n 3F</i>	Cannot communicate with the Machine ID Control	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E L_o</i>	Drive/Output Board Communication Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.
<i>E d_r</i>	Drain Error	If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and turn on the Machine Error Tone for 15 seconds.
<i>E S_d</i>	Slow Drain Error	If a slow drain is detected in the Drain step of a running cycle, the machine control will light the right-most decimal point. The decimal point will remain illuminated after the slow drain error display has expired, to draw the attention of the owner or attendant. The decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds, or by cycling the power to the machine.
<i>E L_d</i>	Water Leak Drain Error	Error will display if there is a leak after the lid is opened at the End of Cycle for 1 minute. Clears after 1 minute or until a key is pressed. If the water level has dropped more than an acceptable amount in a during a water leak drain check, the control will save a water leak drain error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E nF</i>	No Water Flow Error	If the control does not reach a water level of 0.5 inches within the programmed time it may mean the hose to the pressure sensor has a leak or no water is flowing into the machine. The control will enter Machine Error mode. The control will turn off all outputs and turn on the Machine Error Tone for 15 seconds. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E oF</i>	Overflow Error	The machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent. This error is triggered when an unsafe high water level is detected in the machine and water is unable to drain.
<i>E PS</i>	Pressure Sensor Error	If the control does not detect a valid water level sensor input for thirty (30) seconds, or if the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Mode, or Overflow Mode, the control will enter Machine Error Mode. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E LF</i>	Water Leak Fill Error	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
Display is dim		Look for loose pins and damaged wires on harness from user control to drive board.
<i>E tP</i>	Thermal Protect Error	This error occurs when the motor thermal protect opens. If a cycle is running, the audio will sound for five seconds and the cycle will stop for two minutes. If the motor thermal protect is closed and the lid was not opened during the duration of the error, the cycle will resume automatically. If the lid was opened, the display will show <i>PUSH, StEt, E tP</i> indicating that the START keypad must be pressed to resume the cycle.
<i>E dxx</i>	Drive/Output Board Error	A machine error tone will sound for 15 seconds. Fatal error condition detected by drive board where xx represents an error code. Power down machine to clear. Call a service technician if error persists.

Top Load Washer – Error Codes for N and W Control, with 3 in 11 position of model number

Error Codes

NOTE: Fatal Errors will show *oUt oF ordEr* along with the error on the display.

Following is a list of possible error codes for an electronic control. Errors beginning with **E**, refer to external device Infra-red communication errors. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Error Codes		
Display	Description	Cause/Corrective Action
E .01	Transmission Failure	Communication failure. Re-aim external device and try again.
E .02	Time-out Error	Communication failure. Re-aim external device and try again.
E .03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
E .04	Expecting Upload Request	Communication failure. Re-aim external device and try again.
E .05	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Re-check the programming option's value and try again.
E .09	CRC-16 Error	Communication failure. Re-aim external device and try again.
E .0A	Framing Error	Communication error. Re-aim external device and try again.
E .0C	Time-out Exceeded	Communication error. Re-aim external device and try again.
E .0E	Encryption Error	Communication error. Re-aim external device and try again. If the problem persists, check that the security code is correct.
E .0F	Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
ECHH	Payment System Error	The Front-end control communicates with the Payment System in order to perform vending transactions. If an error should occur, which, terminates communication during a transaction, the LED Display will show ECHH for a control generated error, where the HH represents an error code.
EC02	Time-out Error	Communication failure. Try card again.
EC03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>EC05</i>	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Re-check the programming option's value and try again.
<i>EC11</i>	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
<i>EC18</i>	No Communication	Card reader is initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
<i>EC19</i>	No Card Reader Communication	Communication failure. Power down, power up and try again. If error persists, replace control or card reader.
Right most decimal point Lit	Network Communication Error	Communication problem. Wait for 1.5 minutes for error to clear. If error doesn't clear, power-down and power-up the machine. If error persists, replace control or network board.
Right most decimal point Lit	Water Leak Detection Error or Slow Drain Detection Error	Water leak test has detected a water leak during a cycle or slow drain is detected in the drain step of a running cycle. The decimal point will remain lit after the error display has expired. Clear the decimal point by pressing the START keypad three times within five seconds or by cycling the power to the machine.
Right most decimal point blinking	Machine ID Error	Machine ID is no longer communicating with the control. Check Machine ID connection.
<i>ALArn</i>	Break-in Alarm Error	Check the service door and coin vault switches.
<i>aFF</i>	Break-in Alarm Shutdown Error	Check the service door and coin vault switches.
<i>E FL</i>	Fill Error	Fill level is not reached within 30 minutes (or other programmed length of time) in any fill step.
<i>E LL</i>	Lid Unlock Error	On models with a lid lock, if the lock fails to unlock after three attempts, this error will be displayed and the audio will sound for five seconds.
<i>Coin Error</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E id</i>	Board ID	Incorrect replacement control. Replace user control or output board with the correct part.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dip switch #1 to the same setting as the previous control. If reworking the machine to use a different voltage supply, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>E nr</i>	Drive/Output Board Not Ready	Hardware failure. Try cycling power to machine before replacing output board.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E b5</i>	Drive/Output Board Shorted	Hardware failure. Try cycling power to machine before replacing output board.
<i>E_n</i>	Machine ID Errors	
<i>E_n 31</i>	Product Byte #1 Mis-Match	Product family does not match between the Machine ID Control and Front End Control. Replace Machine ID Control with one meant for current Front End Control platform.
<i>E_n 32</i>	Product Byte #2 Mis-Match	Machine type does not match between the Machine ID Control and Front End Control (frontload washer vs. dryer). Replace Machine ID Control and/or front end control with one meant for current machine type.
<i>E_n 33</i>	Product Byte #3 Mis-Match	Control level does not match between the Machine ID Control and Front End Control (A4 vs. A2). Replace Machine ID Control with a properly configured A level for the control being attached. Use Factory Test Procedure to determine front end control's control level.
<i>E_n 39</i>	Corrupted Data on Machine ID Control	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E_n 3E</i>	Machine control cannot be configured with the Machine ID Control in the machine	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E_n 3F</i>	Cannot communicate with the Machine ID Control	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E C_o</i>	Drive/Output Board Communication Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.
<i>E dr</i>	Drain Error	If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and turn on the Machine Error Tone for 15 seconds.
<i>E 5d</i>	Slow Drain Error	If a slow drain is detected in the Drain step of a running cycle, the machine control will light the right-most decimal point. The decimal point will remain illuminated after the slow drain error display has expired, to draw the attention of the owner or attendant. The decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds, or by cycling the power to the machine.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E Ld</i>	Water Leak Drain Error	Error will display if there is a leak after the lid is opened at the End of Cycle for 1 minute. Clears after 1 minute or until a key is pressed. If the water level has dropped more than an acceptable amount in a during a water leak drain check, the control will save a water leak drain error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
<i>E nFLo</i>	No Water Flow Error	If the control does not reach a water level of 0.5 inches within the programmed time it may mean the hose to the pressure sensor has a leak or no water is flowing into the machine. The control will enter Machine Error mode. The control will turn off all outputs and turn on the Machine Error Tone for 15 seconds. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E oF</i>	Overflow Error	The machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent. This error is triggered when an unsafe high water level is detected in the machine and water is unable to drain.
<i>E PS</i>	Pressure Sensor Error	If the control does not detect a valid water level sensor input for thirty (30) seconds, or if the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Mode, or Overflow Mode, the control will enter Machine Error Mode. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E LF</i>	Water Leak Fill Error	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
Display is dim		Look for loose pins and damaged wires on harness from user control to drive board.
<i>E tP</i>	Thermal Protect Error	This error occurs when the motor thermal protect opens. If a cycle is running, the audio will sound for five seconds and the cycle will stop for two minutes. If the motor thermal protect is closed and the lid was not opened during the duration of the error, the cycle will resume automatically. If the lid was opened, the display will show PUSH, SEArE, E tP indicating that the START keypad must be pressed to resume the cycle.
<i>E dxx</i>	Drive/Output Board Error	A machine error tone will sound for 15 seconds. Fatal error condition detected by drive board where xx represents an error code. Power down machine to clear. Call a service technician if error persists.

Top Load Washer – Error Codes for N and W Control, with 5 in 11th position of model number

Error Codes

NOTE: Fatal Errors will show *oUt oF oRdEr* along with the error on the display.

Following is a list of possible error codes for an electronic control. Errors beginning with **E**, refer to external device Infra-red communication errors. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Error Codes		
Display	Description	Cause/Corrective Action
E .01	Transmission Failure	Communication failure. Re-aim external device and try again.
E .02	Time-out Error	Communication failure. Re-aim external device and try again.
E .03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
E .04	Expecting Upload Request	Communication failure. Re-aim external device and try again.
E .05	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Re-check the programming option's value and try again.
E .09	CRC-16 Error	Communication failure. Re-aim external device and try again.
E .0A	Framing Error	Communication error. Re-aim external device and try again.
E .0C	Time-out Exceeded	Communication error. Re-aim external device and try again.
E .0E	Encryption Error	Communication error. Re-aim external device and try again. If the problem persists, check that the security code is correct.
E .0F	Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
ECHH	Payment System Error	The Front-end control communicates with the Payment System in order to perform vending transactions. If an error should occur, which, terminates communication during a transaction, the LED Display will show ECHH for a control generated error, where the HH represents an error code.
ECC02	Time-out Error	Communication failure. Try card again.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>EC03</i>	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
<i>EC05</i>	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Re-check the programming option's value and try again.
<i>EC11</i>	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
<i>EC18</i>	No Communication	Card reader is initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
<i>EC19</i>	No Card Reader Communication	Communication failure. Power down, power up and try again. If error persists, replace control or card reader.
Right most decimal point Lit	Network Communication Error	Communication problem. Wait for 1.5 minutes for error to clear. If error doesn't clear, power-down and power-up the machine. If error persists, replace control or network board.
Right most decimal point Lit	Water Leak Detection Error or Slow Drain Detection Error	Water leak test has detected a water leak during a cycle or slow drain is detected in the drain step of a running cycle. The decimal point will remain lit after the error display has expired. Clear the decimal point by pressing the START keypad three times within five seconds or by cycling the power to the machine.
Right most decimal point blinking	Machine ID Error	Machine ID is no longer communicating with the control. Check Machine ID connection.
<i>ALArn</i>	Break-in Alarm Error	Check the service door and coin vault switches.
<i>aFF</i>	Break-in Alarm Shutdown Error	Check the service door and coin vault switches.
<i>E FL</i>	Fill Error	Fill level is not reached within 30 minutes (or other programmed length of time) in any fill step.
<i>Coin Error</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E id</i>	Board ID	Incorrect replacement control. Replace user control or output board with the correct part.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dip switch #1 to the same setting as the previous control. If reworking the machine to use a different voltage supply, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E nr</i>	Drive/Output Board Not Ready	Hardware failure. Try cycling power to machine before replacing output board.
<i>E b5</i>	Drive/Output Board Shorted	Hardware failure. Try cycling power to machine before replacing output board.
<i>E n</i>	Machine ID Errors	
<i>E n 31</i>	Product Byte #1 Mis-Match	Product family does not match between the Machine ID Control and Front End Control. Replace Machine ID Control with one meant for current Front End Control platform.
<i>E n 32</i>	Product Byte #2 Mis-Match	Machine type does not match between the Machine ID Control and Front End Control (frontload washer vs. dryer). Replace Machine ID Control and/or front end control with one meant for current machine type.
<i>E n 33</i>	Product Byte #3 Mis-Match	Control level does not match between the Machine ID Control and Front End Control (A4 vs. A2). Replace Machine ID Control with a properly configured A level for the control being attached. Use Factory Test Procedure to determine front end control's control level.
<i>E n 39</i>	Corrupted Data on Machine ID Control	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E n 3E</i>	Machine control cannot be configured with the Machine ID Control in the machine	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E n 3F</i>	Cannot communicate with the Machine ID Control	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E Co</i>	Drive/Output Board Communication Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.
<i>E dr</i>	Drain Error	If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and turn on the Machine Error Tone for 15 seconds.
<i>E 5d</i>	Slow Drain Error	If a slow drain is detected in the Drain step of a running cycle, the machine control will light the right-most decimal point. The decimal point will remain illuminated after the slow drain error display has expired, to draw the attention of the owner or attendant. The decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds, or by cycling the power to the machine.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E Ld</i>	Water Leak Drain Error	Error will display if there is a leak after the lid is opened at the End of Cycle for 1 minute. Clears after 1 minute or until a key is pressed. If the water level has dropped more than an acceptable amount in a during a water leak drain check, the control will save a water leak drain error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
<i>E nFLo</i>	No Water Flow Error	If the control does not reach a water level of 0.5 inches within the programmed time it may mean the hose to the pressure sensor has a leak or no water is flowing into the machine. The control will enter Machine Error mode. The control will turn off all outputs and turn on the Machine Error Tone for 15 seconds. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E oF</i>	Overflow Error	The machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent. This error is triggered when an unsafe high water level is detected in the machine and water is unable to drain.
<i>E PS</i>	Pressure Sensor Error	If the control does not detect a valid water level sensor input for thirty (30) seconds, or if the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Mode, or Overflow Mode, the control will enter Machine Error Mode. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E LF</i>	Water Leak Fill Error	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
Display is dim		Look for loose pins and damaged wires on harness from user control to drive board.
<i>E tP</i>	Thermal Protect Error	This error occurs when the motor thermal protect opens. If a cycle is running, the audio will sound for five seconds and the cycle will stop for two minutes. If the motor thermal protect is closed and the lid was not opened during the duration of the error, the cycle will resume automatically. If the lid was opened, the display will show PUSH, SEArE, E tP indicating that the START keypad must be pressed to resume the cycle.
<i>E dxx</i>	Drive/Output Board Error	A machine error tone will sound for 15 seconds. Fatal error condition detected by drive board where xx represents an error code. Power down machine to clear. Call a service technician if error persists.

Top Load Washer – Error Codes for K Control, with 6 in 11th position of model number

Error Codes

NOTE: Fatal Errors will show *oUt oF ordEr* along with the error on the display.

Following is a list of possible error codes for an electronic control. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Error Codes		
Display	Description	Cause/Corrective Action
EC\overline{H}H	Payment System Error	The Front-end control communicates with the Payment System in order to perform vending transactions. If an error should occur, which, terminates communication during a transaction, the LED Display will show EC\overline{H}H for a control generated error, where the HH represents an error code.
EC02	Time-out Error	Communication failure. Try card again.
EC03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
EC05	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Re-check the programming option's value and try again.
EC 11	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
EC 18	No Communication	Card reader is initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
EC 19	No Card Reader Communication	Communication failure. Power down, power up and try again. If error persists, replace control or card reader.
Right most decimal point Lit	Network Communication Error	Communication problem. Wait for 1.5 minutes for error to clear. If error doesn't clear, power-down and power-up the machine. If error persists, replace control or network board.
Right most decimal point Lit	Water Leak Detection Error or Slow Drain Detection Error	Water leak test has detected a water leak during a cycle or slow drain is detected in the drain step of a running cycle. The decimal point will remain lit after the error display has expired. Clear the decimal point by pressing the START keypad three times within five seconds or by cycling the power to the machine.
Right most decimal point blinking	Machine ID Error	Machine ID is no longer communicating with the control. Check Machine ID connection.
ALArn	Break-in Alarm Error	Check the service door and coin vault switches.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>aFF</i>	Break-in Alarm Shutdown Error	Check the service door and coin vault switches.
<i>E FL</i>	Fill Error	Fill level is not reached within 30 minutes (or other programmed length of time) in any fill step.
<i>Co in Error</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E id</i>	Board ID	Incorrect replacement control. Replace user control or output board with the correct part.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dip switch #1 to the same setting as the previous control. If reworking the machine to use a different voltage supply, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>E nr</i>	Drive/Output Board Not Ready	Hardware failure. Try cycling power to machine before replacing output board.
<i>E b5</i>	Drive/Output Board Shorted	Hardware failure. Try cycling power to machine before replacing output board.
<i>E Co</i>	Drive/Output Board Communication Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.
<i>E dr</i>	Drain Error	If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and turn on the Machine Error Tone for 15 seconds.
<i>E 5d</i>	Slow Drain Error	If a slow drain is detected in the Drain step of a running cycle, the machine control will light the right-most decimal point. The decimal point will remain illuminated after the slow drain error display has expired, to draw the attention of the owner or attendant. The decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds, or by cycling the power to the machine.
<i>E Ld</i>	Water Leak Drain Error	Error will display if there is a leak after the lid is opened at the End of Cycle for 1 minute. Clears after 1 minute or until a key is pressed. If the water level has dropped more than an acceptable amount in a during a water leak drain check, the control will save a water leak drain error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E nFLo</i>	No Water Flow Error	If the control does not reach a water level of 0.5 inches within the programmed time it may mean the hose to the pressure sensor has a leak or no water is flowing into the machine. The control will enter Machine Error mode. The control will turn off all outputs and turn on the Machine Error Tone for 15 seconds. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E oF</i>	Overflow Error	The machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent. This error is triggered when an unsafe high water level is detected in the machine and water is unable to drain.
<i>E PS</i>	Pressure Sensor Error	If the control does not detect a valid water level sensor input for thirty (30) seconds, or if the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Mode, or Overflow Mode, the control will enter Machine Error Mode. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E LF</i>	Water Leak Fill Error	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
Display is dim		Look for loose pins and damaged wires on harness from user control to drive board.
<i>E tP</i>	Thermal Protect Error	This error occurs when the motor thermal protect opens. If a cycle is running, the audio will sound for five seconds and the cycle will stop for two minutes. If the motor thermal protect is closed and the lid was not opened during the duration of the error, the cycle will resume automatically. If the lid was opened, the display will show <i>PUSH, StArt, E tP</i> indicating that the START keypad must be pressed to resume the cycle.
<i>E d HH</i>	Drive/Output Board Error	A machine error tone will sound for 15 seconds. Fatal error condition detected by drive board where <i>HH</i> represents an error code. Power down machine to clear. Call a service technician if error persists.

Top Load Washer – Error Codes for N Control, with 6 in 11th position of model number

Error Codes

NOTE: Fatal Errors will show *oUt oF ordEr* along with the error on the display.

Following is a list of possible error codes for an electronic control. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Error Codes		
Display	Description	Cause/Corrective Action
EC\overline{H}H	Payment System Error	The Front-end control communicates with the Payment System in order to perform vending transactions. If an error should occur, which, terminates communication during a transaction, the LED Display will show EC\overline{H}H for a control generated error, where the HH represents an error code.
EC02	Time-out Error	Communication failure. Try card again.
EC03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
EC05	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Re-check the programming option's value and try again.
EC 11	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
EC 18	No Communication	Card reader is initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
EC 19	No Card Reader Communication	Communication failure. Power down, power up and try again. If error persists, replace control or card reader.
Right most decimal point Lit	Network Communication Error	Communication problem. Wait for 1.5 minutes for error to clear. If error doesn't clear, power-down and power-up the machine. If error persists, replace control or network board.
Right most decimal point Lit	Water Leak Detection Error or Slow Drain Detection Error	Water leak test has detected a water leak during a cycle or slow drain is detected in the drain step of a running cycle. The decimal point will remain lit after the error display has expired. Clear the decimal point by pressing the START keypad three times within five seconds or by cycling the power to the machine.
ALAr\overline{n}	Break-in Alarm Error	Check the service door and coin vault switches.
oFF	Break-in Alarm Shutdown Error	Check the service door and coin vault switches.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E FL</i>	Fill Error	Fill level is not reached within 30 minutes (or other programmed length of time) in any fill step.
<i>Co in Error</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E id</i>	Board ID	Incorrect replacement control. Replace user control or output board with the correct part.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board.
<i>E nr</i>	Drive/Output Board Not Ready	Hardware failure. Try cycling power to machine before replacing output board.
<i>E b5</i>	Drive/Output Board Shorted	Hardware failure. Try cycling power to machine before replacing output board.
<i>E Co</i>	Drive/Output Board Communication Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.
<i>E dr</i>	Drain Error	If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and turn on the Machine Error Tone for 15 seconds.
<i>E 5d</i>	Slow Drain Error	If a slow drain is detected in the Drain step of a running cycle, the machine control will light the right-most decimal point. The decimal point will remain illuminated after the slow drain error display has expired, to draw the attention of the owner or attendant. The decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds, or by cycling the power to the machine.
<i>E Ld</i>	Water Leak Drain Error	Error will display if there is a leak after the lid is opened at the End of Cycle for 1 minute. Clears after 1 minute or until a key is pressed. If the water level has dropped more than an acceptable amount in a during a water leak drain check, the control will save a water leak drain error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
<i>E nFLo</i>	No Water Flow Error	If the control does not reach a water level of 0.5 inches within the programmed time it may mean the hose to the pressure sensor has a leak or no water is flowing into the machine. The control will enter Machine Error mode. The control will turn off all outputs and turn on the Machine Error Tone for 15 seconds. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E aF</i>	Overflow Error	The machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent. This error is triggered when an unsafe high water level is detected in the machine and water is unable to drain.
<i>E P5</i>	Pressure Sensor Error	If the control does not detect a valid water level sensor input for thirty (30) seconds, or if the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Mode, or Overflow Mode, the control will enter Machine Error Mode. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E LF</i>	Water Leak Fill Error	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
Display is dim		Look for loose pins and damaged wires on harness from user control to drive board.
<i>E tP</i>	Thermal Protect Error	This error occurs when the motor thermal protect opens. If a cycle is running, the audio will sound for five seconds and the cycle will stop for two minutes. If the motor thermal protect is closed and the lid was not opened during the duration of the error, the cycle will resume automatically. If the lid was opened, the display will show PUSH, START, E tP indicating that the START keypad must be pressed to resume the cycle.
<i>E d xx</i>	Drive/Output Board Error	A machine error tone will sound for 15 seconds. Fatal error condition detected by drive board where xx represents an error code. Power down machine to clear. Call a service technician if error persists.

Front Load Washer – Error Codes for N (4th position of model number) Control, with 6 in 11th position of model number

Error Codes

NOTE: Fatal Errors will show *out of order* along with the error on the display.

Following is a list of possible error codes for an electronic control. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Error Codes		
Display	Description	Cause/Corrective Action
ECHH	Payment System Error	The Front-end control communicates with the Payment System in order to perform vending transactions. If an error should occur, which, terminates communication during a transaction, the LED Display will show ECHH for a control generated error, where the HH represents an error code.
EC02	Time-out Error	Communication failure. Try card again.
EC03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
EC05	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Re-check the programming option's value and try again.
EC 11	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
EC 18	No Communication	Card reader is initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
EC 19	No Card Reader Communication	Communication failure. Power down, power up and try again. If error persists, replace control or card reader.
Right most decimal point Lit	Network Communication Error	Communication problem. Wait for 1.5 minutes for error to clear. If error doesn't clear, power-down and power-up the machine. If error persists, replace control or network board.
Right most decimal point Lit	Water Leak Detection Error or Slow Drain Detection Error	Water leak test has detected a water leak during a cycle or slow drain is detected in the drain step of a running cycle. The decimal point will remain lit after the error display has expired. Clear the decimal point by pressing the START keypad three times within five seconds or by cycling the power to the machine.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
Left most decimal point blinking one second on/one second off	Max Speed Fail Error	If the final spin fails to reach 1200 RPM, the control will set the Max Speed Fail Error immediately when entering End of Cycle Mode to alert that the max speed was not reached in the cycle. This error will be cleared when vend is entered, a key is pressed, the door is opened, or when higher priority errors are cleared.
<i>ALArn</i>	Break-in Alarm Error	Check the service door and coin vault switches.
<i>aFF</i>	Break-in Alarm Shutdown Error	Check the service door and coin vault switches.
<i>E FL</i>	Fill Error	Fill level is not reached within 30 minutes (or other programmed length of time) in any fill step.
<i>E dL</i>	Door Lock Fatal Error	Door is unlocked during a running cycle. To clear this error, cycle power to the machine.
<i>E dL 1</i>	Door Lock Non-Fatal Error	If the door fails to lock in twenty (20) seconds in Door Locking Mode after the Drive has been enabled the control will turn off all outputs and show the error <i>E dL 1</i> . To clear this error the door must either open or lock.
<i>E dL2</i>	Door Unlock Non-Fatal Error	If the door fails to unlock in 20 seconds, with a solenoid type door lock, after the drum has stopped spinning, and all other outputs have been turned off, the control will show error <i>E dL2</i> . To clear this error the door must unlock or open.
<i>E door</i>	Door Opened During A Running Cycle	Control detects door open and door locked inputs high. Can be caused by pulling on door while locked or about to lock. Correct inoperative door locking system. Unpower machine to clear error.
<i>E Ub 1</i>	Non-Fatal Unbalance Error	Unable to balance load. Redistribute load and run cycle.
<i>E Ub2</i>	Fatal Unbalance Error	Wires to unbalance switch broken or not connected.
<i>CLoSE door</i>	Door Open Indicator	Door is not closed during an active cycle. If door is closed, check for improper wiring or faulty door switch.
<i>Co in Error</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E id</i>	Board ID	Incorrect replacement control. Replace user control or output board with the correct part.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E nr</i>	Drive/Output Board Not Ready	Hardware failure. Try cycling power to machine before replacing output board.
<i>E b5</i>	Drive/Output Board Shorted	Hardware failure. Try cycling power to machine before replacing output board.
<i>E Co</i>	Drive/Output Board Communication Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.
<i>E dr</i>	Drain Error	If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and turn on the Machine Error Tone for 15 seconds.
<i>E 5d</i>	Slow Drain Error	If a slow drain is detected in the Drain step of a running cycle, the machine control will light the right-most decimal point. The decimal point will remain illuminated after the slow drain error display has expired, to draw the attention of the owner or attendant. The decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds, or by cycling the power to the machine.
<i>E 5ud5</i>	Suds Lock Error	In the spin steps, if the control determines that there are suds in the machine after running all programmed Suds Routines, it will display a Suds Lock Error at the end of the cycle after the door is opened. The control will continue showing this error code until any key has been pressed or for one minute.
<i>E Ld</i>	Water Leak Drain Error	Error will display if there is a leak after the door is opened at the End of Cycle for 1 minute. Clears after 1 minute or until a key is pressed. If the water level has dropped more than an acceptable amount in a during a water leak drain check, the control will save a water leak drain error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
<i>E nFLo</i>	No Water Flow Error	If the control does not reach a water level of 4 inches within the programmed time it may mean the hose to the pressure sensor has a leak or no water is flowing into the machine. The control will enter Machine Error mode. The control will first drain for 90 seconds and then turn off all outputs and turn on the Machine Error Tone for 15 seconds. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E oF</i>	Overflow Error	The machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent. This error is triggered when an unsafe high water level is detected in the machine and water is unable to drain.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
E P5	Pressure Sensor Error	If the control does not detect a valid water level sensor input for thirty (30) seconds, or if the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Mode, or Overflow Mode, the control will enter Machine Error Mode. The control will first drain for thirty (30) seconds to get out any water, and unlock the door. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
E Er	Trim Error	The machine must be powered down, the Clear Fatal Error Keys must be pressed or a Clear Fatal Error Network command must be send.
E bELt	Broken Belt Error	If a broken belt is ever detected by the control, the control will show error this error code. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
E LF	Water Leak Fill Error	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
Display is dim		Look for loose pins and damaged wires on harness from user control to drive board.
E d	Drive Board Errors	
E d 10	Voltage Select Error	Wrong Input Voltage seen at drive board 120V vs 240V. Water may be on drive board. Let drive dry out and determine cause of water. Unpower to clear error. Replace drive board if error persists.
E d 12	Over Voltage AC-Main Input Error	Machine voltage is too high, check supply voltage to the machine and verify that it is within machine specifications. Unpower to clear error. Replace drive board if error persists.
E d 13	Power Fail Dangerous Error	The Neutral Line power input to the machine was seen out of range. Unpower to clear error. Check for damage in the power supply harness. Replace power supply harness or drive board if error persists.
E d 21	Over Voltage DC Bus Error	Unpower to clear error. Check voltage input to machine. If it happens only at start of spin, replace motor. Replace drive board if error persists.
E d 22	Over Motor Temperature Error	Motor temperature is detected to be too high. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Unpower to clear error. Replace drive board if error persists.
E d 23	Fatal IPM Over Current Shunt Error	Check that drum and motor spins freely. Unpower to clear error. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Replace drive board if error persists.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E d 24</i>	Fatal I2T Hardware Over Current Error	Check that drum and motor spins freely. Rotor may be locked up. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Unpower to clear error. Replace drive board if error persists.
<i>E d 25</i>	IPM Over Temperature Error	IPM temperature is detected to be too high. Check that drum spins freely when empty, check for overloading of machine, reduce agitation time, and duty cycle if rotate/pause times are very short and programmable. Unpower to clear error. Check for lint build-up on heat sink on drive board. Replace drive board if error persists.
<i>E d 29</i>	Motor Not Connected Error	The motor or one of its electrical phases is not connected. Check that the harness from the motor to the drive board is fully plugged in on both ends and that there is no damage to the motor harness. Make sure to push in the motor harness on both ends just in case it is a little loose and not fully inserted. If the harness looks fine and the error still occurs, try replacing the drive board or harness. Unpower to clear error.
<i>E d 44</i>	Overcurrent Shunt Detection Circuit Fail Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 45</i>	Door Lock Pin HW On/Off Fail Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 46</i>	Heater Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 47</i>	Hot Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 48</i>	Cold Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 49</i>	Detergent Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 50</i>	Softener Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 51</i>	Inrush Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 52</i>	Voltage Doubler Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 53</i>	Door Lock Select Voltage Pin HW On/Off Fail	Hardware failure. Inspect door lock for signs of damage. Check the door lock connections and that coil resistance of door lock solenoid is within specifications. Unpower to clear error. Replace drive board if error persists.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E d 54</i>	Pump Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 55</i>	Fatal NTC Short Error	Check heater thermistor and thermistor wiring for damage. Unpower to clear error. Replace drive board if error persists.
<i>E d 56</i>	Fatal NTC Open Error	Check heater thermistor and thermistor wiring for damage. Unpower to clear error. Replace drive board if error persists.
<i>E d 63</i>	Fatal IPM Temperature Short Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 64</i>	Fatal IPM Temperature Open Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.

Front Load Washer – Error Codes for J, N, and W (4th position of model number) Control with 3, 4, or 5 in 11th position of model number

Error Codes

NOTE: Fatal Errors will show *oUt oF oRdEr* along with the error on the display.

Following is a list of possible error codes for an electronic control. Errors beginning with **E**, refer to external device Infra-red communication errors. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Error Codes		
Display	Description	Cause/Corrective Action
<i>E .01</i>	Transmission Failure	Communication failure. Re-aim external device and try again.
<i>E .02</i>	Time-out Error	Communication failure. Re-aim external device and try again.
<i>E .03</i>	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
<i>E .04</i>	Expecting Upload Request	Communication failure. Re-aim external device and try again.
<i>E .05</i>	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Re-check the programming option's value and try again.
<i>E .09</i>	CRC-16 Error	Communication failure. Re-aim external device and try again.
<i>E .0A</i>	Framing Error	Communication error. Re-aim external device and try again.
<i>E .0C</i>	Time-out Exceeded	Communication error. Re-aim external device and try again.
<i>E .0E</i>	Encryption Error	Communication error. Re-aim external device and try again. If the problem persists, check that the security code is correct.
<i>E .0F</i>	Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
<i>EC HH</i>	Payment System Error	The Front-end control communicates with the Payment System in order to perform vending transactions. If an error should occur, which, terminates communication during a transaction, the LED Display will show <i>EC HH</i> for a control generated error, where the <i>HH</i> represents an error code.
<i>EC02</i>	Time-out Error	Communication failure. Try card again.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
EC03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
EC05	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Re-check the programming option's value and try again.
EC11	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
EC18	No Communication	Card reader is initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
EC19	No Card Reader Communication	Communication failure. Power down, power up and try again. If error persists, replace control or card reader.
Right most decimal point Lit	Network Communication Error	Communication problem. Wait for 1.5 minutes for error to clear. If error doesn't clear, power-down and power-up the machine. If error persists, replace control or network board.
Right most decimal point Lit	Water Leak Detection Error or Slow Drain Detection Error	Water leak test has detected a water leak during a cycle or slow drain is detected in the drain step of a running cycle. The decimal point will remain lit after the error display has expired. Clear the decimal point by pressing the START keypad three times within five seconds or by cycling the power to the machine.
Right most decimal point blinking	Machine ID Error	Machine ID is no longer communicating with the control. Check Machine ID connection.
Left most decimal point blinking one second on/one second off	Max Speed Fail Error	If the final spin fails to reach 1200 RPM, the control will set the Max Speed Fail Error immediately when entering End of Cycle Mode to alert that the max speed was not reached in the cycle. This error will be cleared when vend is entered, a key is pressed, the door is opened, or when higher priority errors are cleared.
ALArn	Break-in Alarm Error	Check the service door and coin vault switches.
aFF	Break-in Alarm Shutdown Error	Check the service door and coin vault switches.
E FL	Fill Error	Fill level is not reached within 30 minutes (or other programmed length of time) in any fill step.
E dL	Door Lock Fatal Error	Door is unlocked during a running cycle. To clear this error, cycle power to the machine.
E dL I	Door Lock Non-Fatal Error	If the door fails to lock in twenty (20) seconds in Door Locking Mode after the Drive has been enabled the control will turn off all outputs and show the error E dL I . To clear this error the door must either open or lock.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E dL2</i>	Door Unlock Non-Fatal Error	If the door fails to unlock in 20 seconds, with a solenoid type door lock, after the drum has stopped spinning, and all other outputs have been turned off, the control will show error <i>E dL2</i> . To clear this error the door must unlock or open.
<i>E door</i>	Door Opened During A Running Cycle	Control detects door open and door locked inputs high. Can be caused by pulling on door while locked or about to lock. Correct inoperative door locking system. Unpower machine to clear error.
<i>E Ub1</i>	Non-Fatal Unbalance Error	Unable to balance load. Redistribute load and run cycle.
<i>E Ub2</i>	Fatal Unbalance Error	Wires to unbalance switch broken or not connected.
<i>CLoSE door</i>	Door Open Indicator	Door is not closed during an active cycle. If door is closed, check for improper wiring or faulty door switch.
<i>Co in Error</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E id</i>	Board ID	Incorrect replacement control. Replace user control or output board with the correct part.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dip switch #1 to the same setting as the previous control. If reworking the machine to use a different voltage supply, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>E nr</i>	Drive/Output Board Not Ready	Hardware failure. Try cycling power to machine before replacing output board.
<i>E b5</i>	Drive/Output Board Shorted	Hardware failure. Try cycling power to machine before replacing output board.
<i>En</i>	Machine ID Errors	
<i>En 31</i>	Product Byte #1 Mis-Match	Product family does not match between the Machine ID Control and Front End Control. Replace Machine ID Control with one meant for current Front End Control platform.
<i>En 32</i>	Product Byte #2 Mis-Match	Machine type does not match between the Machine ID Control and Front End Control (frontload washer vs. dryer). Replace Machine ID Control and/or front end control with one meant for current machine type.
<i>En 33</i>	Product Byte #3 Mis-Match	Control level does not match between the Machine ID Control and Front End Control (A4 vs. A2). Replace Machine ID Control with a properly configured A level for the control being attached. Use Factory Test Procedure to determine front end control's control level.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E_n 39</i>	Corrupted Data on Machine ID Control	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E_n 3E</i>	Machine control cannot be configured with the Machine ID Control in the machine	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E_n 3F</i>	Cannot communicate with the Machine ID Control	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E C_o</i>	Drive/Output Board Communication Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.
<i>E d_r</i>	Drain Error	If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and turn on the Machine Error Tone for 15 seconds.
<i>E 5_d</i>	Slow Drain Error	If a slow drain is detected in the Drain step of a running cycle, the machine control will light the right-most decimal point. The decimal point will remain illuminated after the slow drain error display has expired, to draw the attention of the owner or attendant. The decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds, or by cycling the power to the machine.
<i>E H_t</i>	Heater Error	If the heater is enabled and the water temperature has not reached the desired temperature selection within the programmable time, the control will indicate a heater error. If this error occurs, the heater output will be turned off, and the cycle will continue. This error will be cleared when the door is opened or any key is pressed.
<i>E t_E</i>	Max Temperature Exceeded Error	The control will continuously monitor the Machine Status for an indication that the maximum water temperature is exceeded. When the cycle has been completed and if the control has saved a Max Temperature Exceeded Error, the control shows error <i>E t_E</i> for one minute, after the door is opened or a key is pressed.
<i>E o_P</i>	Open Temperature/Thermistor Sensor Error	The Output Board will flag an Open Thermistor Error any time it senses a temperature less than 0°F. It turns off the heater output for the remainder of the cycle. At the end of the cycle, error code will be shown. Clears after 1 minute or with any key press.
<i>E 5_H</i>	Shorted Temperature/Thermistor Sensor Error	The Output Board will flag a Shorted Thermistor any time it senses a temperature greater than 212 °F [100 °C] . It turns off the heater output for the remainder of the cycle. At the end of the cycle, error code will be shown. Clears after 1 minute or with any key press.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
E SudS	Suds Lock Error	In the spin steps, if the control determines that there are suds in the machine after running all programmed Suds Routines, it will display a Suds Lock Error at the end of the cycle after the door is opened. The control will continue showing this error code until any key has been pressed or for one minute.
E Hd	Too Hot To Drain Error	If water is detected to be too hot to safely drain, this error will be set. It is advised to add a cool down step to the cycle after every heating step to avoid this error. Error will display after door is opened in End of Cycle Mode. Clears after 1 minute.
E Ld	Water Leak Drain Error	Error will display if there is a leak after the door is opened at the End of Cycle for 1 minute. Clears after 1 minute or until a key is pressed. If the water level has dropped more than an acceptable amount in a during a water leak drain check, the control will save a water leak drain error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
E StHt	Slow To Heat Error	Non-Fatal Error that will appear during the running cycle without affecting the cycle. Machine Error code is turned on for 15 seconds. Clears after a key is pressed.
E nFLo	No Water Flow Error	If the control does not reach a water level of 4 inches within the programmed time it may mean the hose to the pressure sensor has a leak or no water is flowing into the machine. The control will enter Machine Error mode. The control will first drain for 90 seconds and then turn off all outputs and turn on the Machine Error Tone for 15 seconds. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
E oF	Overflow Error	The machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent. This error is triggered when an unsafe high water level is detected in the machine and water is unable to drain.
E PS	Pressure Sensor Error	If the control does not detect a valid water level sensor input for thirty (30) seconds, or if the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Mode, or Overflow Mode, the control will enter Machine Error Mode. The control will first drain for thirty (30) seconds to get out any water, and unlock the door. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
E bELL	Broken Belt Error	If a broken belt is ever detected by the control, the control will show error this error code. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
E LF	Water Leak Fill Error	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
Display is dim		Look for loose pins and damaged wires on harness from user control to drive board.
<i>E d</i>	Drive Board Errors	
<i>E d 10</i>	Voltage Select Error	Wrong Input Voltage seen at drive board 120V vs 240V. Dip switch 1 on FEC set wrong, or possibly water on drive board (let drive dry out and determine cause of water). Unpower to clear error. Replace drive board if error persists.
<i>E d 12</i>	Over Voltage AC-Main Input Error	Machine voltage is too high, check supply voltage to the machine and verify that it is within machine specifications. Unpower to clear error. Replace drive board if error persists.
<i>E d 13</i>	Power Fail Dangerous Error	The Neutral Line power input to the machine was seen out of range. Unpower to clear error. Check for damage in the power supply harness. Replace power supply harness or drive board if error persists.
<i>E d 21</i>	Over Voltage DC Bus Error	Unpower to clear error. Check voltage input to machine. If it happens only at start of spin, replace motor. Replace drive board if error persists.
<i>E d 22</i>	Over Motor Temperature Error	Motor temperature is detected to be too high. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Unpower to clear error. Replace drive board if error persists.
<i>E d 23</i>	Fatal IPM Over Current Shunt Error	Check that drum and motor spins freely. Unpower to clear error. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Replace drive board if error persists.
<i>E d 24</i>	Fatal I2T Hardware Over Current Error	Check that drum and motor spins freely. Rotor may be locked up. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Unpower to clear error. Replace drive board if error persists.
<i>E d 25</i>	IPM Over Temperature Error	IPM temperature is detected to be too high. Check that drum spins freely when empty, check for overloading of machine, reduce agitation time, and duty cycle if rotate/pause times are very short and programmable. Unpower to clear error. Check for lint build-up on heat sink on drive board. Replace drive board if error persists.
<i>E d 29</i>	Motor Not Connected Error	The motor or one of its electrical phases is not connected. Check that the harness from the motor to the drive board is fully plugged in on both ends and that there is no damage to the motor harness. Make sure to push in the motor harness on both ends just in case it is a little loose and not fully inserted. If the harness looks fine and the error still occurs, try replacing the drive board or harness. Unpower to clear error.
<i>E d 44</i>	Overcurrent Shunt Detection Circuit Fail Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 45</i>	Door Lock Pin HW On/Off Fail Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E d 46</i>	Heater Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 47</i>	Hot Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 48</i>	Cold Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 49</i>	Detergent Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 50</i>	Softener Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 51</i>	Inrush Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 52</i>	Voltage Doubler Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 53</i>	Door Lock Select Voltage Pin HW On/Off Fail	Hardware failure. Inspect door lock for signs of damage. Check the door lock connections and that coil resistance of door lock solenoid is within specifications. Unpower to clear error. Replace drive board if error persists.
<i>E d 54</i>	Pump Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 55</i>	Fatal NTC Short Error	Check heater thermistor and thermistor wiring for damage. Unpower to clear error. Replace drive board if error persists.
<i>E d 56</i>	Fatal NTC Open Error	Check heater thermistor and thermistor wiring for damage. Unpower to clear error. Replace drive board if error persists.
<i>E d 63</i>	Fatal IPM Temperature Short Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 64</i>	Fatal IPM Temperature Open Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.

Front Load Washer – Error Codes for K or Z Control

Error Codes

NOTE: Fatal Errors will show *oUt oF ordEr* along with the error on the display.

Following is a list of possible error codes for an electronic control. Errors beginning with **E**, refer to external device Infra-red communication errors. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Error Codes		
Display	Description	Cause/Corrective Action
E .01	Transmission Failure	Communication failure. Re-aim external device and try again.
E .02	Time-out Error	Communication failure. Re-aim external device and try again.
E .03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
E .04	Expecting Upload Request	Communication failure. Re-aim external device and try again.
E .05	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Re-check the programming option's value and try again.
E .09	CRC-16 Error	Communication failure. Re-aim external device and try again.
E .0A	Framing Error	Communication error. Re-aim external device and try again.
E .0C	Time-out Exceeded	Communication error. Re-aim external device and try again.
E .0E	Encryption Error	Communication error. Re-aim external device and try again. If the problem persists, check that the security code is correct.
E .0F	Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
EC\overline{H}H	Payment System Error	The Front-end control communicates with the Payment System in order to perform vending transactions. If an error should occur, which, terminates communication during a transaction, the LED Display will show EC\overline{H}H for a control generated error, where the HH represents an error code.
EC02	Time-out Error	Communication failure. Try card again.
EC03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
EC05	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Re-check the programming option's value and try again.
EC 11	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
EC 18	No Communication	Card reader is initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
EC 19	No Card Reader Communication	Communication failure. Power down, power up and try again. If error persists, replace control or card reader.
Right most decimal point Lit	Network Communication Error	Communication problem. Wait for 1.5 minutes for error to clear. If error doesn't clear, power-down and power-up the machine. If error persists, replace control or network board.
Right most decimal point Lit	Water Leak Detection Error or Slow Drain Detection Error	Water leak test has detected a water leak during a cycle or slow drain is detected in the drain step of a running cycle. The decimal point will remain lit after the error display has expired. Clear the decimal point by pressing the START keypad three times within five seconds or by cycling the power to the machine.
Right most decimal point blinking	Machine ID Error	Machine ID is no longer communicating with the control. Check Machine ID connection.
Left most decimal point blinking one second on/one second off	Max Speed Fail Error	If the final spin fails to reach 1200 RPM, the control will set the Max Speed Fail Error immediately when entering End of Cycle Mode to alert that the max speed was not reached in the cycle. This error will be cleared when vend is entered, a key is pressed, the door is opened, or when higher priority errors are cleared.
ALArn	Break-in Alarm Error	Check the service door and coin vault switches.
aFF	Break-in Alarm Shutdown Error	Check the service door and coin vault switches.
E FL	Fill Error	Fill level is not reached within 30 minutes (or other programmed length of time) in any fill step.
E dL	Door Lock Fatal Error	Door is unlocked during a running cycle. To clear this error, cycle power to the machine.
E dL 1	Door Lock Non-Fatal Error	If the door fails to lock in twenty (20) seconds in Door Locking Mode after the Drive has been enabled the control will turn off all outputs and show the error E dL 1 . To clear this error the door must either open or lock.
E dL 2	Door Unlock Non-Fatal Error	If the door fails to unlock in 20 seconds, with a solenoid type door lock, after the drum has stopped spinning, and all other outputs have been turned off, the control will show error E dL 2 . To clear this error the door must unlock or open.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E door</i>	Door Opened During A Running Cycle	Control detects door open and door locked inputs high. Can be caused by pulling on door while locked or about to lock. Correct inoperative door locking system. Unpower machine to clear error.
<i>E Ub1</i>	Non-Fatal Unbalance Error	Unable to balance load. Redistribute load and run cycle.
<i>E Ub2</i>	Fatal Unbalance Error	Wires to unbalance switch broken or not connected.
<i>CLaSE door</i>	Door Open Indicator	Door is not closed during an active cycle. If door is closed, check for improper wiring or faulty door switch.
<i>Co in Error</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E id</i>	Board ID	Incorrect replacement control. Replace user control or output board with the correct part.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dip switch #1 to the same setting as the previous control. If reworking the machine to use a different voltage supply, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>E nr</i>	Drive/Output Board Not Ready	Hardware failure. Try cycling power to machine before replacing output board.
<i>E b5</i>	Drive/Output Board Shorted	Hardware failure. Try cycling power to machine before replacing output board.
<i>En</i>	Machine ID Errors	
<i>En 31</i>	Product Byte #1 Mis-Match	Product family does not match between the Machine ID Control and Front End Control. Replace Machine ID Control with one meant for current Front End Control platform.
<i>En 32</i>	Product Byte #2 Mis-Match	Machine type does not match between the Machine ID Control and Front End Control (frontload washer vs. dryer). Replace Machine ID Control and/or front end control with one meant for current machine type.
<i>En 33</i>	Product Byte #3 Mis-Match	Control level does not match between the Machine ID Control and Front End Control (A4 vs. A2). Replace Machine ID Control with a properly configured A level for the control being attached. Use Factory Test Procedure to determine front end control's control level.
<i>En 39</i>	Corrupted Data on Machine ID Control	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E_n 3E</i>	Machine control cannot be configured with the Machine ID Control in the machine	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E_n 3F</i>	Cannot communicate with the Machine ID Control	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E C_o</i>	Drive/Output Board Communication Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.
<i>E dr</i>	Drain Error	If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and turn on the Machine Error Tone for 15 seconds.
<i>E 5d</i>	Slow Drain Error	If a slow drain is detected in the Drain step of a running cycle, the machine control will light the right-most decimal point. The decimal point will remain illuminated after the slow drain error display has expired, to draw the attention of the owner or attendant. The decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds, or by cycling the power to the machine.
<i>E 5ud5</i>	Suds Lock Error	In the spin steps, if the control determines that there are suds in the machine after running all programmed Suds Routines, it will display a Suds Lock Error at the end of the cycle after the door is opened. The control will continue showing this error code until any key has been pressed or for one minute.
<i>E Ld</i>	Water Leak Drain Error	Error will display if there is a leak after the door is opened at the End of Cycle for 1 minute. Clears after 1 minute or until a key is pressed. If the water level has dropped more than an acceptable amount in a during a water leak drain check, the control will save a water leak drain error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
<i>E nFL_o</i>	No Water Flow Error	If the control does not reach a water level of 4 inches within the programmed time it may mean the hose to the pressure sensor has a leak or no water is flowing into the machine. The control will enter Machine Error mode. The control will first drain for 90 seconds and then turn off all outputs and turn on the Machine Error Tone for 15 seconds. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E oF</i>	Overflow Error	The machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent. This error is triggered when an unsafe high water level is detected in the machine and water is unable to drain.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E P5</i>	Pressure Sensor Error	If the control does not detect a valid water level sensor input for thirty (30) seconds, or if the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Mode, or Overflow Mode, the control will enter Machine Error Mode. The control will first drain for thirty (30) seconds to get out any water, and unlock the door. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E bELL</i>	Broken Belt Error	If a broken belt is ever detected by the control, the control will show error this error code. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E LF</i>	Water Leak Fill Error	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
Display is dim		Look for loose pins and damaged wires on harness from user control to drive board.
<i>E d</i>	Drive Board Errors	
<i>E d 10</i>	Voltage Select Error	Wrong Input Voltage seen at drive board 120V vs 240V. Dip switch 1 on FEC set wrong, or possibly water on drive board (let drive dry out and determine cause of water). Unpower to clear error. Replace drive board if error persists.
<i>E d 12</i>	Over Voltage AC-Main Input Error	Machine voltage is too high, check supply voltage to the machine and verify that it is within machine specifications. Unpower to clear error. Replace drive board if error persists.
<i>E d 13</i>	Power Fail Dangerous Error	The Neutral Line power input to the machine was seen out of range. Unpower to clear error. Check for damage in the power supply harness. Replace power supply harness or drive board if error persists.
<i>E d 21</i>	Over Voltage DC Bus Error	Unpower to clear error. Check voltage input to machine. If it happens only at start of spin, replace motor. Replace drive board if error persists.
<i>E d 22</i>	Over Motor Temperature Error	Motor temperature is detected to be too high. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Unpower to clear error. Replace drive board if error persists.
<i>E d 23</i>	Fatal IPM Over Current Shunt Error	Check that drum and motor spins freely. Unpower to clear error. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Replace drive board if error persists.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E d 24</i>	Fatal I2T Hardware Over Current Error	Check that drum and motor spins freely. Rotor may be locked up. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Unpower to clear error. Replace drive board if error persists.
<i>E d 25</i>	IPM Over Temperature Error	IPM temperature is detected to be too high. Check that drum spins freely when empty, check for overloading of machine, reduce agitation time, and duty cycle if rotate/pause times are very short and programmable. Unpower to clear error. Check for lint build-up on heat sink on drive board. Replace drive board if error persists.
<i>E d 29</i>	Motor Not Connected Error	The motor or one of its electrical phases is not connected. Check that the harness from the motor to the drive board is fully plugged in on both ends and that there is no damage to the motor harness. Make sure to push in the motor harness on both ends just in case it is a little loose and not fully inserted. If the harness looks fine and the error still occurs, try replacing the drive board or harness. Unpower to clear error.
<i>E d 44</i>	Overcurrent Shunt Detection Circuit Fail Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 45</i>	Door Lock Pin HW On/Off Fail Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 46</i>	Heater Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 47</i>	Hot Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 48</i>	Cold Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 49</i>	Detergent Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 50</i>	Softener Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 51</i>	Inrush Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 52</i>	Voltage Doubler Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 53</i>	Door Lock Select Voltage Pin HW On/Off Fail	Hardware failure. Inspect door lock for signs of damage. Check the door lock connections and that coil resistance of door lock solenoid is within specifications. Unpower to clear error. Replace drive board if error persists.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E d 54</i>	Pump Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 55</i>	Fatal NTC Short Error	Check heater thermistor and thermistor wiring for damage. Unpower to clear error. Replace drive board if error persists.
<i>E d 56</i>	Fatal NTC Open Error	Check heater thermistor and thermistor wiring for damage. Unpower to clear error. Replace drive board if error persists.
<i>E d 63</i>	Fatal IPM Temperature Short Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 64</i>	Fatal IPM Temperature Open Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.

Front Load Washer – Error Codes for B (4th position of model number) Control with 3, 4, or 5 in 11th position of model number

Error Codes

NOTE: Fatal Errors will show *out of order* along with the error on the display.

Following is a list of possible error codes for an electronic control. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Error Codes		
Display	Description	Cause/Corrective Action
EC\overline{C}HH	Payment System Error	The Front-end control communicates with the Payment System in order to perform vending transactions. If an error should occur, which, terminates communication during a transaction, the LED Display will show EC\overline{C}HH for a control generated error, where the HH represents an error code.
EC02	Time-out Error	Communication failure. Try card again.
EC03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
EC05	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Re-check the programming option's value and try again.
EC 11	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
EC 18	No Communication	Card reader is initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
EC 19	No Card Reader Communication	Communication failure. Power down, power up and try again. If error persists, replace control or card reader.
Right most decimal point Lit	Water Leak Detection Error or Slow Drain Detection Error	Water leak test has detected a water leak during a cycle or slow drain is detected in the drain step of a running cycle. The decimal point will remain lit after the error display has expired. Clear the decimal point by pressing the START keypad three times within five seconds or by cycling the power to the machine.
Right most decimal point blinking	Machine ID Error	Machine ID is no longer communicating with the control. Check Machine ID connection.
Left most decimal point blinking one second on/one second off	Max Speed Fail Error	If the final spin fails to reach 1200 RPM, the control will set the Max Speed Fail Error immediately when entering End of Cycle Mode to alert that the max speed was not reached in the cycle. This error will be cleared when vend is entered, a key is pressed, the door is opened, or when higher priority errors are cleared.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E FL</i>	Fill Error	Fill level is not reached within 30 minutes (or other programmed length of time) in any fill step.
<i>E dL</i>	Door Lock Fatal Error	Door is unlocked during a running cycle. To clear this error, cycle power to the machine.
<i>E dL 1</i>	Door Lock Non-Fatal Error	If the door fails to lock in twenty (20) seconds in Door Locking Mode after the Drive has been enabled the control will turn off all outputs and show the error <i>E dL 1</i> . To clear this error the door must either open or lock.
<i>E dL2</i>	Door Unlock Non-Fatal Error	If the door fails to unlock in 20 seconds, with a solenoid type door lock, after the drum has stopped spinning, and all other outputs have been turned off, the control will show error <i>E dL2</i> . To clear this error the door must unlock or open.
<i>E do</i>	Door Opened During A Running Cycle	Control detects door open and door locked inputs high. Can be caused by pulling on door while locked or about to lock. Correct inoperative door locking system. Unpower machine to clear error.
<i>E Ub 1</i>	Non-Fatal Unbalance Error	Unable to balance load. Redistribute load and run cycle.
<i>E Ub2</i>	Fatal Unbalance Error	Wires to unbalance switch broken or not connected.
<i>CLoS door</i>	Door Open Indicator	Door is not closed during an active cycle. If door is closed, check for improper wiring or faulty door switch.
<i>Err</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E id</i>	Board ID	Incorrect replacement control. Replace user control or output board with the correct part.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dip switch #1 to the same setting as the previous control. If reworking the machine to use a different voltage supply, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>E nr</i>	Drive/Output Board Not Ready	Hardware failure. Try cycling power to machine before replacing output board.
<i>E b5</i>	Drive/Output Board Shorted	Hardware failure. Try cycling power to machine before replacing output board.
<i>En</i>	Machine ID Errors	
<i>En 31</i>	Product Byte #1 Mis-Match	Product family does not match between the Machine ID Control and Front End Control. Replace Machine ID Control with one meant for current Front End Control platform.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E_n 32</i>	Product Byte #2 Mis-Match	Machine type does not match between the Machine ID Control and Front End Control (frontload washer vs. dryer). Replace Machine ID Control and/or front end control with one meant for current machine type.
<i>E_n 33</i>	Product Byte #3 Mis-Match	Control level does not match between the Machine ID Control and Front End Control (A4 vs. A2). Replace Machine ID Control with a properly configured A level for the control being attached. Use Factory Test Procedure to determine front end control's control level.
<i>E_n 39</i>	Corrupted Data on Machine ID Control	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E_n 3E</i>	Machine control cannot be configured with the Machine ID Control in the machine	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E_n 3F</i>	Cannot communicate with the Machine ID Control	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E C_o</i>	Drive/Output Board Communication Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.
<i>E dr</i>	Drain Error	If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and turn on the Machine Error Tone for 15 seconds.
<i>E 5d</i>	Slow Drain Error	If a slow drain is detected in the Drain step of a running cycle, the machine control will light the right-most decimal point. The decimal point will remain illuminated after the slow drain error display has expired, to draw the attention of the owner or attendant. The decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds, or by cycling the power to the machine.
<i>E 5L</i>	Suds Lock Error	In the spin steps, if the control determines that there are suds in the machine after running all programmed Suds Routines, it will display a Suds Lock Error at the end of the cycle after the door is opened. The control will continue showing this error code until any key has been pressed or for one minute.
<i>E Ld</i>	Water Leak Drain Error	Error will display if there is a leak after the door is opened at the End of Cycle for 1 minute. Clears after 1 minute or until a key is pressed. If the water level has dropped more than an acceptable amount in a during a water leak drain check, the control will save a water leak drain error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E nF</i>	No Water Flow Error	If the control does not reach a water level of 4 inches within the programmed time it may mean the hose to the pressure sensor has a leak or no water is flowing into the machine. The control will enter Machine Error mode. The control will first drain for 90 seconds and then turn off all outputs and turn on the Machine Error Tone for 15 seconds. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E oF</i>	Overflow Error	The machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent. This error is triggered when an unsafe high water level is detected in the machine and water is unable to drain.
<i>E P5</i>	Pressure Sensor Error	If the control does not detect a valid water level sensor input for thirty (30) seconds, or if the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Mode, or Overflow Mode, the control will enter Machine Error Mode. The control will first drain for thirty (30) seconds to get out any water, and unlock the door. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E bb</i>	Broken Belt Error	If a broken belt is ever detected by the control, the control will show error this error code. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E LF</i>	Water Leak Fill Error	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
Display is dim		Look for loose pins and damaged wires on harness from user control to drive board.
<i>E d</i>	Drive Board Errors	
<i>E d 10</i>	Voltage Select Error	Wrong Input Voltage seen at drive board 120V vs 240V. Dip switch 1 on FEC set wrong, or possibly water on drive board (let drive dry out and determine cause of water). Unpower to clear error. Replace drive board if error persists.
<i>E d 12</i>	Over Voltage AC-Main Input Error	Machine voltage is too high, check supply voltage to the machine and verify that it is within machine specifications. Unpower to clear error. Replace drive board if error persists.
<i>E d 13</i>	Power Fail Dangerous Error	The Neutral Line power input to the machine was seen out of range. Unpower to clear error. Check for damage in the power supply harness. Replace power supply harness or drive board if error persists.
<i>E d 21</i>	Over Voltage DC Bus Error	Unpower to clear error. Check voltage input to machine. If it happens only at start of spin, replace motor. Replace drive board if error persists.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E d 22</i>	Over Motor Temperature Error	Motor temperature is detected to be too high. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Unpower to clear error. Replace drive board if error persists.
<i>E d 23</i>	Fatal IPM Over Current Shunt Error	Check that drum and motor spins freely. Unpower to clear error. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Replace drive board if error persists.
<i>E d 24</i>	Fatal I2T Hardware Over Current Error	Check that drum and motor spins freely. Rotor may be locked up. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Unpower to clear error. Replace drive board if error persists.
<i>E d 25</i>	IPM Over Temperature Error	IPM temperature is detected to be too high. Check that drum spins freely when empty, check for overloading of machine, reduce agitation time, and duty cycle if rotate/pause times are very short and programmable. Unpower to clear error. Check for lint build-up on heat sink on drive board. Replace drive board if error persists.
<i>E d 29</i>	Motor Not Connected Error	The motor or one of its electrical phases is not connected. Check that the harness from the motor to the drive board is fully plugged in on both ends and that there is no damage to the motor harness. Make sure to push in the motor harness on both ends just in case it is a little loose and not fully inserted. If the harness looks fine and the error still occurs, try replacing the drive board or harness. Unpower to clear error.
<i>E d 44</i>	Overcurrent Shunt Detection Circuit Fail Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 45</i>	Door Lock Pin HW On/Off Fail Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 46</i>	Heater Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 47</i>	Hot Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 48</i>	Cold Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 49</i>	Detergent Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 50</i>	Softener Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 51</i>	Inrush Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E d 52</i>	Voltage Doubler Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 53</i>	Door Lock Select Voltage Pin HW On/Off Fail	Hardware failure. Inspect door lock for signs of damage. Check the door lock connections and that coil resistance of door lock solenoid is within specifications. Unpower to clear error. Replace drive board if error persists.
<i>E d 54</i>	Pump Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 55</i>	Fatal NTC Short Error	Check heater thermistor and thermistor wiring for damage. Unpower to clear error. Replace drive board if error persists.
<i>E d 56</i>	Fatal NTC Open Error	Check heater thermistor and thermistor wiring for damage. Unpower to clear error. Replace drive board if error persists.
<i>E d 63</i>	Fatal IPM Temperature Short Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 64</i>	Fatal IPM Temperature Open Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.

Stacked Washer Dryer – Error Codes for N Control, with 6 in 11th position of model number

Front Load Washer

NOTE: Fatal Errors will show *oUt oF ordEr* along with the error on the display.

Error Codes

Following is a list of possible error codes for an electronic control. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Error Codes		
Display	Description	Cause/Corrective Action
EC^{HH}	Payment System Error	The Front-end control communicates with the Payment System in order to perform vending transactions. If an error should occur, which, terminates communication during a transaction, the LED Display will show EC^{HH} for a control generated error, where the HH represents an error code.
EC02	Time-out Error	Communication failure. Try card again.
EC03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
EC05	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Re-check the programming option's value and try again.
EC 11	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
EC 18	No Communication	Card reader is initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
EC 19	No Card Reader Communication	Communication failure. Power down, power up and try again. If error persists, replace control or card reader.
Right most decimal point Lit	Network Communication Error	Communication problem. Wait for 1.5 minutes for error to clear. If error doesn't clear, power-down and power-up the machine. If error persists, replace control or network board.
Right most decimal point Lit	Water Leak Detection Error or Slow Drain Detection Error	Water leak test has detected a water leak during a cycle or slow drain is detected in the drain step of a running cycle. The decimal point will remain lit after the error display has expired. Clear the decimal point by pressing the START keypad three times within five seconds or by cycling the power to the machine.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
Left most decimal point blinking one second on/one second off	Max Speed Fail Error	If the final spin fails to reach 1200 RPM, the control will set the Max Speed Fail Error immediately when entering End of Cycle Mode to alert that the max speed was not reached in the cycle. This error will be cleared when vend is entered, a key is pressed, the door is opened, or when higher priority errors are cleared.
<i>ALARM</i>	Break-in Alarm Error	Check the service door and coin vault switches.
<i>OFF</i>	Break-in Alarm Shutdown Error	Check the service door and coin vault switches.
<i>E FL</i>	Fill Error	Fill level is not reached within 30 minutes (or other programmed length of time) in any fill step.
<i>E dL</i>	Door Lock Fatal Error	Door is unlocked during a running cycle. To clear this error, cycle power to the machine.
<i>E dL 1</i>	Door Lock Non-Fatal Error	If the door fails to lock in twenty (20) seconds in Door Locking Mode after the Drive has been enabled the control will turn off all outputs and show the error <i>E dL 1</i> . To clear this error the door must either open or lock.
<i>E dL2</i>	Door Unlock Non-Fatal Error	If the door fails to unlock in 20 seconds, with a solenoid type door lock, after the drum has stopped spinning, and all other outputs have been turned off, the control will show error <i>E dL2</i> . To clear this error the door must unlock or open.
<i>E door</i>	Door Opened During A Running Cycle	Control detects door open and door locked inputs high. Can be caused by pulling on door while locked or about to lock. Correct inoperative door locking system. Unpower machine to clear error.
<i>E Ub 1</i>	Non-Fatal Unbalance Error	Unable to balance load. Redistribute load and run cycle.
<i>E Ub2</i>	Fatal Unbalance Error	Wires to unbalance switch broken or not connected.
<i>CLoSE door</i>	Door Open Indicator	Door is not closed during an active cycle. If door is closed, check for improper wiring or faulty door switch.
<i>Coin Error</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E id</i>	Board ID	Incorrect replacement control. Replace user control or output board with the correct part.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E nr</i>	Drive/Output Board Not Ready	Hardware failure. Try cycling power to machine before replacing output board.
<i>E b5</i>	Drive/Output Board Shorted	Hardware failure. Try cycling power to machine before replacing output board.
<i>E Co</i>	Drive/Output Board Communication Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.
<i>E dr</i>	Drain Error	If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and turn on the Machine Error Tone for 15 seconds.
<i>E 5d</i>	Slow Drain Error	If a slow drain is detected in the Drain step of a running cycle, the machine control will light the right-most decimal point. The decimal point will remain illuminated after the slow drain error display has expired, to draw the attention of the owner or attendant. The decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds, or by cycling the power to the machine.
<i>E 5ud5</i>	Suds Lock Error	In the spin steps, if the control determines that there are suds in the machine after running all programmed Suds Routines, it will display a Suds Lock Error at the end of the cycle after the door is opened. The control will continue showing this error code until any key has been pressed or for one minute.
<i>E Ld</i>	Water Leak Drain Error	Error will display if there is a leak after the door is opened at the End of Cycle for 1 minute. Clears after 1 minute or until a key is pressed. If the water level has dropped more than an acceptable amount in a during a water leak drain check, the control will save a water leak drain error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
<i>E nFLo</i>	No Water Flow Error	If the control does not reach a water level of 4 inches within the programmed time it may mean the hose to the pressure sensor has a leak or no water is flowing into the machine. The control will enter Machine Error mode. The control will first drain for 90 seconds and then turn off all outputs and turn on the Machine Error Tone for 15 seconds. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E oF</i>	Overflow Error	The machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent. This error is triggered when an unsafe high water level is detected in the machine and water is unable to drain.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
E P5	Pressure Sensor Error	If the control does not detect a valid water level sensor input for thirty (30) seconds, or if the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Mode, or Overflow Mode, the control will enter Machine Error Mode. The control will first drain for thirty (30) seconds to get out any water, and unlock the door. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
E Er	Trim Error	The machine must be powered down, the Clear Fatal Error Keys must be pressed or a Clear Fatal Error Network command must be send.
E bELt	Broken Belt Error	If a broken belt is ever detected by the control, the control will show error this error code. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
E LF	Water Leak Fill Error	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
Display is dim		Look for loose pins and damaged wires on harness from user control to drive board.
E d	Drive Board Errors	
E d 10	Voltage Select Error	Wrong Input Voltage seen at drive board 120V vs 240V. Water may be on drive board. Let drive dry out and determine cause of water. Unpower to clear error. Replace drive board if error persists.
E d 12	Over Voltage AC-Main Input Error	Machine voltage is too high, check supply voltage to the machine and verify that it is within machine specifications. Unpower to clear error. Replace drive board if error persists.
E d 13	Power Fail Dangerous Error	The Neutral Line power input to the machine was seen out of range. Unpower to clear error. Check for damage in the power supply harness. Replace power supply harness or drive board if error persists.
E d 21	Over Voltage DC Bus Error	Unpower to clear error. Check voltage input to machine. If it happens only at start of spin, replace motor. Replace drive board if error persists.
E d 22	Over Motor Temperature Error	Motor temperature is detected to be too high. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Unpower to clear error. Replace drive board if error persists.
E d 23	Fatal IPM Over Current Shunt Error	Check that drum and motor spins freely. Unpower to clear error. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Replace drive board if error persists.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E d 24</i>	Fatal I2T Hardware Over Current Error	Check that drum and motor spins freely. Rotor may be locked up. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Unpower to clear error. Replace drive board if error persists.
<i>E d 25</i>	IPM Over Temperature Error	IPM temperature is detected to be too high. Check that drum spins freely when empty, check for overloading of machine, reduce agitation time, and duty cycle if rotate/pause times are very short and programmable. Unpower to clear error. Check for lint build-up on heat sink on drive board. Replace drive board if error persists.
<i>E d 29</i>	Motor Not Connected Error	The motor or one of its electrical phases is not connected. Check that the harness from the motor to the drive board is fully plugged in on both ends and that there is no damage to the motor harness. Make sure to push in the motor harness on both ends just in case it is a little loose and not fully inserted. If the harness looks fine and the error still occurs, try replacing the drive board or harness. Unpower to clear error.
<i>E d 44</i>	Overcurrent Shunt Detection Circuit Fail Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 45</i>	Door Lock Pin HW On/Off Fail Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 46</i>	Heater Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 47</i>	Hot Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 48</i>	Cold Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 49</i>	Detergent Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 50</i>	Softener Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 51</i>	Inrush Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 52</i>	Voltage Doubler Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 53</i>	Door Lock Select Voltage Pin HW On/Off Fail	Hardware failure. Inspect door lock for signs of damage. Check the door lock connections and that coil resistance of door lock solenoid is within specifications. Unpower to clear error. Replace drive board if error persists.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E d 54</i>	Pump Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 55</i>	Fatal NTC Short Error	Check heater thermistor and thermistor wiring for damage. Unpower to clear error. Replace drive board if error persists.
<i>E d 56</i>	Fatal NTC Open Error	Check heater thermistor and thermistor wiring for damage. Unpower to clear error. Replace drive board if error persists.
<i>E d 63</i>	Fatal IPM Temperature Short Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 64</i>	Fatal IPM Temperature Open Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.

Dryer**Error Codes**

Following is a list of possible error codes for an electronic control. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Display	Description	Cause/ Corrective Action
<i>EC02</i>	Time-out Error	Communication failure. Try card again.
<i>EC03</i>	Invalid Command Code	Incorrect machine type. Before downloading, ensure data is for current machine type.
<i>EC05</i>	Invalid or Out-of-Range Data	Incorrect machine type. Before downloading, ensure data is for current machine type and values entered are within the minimum and maximum limits.
<i>EC 11</i>	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
<i>EC 18</i>	No Communication	Card reader initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
<i>EC 19</i>	No Card Reader Communication and No Card Reader Initialization	Communication failure. Power down, power up, check connections, harness and try again. If error persists, replace control or card reader.
<i>EC36</i>	Audit Card Removed Prematurely	Re-insert Audit Card and wait until machine prompts for card removal.

Table 5 *continues...*

Display	Description	Cause/ Corrective Action
Right most decimal point Lit	Network Communication Error	Communication problem. Wait for 1.5 minutes for error to clear. If error doesn't clear, power-down and power-up the machine. Check all network connections. If error persists, replace control or network board.
<i>ALArn</i>	Break-in Alarm Error	Service the service door or coin vault switches.
<i>oFF</i>	Break-in Alarm Shutdown Error	Service the service door or coin vault switches.
<i>Err</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E 5H</i>	Shorted Thermistor Error	Dead short in thermistor circuit. Check wiring harness and remove any lint build-up around thermistor. If problem persists, replace thermistor or output board.
<i>E oP</i>	Open Thermistor Error	Physical open in thermistor circuit. Check wiring harness and remove any lint build-up around thermistor. If problem persists, replace thermistor or output board.
<i>E id</i>	Board ID	Incorrect replacement control. Replace user control or output board with correct part.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dipswitch #1 to the same setting as the previous control. If reworking the machine to use a different supply voltage, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>E nr</i>	Output Board Not Ready	Hardware failure. Replace output board.
<i>E b5</i>	Output Board Communication	Hardware failure. Replace output board.
<i>E Co</i>	Output Board Communication	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.
<i>E 59</i>	Door Input Acquisition	Hardware failure. Replace output board.

Table 5 *continues...*

Display	Description	Cause/ Corrective Action
<i>E 60</i>	Centrifugal Switch Input Acquisition	Hardware failure. Replace output board.
<i>E 61</i>	High Limit Thermostat Input Acquisition	Hardware failure. Replace output board.
<i>E r0</i>	Locked Rotor	The motor is not sensed as rotating when it should be. Check that nothing is obstructing motor rotation, check connection between user control and output board, or try replacing the user control or the output board.
<i>E n5</i>	Motor Output Shorted	Hardware failure. Replace output board.

Table 5

Stacked Washer Dryer – Error Codes for J, N, and W Control with 3, 4, or 5 in 11th position of model number

Front Load Washer

communication errors. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Error Codes

NOTE: Fatal Errors will show *OUT OF ORDER* along with the error on the display.

Following is a list of possible error codes for an electronic control. Errors beginning with **E**, refer to external device Infra-red

Error Codes		
Display	Description	Cause/Corrective Action
E .01	Transmission Failure	Communication failure. Re-aim external device and try again.
E .02	Time-out Error	Communication failure. Re-aim external device and try again.
E .03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
E .04	Expecting Upload Request	Communication failure. Re-aim external device and try again.
E .05	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Re-check the programming option's value and try again.
E .09	CRC-16 Error	Communication failure. Re-aim external device and try again.
E .0A	Framing Error	Communication error. Re-aim external device and try again.
E .0C	Time-out Exceeded	Communication error. Re-aim external device and try again.
E .0E	Encryption Error	Communication error. Re-aim external device and try again. If the problem persists, check that the security code is correct.
E .0F	Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
EC^{HH}	Payment System Error	The Front-end control communicates with the Payment System in order to perform vending transactions. If an error should occur, which, terminates communication during a transaction, the LED Display will show EC^{HH} for a control generated error, where the HH represents an error code.
EC02	Time-out Error	Communication failure. Try card again.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
EC03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
EC05	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Re-check the programming option's value and try again.
EC11	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
EC18	No Communication	Card reader is initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
EC19	No Card Reader Communication	Communication failure. Power down, power up and try again. If error persists, replace control or card reader.
Right most decimal point Lit	Network Communication Error	Communication problem. Wait for 1.5 minutes for error to clear. If error doesn't clear, power-down and power-up the machine. If error persists, replace control or network board.
Right most decimal point Lit	Water Leak Detection Error or Slow Drain Detection Error	Water leak test has detected a water leak during a cycle or slow drain is detected in the drain step of a running cycle. The decimal point will remain lit after the error display has expired. Clear the decimal point by pressing the START keypad three times within five seconds or by cycling the power to the machine.
Right most decimal point blinking	Machine ID Error	Machine ID is no longer communicating with the control. Check Machine ID connection.
Left most decimal point blinking one second on/one second off	Max Speed Fail Error	If the final spin fails to reach 1200 RPM, the control will set the Max Speed Fail Error immediately when entering End of Cycle Mode to alert that the max speed was not reached in the cycle. This error will be cleared when vend is entered, a key is pressed, the door is opened, or when higher priority errors are cleared.
ALArn	Break-in Alarm Error	Check the service door and coin vault switches.
aFF	Break-in Alarm Shutdown Error	Check the service door and coin vault switches.
E FL	Fill Error	Fill level is not reached within 30 minutes (or other programmed length of time) in any fill step.
E dL	Door Lock Fatal Error	Door is unlocked during a running cycle. To clear this error, cycle power to the machine.
E dL I	Door Lock Non-Fatal Error	If the door fails to lock in twenty (20) seconds in Door Locking Mode after the Drive has been enabled the control will turn off all outputs and show the error E dL I . To clear this error the door must either open or lock.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E dL2</i>	Door Unlock Non-Fatal Error	If the door fails to unlock in 20 seconds, with a solenoid type door lock, after the drum has stopped spinning, and all other outputs have been turned off, the control will show error <i>E dL2</i> . To clear this error the door must unlock or open.
<i>E door</i>	Door Opened During A Running Cycle	Control detects door open and door locked inputs high. Can be caused by pulling on door while locked or about to lock. Correct inoperative door locking system. Unpower machine to clear error.
<i>E Ub1</i>	Non-Fatal Unbalance Error	Unable to balance load. Redistribute load and run cycle.
<i>E Ub2</i>	Fatal Unbalance Error	Wires to unbalance switch broken or not connected.
<i>CLoSE door</i>	Door Open Indicator	Door is not closed during an active cycle. If door is closed, check for improper wiring or faulty door switch.
<i>Co in Error</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E id</i>	Board ID	Incorrect replacement control. Replace user control or output board with the correct part.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dip switch #1 to the same setting as the previous control. If reworking the machine to use a different voltage supply, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>E nr</i>	Drive/Output Board Not Ready	Hardware failure. Try cycling power to machine before replacing output board.
<i>E b5</i>	Drive/Output Board Shorted	Hardware failure. Try cycling power to machine before replacing output board.
<i>En</i>	Machine ID Errors	
<i>En 31</i>	Product Byte #1 Mis-Match	Product family does not match between the Machine ID Control and Front End Control. Replace Machine ID Control with one meant for current Front End Control platform.
<i>En 32</i>	Product Byte #2 Mis-Match	Machine type does not match between the Machine ID Control and Front End Control (frontload washer vs. dryer). Replace Machine ID Control and/or front end control with one meant for current machine type.
<i>En 33</i>	Product Byte #3 Mis-Match	Control level does not match between the Machine ID Control and Front End Control (A4 vs. A2). Replace Machine ID Control with a properly configured A level for the control being attached. Use Factory Test Procedure to determine front end control's control level.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E_n 39</i>	Corrupted Data on Machine ID Control	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E_n 3E</i>	Machine control cannot be configured with the Machine ID Control in the machine	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E_n 3F</i>	Cannot communicate with the Machine ID Control	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E C_o</i>	Drive/Output Board Communication Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.
<i>E d_r</i>	Drain Error	If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and turn on the Machine Error Tone for 15 seconds.
<i>E 5_d</i>	Slow Drain Error	If a slow drain is detected in the Drain step of a running cycle, the machine control will light the right-most decimal point. The decimal point will remain illuminated after the slow drain error display has expired, to draw the attention of the owner or attendant. The decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds, or by cycling the power to the machine.
<i>E H_t</i>	Heater Error	If the heater is enabled and the water temperature has not reached the desired temperature selection within the programmable time, the control will indicate a heater error. If this error occurs, the heater output will be turned off, and the cycle will continue. This error will be cleared when the door is opened or any key is pressed.
<i>E t_E</i>	Max Temperature Exceeded Error	The control will continuously monitor the Machine Status for an indication that the maximum water temperature is exceeded. When the cycle has been completed and if the control has saved a Max Temperature Exceeded Error, the control shows error <i>E t_E</i> for one minute, after the door is opened or a key is pressed.
<i>E o_P</i>	Open Temperature/Thermistor Sensor Error	The Output Board will flag an Open Thermistor Error any time it senses a temperature less than 0°F. It turns off the heater output for the remainder of the cycle. At the end of the cycle, error code will be shown. Clears after 1 minute or with any key press.
<i>E 5_H</i>	Shorted Temperature/Thermistor Sensor Error	The Output Board will flag a Shorted Thermistor any time it senses a temperature greater than 212 °F [100 °C] . It turns off the heater output for the remainder of the cycle. At the end of the cycle, error code will be shown. Clears after 1 minute or with any key press.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
E SudS	Suds Lock Error	In the spin steps, if the control determines that there are suds in the machine after running all programmed Suds Routines, it will display a Suds Lock Error at the end of the cycle after the door is opened. The control will continue showing this error code until any key has been pressed or for one minute.
E Hd	Too Hot To Drain Error	If water is detected to be too hot to safely drain, this error will be set. It is advised to add a cool down step to the cycle after every heating step to avoid this error. Error will display after door is opened in End of Cycle Mode. Clears after 1 minute.
E Ld	Water Leak Drain Error	Error will display if there is a leak after the door is opened at the End of Cycle for 1 minute. Clears after 1 minute or until a key is pressed. If the water level has dropped more than an acceptable amount in a during a water leak drain check, the control will save a water leak drain error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
E StHt	Slow To Heat Error	Non-Fatal Error that will appear during the running cycle without affecting the cycle. Machine Error code is turned on for 15 seconds. Clears after a key is pressed.
E nFLo	No Water Flow Error	If the control does not reach a water level of 4 inches within the programmed time it may mean the hose to the pressure sensor has a leak or no water is flowing into the machine. The control will enter Machine Error mode. The control will first drain for 90 seconds and then turn off all outputs and turn on the Machine Error Tone for 15 seconds. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
E oF	Overflow Error	The machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent. This error is triggered when an unsafe high water level is detected in the machine and water is unable to drain.
E PS	Pressure Sensor Error	If the control does not detect a valid water level sensor input for thirty (30) seconds, or if the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Mode, or Overflow Mode, the control will enter Machine Error Mode. The control will first drain for thirty (30) seconds to get out any water, and unlock the door. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
E bELL	Broken Belt Error	If a broken belt is ever detected by the control, the control will show error this error code. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
E LF	Water Leak Fill Error	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
Display is dim		Look for loose pins and damaged wires on harness from user control to drive board.
<i>E d</i>	Drive Board Errors	
<i>E d 10</i>	Voltage Select Error	Wrong Input Voltage seen at drive board 120V vs 240V. Dip switch 1 on FEC set wrong, or possibly water on drive board (let drive dry out and determine cause of water). Unpower to clear error. Replace drive board if error persists.
<i>E d 12</i>	Over Voltage AC-Main Input Error	Machine voltage is too high, check supply voltage to the machine and verify that it is within machine specifications. Unpower to clear error. Replace drive board if error persists.
<i>E d 13</i>	Power Fail Dangerous Error	The Neutral Line power input to the machine was seen out of range. Unpower to clear error. Check for damage in the power supply harness. Replace power supply harness or drive board if error persists.
<i>E d 21</i>	Over Voltage DC Bus Error	Unpower to clear error. Check voltage input to machine. If it happens only at start of spin, replace motor. Replace drive board if error persists.
<i>E d 22</i>	Over Motor Temperature Error	Motor temperature is detected to be too high. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Unpower to clear error. Replace drive board if error persists.
<i>E d 23</i>	Fatal IPM Over Current Shunt Error	Check that drum and motor spins freely. Unpower to clear error. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Replace drive board if error persists.
<i>E d 24</i>	Fatal I2T Hardware Over Current Error	Check that drum and motor spins freely. Rotor may be locked up. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Unpower to clear error. Replace drive board if error persists.
<i>E d 25</i>	IPM Over Temperature Error	IPM temperature is detected to be too high. Check that drum spins freely when empty, check for overloading of machine, reduce agitation time, and duty cycle if rotate/pause times are very short and programmable. Unpower to clear error. Check for lint build-up on heat sink on drive board. Replace drive board if error persists.
<i>E d 29</i>	Motor Not Connected Error	The motor or one of its electrical phases is not connected. Check that the harness from the motor to the drive board is fully plugged in on both ends and that there is no damage to the motor harness. Make sure to push in the motor harness on both ends just in case it is a little loose and not fully inserted. If the harness looks fine and the error still occurs, try replacing the drive board or harness. Unpower to clear error.
<i>E d 44</i>	Overcurrent Shunt Detection Circuit Fail Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 45</i>	Door Lock Pin HW On/Off Fail Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E d 46</i>	Heater Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 47</i>	Hot Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 48</i>	Cold Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 49</i>	Detergent Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 50</i>	Softener Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 51</i>	Inrush Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 52</i>	Voltage Doubler Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 53</i>	Door Lock Select Voltage Pin HW On/Off Fail	Hardware failure. Inspect door lock for signs of damage. Check the door lock connections and that coil resistance of door lock solenoid is within specifications. Unpower to clear error. Replace drive board if error persists.
<i>E d 54</i>	Pump Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 55</i>	Fatal NTC Short Error	Check heater thermistor and thermistor wiring for damage. Unpower to clear error. Replace drive board if error persists.
<i>E d 56</i>	Fatal NTC Open Error	Check heater thermistor and thermistor wiring for damage. Unpower to clear error. Replace drive board if error persists.
<i>E d 63</i>	Fatal IPM Temperature Short Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 64</i>	Fatal IPM Temperature Open Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.

Dryer

communication errors. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Error Codes

Following is a list of possible error codes for an electronic control. Errors beginning with **EI** refer to external device Infra-red

Display	Description	Cause/ Corrective Action
<i>E1 01</i>	Transmission Failure	Communication failure. Re-aim external device and try again.
<i>E1 02</i>	Device Time-out	Communication failure. Re-aim external device and try again.
<i>E1 03</i>	Invalid Command Code	Incorrect machine type. Before downloading, ensure data is for current machine type.
<i>E1 04</i>	Command Packet Time Out	Communication failure. Re-aim external device and try again.
<i>E1 05</i>	Invalid or Out-of-Range Data	Incorrect machine type. Before downloading, ensure data is for current machine type and values entered are within the minimum and maximum limits.
<i>E1 09</i>	CRC-16 Error	Communication failure. Re-aim external device and try again.
<i>E1 0A</i>	Framing Error	Communication error. Re-aim external device and try again.
<i>E1 0C</i>	Time-out Exceeded	Communication error. Re-aim external device and try again.
<i>E1 0E</i>	Encryption Error	Incorrect machine type. Before downloading, ensure data is for current machine type.
<i>E1 0F</i>	Invalid Wake-up or Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
<i>EC02</i>	Time-out Error	Communication failure. Try card again.
<i>EC03</i>	Invalid Command Code	Incorrect machine type. Before downloading, ensure data is for current machine type.
<i>EC05</i>	Invalid or Out-of-Range Data	Incorrect machine type. Before downloading, ensure data is for current machine type and values entered are within the minimum and maximum limits.
<i>EC 11</i>	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
<i>EC 1B</i>	No Communication	Card reader initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.

Table 6 *continues...*

Display	Description	Cause/ Corrective Action
<i>EC 19</i>	No Card Reader Communication and No Card Reader Initialization	Communication failure. Power down, power up, check connections, harness and try again. If error persists, replace control or card reader.
<i>EC 36</i>	Audit Card Removed Prematurely	Re-insert Audit Card and wait until machine prompts for card removal.
Right most decimal point Lit	Network Communication Error	Communication problem. Wait for 1.5 minutes for error to clear. If error doesn't clear, power-down and power-up the machine. Check all network connections. If error persists, replace control or network board.
<i>ALArn</i>	Break-in Alarm Error	Service the service door or coin vault switches.
<i>aFF</i>	Break-in Alarm Shutdown Error	Service the service door or coin vault switches.
<i>Err</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E 5H</i>	Shorted Thermistor Error	Dead short in thermistor circuit. Check wiring harness and remove any lint build-up around thermistor. If problem persists, replace thermistor or output board.
<i>E aP</i>	Open Thermistor Error	Physical open in thermistor circuit. Check wiring harness and remove any lint build-up around thermistor. If problem persists, replace thermistor or output board.
<i>E id</i>	Board ID	Incorrect replacement control. Replace user control or output board with correct part.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dipswitch #1 to the same setting as the previous control. If reworking the machine to use a different supply voltage, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>E nr</i>	Output Board Not Ready	Hardware failure. Replace output board.
<i>E b5</i>	Output Board Communication	Hardware failure. Replace output board.

Table 6 *continues...*

Display	Description	Cause/ Corrective Action
<i>E nHH</i>	Machine ID	Communication failure. Power down, power up and try again. If error persists, check connection between user control and Machine ID chip, or try replacing the user control or the Machine ID chip.
<i>E Co</i>	Output Board Communication	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.
<i>E 59</i>	Door Input Acquisition	Hardware failure. Replace output board.
<i>E 60</i>	Centrifugal Switch Input Acquisition	Hardware failure. Replace output board.
<i>E 61</i>	High Limit Thermostat Input Acquisition	Hardware failure. Replace output board.
<i>E ro</i>	Locked Rotor	The motor is not sensed as rotating when it should be. Check that nothing is obstructing motor rotation, check connection between user control and output board, or try replacing the user control or the output board.
<i>E n5</i>	Motor Output Shorted	Hardware failure. Replace output board.

Table 6

Stacked Washer Dryer – Error Codes for B Control with 3, 4, or 5 in 11th position of model number

Front Load Washer

NOTE: Fatal Errors will show *out of order* along with the error on the display.

Error Codes

Following is a list of possible error codes for an electronic control. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Error Codes		
Display	Description	Cause/Corrective Action
ECHH	Payment System Error	The Front-end control communicates with the Payment System in order to perform vending transactions. If an error should occur, which, terminates communication during a transaction, the LED Display will show ECHH for a control generated error, where the HH represents an error code.
EC02	Time-out Error	Communication failure. Try card again.
EC03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
EC05	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Re-check the programming option's value and try again.
EC 11	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
EC 18	No Communication	Card reader is initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
EC 19	No Card Reader Communication	Communication failure. Power down, power up and try again. If error persists, replace control or card reader.
Right most decimal point Lit	Water Leak Detection Error or Slow Drain Detection Error	Water leak test has detected a water leak during a cycle or slow drain is detected in the drain step of a running cycle. The decimal point will remain lit after the error display has expired. Clear the decimal point by pressing the START keypad three times within five seconds or by cycling the power to the machine.
Right most decimal point blinking	Machine ID Error	Machine ID is no longer communicating with the control. Check Machine ID connection.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
Left most decimal point blinking one second on/one second off	Max Speed Fail Error	If the final spin fails to reach 1200 RPM, the control will set the Max Speed Fail Error immediately when entering End of Cycle Mode to alert that the max speed was not reached in the cycle. This error will be cleared when vend is entered, a key is pressed, the door is opened, or when higher priority errors are cleared.
<i>E FL</i>	Fill Error	Fill level is not reached within 30 minutes (or other programmed length of time) in any fill step.
<i>E dL</i>	Door Lock Fatal Error	Door is unlocked during a running cycle. To clear this error, cycle power to the machine.
<i>E dL 1</i>	Door Lock Non-Fatal Error	If the door fails to lock in twenty (20) seconds in Door Locking Mode after the Drive has been enabled the control will turn off all outputs and show the error <i>E dL 1</i> . To clear this error the door must either open or lock.
<i>E dL 2</i>	Door Unlock Non-Fatal Error	If the door fails to unlock in 20 seconds, with a solenoid type door lock, after the drum has stopped spinning, and all other outputs have been turned off, the control will show error <i>E dL 2</i> . To clear this error the door must unlock or open.
<i>E do</i>	Door Opened During A Running Cycle	Control detects door open and door locked inputs high. Can be caused by pulling on door while locked or about to lock. Correct inoperative door locking system. Unpower machine to clear error.
<i>E Ub 1</i>	Non-Fatal Unbalance Error	Unable to balance load. Redistribute load and run cycle.
<i>E Ub 2</i>	Fatal Unbalance Error	Wires to unbalance switch broken or not connected.
<i>CLoS door</i>	Door Open Indicator	Door is not closed during an active cycle. If door is closed, check for improper wiring or faulty door switch.
<i>Err</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E id</i>	Board ID	Incorrect replacement control. Replace user control or output board with the correct part.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dip switch #1 to the same setting as the previous control. If reworking the machine to use a different voltage supply, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>E nr</i>	Drive/Output Board Not Ready	Hardware failure. Try cycling power to machine before replacing output board.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E b5</i>	Drive/Output Board Shorted	Hardware failure. Try cycling power to machine before replacing output board.
<i>En</i>	Machine ID Errors	
<i>En 31</i>	Product Byte #1 Mis-Match	Product family does not match between the Machine ID Control and Front End Control. Replace Machine ID Control with one meant for current Front End Control platform.
<i>En 32</i>	Product Byte #2 Mis-Match	Machine type does not match between the Machine ID Control and Front End Control (frontload washer vs. dryer). Replace Machine ID Control and/or front end control with one meant for current machine type.
<i>En 33</i>	Product Byte #3 Mis-Match	Control level does not match between the Machine ID Control and Front End Control (A4 vs. A2). Replace Machine ID Control with a properly configured A level for the control being attached. Use Factory Test Procedure to determine front end control's control level.
<i>En 39</i>	Corrupted Data on Machine ID Control	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>En 3E</i>	Machine control cannot be configured with the Machine ID Control in the machine	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>En 3F</i>	Cannot communicate with the Machine ID Control	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E Co</i>	Drive/Output Board Communication Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.
<i>E dr</i>	Drain Error	If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and turn on the Machine Error Tone for 15 seconds.
<i>E 5d</i>	Slow Drain Error	If a slow drain is detected in the Drain step of a running cycle, the machine control will light the right-most decimal point. The decimal point will remain illuminated after the slow drain error display has expired, to draw the attention of the owner or attendant. The decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds, or by cycling the power to the machine.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E 5L</i>	Suds Lock Error	In the spin steps, if the control determines that there are suds in the machine after running all programmed Suds Routines, it will display a Suds Lock Error at the end of the cycle after the door is opened. The control will continue showing this error code until any key has been pressed or for one minute.
<i>E Ld</i>	Water Leak Drain Error	Error will display if there is a leak after the door is opened at the End of Cycle for 1 minute. Clears after 1 minute or until a key is pressed. If the water level has dropped more than an acceptable amount in a during a water leak drain check, the control will save a water leak drain error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
<i>E nF</i>	No Water Flow Error	If the control does not reach a water level of 4 inches within the programmed time it may mean the hose to the pressure sensor has a leak or no water is flowing into the machine. The control will enter Machine Error mode. The control will first drain for 90 seconds and then turn off all outputs and turn on the Machine Error Tone for 15 seconds. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E aF</i>	Overflow Error	The machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent. This error is triggered when an unsafe high water level is detected in the machine and water is unable to drain.
<i>E P5</i>	Pressure Sensor Error	If the control does not detect a valid water level sensor input for thirty (30) seconds, or if the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Mode, or Overflow Mode, the control will enter Machine Error Mode. The control will first drain for thirty (30) seconds to get out any water, and unlock the door. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E bb</i>	Broken Belt Error	If a broken belt is ever detected by the control, the control will show error this error code. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E LF</i>	Water Leak Fill Error	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
Display is dim		Look for loose pins and damaged wires on harness from user control to drive board.
<i>E d</i>	Drive Board Errors	

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E d 10</i>	Voltage Select Error	Wrong Input Voltage seen at drive board 120V vs 240V. Dip switch 1 on FEC set wrong, or possibly water on drive board (let drive dry out and determine cause of water). Unpower to clear error. Replace drive board if error persists.
<i>E d 12</i>	Over Voltage AC-Main Input Error	Machine voltage is too high, check supply voltage to the machine and verify that it is within machine specifications. Unpower to clear error. Replace drive board if error persists.
<i>E d 13</i>	Power Fail Dangerous Error	The Neutral Line power input to the machine was seen out of range. Unpower to clear error. Check for damage in the power supply harness. Replace power supply harness or drive board if error persists.
<i>E d 21</i>	Over Voltage DC Bus Error	Unpower to clear error. Check voltage input to machine. If it happens only at start of spin, replace motor. Replace drive board if error persists.
<i>E d 22</i>	Over Motor Temperature Error	Motor temperature is detected to be too high. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Unpower to clear error. Replace drive board if error persists.
<i>E d 23</i>	Fatal IPM Over Current Shunt Error	Check that drum and motor spins freely. Unpower to clear error. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Replace drive board if error persists.
<i>E d 24</i>	Fatal I2T Hardware Over Current Error	Check that drum and motor spins freely. Rotor may be locked up. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Unpower to clear error. Replace drive board if error persists.
<i>E d 25</i>	IPM Over Temperature Error	IPM temperature is detected to be too high. Check that drum spins freely when empty, check for overloading of machine, reduce agitation time, and duty cycle if rotate/pause times are very short and programmable. Unpower to clear error. Check for lint build-up on heat sink on drive board. Replace drive board if error persists.
<i>E d 29</i>	Motor Not Connected Error	The motor or one of its electrical phases is not connected. Check that the harness from the motor to the drive board is fully plugged in on both ends and that there is no damage to the motor harness. Make sure to push in the motor harness on both ends just in case it is a little loose and not fully inserted. If the harness looks fine and the error still occurs, try replacing the drive board or harness. Unpower to clear error.
<i>E d 44</i>	Overcurrent Shunt Detection Circuit Fail Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 45</i>	Door Lock Pin HW On/Off Fail Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 46</i>	Heater Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E d 47</i>	Hot Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 48</i>	Cold Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 49</i>	Detergent Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 50</i>	Softener Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 51</i>	Inrush Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 52</i>	Voltage Doubler Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 53</i>	Door Lock Select Voltage Pin HW On/Off Fail	Hardware failure. Inspect door lock for signs of damage. Check the door lock connections and that coil resistance of door lock solenoid is within specifications. Unpower to clear error. Replace drive board if error persists.
<i>E d 54</i>	Pump Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 55</i>	Fatal NTC Short Error	Check heater thermistor and thermistor wiring for damage. Unpower to clear error. Replace drive board if error persists.
<i>E d 56</i>	Fatal NTC Open Error	Check heater thermistor and thermistor wiring for damage. Unpower to clear error. Replace drive board if error persists.
<i>E d 63</i>	Fatal IPM Temperature Short Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 64</i>	Fatal IPM Temperature Open Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.

Dryer

communication errors. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Error Codes

Following is a list of possible error codes for an electronic control. Errors beginning with **E** , refer to external device Infra-red

Display	Description	Cause/ Corrective Action
<i>E 101</i>	Transmission Failure	Communication failure. Re-aim external device and try again.
<i>E 102</i>	Device Time-out	Communication failure. Re-aim external device and try again.
<i>E 103</i>	Invalid Command Code	Incorrect machine type. Before downloading, ensure data is for current machine type.
<i>E 104</i>	Command Packet Time Out	Communication failure. Re-aim external device and try again.
<i>E 105</i>	Invalid or Out-of-Range Data	Incorrect machine type. Before downloading, ensure data is for current machine type and values entered are within the minimum and maximum limits.
<i>E 109</i>	CRC-16 Error	Communication failure. Re-aim external device and try again.
<i>E 10A</i>	Framing Error	Communication error. Re-aim external device and try again.
<i>E 10C</i>	Time-out Exceeded	Communication error. Re-aim external device and try again.
<i>E 10E</i>	Encryption Error	Incorrect machine type. Before downloading, ensure data is for current machine type.
<i>E 10F</i>	Invalid Wake-up or Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
<i>EC02</i>	Time-out Error	Communication failure. Try card again.
<i>EC03</i>	Invalid Command Code	Incorrect machine type. Before downloading, ensure data is for current machine type.
<i>EC05</i>	Invalid or Out-of-Range Data	Incorrect machine type. Before downloading, ensure data is for current machine type and values entered are within the minimum and maximum limits.
<i>EC 11</i>	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
<i>EC 1B</i>	No Communication	Card reader initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.

Table 7 *continues...*

Display	Description	Cause/ Corrective Action
<i>EC 19</i>	No Card Reader Communication and No Card Reader Initialization	Communication failure. Power down, power up, check connections, harness and try again. If error persists, replace control or card reader.
<i>EC 36</i>	Audit Card Removed Prematurely	Re-insert Audit Card and wait until machine prompts for card removal.
Right most decimal point Lit	Network Communication Error	Communication problem. Wait for 1.5 minutes for error to clear. If error doesn't clear, power-down and power-up the machine. Check all network connections. If error persists, replace control or network board.
<i>AL i</i>	Break-in Alarm Error	Service the service door or coin vault switches.
<i>aFF</i>	Break-in Alarm Shutdown Error	Service the service door or coin vault switches.
<i>Err</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E 5H</i>	Shorted Thermistor Error	Dead short in thermistor circuit. Check wiring harness and remove any lint build-up around thermistor. If problem persists, replace thermistor or output board.
<i>E aP</i>	Open Thermistor Error	Physical open in thermistor circuit. Check wiring harness and remove any lint build-up around thermistor. If problem persists, replace thermistor or output board.
<i>E id</i>	Board ID	Incorrect replacement control. Replace user control or output board with correct part.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dipswitch #1 to the same setting as the previous control. If reworking the machine to use a different supply voltage, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>E nr</i>	Output Board Not Ready	Hardware failure. Replace output board.
<i>E b5</i>	Output Board Communication	Hardware failure. Replace output board.

Table 7 *continues...*

Display	Description	Cause/ Corrective Action
<i>E nHH</i>	Machine ID	Communication failure. Power down, power up and try again. If error persists, check connection between user control and Machine ID chip, or try replacing the user control or the Machine ID chip.
<i>E Co</i>	Output Board Communication	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.
<i>E 59</i>	Door Input Acquisition	Hardware failure. Replace output board.
<i>E 60</i>	Centrifugal Switch Input Acquisition	Hardware failure. Replace output board.
<i>E 61</i>	High Limit Thermostat Input Acquisition	Hardware failure. Replace output board.
<i>E ro</i>	Locked Rotor	The motor is not sensed as rotating when it should be. Check that nothing is obstructing motor rotation, check connection between user control and output board, or try replacing the user control or the output board.
<i>E n5</i>	Motor Output Shorted	Hardware failure. Replace output board.

Table 7

Stacked Washer Dryer – Error Codes for B Control, with 6 in 11th position of model number

Front Load Washer

NOTE: Fatal Errors will show *out of order* along with the error on the display.

Error Codes

Following is a list of possible error codes for an electronic control. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Error Codes		
Display	Description	Cause/Corrective Action
EC\overline{C}HH	Payment System Error	The Front-end control communicates with the Payment System in order to perform vending transactions. If an error should occur, which, terminates communication during a transaction, the LED Display will show EC\overline{C}HH for a control generated error, where the HH represents an error code.
EC02	Time-out Error	Communication failure. Try card again.
EC03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
EC05	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Re-check the programming option's value and try again.
EC 11	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
EC 18	No Communication	Card reader is initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
EC 19	No Card Reader Communication	Communication failure. Power down, power up and try again. If error persists, replace control or card reader.
Right most decimal point Lit	Water Leak Detection Error or Slow Drain Detection Error	Water leak test has detected a water leak during a cycle or slow drain is detected in the drain step of a running cycle. The decimal point will remain lit after the error display has expired. Clear the decimal point by pressing the START keypad three times within five seconds or by cycling the power to the machine.
Right most decimal point blinking	Machine ID Error	Machine ID is no longer communicating with the control. Check Machine ID connection.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
Left most decimal point blinking one second on/one second off	Max Speed Fail Error	If the final spin fails to reach 1200 RPM, the control will set the Max Speed Fail Error immediately when entering End of Cycle Mode to alert that the max speed was not reached in the cycle. This error will be cleared when vend is entered, a key is pressed, the door is opened, or when higher priority errors are cleared.
<i>E FL</i>	Fill Error	Fill level is not reached within 30 minutes (or other programmed length of time) in any fill step.
<i>E dL</i>	Door Lock Fatal Error	Door is unlocked during a running cycle. To clear this error, cycle power to the machine.
<i>E dL 1</i>	Door Lock Non-Fatal Error	If the door fails to lock in twenty (20) seconds in Door Locking Mode after the Drive has been enabled the control will turn off all outputs and show the error <i>E dL 1</i> . To clear this error the door must either open or lock.
<i>E dL 2</i>	Door Unlock Non-Fatal Error	If the door fails to unlock in 20 seconds, with a solenoid type door lock, after the drum has stopped spinning, and all other outputs have been turned off, the control will show error <i>E dL 2</i> . To clear this error the door must unlock or open.
<i>E do</i>	Door Opened During A Running Cycle	Control detects door open and door locked inputs high. Can be caused by pulling on door while locked or about to lock. Correct inoperative door locking system. Unpower machine to clear error.
<i>E Ub 1</i>	Non-Fatal Unbalance Error	Unable to balance load. Redistribute load and run cycle.
<i>E Ub 2</i>	Fatal Unbalance Error	Wires to unbalance switch broken or not connected.
<i>CLoS door</i>	Door Open Indicator	Door is not closed during an active cycle. If door is closed, check for improper wiring or faulty door switch.
<i>Err</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E id</i>	Board ID	Incorrect replacement control. Replace user control or output board with the correct part.
<i>E dS</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dip switch #1 to the same setting as the previous control. If reworking the machine to use a different voltage supply, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>E nr</i>	Drive/Output Board Not Ready	Hardware failure. Try cycling power to machine before replacing output board.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E b5</i>	Drive/Output Board Shorted	Hardware failure. Try cycling power to machine before replacing output board.
<i>E n</i>	Machine ID Errors	
<i>E n 31</i>	Product Byte #1 Mis-Match	Product family does not match between the Machine ID Control and Front End Control. Replace Machine ID Control with one meant for current Front End Control platform.
<i>E n 32</i>	Product Byte #2 Mis-Match	Machine type does not match between the Machine ID Control and Front End Control (frontload washer vs. dryer). Replace Machine ID Control and/or front end control with one meant for current machine type.
<i>E n 33</i>	Product Byte #3 Mis-Match	Control level does not match between the Machine ID Control and Front End Control (A4 vs. A2). Replace Machine ID Control with a properly configured A level for the control being attached. Use Factory Test Procedure to determine front end control's control level.
<i>E n 39</i>	Corrupted Data on Machine ID Control	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E n 3E</i>	Machine control cannot be configured with the Machine ID Control in the machine	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E n 3F</i>	Cannot communicate with the Machine ID Control	Try cycling power to machine. If error continues, check for damage to Machine ID Control and harness and/or replace Machine ID Control with a correctly configured Machine ID Control.
<i>E C o</i>	Drive/Output Board Communication Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.
<i>E dr</i>	Drain Error	If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and turn on the Machine Error Tone for 15 seconds.
<i>E 5d</i>	Slow Drain Error	If a slow drain is detected in the Drain step of a running cycle, the machine control will light the right-most decimal point. The decimal point will remain illuminated after the slow drain error display has expired, to draw the attention of the owner or attendant. The decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds, or by cycling the power to the machine.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E 5L</i>	Suds Lock Error	In the spin steps, if the control determines that there are suds in the machine after running all programmed Suds Routines, it will display a Suds Lock Error at the end of the cycle after the door is opened. The control will continue showing this error code until any key has been pressed or for one minute.
<i>E Ld</i>	Water Leak Drain Error	Error will display if there is a leak after the door is opened at the End of Cycle for 1 minute. Clears after 1 minute or until a key is pressed. If the water level has dropped more than an acceptable amount in a during a water leak drain check, the control will save a water leak drain error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
<i>E nF</i>	No Water Flow Error	If the control does not reach a water level of 4 inches within the programmed time it may mean the hose to the pressure sensor has a leak or no water is flowing into the machine. The control will enter Machine Error mode. The control will first drain for 90 seconds and then turn off all outputs and turn on the Machine Error Tone for 15 seconds. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E aF</i>	Overflow Error	The machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent. This error is triggered when an unsafe high water level is detected in the machine and water is unable to drain.
<i>E P5</i>	Pressure Sensor Error	If the control does not detect a valid water level sensor input for thirty (30) seconds, or if the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Mode, or Overflow Mode, the control will enter Machine Error Mode. The control will first drain for thirty (30) seconds to get out any water, and unlock the door. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E bb</i>	Broken Belt Error	If a broken belt is ever detected by the control, the control will show error this error code. To clear this error one of the following must occur: the machine must be powered down, the Clear Fatal Error Keys must be pressed, or a Clear Fatal Error Network command must be sent.
<i>E LF</i>	Water Leak Fill Error	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
Display is dim		Look for loose pins and damaged wires on harness from user control to drive board.
<i>E d</i>	Drive Board Errors	

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E d 10</i>	Voltage Select Error	Wrong Input Voltage seen at drive board 120V vs 240V. Dip switch 1 on FEC set wrong, or possibly water on drive board (let drive dry out and determine cause of water). Unpower to clear error. Replace drive board if error persists.
<i>E d 12</i>	Over Voltage AC-Main Input Error	Machine voltage is too high, check supply voltage to the machine and verify that it is within machine specifications. Unpower to clear error. Replace drive board if error persists.
<i>E d 13</i>	Power Fail Dangerous Error	The Neutral Line power input to the machine was seen out of range. Unpower to clear error. Check for damage in the power supply harness. Replace power supply harness or drive board if error persists.
<i>E d 21</i>	Over Voltage DC Bus Error	Unpower to clear error. Check voltage input to machine. If it happens only at start of spin, replace motor. Replace drive board if error persists.
<i>E d 22</i>	Over Motor Temperature Error	Motor temperature is detected to be too high. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Unpower to clear error. Replace drive board if error persists.
<i>E d 23</i>	Fatal IPM Over Current Shunt Error	Check that drum and motor spins freely. Unpower to clear error. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Replace drive board if error persists.
<i>E d 24</i>	Fatal I2T Hardware Over Current Error	Check that drum and motor spins freely. Rotor may be locked up. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Unpower to clear error. Replace drive board if error persists.
<i>E d 25</i>	IPM Over Temperature Error	IPM temperature is detected to be too high. Check that drum spins freely when empty, check for overloading of machine, reduce agitation time, and duty cycle if rotate/pause times are very short and programmable. Unpower to clear error. Check for lint build-up on heat sink on drive board. Replace drive board if error persists.
<i>E d 29</i>	Motor Not Connected Error	The motor or one of its electrical phases is not connected. Check that the harness from the motor to the drive board is fully plugged in on both ends and that there is no damage to the motor harness. Make sure to push in the motor harness on both ends just in case it is a little loose and not fully inserted. If the harness looks fine and the error still occurs, try replacing the drive board or harness. Unpower to clear error.
<i>E d 44</i>	Overcurrent Shunt Detection Circuit Fail Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 45</i>	Door Lock Pin HW On/Off Fail Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 46</i>	Heater Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.

Table continues...

Error Codes		
Display	Description	Cause/Corrective Action
<i>E d 47</i>	Hot Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 48</i>	Cold Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 49</i>	Detergent Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 50</i>	Softener Valve Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 51</i>	Inrush Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 52</i>	Voltage Doubler Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 53</i>	Door Lock Select Voltage Pin HW On/Off Fail	Hardware failure. Inspect door lock for signs of damage. Check the door lock connections and that coil resistance of door lock solenoid is within specifications. Unpower to clear error. Replace drive board if error persists.
<i>E d 54</i>	Pump Pin HW On/Off Fail	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 55</i>	Fatal NTC Short Error	Check heater thermistor and thermistor wiring for damage. Unpower to clear error. Replace drive board if error persists.
<i>E d 56</i>	Fatal NTC Open Error	Check heater thermistor and thermistor wiring for damage. Unpower to clear error. Replace drive board if error persists.
<i>E d 63</i>	Fatal IPM Temperature Short Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.
<i>E d 64</i>	Fatal IPM Temperature Open Error	Hardware failure. Unpower to clear error. Replace drive board if error persists.

Dryer**Error Codes**

Following is a list of possible error codes for an electronic control. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Display	Description	Cause/ Corrective Action
<i>EC02</i>	Time-out Error	Communication failure. Try card again.

Table 8 *continues...*

Display	Description	Cause/ Corrective Action
<i>EC03</i>	Invalid Command Code	Incorrect machine type. Before downloading, ensure data is for current machine type.
<i>EC05</i>	Invalid or Out-of-Range Data	Incorrect machine type. Before downloading, ensure data is for current machine type and values entered are within the minimum and maximum limits.
<i>EC 11</i>	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
<i>EC 1B</i>	No Communication	Card reader initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
<i>EC 19</i>	No Card Reader Communication and No Card Reader Initialization	Communication failure. Power down, power up, check connections, harness and try again. If error persists, replace control or card reader.
<i>EC36</i>	Audit Card Removed Prematurely	Re-insert Audit Card and wait until machine prompts for card removal.
Right most decimal point Lit	Network Communication Error	Communication problem. Wait for 1.5 minutes for error to clear. If error doesn't clear, power-down and power-up the machine. Check all network connections. If error persists, replace control or network board.
<i>ALi</i>	Break-in Alarm Error	Service the service door or coin vault switches.
<i>oFF</i>	Break-in Alarm Shutdown Error	Service the service door or coin vault switches.
<i>Err</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E 5H</i>	Shorted Thermistor Error	Dead short in thermistor circuit. Check wiring harness and remove any lint build-up around thermistor. If problem persists, replace thermistor or output board.
<i>E oP</i>	Open Thermistor Error	Physical open in thermistor circuit. Check wiring harness and remove any lint build-up around thermistor. If problem persists, replace thermistor or output board.

Table 8 *continues...*

Display	Description	Cause/ Corrective Action
<i>E 1d</i>	Board ID	Incorrect replacement control. Replace user control or output board with correct part.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dipswitch #1 to the same setting as the previous control. If reworking the machine to use a different supply voltage, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>E nr</i>	Output Board Not Ready	Hardware failure. Replace output board.
<i>E b5</i>	Output Board Communication	Hardware failure. Replace output board.
<i>E Co</i>	Output Board Communication	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.
<i>E 59</i>	Door Input Acquisition	Hardware failure. Replace output board.
<i>E 60</i>	Centrifugal Switch Input Acquisition	Hardware failure. Replace output board.
<i>E 61</i>	High Limit Thermostat Input Acquisition	Hardware failure. Replace output board.
<i>E ro</i>	Locked Rotor	The motor is not sensed as rotating when it should be. Check that nothing is obstructing motor rotation, check connection between user control and output board, or try replacing the user control or the output board.
<i>E n5</i>	Motor Output Shorted	Hardware failure. Replace output board.

Table 8

Tumble Dryer - Error Codes for F Control

Error Codes

NOTE: Fatal Errors will show *out of order* along with the error on the display.

Following is a list of possible error codes for an electronic control.

Error Codes		
Display	Description	Cause/ Corrective Action
<i>E AF</i>	Airflow Switch Bounces	Inspect lint screen and ductwork. Cycle power to machine (power down, then power up).
<i>E Co</i>	SCI Communications Error	Communication failure. Power down, power up, check connections and try again. If error persists, replace control or output board.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check wiring at input of machine to make sure the correct input voltage is supplied to the machine. Check the harness connections between the user control and the output board. If the user control was replaced, set dipswitch #1 to the same setting as the previous control. If reworking the machine to use a different supply voltage, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>E Ht</i>	Machine Did Not Reach Expected Temperature	The ignition control has power, but a flame was not sensed after the programmed amount of retries. Be sure that gas is turned on. If problem persists, troubleshoot the ignition circuit. (Igniter, Cable, Ignition Control Module.)
<i>E id</i>	Board ID Error	Incorrect replacement control. Replace user control or output board with correct part. The board ID error will also be set if the wrong drive motor, fan motor or ignition control are connected. The display will show <i>dr uE</i> , <i>F An</i> or <i>i Cn</i> . Check machine configurations and connect correct drive motor, fan motor or ignition control.
<i>E nr</i>	Drive/Output Board Not Ready	Hardware failure. Replace output board.

Table 9 *continues...*

Error Codes		
Display	Description	Cause/ Corrective Action
<i>E aP</i>	Open Thermistor Error	Remove any lint build-up around thermistor. If problem persists, replace control or thermistor.
<i>E 5H</i>	Shorted Thermistor Error	Remove any lint build-up around thermistor. If problem persists, replace control or thermistor.
<i>EA F1</i>	Airflow Switch Failed to Open	Inspect lint screen and ductwork. Wipe clean and completely dry off the airflow switch vane as well as the mating material. Once error is cleared, control will go back to previous mode of operation.
<i>EA F2</i>	Airflow Switch Failed to Close	If machine is newly installed, make sure shipping tie has been removed from airflow switch. Inspect lint screen and ductwork. Cycle power to machine (power down, then power up).
<i>EC Ab</i>	Cabinet Limit Cycles	Remove any lint build-up around thermostat. If problem persists, replace control or thermostat.
<i>E dC, E FC</i>	Drive and Fan Communication Error	Communication failure. Power down for at least 1 minute, power up, check connections between I/O board and Drive/Fan and try again. If error persists, replace tumbler I/O board or motor with which the error occurred (Fan or Drive).
<i>E iC</i>	ICM Communication Error	Communication failure. Power down, power up, check connections and try again. If error persists, replace tumbler I/O board or ignition control.
<i>EF 01, Ed 01</i> (Tumble Dryer Design 6)	Communication Error	Check wiring between I/O board and inverter.
<i>EF 02, Ed 02</i>	Fan or Cylinder Motor High DC Bus Error	Voltage to fan/cylinder is too high. Unpower machine to clear error. Check voltage input and check wiring to machine. Replace fan/cylinder motor if error persists.
<i>EF 03, Ed 03</i> (Tumble Dryer Design 6)	Motor Not Connected Error	Check motor wiring.
<i>EF 04, Ed 04</i>	Fan or Cylinder Motor Stall Error	Check that fan or cylinder turns freely, make sure machine is not overloaded. Error can be cleared by any key press.

Table 9 *continues...*

Error Codes		
Display	Description	Cause/ Corrective Action
<i>EF 05, Ed 05</i> (Tumble Dryer Designs 3 and 5, Stacked Washer-Extractor/Tumble Dryer Designs 1 and 2)	Fan or Cylinder Motor Coherence Check Error	Check that fan wheel spins freely. Cylinder error can be caused by an unbalanced load. Try to redistribute the load and lengthen the reversing pause time if reversing is enabled. Error can be cleared by any key press.
<i>EF 05, Ed 05</i> (Tumble Dryer Design 6)	Back EMF Error	Check motor wiring.
<i>EF 06, Ed 06</i>	Fan or Cylinder Motor IPM Overtemp Error	IPM temperature is detected too high. Check that heat sink on the motor(s) is clear of lint or any other obstruction and check that cylinder spins freely when empty. Design 6, clean inverter drive compartment. Replace motor(s) or inverter drive if error persists.
<i>EF 07, Ed 07</i> (Tumble Dryer Design 6)	Drive Enable Error	Check the inverter drive enable wiring between H6 header on I/O board and inverter drive.
<i>EF 08, Ed 08</i> (Tumble Dryer Designs 3 and 5, Stacked Washer-Extractor/Tumble Dryer Designs 1 and 2)	Fan or Cylinder Motor Current Limit Error	Check that fan/cylinder turns freely, make sure machine is not overloaded. Replace fan/cylinder motor if error persists.
<i>EF 09, Ed 09</i> (Tumble Dryer Designs 3 and 5, Stacked Washer-Extractor/Tumble Dryer Designs 1 and 2)	Fan or Cylinder Motor 460V Drive Overcurrent	Check that fan/cylinder turns freely, make sure machine is not overloaded. Replace fan/cylinder motor if error persists.
<i>EF 10, Ed 10</i>	Fan or Cylinder Motor Low DC Bus Error	Voltage to motor(s) or inverter drive is too low. For 120V machines, make sure wire harness jumper is connected which connects pins 1 and 2 of the 5-pin connector on the motor. Check voltage input and check wiring to machine. Replace motor(s) or inverter drive if error persists.
<i>EF 11, Ed 11</i>	Fan or Cylinder Motor Overload Error	Check that fan or cylinder turns freely, make sure machine is not overloaded. Error can be cleared by any key press.
<i>EF 12, Ed 12</i> (Tumble Dryer Designs 3 and 5, Stacked Washer-Extractor/Tumble Dryer Designs 1 and 2)	Fan or Cylinder Motor Microcontroller Fault	Try to power down and power up the machine to clear the error. If error persists, replace fan/cylinder motor.
<i>EF 12, Ed 12</i> (Tumble Dryer Design 6)	Motor System Fail	Check that correct inverter drive is installed. Check for correct configuration of front end control.
<i>Ed 13</i> (Tumble Dryer Designs 3 and 5, Stacked Washer-Extractor/Tumble Dryer Designs 1 and 2)	Cylinder Motor Hall Sensor Failure	Power down machine to clear error.

Table 9 *continues...*

Error Codes		
Display	Description	Cause/ Corrective Action
<i>EF 13, Ed 13</i> (Tumble Dryer Design 6)	Setup Compatibility Failure	Check that correct inverter drive is installed. Check for correct configuration of front end control.
<i>EF 14, Ed 14</i> (Tumble Dryer Design 6)	Power Fail Dangerous Error	Check voltage to machine and voltage to inverter drive.
<i>EF 15, Ed 15</i> (Tumble Dryer Design 6)	Open Phase Error	Check motor wiring. Replace motor if error persists.
<i>EF 16, Ed 16</i> (Tumble Dryer Design 6)	Power Fail NO Dangerous Error	Check voltage to machine and voltage to inverter drive.
<i>EF 18, Ed 18</i> (Tumble Dryer Design 6)	Fatal IPM Over Current Shunt Error	Check motor wiring. Replace motor if error persists.
<i>EF 19, Ed 19</i> (Tumble Dryer Design 6)	Fatal Hardware I2T Over Current Error	Check for motor overload or blocking condition which could be caused from lint buildup or blocked fan, overwet load or mechanical issues causing cylinder sticking.
<i>EF 21, Ed 21</i> (Tumble Dryer Design 6)	Speed Limitation Error	Check that machine is configured to the correct machine size.
<i>EF 22, Ed 22</i> (Tumble Dryer Design 6)	Inrush Pin Hardware On/Off Fail	Cycle power to machine. Replace inverter drive if error persists.
<i>EF 23, Ed 23</i> (Tumble Dryer Design 6)	Fatal IPM Temperature Acquisition Error (NTC is in short circuit or open)	Cycle power to machine. Replace inverter drive if error persists.
<i>EF 24, Ed 24</i> (Tumble Dryer Design 6)	ADC Current Acquisition Fail	Cycle power to machine. Replace inverter drive if error persists.
<i>EF 25, Ed 25</i> (Tumble Dryer Design 6)	VBUS Acquisition Fail	Cycle power to machine. Replace inverter drive if error persists.
<i>EF 26, Ed 26</i> (Tumble Dryer Design 6)	Fault IPM Circuit Fail	Cycle power to machine. Replace inverter drive if error persists.
<i>EF E1</i>	Optional Heat Output Shorted	Check wiring to valve/motor connected to output, replace valve/motor.
<i>EF E2</i>	Motor Relay Enable Output Shorted	Check motor power relay connected between, if error persists replace relay.
<i>EF E3</i>	Spare Relay Enable Output Shorted	Check relay powered by KM2 output, if error persists replace relay.
<i>EF E4</i>	Auxiliary Relay 1 Output Shorted Error	Check relay powered by Aux 1 output, if error persists replace relay.
<i>EF E5</i>	Run Relay Output Shorted Error	Check Relay powered by the Run output, if error persists replace relay.

Table 9 *continues...*

Error Codes		
Display	Description	Cause/ Corrective Action
<i>EF 66</i>	Gas Valve 1 Output Shorted Error	Check gas valve 1, if error persists replace valve.
<i>EF 67</i>	Gas Valve 2 Output Shorted Error	Check gas valve 2, if error persists replace valve.
<i>E9 01</i>	ICM Lockout Alarm Active	Check that the gas is turned on and that the ignition circuit functions. Also check that the gas valve is operational. This error needs to be manually reset. To reset, open service door and press start button. After 5 seconds error should be cleared.
<i>E9 02</i>	ICM Alarm Reset Shorted Error	Check wiring between the I/O board and the ignition control. Power down and power up machine to clear the error.
<i>E9 03</i>	ICM Hardware Failure Error	Ignition control has detected a hardware fault. Power down and power machine to clear error. Replace ignition control if error persists.
<i>E0 05</i>	I/O Board 24VDC Supply Over Voltage Error	Check machine input voltage. Power down and power up the machine to clear error. If error persists, replace I/O board.
<i>E0 06</i>	I/O Board 24VDC Supply Under Voltage Error	Check machine input voltage. Check for pinched control wires. Clear any debris or lint from the I/O board. Power down and power up the machine to clear error. If error persists, replace I/O board.
<i>E0 07</i>	Heat Output Shorted Error	Power down machine to clear error, power up machine, try heating again. If error persists, replace I/O board.
<i>E0 32</i>	Mosfet Enabled Shorted Error	Power down machine to clear error, power up machine, try running a cycle. If error persists, replace I/O board.
<i>E0 rL</i>	Manual Reset Limit Error	Inspect tumble dryers venting/ventwork to ensure that the ventwork is adequate and that there are no blockages. Be sure to clean and inspect lint screen. Remove any lint buildup around the thermostat. Limit needs to be manually reset and machine needs to be powered down to clear the error. If problem persists, replace thermostat.

Table 9 *continues...*

Error Codes		
Display	Description	Cause/ Corrective Action
<i>E5 L1</i>	Stove Limit 1 Cycle	Inspect tumble dryers venting/ventwork to ensure that the ventwork is adequate and that there are no blockages. Be sure to clean and inspect lint screen. Remove any lint buildup around the thermostat. If problem persists, replace thermostat.
<i>E5 L2</i>	Stove Limit 2 Cycle	Inspect tumble dryers venting/ventwork to ensure that the ventwork is adequate and that there are no blockages. Be sure to clean and inspect lint screen. Remove any lint buildup around the thermostat. If problem persists, replace thermostat.

Table 9

Tumble Dryer - Error Codes for B Control

Error Codes

Following is a list of possible error codes for an electronic control. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Error Codes		
Display	Description	Cause/ Corrective Action
E r r	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
E AF	Airflow Switch Bounces	Inspect lint screen, ductwork and make-up air. Cycle power to machine (power down, then power up).
E bb	Broken Belt Error	Check belt and pulleys for issues.
E Co	SCI Communications Error	Communication failure. Power down, power up, check connections and try again. If error persists, replace control or output board.
E dS	Brownout/Voltage Configuration	Unexpected supply voltage. Check wiring at input of machine to make sure the correct input voltage is supplied to the machine. Check the harness connections between the user control and the output board. If the user control was replaced, set dipswitch #1 to the same setting as the previous control. If reworking the machine to use a different supply voltage, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
E Ht	Machine Did Not Reach Expected Temperature	The ignition control has power, but a flame was not sensed after the programmed amount of retries. Be sure that gas and gas valve are turned on. If problem persists, troubleshoot the ignition circuit. (Igniter, Cable, Ignition Control Module.) For electric machines, check wiring to auxiliary switch on electric contactors and make sure contactors work properly.
E id	Board ID Error	Incorrect replacement control. The display will show o t P t . Replace user control or output board with correct part. The board ID error will also be set if the wrong drive motor, fan motor or ignition control are connected. The display will show dr u , FAn or ,Cn . Check machine configurations and connect correct drive motor, fan motor or ignition control.
E nr	Drive/Output Board Not Ready	Hardware failure. Replace output board.
E oP	Open Thermistor Error	Remove any lint build-up around thermistor and check wire connection. If problem persists, replace control or thermistor.
E SH	Shorted Thermistor Error	Remove any lint build-up around thermistor. If problem persists, replace control or thermistor.
EFF I	Airflow Switch Failed to Open	Inspect lint screen and ductwork. Wipe clean and completely dry off the airflow switch vane as well as the mating material. Once error is cleared, control will go back to previous mode of operation.

Table 10 *continues...*

Error Codes		
Display	Description	Cause/ Corrective Action
EEF2	Airflow Switch Failed to Close	If machine is newly installed, make sure shipping tie has been removed from airflow switch. Inspect lint screen and ductwork. Cycle power to machine (power down, then power up).
EC 11	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
EC 18	No Communication	Card reader initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
EC 19	No Card Reader Communication and No Card Reader Initialization	Communication failure. Power down, power up, check connections and try again. If error persists, replace control or card reader.
ECRb	Cabinet Limit Cycle	Remove any lint build-up around thermostat. If problem persists, replace control or thermostat. Check thermistor function. Error can also be caused by running no load or a small load.
Edc, EFC	Drive and Fan Communication Error	Communication failure. Power down for at least 1 minute, power up, check connections between I/O board and Drive/Fan and try again. If error persists, replace tumbler I/O board or motor with which the error occurred (Fan or Drive).
Edc	ICM Communication Error	Communication failure. Power down, power up, check connections and try again. If error persists, replace tumbler I/O board or ignition control.
Ed 04	Drive Motor Stall Error	Check that cylinder turns freely, make sure machine is not overloaded. Error can be cleared by any key press.
Ed 05	Drive Motor Coherence Check Error	Can be caused by an unbalanced load. Try to redistribute the load and lengthen the reversing pause time if reversing is enabled. Error can be cleared by any key press.
Ed 11	Drive Motor Overload Error	Check that cylinder turns freely, make sure machine is not overloaded. Error can be cleared by any key press.
Ed 13	Drive Motor Hall Sensor Failure	Power down machine to clear error.
EEFn, 02; Ed02	Fan and Drive Motor High DC Bus Error	Voltage to Fan/Drive is too high. Unpower machine to clear error. Check voltage input and check wiring to machine. Replace fan/drive if error persists.
EEFn, 04	Fan Motor Stall Error	Check that blower wheel spins freely. Error can be cleared by any key press.
EEFn, 05	Fan Motor Coherence Check Error	Check that blower wheel spins freely. Error can be cleared by any key press.
EEFn, 06; Ed06	Fan and Drive Motor IPM Overtemp Error	IPM temperature is detected too high. Check that heat sink on the fan/drive is clear of lint or any other obstruction and check that cylinder spins freely when empty. Replace Fan/Drive if error persists.

Table 10 continues...

Error Codes		
Display	Description	Cause/ Corrective Action
<i>EFFn, 08; Ed08</i>	Fan and Drive Motor Current Limit Error	Check that cylinder/fan turns freely, make sure machine is not overloaded. Replace fan/drive if error persists.
<i>EFFn, 09; Ed09</i>	Fan and Drive Motor 460V Drive Overcurrent	Check that cylinder/fan turns freely, make sure machine is not overloaded. Replace drive/fan if error persists.
<i>EFFn, 10; Ed 10</i>	Fan and Drive Motor Low DC Bus Error	Voltage to Fan/Drive is too low. For 120V machines, make sure wire harness jumper is connected which connects pins 1 and 2 of the 5-pin connector on the motor. Check voltage input and check wiring to machine. Replace fan/drive if error persists.
<i>EFFn, 12; Ed 12</i>	Fan and Drive Motor Micro-controller Fault	Try to power down and power up the machine to clear the error. If error persists replace fan/drive.
<i>EFF 1</i>	Optional Heat Output Shorted	Check wiring to valve/motor connected to output, replace valve/motor.
<i>EFF 2</i>	Motor Relay Enable Output Shorted	Check motor power relay connected between, if error persists replace relay.
<i>EFF 3</i>	Spare Relay Enable Output Shorted	Check relay powered by KM2 output, if error persists replace relay.
<i>EFF 4</i>	Auxiliary Relay 1 Output Shorted Error	Check relay powered by Aux 1 output, if error persists replace relay.
<i>EFF 5</i>	Run Relay Output Shorted Error	Check Relay powered by the Run output, if error persists replace relay.
<i>EFF 6</i>	Gas Valve 1 Output Shorted Error	Check gas valve 1, if error persists replace valve.
<i>EFF 7</i>	Gas Valve 2 Output Shorted Error	Check gas valve 2, if error persists replace valve.
<i>E I C i</i>	ICM Lockout Alarm Active	Check that the gas is turned on and that the ignition circuit functions. Also check that the gas valve is operational. This error needs to be manually reset. To reset, open service door and press start button. After 5 seconds error should be cleared.
<i>E9 1</i>	ICM False Flame Error	Press any key, open the loading door or cycle power to machine.
<i>E9 2</i>	ICM Alarm Reset Shorted Error	Check wiring between the I/O board and the ignition control. Power down and power up machine to clear the error.
<i>E9 3</i>	ICM Hardware Failure Error	Ignition control has detected a hardware fault. Power down and power machine to clear error. Replace ignition control if error persists.
<i>Eo05</i>	I/O Board 24VDC Supply Over Voltage Error	Check machine input voltage. Power down and power up the machine to clear error. If error persists, replace I/O board.
<i>Eo06</i>	I/O Board 24VDC Supply Under Voltage Error	Check machine input voltage. Check for pinched control wires. Clear any debris or lint from the I/O board. Power down and power up the machine to clear error. If error persists, replace I/O board.

Table 10 *continues...*

Error Codes		
Display	Description	Cause/ Corrective Action
<i>E007</i>	Heat Output Shorted Error	Power down machine to clear error, power up machine, try heating again. If error persists, replace I/O board.
<i>E032</i>	Mosfet Enabled Shorted Error	Power down machine to clear error, power up machine, try running a cycle. If error persists, replace I/O board.
<i>E1rL</i>	Manual Reset Limit Error	Inspect tumble dryers venting/ventwork to ensure that the ventwork is adequate and that there are no blockages. Be sure to clean and inspect lint screen. Remove any lint build-up around the thermostat. Check thermistor and cabinet limit function. Limit needs to be manually reset and machine needs to be powered down to clear the error. If problem persists, replace thermostat.
<i>E1HH</i>	Machine ID Chip Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and Machine ID chip, or try replacing the user control or the Machine ID chip.
<i>E5L1</i>	Stove Limit 1 Cycle	Inspect tumble dryers venting/ventwork to ensure that the ventwork is adequate and that there are no blockages. Be sure to clean and inspect lint screen. Remove any lint build-up around the thermostat. Check make-up air and gas pressure. If problem persists, replace thermostat.
<i>E5L2</i>	Stove Limit 2 Cycle	Inspect tumble dryers venting/ventwork to ensure that the ventwork is adequate and that there are no blockages. Be sure to clean and inspect lint screen. Remove any lint build-up around the thermostat. Check make-up air and gas pressure. If problem persists, replace thermostat.

Table 10

Tumble Dryer - Error Codes for N Control - Vend

Error Codes

Following is a list of possible error codes for an electronic control. Errors beginning with **E**, refer to external device Infra-red communication errors. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Display	Description	Cause/ Corrective Action
<i>ALArn</i>	Break-In Alarm Error	Check the service door or coin vault switches.
<i>Coin, Error</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E AF</i>	Airflow Switch Bounces	Inspect lint screen, ductwork and make-up air. Cycle power to machine (power down, then power up).
<i>E Co</i>	SCI Communications Error	Communication failure. Power down, power up, check connections and try again. If error persists, replace control or output board.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check wiring at input of machine to make sure the correct input voltage is supplied to the machine. Check the harness connections between the user control and the output board. If the user control was replaced, set dipswitch #1 to the same setting as the previous control. If reworking the machine to use a different supply voltage, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>E HEAT</i>	Machine Did Not Reach Expected Temperature	The ignition control has power, but a flame was not sensed after the programmed amount of retries. Be sure that gas and gas valve are turned on. If problem persists, troubleshoot the ignition circuit. (Igniter, Cable, Ignition Control Module.) For electric machines, check wiring to auxiliary switch on electric contactors and make sure contactors work properly.

Table 11 *continues...*

Display	Description	Cause/ Corrective Action
<i>E id</i>	Board ID Error	Incorrect replacement control. The display will show <i>oUePUe</i> . Replace user control or output board with correct part. The board ID error will also be set if the wrong drive motor, fan motor or ignition control are connected. The display will show <i>dr iUE, FRn</i> or <i>iEN</i> . Check machine configurations and connect correct drive motor, fan motor or ignition control. For cyclonic lint and airflow management system, the drive software needs to be updated to version 02 or later.
<i>E nr</i>	Drive/Output Board Not Ready	Hardware failure. Replace output board.
<i>E oP 1</i>	Open Thermistor 1 Error (Cylinder Output)	Remove any lint build-up around thermistor and check wire connection. If problem persists, replace control or thermistor.
<i>E SH 1</i>	Shorted Thermistor 1 Error (Cylinder Output)	Remove any lint build-up around thermistor. If problem persists, replace control or thermistor.
<i>E oP 2</i>	Open Thermistor 2 Error (Cylinder Input)	Remove any lint build-up around thermistor and check wire connection. If problem persists, replace control or thermistor.
<i>E SH 2</i>	Shorted Thermistor 2 Error (Cylinder Input)	Remove any lint build-up around thermistor. If problem persists, replace control or thermistor.
<i>ERF 1</i>	Airflow Switch Failed to Open	Inspect lint screen and ductwork. Wipe clean and completely dry off the airflow switch vane as well as the mating material. Once error is cleared, control will go back to previous mode of operation.
<i>ERF2</i>	Airflow Switch Failed to Close	If machine is newly installed, make sure shipping tie has been removed from airflow switch. Inspect lint screen and ductwork. Cycle power to machine (power down, then power up).
<i>EC 11</i>	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
<i>EC 1B</i>	No Communication	Card reader initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.

Table 11 *continues...*

Display	Description	Cause/ Corrective Action
<i>EE 19</i>	No Card Reader Communication and No Card Reader Initialization	Communication failure. Power down, power up, check connections and try again. If error persists, replace control or card reader.
<i>EEAb</i>	Cabinet Limit Cycle	Remove any lint build-up around thermostat. If problem persists, replace control or thermostat. Check thermistor 1 function. Error can also be caused by running no load or a small load.
<i>EEodr, EEoFRn</i> <i>E dC, E FC</i> (Factory Test only appears as 4-digit display)	Drive and Fan Communication Error	Communication failure. Power down for at least 1 minute, power up, check connections between I/O board and Drive/Fan and try again. If error persists, replace tumbler I/O board or motor with which the error occurred (Fan or Drive).
<i>EEo iCn</i> <i>E iC</i> (Factory Test only appears as 4-digit display)	ICM Communication Error	Communication failure. Power down, power up, check connections and try again. If error persists, replace tumbler I/O board or ignition control.
<i>EFFn01, Ed 01</i> (Design 6)	Communication Error	Check wiring between I/O board and inverter.
<i>EFFn02, Ed 02</i>	Fan or Cylinder Motor High DC Bus Error	Voltage to fan/cylinder is too high. Unpower machine to clear error. Check voltage input and check wiring to machine. Replace fan/cylinder motor if error persists.
<i>EFFn03, Ed 03</i> (Design 6)	Motor Not Connected Error	Check motor wiring.
<i>EFFn04, Ed 04</i>	Fan or Cylinder Motor Stall Error	Check that fan or cylinder turns freely, make sure machine is not overloaded. Error can be cleared by any key press.
<i>EFFn05, Ed 05</i> (Designs 3 and 5)	Fan or Cylinder Motor Coherence Check Error	Check that fan wheel spins freely. Cylinder error can be caused by an unbalanced load. Try to redistribute the load and lengthen the reversing pause time if reversing is enabled. Error can be cleared by any key press.
<i>EFFn05, Ed 05</i> (Design 6)	Back EMF Error	Check motor wiring.
<i>EFFn06, Ed 06</i>	Fan or Cylinder Motor IPM Overtemp Error	IPM temperature is detected too high. Check that heat sink on the motor(s) is clear of lint or any other obstruction and check that cylinder spins freely when empty. Design 6, clean inverter drive compartment. Replace motor(s) or inverter drive if error persists.

Table 11 *continues...*

Display	Description	Cause/ Corrective Action
<i>EFA_n07, Ed 07</i> (Design 6)	Drive Enable Error	Check the inverter drive enable wiring between H6 header on I/O board and inverter drive.
<i>EFA_n08, Ed 08</i> (Designs 3 and 5 only)	Fan or Cylinder Motor Current Limit Error	Check that fan/cylinder turns freely, make sure machine is not overloaded. Replace fan/cylinder motor if error persists.
<i>EFA_n09, Ed 09</i> (Designs 3 and 5 only)	Fan or Cylinder Motor 460V Drive Over-current	Check that fan/cylinder turns freely, make sure machine is not overloaded. Replace fan/cylinder motor if error persists.
<i>EFA_n10, Ed 10</i>	Fan or Cylinder Motor Low DC Bus Error	Voltage to motor(s) or inverter drive is too low. For 120V machines, make sure wire harness jumper is connected which connects pins 1 and 2 of the 5-pin connector on the motor. Check voltage input and check wiring to machine. Replace motor(s) or inverter drive if error persists.
<i>EFA_n11, Ed 11</i>	Fan or Cylinder Motor Overload Error	Check that fan or cylinder turns freely, make sure machine is not overloaded. Error can be cleared by any key press.
<i>EFA_n12, Ed 12</i> (Designs 3 and 5)	Fan or Cylinder Motor Microcontroller Fault	Try to power down and power up the machine to clear the error. If error persists, replace fan/cylinder motor.
<i>EFA_n12, Ed 12</i> (Design 6)	Motor System Fail	Check that correct inverter drive is installed. Check for correct configuration of front end control.
<i>Ed 13</i> (Designs 3 and 5)	Cylinder Motor Hall Sensor Failure	Power down machine to clear error.
<i>EFA_n13, Ed 13</i> (Design 6)	Setup Compatibility Failure	Check that correct inverter drive is installed. Check for correct configuration of front end control.
<i>EFA_n14, Ed 14</i> (Design 6)	Power Fail Dangerous Error	Check voltage to machine and voltage to inverter drive.
<i>EFA_n15, Ed 15</i> (Design 6)	Open Phase Error	Check motor wiring. Replace motor if error persists.
<i>EFA_n16, Ed 16</i> (Design 6)	Power Fail NO Dangerous Error	Check voltage to machine and voltage to inverter drive.
<i>EFA_n18, Ed 18</i> (Design 6)	Fatal IPM Over Current Shunt Error	Check motor wiring. Replace motor if error persists.
<i>EFA_n19, Ed 19</i> (Design 6)	Fatal Hardware I2T Over Current Error	Check for motor overload or blocking condition which could be caused from lint buildup or blocked fan, overwet load or mechanical issues causing cylinder sticking.

Table 11 *continues...*

Display	Description	Cause/ Corrective Action
<i>EFFn21, Ed 21</i> (Design 6)	Speed Limitation Error	Check that machine is configured to the correct machine size.
<i>EFFn22, Ed 22</i> (Design 6)	Inrush Pin Hardware On/Off Fail	Cycle power to machine. Replace inverter drive if error persists.
<i>EFFn23, Ed 23</i> (Design 6)	Fatal IPM Temperature Acquisition Error (NTC is in short circuit or open)	Cycle power to machine. Replace inverter drive if error persists.
<i>EFFn24, Ed 24</i> (Design 6)	ADC Current Acquisition Fail	Cycle power to machine. Replace inverter drive if error persists.
<i>EFFn25, Ed 25</i> (Design 6)	VBUS Acquisition Fail	Cycle power to machine. Replace inverter drive if error persists.
<i>EFFn26, Ed 26</i> (Design 6)	Fault IPM Circuit Fail	Cycle power to machine. Replace inverter drive if error persists.
<i>EFLÉ01</i> <i>EFLÉ1</i> (Factory Test only appears as 4-digit display)	Optional Heat Output Shorted	Check wiring to valve/motor connected to output, replace valve/motor.
<i>EFLÉ02</i> <i>EFLÉ2</i> (Factory Test only appears as 4-digit display)	Motor Relay Enable Output Shorted	Check motor power relay connected between, if error persists replace relay.
<i>EFLÉ03</i> <i>EFLÉ3</i> (Factory Test only appears as 4-digit display)	Spare Relay Enable Output Shorted	Check relay powered by KM2 output, if error persists replace relay.
<i>EFLÉ04</i> <i>EFLÉ4</i> (Factory Test only appears as 4-digit display)	Auxiliary Relay 1 Output Shorted Error	Check relay powered by Aux 1 output, if error persists replace relay.
<i>EFLÉ05</i> <i>EFLÉ5</i> (Factory Test only appears as 4-digit display)	Run Relay Output Shorted Error	Check Relay powered by the Run output, if error persists replace relay.
<i>EFLÉ06</i> <i>EFLÉ6</i> (Factory Test only appears as 4-digit display)	Gas Valve 1 Output Shorted Error	Check gas valve 1, if error persists replace valve.
<i>EFLÉ07</i> <i>EFLÉ7</i> (Factory Test only appears as 4-digit display)	Gas Valve 2 Output Shorted Error	Check gas valve 2, if error persists replace valve.
<i>E 101</i>	Transmission Failure	Communication failure. Re-aim external device and try again.
<i>E 102</i>	Device Time-Out	Communication failure. Re-aim external device and try again.

Table 11 *continues...*

Display	Description	Cause/ Corrective Action
<i>E 103</i>	Invalid Command Code	Incorrect machine type. Before downloading, ensure data is for current machine type.
<i>E 104</i>	Command Packet Time Out	Communication failure. Re-aim external device and try again.
<i>E 105</i>	Invalid or Out-of-Range Data	Incorrect machine type. Before downloading, ensure data is for current machine type and values entered are within the minimum and maximum limits.
<i>E 109</i>	CRC-16 Error	Communication failure. Re-aim external device and try again.
<i>E 10A</i>	Framing Error	Communication failure. Re-aim external device and try again.
<i>E 10C</i>	Time-Out Exceeded	Communication failure. Re-aim external device and try again.
<i>E 10E</i>	Encryption Error	Incorrect machine type. Before downloading, ensure data is for current machine type.
<i>E 10F</i>	Invalid Wake-up or Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
<i>E 1C1</i>	ICM Lockout Alarm Active	Check that the gas is turned on and that the ignition circuit functions. Also check that the gas valve is operational. This error needs to be manually reset. To reset, open service door and press start button. After 5 seconds error should be cleared.
<i>E 1C101</i> <i>E901</i> (Factory Test only appears as 4-digit display)	ICM False Flame Error	Press any key, open the loading door or cycle power to machine.
<i>E 1C102</i> <i>E902</i> (Factory Test only appears as 4-digit display)	ICM Alarm Reset Shorted Error	Check wiring between the I/O board and the ignition control. Power down and power up machine to clear the error.
<i>E 1C103</i> <i>E903</i> (Factory Test only appears as 4-digit display)	ICM Hardware Failure Error	Ignition control has detected a hardware fault. Power down and power machine to clear error. Replace ignition control if error persists.
<i>E 10 05</i>	I/O Board 24VDC Supply Over Voltage Error	Check machine input voltage. Power down and power up the machine to clear error. If error persists, replace I/O board.

Table 11 *continues...*

Display	Description	Cause/ Corrective Action
<i>E 10 06</i>	I/O Board 24VDC Supply Under Voltage Error	Check machine input voltage. Check for pinched control wires. Clear any debris or lint from the I/O board. Power down and power up the machine to clear error. If error persists, replace I/O board.
<i>E 10 07</i>	Heat Output Shorted Error	Power down machine to clear error, power up machine, try heating again. If error persists, replace I/O board.
<i>E 10 32</i>	Mosfet Enabled Shorted Error	Power down machine to clear error, power up machine, try running a cycle. If error persists, replace I/O board.
<i>E n r L</i>	Manual Reset Limit Error	Inspect tumble dryers venting/ventwork to ensure that the ventwork is adequate and that there are no blockages. Be sure to clean and inspect lint screen. Remove any lint buildup around the thermostat. Check thermistor 1 and cabinet limit function. Limit needs to be manually reset and machine needs to be powered down to clear the error. If problem persists, replace thermostat.
<i>E n H H</i>	Machine ID Chip Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and Machine ID chip, or try replacing the user control or the Machine ID chip.
<i>E S L 1</i>	Stove Limit 1 Cycle	Inspect tumble dryers venting/ventwork to ensure that the ventwork is adequate and that there are no blockages. Be sure to clean and inspect lint screen. Remove any lint buildup around the thermostat. Check make-up air and gas pressure. If problem persists, replace thermostat.
<i>E S L 2</i>	Stove Limit 2 Cycle	Inspect tumble dryers venting/ventwork to ensure that the ventwork is adequate and that there are no blockages. Be sure to clean and inspect lint screen. Remove any lint buildup around the thermostat. Check make-up air and gas pressure. If problem persists, replace thermostat.
<i>o F F</i>	Break-In Alarm Shutdown Error	Check the service door or coin vault switches.

Table 11 *continues...*

Display	Description	Cause/ Corrective Action
Right most decimal point Lit	Network Communication Error	Communication problem. Wait for 1.5 minutes for error to clear. If error doesn't clear, power-down and power-up the machine. Check all network connections. If error persists, replace control or network board.

Table 11

Tumble Dryer - Error Codes for N Control - OPL

Error Codes

Following is a list of possible error codes for an electronic control. Errors beginning with **E** refer to external device Infra-red communication errors. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

Error Codes		
Display	Description	Cause/ Corrective Action
ALArn	Break-In Alarm Error	Check the service door or coin vault switches.
E AF	Airflow Switch Bounces	Inspect lint screen, ductwork and make-up air. Cycle power to machine (power down, then power up).
E Co	SCI Communications Error	Communication failure. Power down, power up, check connections and try again. If error persists, replace control or output board.
E d5	Brownout/Voltage Configuration	Unexpected supply voltage. Check wiring at input of machine to make sure the correct input voltage is supplied to the machine. Check the harness connections between the user control and the output board. If the user control was replaced, set dipswitch #1 to the same setting as the previous control. If reworking the machine to use a different supply voltage, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
E HEAt	Machine Did Not Reach Expected Temperature	The ignition control has power, but a flame was not sensed after the programmed amount of retries. Be sure that gas and gas valve are turned on. If problem persists, troubleshoot the ignition circuit. (Igniter, Cable, Ignition Control Module.) For electric machines, check wiring to auxiliary switch on electric contactors and make sure contactors work properly.
E id	Board ID Error	Incorrect replacement control. The display will show oUtPUt . Replace user control or output board with correct part. The board ID error will also be set if the wrong drive motor, fan motor or ignition control are connected. The display will show dr iUE , FAn or iCn . Check machine configurations and connect correct drive motor, fan motor or ignition control. For cyclonic lint and airflow management system, the drive software needs to be updated to version 02 or later.
E nr	Drive/Output Board Not Ready	Hardware failure. Replace output board.
E oP 1	Open Thermistor 1 Error (Cylinder Output)	Remove any lint build-up around thermistor. Check wire connections. If problem persists, replace control or thermistor.
E SH 1	Shorted Thermistor 1 Error (Cylinder Output)	Remove any lint build-up around thermistor. If problem persists, replace control or thermistor.
E oP 2	Open Thermistor 2 Error (Cylinder Input)	Remove any lint build-up around thermistor. Check wire connections. If problem persists, replace control or thermistor.
E SH 2	Shorted Thermistor 2 Error (Cylinder Input)	Remove any lint build-up around thermistor. If problem persists, replace control or thermistor.

Table 12 continues...

Error Codes		
Display	Description	Cause/ Corrective Action
<i>ERF1</i>	Airflow Switch Failed to Open	Inspect lint screen and ductwork. Wipe clean and completely dry off the airflow switch vane as well as the mating material. Once error is cleared, control will go back to previous mode of operation.
<i>ERF2</i>	Airflow Switch Failed to Close	If machine is newly installed, make sure shipping tie has been removed from airflow switch. Inspect lint screen and ductwork. Cycle power to machine (power down, then power up).
<i>ECAb</i>	Cabinet Limit Cycle	Remove any lint build-up around thermostat. If problem persists, replace control or thermostat. Check thermistor 1 function. Error can also be caused by running no load or a small load.
<i>ECodr_u, ECofAn</i>	Drive and Fan Communication Error	Communication failure. Power down for at least 1 minute, power up, check connections between I/O board and Drive/Fan and try again. If error persists, replace tumbler I/O board or motor with which the error occurred (Fan or Drive).
<i>ECoiCN</i>	ICM Communication Error	Communication failure. Power down, power up, check connections and try again. If error persists, replace tumbler I/O board or ignition control.
<i>EFAr01, Ed 01</i> (Design 6)	Communication Error	Check wiring between I/O board and inverter.
<i>EFAr02, Ed 02</i>	Fan or Cylinder Motor High DC Bus Error	Voltage to fan/cylinder is too high. Unpower machine to clear error. Check voltage input and check wiring to machine. Replace fan/cylinder motor if error persists.
<i>EFAr03, Ed 03</i> (Design 6)	Motor Not Connected Error	Check motor wiring.
<i>EFAr04, Ed 04</i>	Fan or Cylinder Motor Stall Error	Check that fan or cylinder turns freely, make sure machine is not overloaded. Error can be cleared by any key press.
<i>EFAr05, Ed 05</i> (Designs 3 and 5)	Fan or Cylinder Motor Coherence Check Error	Check that fan wheel spins freely. Cylinder error can be caused by an unbalanced load. Try to redistribute the load and lengthen the reversing pause time if reversing is enabled. Error can be cleared by any key press.
<i>EFAr05, Ed 05</i> (Design 6)	Back EMF Error	Check motor wiring.
<i>EFAr06, Ed 06</i>	Fan or Cylinder Motor IPM Over-temp Error	IPM temperature is detected too high. Check that heat sink on the motor(s) is clear of lint or any other obstruction and check that cylinder spins freely when empty. Design 6, clean inverter drive compartment. Replace motor(s) or inverter drive if error persists.
<i>EFAr07, Ed 07</i> (Design 6)	Drive Enable Error	Check the inverter drive enable wiring between H6 header on I/O board and inverter drive.
<i>EFAr08, Ed 08</i> (Designs 3 and 5 only)	Fan or Cylinder Motor Current Limit Error	Check that fan/cylinder turns freely, make sure machine is not overloaded. Replace fan/cylinder motor if error persists.

Table 12 *continues...*

Error Codes		
Display	Description	Cause/ Corrective Action
<i>EFA_n09, Ed 09</i> (Designs 3 and 5 only)	Fan or Cylinder Motor 460V Drive Overcurrent	Check that fan/cylinder turns freely, make sure machine is not overloaded. Replace fan/cylinder motor if error persists.
<i>EFA_n10, Ed 10</i>	Fan or Cylinder Motor Low DC Bus Error	Voltage to motor(s) or inverter drive is too low. For 120V machines, make sure wire harness jumper is connected which connects pins 1 and 2 of the 5-pin connector on the motor. Check voltage input and check wiring to machine. Replace motor(s) or inverter drive if error persists.
<i>EFA_n11, Ed 11</i>	Fan or Cylinder Motor Overload Error	Check that fan or cylinder turns freely, make sure machine is not overloaded. Error can be cleared by any key press.
<i>EFA_n12, Ed 12</i> (Designs 3 and 5)	Fan or Cylinder Motor Microcontroller Fault	Try to power down and power up the machine to clear the error. If error persists, replace fan/cylinder motor.
<i>EFA_n12, Ed 12</i> (Design 6)	Motor System Fail	Check that correct inverter drive is installed. Check for correct configuration of front end control.
<i>Ed 13</i> (Designs 3 and 5)	Cylinder Motor Hall Sensor Failure	Power down machine to clear error.
<i>EFA_n13, Ed 13</i> (Design 6)	Setup Compatibility Failure	Check that correct inverter drive is installed. Check for correct configuration of front end control.
<i>EFA_n14, Ed 14</i> (Design 6)	Power Fail Dangerous Error	Check voltage to machine and voltage to inverter drive.
<i>EFA_n15, Ed 15</i> (Design 6)	Open Phase Error	Check motor wiring. Replace motor if error persists.
<i>EFA_n16, Ed 16</i> (Design 6)	Power Fail NO Dangerous Error	Check voltage to machine and voltage to inverter drive.
<i>EFA_n18, Ed 18</i> (Design 6)	Fatal IPM Over Current Shunt Error	Check motor wiring. Replace motor if error persists.
<i>EFA_n19, Ed 19</i> (Design 6)	Fatal Hardware I2T Over Current Error	Check for motor overload or blocking condition which could be caused from lint buildup or blocked fan, overwet load or mechanical issues causing cylinder sticking.
<i>EFA_n21, Ed 21</i> (Design 6)	Speed Limitation Error	Check that machine is configured to the correct machine size.
<i>EFA_n22, Ed 22</i> (Design 6)	Inrush Pin Hardware On/Off Fail	Cycle power to machine. Replace inverter drive if error persists.
<i>EFA_n23, Ed 23</i> (Design 6)	Fatal IPM Temperature Acquisition Error (NTC is in short circuit or open)	Cycle power to machine. Replace inverter drive if error persists.
<i>EFA_n24, Ed 24</i> (Design 6)	ADC Current Acquisition Fail	Cycle power to machine. Replace inverter drive if error persists.
<i>EFA_n25, Ed 25</i> (Design 6)	VBUS Acquisition Fail	Cycle power to machine. Replace inverter drive if error persists.

Table 12 *continues...*

Error Codes		
Display	Description	Cause/ Corrective Action
<i>EFAr26, Ed 26</i> (Design 6)	Fault IPM Circuit Fail	Cycle power to machine. Replace inverter drive if error persists.
<i>EFLt01</i>	Optional Heat Output Shorted	Check wiring to valve/motor connected to output, replace valve/motor.
<i>EFLt02</i>	Motor Relay Enable Output Shorted	Check motor power relay connected between, if error persists replace relay.
<i>EFLt03</i>	Spare Relay Enable Output Shorted	Check relay powered by KM2 output, if error persists replace relay.
<i>EFLt04</i>	Auxiliary Relay 1 Output Shorted Error	Check relay powered by Aux 1 output, if error persists replace relay.
<i>EFLt05</i>	Run Relay Output Shorted Error	Check Relay powered by the Run output, if error persists replace relay.
<i>EFLt06</i>	Gas Valve 1 Output Shorted Error	Check gas valve 1, if error persists replace valve.
<i>EFLt07</i>	Gas Valve 2 Output Shorted Error	Check gas valve 2, if error persists replace valve.
<i>E .01</i>	Transmission Failure	Communication failure. Re-aim external device and try again.
<i>E .02</i>	Device Time-Out	Communication failure. Re-aim external device and try again.
<i>E .03</i>	Invalid Command Code	Incorrect machine type. Before downloading, ensure data is for current machine type.
<i>E .04</i>	Command Packet Time Out	Communication failure. Re-aim external device and try again.
<i>E .05</i>	Invalid or Out-of-Range Data	Incorrect machine type. Before downloading, ensure data is for current machine type and values entered are within the minimum and maximum limits.
<i>E .09</i>	CRC-16 Error	Communication failure. Re-aim external device and try again.
<i>E .0A</i>	Framing Error	Communication failure. Re-aim external device and try again.
<i>E .0C</i>	Time-Out Exceeded	Communication failure. Re-aim external device and try again.
<i>E .0E</i>	Encryption Error	Incorrect machine type. Before downloading, ensure data is for current machine type.
<i>E .0F</i>	Invalid Wake-up or Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
<i>E .cN</i>	ICM Lockout Alarm Active	Check that the gas is turned on and that the ignition circuit functions. Also check that the gas valve is operational. This error needs to be manually reset. To reset, open service door and press start button. After 5 seconds error should be cleared.
<i>E .cN01</i>	False Flame Error	Press any key, open the loading door or cycle power to machine.
<i>E .cN02</i>	ICM Alarm Reset Shorted Error	Check wiring between the I/O board and the ignition control. Power down and power up machine to clear the error.
<i>E .cN03</i>	ICM Hardware Failure Error	Ignition control has detected a hardware fault. Power down and power machine to clear error. Replace ignition control if error persists.

Table 12 *continues...*

Error Codes		
Display	Description	Cause/ Corrective Action
<i>E 10 05</i>	I/O Board 24VDC Supply Over Voltage Error	Check machine input voltage. Power down and power up the machine to clear error. If error persists, replace I/O board.
<i>E 10 06</i>	I/O Board 24VDC Supply Under Voltage Error	Check machine input voltage. Check for pinched control wires. Clear any debris or lint from the I/O board. Power down and power up the machine to clear error. If error persists, replace I/O board.
<i>E 10 07</i>	Heat Output Shorted Error	Power down machine to clear error, power up machine, try heating again. If error persists, replace I/O board.
<i>E 10 32</i>	Mosfet Enabled Shorted Error	Power down machine to clear error, power up machine, try running a cycle. If error persists, replace I/O board.
<i>E 10 5E</i>	Moisture Sensor Error	Make sure cylinder is empty and check slip ring connection on back of machine.
<i>E 10 L</i>	Manual Reset Limit Error	Inspect tumble dryers venting/ventwork to ensure that the ventwork is adequate and that there are no blockages. Be sure to clean and inspect lint screen. Remove any lint buildup around the thermostat. Check thermostat 1 and cabinet limit function. Limit needs to be manually reset and machine needs to be powered down to clear the error. If problem persists, replace thermostat.
<i>E 10 HH</i>	Machine ID Chip Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and Machine ID chip, or try replacing the user control or the Machine ID chip.
<i>E 5L 1</i>	Stove Limit 1 Cycle	Inspect tumble dryers venting/ventwork to ensure that the ventwork is adequate and that there are no blockages. Be sure to clean and inspect lint screen. Remove any lint buildup around the thermostat. Check make-up air and gas pressure. If problem persists, replace thermostat.
<i>E 5L 2</i>	Stove Limit 2 Cycle	Inspect tumble dryers venting/ventwork to ensure that the ventwork is adequate and that there are no blockages. Be sure to clean and inspect lint screen. Remove any lint buildup around the thermostat. Check make-up air and gas pressure. If problem persists, replace thermostat.
Right most decimal point Lit	Machine ID Communication Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and Machine ID chip, or try replacing the user control or the Machine ID chip.

Table 12

Tumble Dryer - Error Codes for D Control

Error Codes

Display	Description	Cause/ Corrective Action
Fan or Drive Motor Error (1) (Design 6)	Communication Error	Check wiring between I/O board and inverter.
Fan or Drive Motor Error (2)	Fan or Cylinder Motor High DC Bus Error	Voltage to fan/cylinder is too high. Unpower machine to clear error. Check voltage input and check wiring to machine. Replace fan/cylinder motor if error persists.
Fan or Drive Motor Error (3) (Design 6)	Motor Not Connected Error	Check motor wiring.
Fan or Drive Motor Error (4)	Fan or Cylinder Motor Stall Error	Check that fan or cylinder turns freely, make sure machine is not overloaded. Error can be cleared by any key press.
Fan or Drive Motor Error (5) (Designs 3 and 5)	Fan or Cylinder Motor Coherence Check Error	Check that fan wheel spins freely. Cylinder error can be caused by an unbalanced load. Try to redistribute the load and lengthen the reversing pause time if reversing is enabled. Error can be cleared by any key press.
Fan or Drive Motor Error (5) (Design 6)	Back EMF Error	Check motor wiring.
Fan or Drive Motor Error (6)	Fan or Cylinder Motor IPM Overtemp Error	IPM temperature is detected too high. Check that heat sink on the motor(s) is clear of lint or any other obstruction and check that cylinder spins freely when empty. Design 6, clean inverter drive compartment. Replace motor(s) or inverter drive if error persists.
Fan or Drive Motor Error (7) (Design 6)	Drive Enable Error	Check the inverter drive enable wiring between H6 header on I/O board and inverter drive.
Fan or Drive Motor Error (8) (Designs 3 and 5 only)	Fan or Cylinder Motor Current Limit Error	Check that fan/cylinder turns freely, make sure machine is not overloaded. Replace fan/cylinder motor if error persists.
Fan or Drive Motor Error (9) (Designs 3 and 5 only)	Fan or Cylinder Motor 460V Drive Overcurrent	Check that fan/cylinder turns freely, make sure machine is not overloaded. Replace fan/cylinder motor if error persists.

Table 13 *continues...*

Display	Description	Cause/ Corrective Action
Fan or Drive Motor Error (10)	Fan or Cylinder Motor Low DC Bus Error	Voltage to motor(s) or inverter drive is too low. For 120V machines, make sure wire harness jumper is connected which connects pins 1 and 2 of the 5-pin connector on the motor. Check voltage input and check wiring to machine. Replace motor(s) or inverter drive if error persists.
Fan or Drive Motor Error (11)	Fan or Cylinder Motor Overload Error	Check that fan or cylinder turns freely, make sure machine is not overloaded. Error can be cleared by any key press.
Fan or Drive Motor Error (12) (Designs 3 and 5)	Fan or Cylinder Motor Microcontroller Fault	Try to power down and power up the machine to clear the error. If error persists, replace fan/cylinder motor.
Fan or Drive Motor Error (12) (Design 6)	Motor System Fail	Check that correct inverter drive is installed. Check for correct configuration of front end control.
Drive Motor Error (13) (Designs 3 and 5)	Cylinder Motor Hall Sensor Failure	Power down machine to clear error.
Fan or Drive Motor Error (13) (Design 6)	Setup Compatibility Failure	Check that correct inverter drive is installed. Check for correct configuration of front end control.
Fan or Drive Motor Error (14) (Design 6)	Power Fail Dangerous Error	Check voltage to machine and voltage to inverter drive.
Fan or Drive Motor Error (15) (Design 6)	Open Phase Error	Check motor wiring. Replace motor if error persists.
Fan or Drive Motor Error (16) (Design 6)	Power Fail NO Dangerous Error	Check voltage to machine and voltage to inverter drive.
Fan or Drive Motor Error (18) (Design 6)	Fatal IPM Over Current Shunt Error	Check motor wiring. Replace motor if error persists.
Fan or Drive Motor Error (19) (Design 6)	Fatal Hardware I2T Over Current Error	Check for motor overload or blocking condition which could be caused from lint buildup or blocked fan, overwet load or mechanical issues causing cylinder sticking.
Fan or Drive Motor Error (21) (Design 6)	Speed Limitation Error	Check that machine is configured to the correct machine size.
Fan or Drive Motor Error (22) (Design 6)	Inrush Pin Hardware On/Off Fail	Cycle power to machine. Replace inverter drive if error persists.
Fan or Drive Motor Error (23) (Design 6)	Fatal IPM Temperature Acquisition Error (NTC is in short circuit or open)	Cycle power to machine. Replace inverter drive if error persists.
Fan or Drive Motor Error (24) (Design 6)	ADC Current Acquisition Fail	Cycle power to machine. Replace inverter drive if error persists.

Table 13 *continues...*

Display	Description	Cause/ Corrective Action
Fan or Drive Motor Error (25) (Design 6)	VBUS Acquisition Fail	Cycle power to machine. Replace inverter drive if error persists.
Fan or Drive Motor Error (26) (Design 6)	Fault IPM Circuit Fail	Cycle power to machine. Replace inverter drive if error persists.
Shorted Output Error (1)	Optional Heat Output Shorted	Check wiring to valve/motor connected to output, replace valve/motor.
Shorted Output Error (2)	Motor Relay Enable Output Shorted	Check motor power relay connected between, if error persists replace relay.
Shorted Output Error (3)	Spare Relay Enable Output Shorted	Check relay powered by KM2 output, if error persists replace relay.
Shorted Output Error (4)	Auxiliary Relay 1 Output Shorted Error	Check relay powered by Aux 1 output, if error persists replace relay.
Shorted Output Error (5)	Run Relay Output Shorted Error	Check Relay powered by the Run output, if error persists replace relay.
Shorted Output Error (6)	Gas Valve 1 Output Shorted Error	Check gas valve 1, if error persists replace valve.
Shorted Output Error (7)	Gas Valve 2 Output Shorted Error	Check gas valve 2, if error persists replace valve.
ICM Error (2)	ICM Alarm Reset Shorted Error	Check wiring between the I/O board and the ignition control. Power down and power up machine to clear the error.
ICM Error (3)	ICM Hardware Failure Error	Ignition control has detected a hardware fault. Power down and power machine to clear error. Replace ignition control if error persists.
ICM Error (4)	ICM Lockout Alarm Active	Check that the gas is turned on and that the ignition circuit functions. Also check that the gas valve is operational. This error needs to be manually reset. To reset, open service door and press start button. After 5 seconds error should be cleared.
Output Board Error (5)	I/O Board 24VDC Supply Over Voltage Error	Check machine input voltage. Power down and power up the machine to clear error. If error persists, replace I/O board.
Output Board Error (6)	I/O Board 24VDC Supply Under Voltage Error	Check machine input voltage. Check for pinched control wires. Clear any debris or lint from the I/O board. Power down and power up the machine to clear error. If error persists, replace I/O board.
Output Board Error (7)	Heat Output Shorted Error	Power down machine to clear error, power up machine, try heating again. If error persists, replace I/O board.

Table 13 *continues...*

Display	Description	Cause/ Corrective Action
Output Board Error (32)	Mosfet Enabled Shorted Error	Power down machine to clear error, power up machine, try running a cycle. If error persists, replace I/O board.

Table 13

Tumble Dryer - Error Codes for V Control - Vend and OPL

Machine Errors

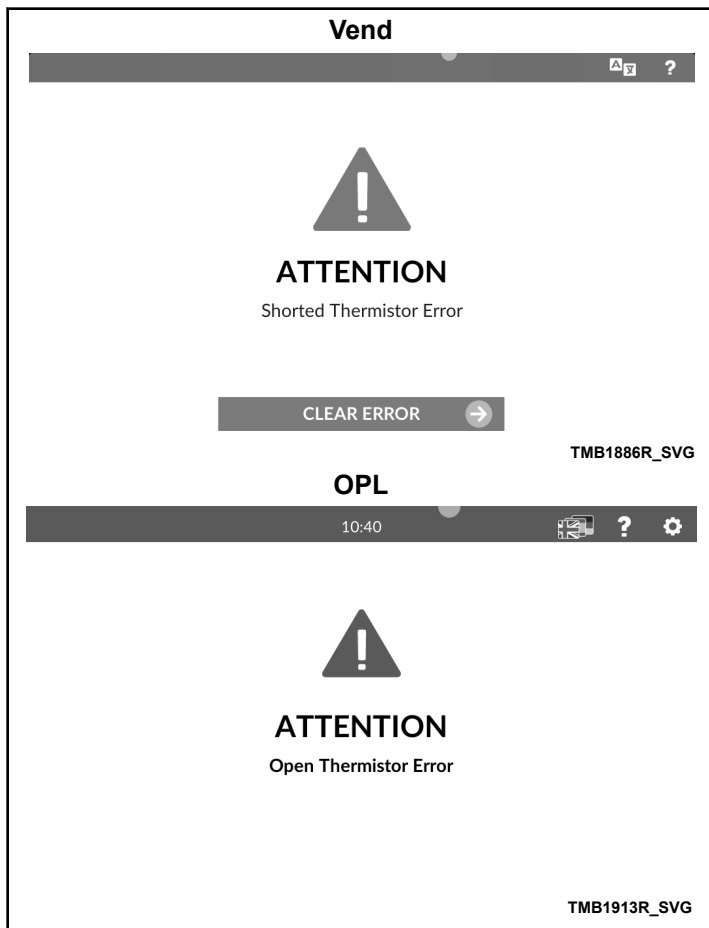


Figure 2

The control displays and logs errors as they occur. When the control senses the error condition, the audit counter for that error increases by one (1). The control saves the time and date of the last 25 errors which have occurred.

Certain errors can be cleared if they are non-fatal. Those can be cleared by pressing the "CLEAR ERROR" button independent of the programming parameter. Fatal errors can be cleared in the System Menu, if the clear error parameter is enabled.

Clear errors manually (if enabled in programming) by touching CLEAR ERROR (when shown), send the clear fatal error command using a PC or cycle power to the machine.

Certain errors trigger a 15 second Machine Error Tone. Touch the display to silence the tone.

Air Flow Switch 1 Error

This error indicates the air flow switch failed to open while the machine was in a stopped state. If an air flow switch is sensed closed for thirty (30) consecutive seconds, thirty (30) seconds after powering up, pausing a cycle, or ending a cycle, the control will show the Message Page with "Air Flow 1 Error" until the air flow switch opens or power is cycled to the machine. When this error occurs, all user input will be ignored. If the error does clear, the control will go back to its previous mode of operation. Cycling power to the machine will clear the error but if the error condition still exists, the error will be set again.

Air Flow Switch 2 Error

This error indicates the air flow switch fails to close 5 seconds after a cycle has started or resumed 3 times. To account for delays, the control will wait until the fan motor is running before checking for this error. After each time the air flow switch fails to close, the cycle will be halted and the control will display "Air Flow 2 Error". The machine will remain paused for 30 seconds before the user can clear the error condition by pressing the clear error button. At this time the user can attempt to resume the cycle. If the air flow switch does not close after three (3) attempts, the control will again set the error and this time treat it as a cool down error.

Air Flow Switch Bounce Error

This error will be treated as a cool down error. A bounce is when the air flow switch is open for 1 second, then closed for 5 seconds. Each bounce increments the air flow switch bounce counter. As soon as the air flow switch is opened, the heat will be turned off. The error is set if the air flow switch bounces 5 times within a 5 minute period. When this error is set, the heat will be turned off and the remainder of the cycle will be run without heat. Once the cycle is completed, the control will display "Air Flow Error".

To protect the heat contactors on electric models, a switch bounce will be determined differently. The alarm input on the I/O board will be used to determine if the air flow switch has opened. Instead of waiting for 1 second before recognizing the air flow switch as open, the air flow switch will be observed as open if the alarm input detects it open for 0.25 seconds.

Break-In Alarm Error

If enabled in programming, the user has (30) seconds to enter the bypass passcode after opening the Service Door and/or Coin Vault. If thirty (30) seconds expire or an incorrect passcode is entered, the control triggers the a Break-In Alarm.

The control signals a network alarm, cause a machine alarm or shut down the machine. The date and time of the break-in is recorded.

The owner can program an alarm to sound (if the passcode is not correctly entered) upon Coin Vault Opening, Service Door Opening or both. The error is non-fatal will clear by itself after 15 seconds.

The owner can also program the machine to shut down (if the passcode is not correctly entered) upon Coin Vault Opening, Service Door Opening or both. The error is fatal and the control will shut down the machine at the end of a cycle, if one is in process.

The hour, date and error code of the event are saved in audit. The error display takes priority over any other error that is already set.

To avoid the alarm during coin collections, the alarm must be turned off or temporarily disabled

Board ID Error (Fatal)

This error occurs when an incorrect board is connected for the machine type and configuration.

The control checks that the connected drive or output board is the correct board. The control also checks that the correct drive and auxiliary output board is connected. The control sets the Board ID Error if the wrong drive motor or auxiliary board is connected for the machine configuration. The display shows "Output Board ID Error", "Drive Board ID Error", "Fan Board ID Error" or "ICM Board ID Error" according to the error.

Brownout/Voltage Configuration Error

This error occurs if the control senses input voltage that does not match the machine configuration. The display shows "Voltage Configuration Error". To clear the error, correct the the input voltage or the voltage configuration parameter (refer to *Settings Menu*), then cycle power to the machine power.

Cabinet Limit Cycle Error

This error is an end of cycle error. While there is a call for heat, if the cabinet temperature causes the cabinet limit to open, the heater will be turned off and the control will continue the cycle with no heat until the limit thermostat resets. At the end of the cycle the control will show the Message Page with "Cabinet Limit Cycle" if the Display Limit Cycles programming parameter is enabled. The control will continue displaying the error message until the error is cleared. Extended tumble will be allowed while the error is present after the cycle has completed.

The control will increment the cabinet limit cycle audit counter only once per cycle.

Coin Drop Error

If enabled in programming, a Coin Drop Error occurs if a coin input pulse is too short, if the input is too long or if the input is too close to the previous input. The control displays "Coin Error" and

turn on the Machine Error Tone for five (5) seconds, after which the error terminates. The coin error #1 or #2 audit counters will be incremented. Any valid coins are accepted normally and will terminate the error condition.

If the coin error penalty parameter is enabled and the coin error is enabled in programming, when a coin error occurs all vend progress is lost and the control returns to the *Approach Page*.

Communication B Errors

Communication B Errors occur when the control cannot properly communicate with an external device, indicating a problem with the USB Serial Communication. These errors not displayed, but are recorded in *Audit Data Menu*. Refer to *Table 14* for the error codes.

Error Code	Descriptions
3	Invalid Command
4	Unexpected Data
5	Out of Range Data
6	No Data Received
7	Invalid Data Length
8	Invalid Command Length

Table 14

Drive and Fan Communication Errors

If the I/O board ever fails to communicate with the fan or drive, the I/O board will set a communication error and send the error code to the control. The control will allow the I/O board to retry communications 3 times. If retries remain when the error is received, the error will be treated as a communication error where the error is displayed until communication is re-established. The control will pause all operation for 1 minute while allowing the fan or drive to fully power down before retrying. During this 1 minute delay, the control will display "Drive Comm Error" for drive communication errors or "Fan Comm Error" for fan communication errors. Once 1 minute has expired, the control will power up the drive and fan and attempt to re-establish communications. If the I/O board is unable to establish communication after 3 retry attempts, the control will then treat this error as a fatal error.

General Drive Errors

The handling of this error will be determined by the error code received. Regardless of which error code is received, when this error is set, the control will terminate the cycle if a cycle was running and display "Drive Motor Error XXX" where "XXX" represents the error code. Refer to *Table 15* .

Error Code	Descriptions	Number of Re-tries
1	Communication Error	Unlimited
2	High DC Bus Error	4
3 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Motor Not Connected Error	3
4	Stall Error	4
5 (Tumble Dryer Designs 4 and 5, Stacked Washer-Extractor/Tumble Dryer Designs 1 and 2)	Coherence Check Error	4
5 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Back EMF Error	4
6	IPM Overtemp Error	0
7 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Drive Enable Error	255
8 (Tumble Dryer Designs 4 and 5, Stacked Washer-Extractor/Tumble Dryer Designs 1 and 2)	Current Limit Reached Error	4
9 (Tumble Dryer Designs 4 and 5, Stacked Washer-Extractor/Tumble Dryer Designs 1 and 2)	460V Drive Overcurrent Error	4
10	Low DC Bus Error	9
11	Motor Overload Error	1

Table 15 *continues...*

Error Code	Descriptions	Number of Re-tries
12 (Tumble Dryer Designs 4 and 5, Stacked Washer-Extractor/Tumble Dryer Designs 1 and 2)	Microcontroller Fault Error	1
12 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Motor System Fail	0
13 (Tumble Dryer Designs 4 and 5, Stacked Washer-Extractor/Tumble Dryer Designs 1 and 2)	Hall Sensor Error	3
13 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Setup Compatibility Failure	0
14 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Power Fail Dangerous Error	255
15 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Open Phase Error	0
16 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Power Fail NO Dangerous Error	255
18 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Fatal IPM Over Current Shunt Error	0

Table 15 *continues...*

Error Code	Descriptions	Number of Retries
19 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Fatal Hardware I2T Over Current Error	0
21 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Speed Limitation Error	0
22 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Inrush Pin Hardware On/Off Fail	0
23 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Fatal IPM Temperature Acquisition Error (NTC is in short circuit or open)	0
24 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	ADC Current Acquisition Fail	0
25 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	VBUS Acquisition Fail	0
26 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Fault IPM Circuit Fail	0

Table 15

General Fan Errors

When this error is set, the control will terminate the cycle and either enter Machine Error Mode or remain in End of Cycle Mode while displaying an error code on the display. If Machine Error Mode was entered, the control will turn on the Machine Error Tone. The display will show the Message Menu with "FAN MOTOR ERROR XXX" where "XXX" is the specific error code. Refer to *Table 16*.

Error Code	Descriptions	Number of Retries
1	Communication Error	Unlimited
2	High DC Bus Error	4
3 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Motor Not Connected Error	3
4	Stall Error	4
5 (Tumble Dryer Designs 4 and 5, Stacked Washer-Extractor/Tumble Dryer Designs 1 and 2)	Coherence Check Error	4
5 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Back EMF Error	4
6	IPM Overtemp Error	0
7 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Drive Enable Error	255
8 (Tumble Dryer Designs 4 and 5, Stacked Washer-Extractor/Tumble Dryer Designs 1 and 2)	Current Limit Reached Error	4
9 (Tumble Dryer Designs 4 and 5, Stacked Washer-Extractor/Tumble Dryer Designs 1 and 2)	460V Drive Overcurrent Error	4
10	Low DC Bus Error	9
11	Motor Overload Error	1

Table 16 *continues...*

Error Code	Descriptions	Number of Retries
12 (Tumble Dryer Designs 4 and 5, Stacked Washer-Extractor/Tumble Dryer Designs 1 and 2)	Microcontroller Fault Error	1
12 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Motor System Fail	0
13 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Setup Compatibility Failure	0
14 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Power Fail Dangerous Error	255
15 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Open Phase Error	0
16 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Power Fail NO Dangerous Error	255
18 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Fatal IPM Over Current Shunt Error	0
19 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Fatal Hardware I2T Over Current Error	0

Table 16 *continues...*

Error Code	Descriptions	Number of Retries
21 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Speed Limitation Error	0
22 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Inrush Pin Hardware On/Off Fail	0
23 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Fatal IPM Temperature Acquisition Error (NTC is in short circuit or open)	0
24 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	ADC Current Acquisition Fail	0
25 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	VBUS Acquisition Fail	0
26 (Tumble Dryer Design 6, Stacked Washer-Extractor/Tumble Dryer Design 3)	Fault IPM Circuit Fail	0

Table 16

General ICM Errors

This error is set when the Ignition Control Module (ICM) communicates an error code to the I/O board. If the error received is a Lockout Error, an Auto-Ignite Retry Error will be set. If a different error code is received, the control will handle the error as described below. When one of these errors is displayed, the display will show the message page "ICM Error X" where "X" represents the error code. Refer to *Table 17*.

Descriptions	Error Code
False Flame Error	1
Reset Shorted Error	2

Table 17 *continues...*

Descriptions	Error Code
Hardware Fault Error	3

Table 17

If the False Flame Error is received, the control will turn off the heat for fifteen (15) seconds and the error will be treated as an end of cycle error. The error will be displayed if the False Flame Programmable Display Option is enabled. If the error occurs multiple times in one cycle, the error audit counter will be incremented only once per cycle. The control will continue displaying the error message until the error is cleared.

When the Reset Shorted Error code is received, the error will be treated as a fatal error. This error indicates that the alarm reset signal to the ICM has been detected.

When the Hardware Fault Error code is received, the error will be treated as a fatal error. This error indicates that the ICM has detected an internal control failure. When this error is set, the control will terminate operation and display the error.

Heat Error

Gas Models

Each gas machine is equipped with an Ignition Control Module (ICM) that is responsible for opening the gas valve and igniting the gas to heat the machine. When there is a call for heat, the gas valve is opened and the ICM attempts to ignite the gas to heat the machine. If the ICM fails to ignite the gas, the ICM will send an ICM Lockout Alarm to the control. When the control receives the ICM Lockout Alarm, the control will increment the Auto-Ignite Retries Error audit counter. The lockout alarm can be reset if retries remain. The amount of retries the control allows is programmable.

When this error is set on IEC machines, the error will be treated as a fatal error. These machines are equipped with an ICM that needs to be manually reset. When the control receives the ICM lockout alarm, the control will show the Message Page with "ICM Error 4". In order to reset the alarm, the service door switch must be opened. Once the service door is opened, the display will prompt the user to reset the ICM. When the ICM is reset, the control will remove the error message and prompt the user to resume the cycle. The user can continue to reset the ICM until there are no more programmable retry attempts or the gas ignites. If the ICM fails to ignite the gas on the last attempt, the control will pause the cycle once more while displaying "ICM Error 4". Once the alarm is reset, the control will terminate the cycle and display "Heat Error".

On machines equipped with an ICM that does not need to be manually reset, the control will automatically clear the ICM lockout alarm and continue to try and ignite the gas until there are no more programmable retry attempts or the gas ignites. If the ICM fails to ignite the gas on the last attempt, the error will be set and

treated as a cool down error. When the cycle is completed, the control will display "Heat Error".

Electric Models

If the control determines that the electric heat contactor is stuck closed, the control will terminate the cycle and set the error. In this condition, the error will be treated as a fatal error displaying "Heat Error".

IR Communications Error

This error occurs if there is a problem with communication between the control and an IR device. The control displays "IR Comm Error (XXX)" where "XXX" indicates the error code value. Refer to *Table 18*.

Error Code	Description
01	Error detected when sending data
02	Time-Out Error
03	Invalid Command Code
05	Invalid or Out of Range Data
09	CRC-16 Error
0A	Framing Error
0C	Time-Out Exceeding While Getting Packet
0E	Encryption Error
0F	IR Disabled in Control Programming

Table 18

Machine ID Chip Error

This error occurs if the control detects either a communication error with the machine ID chip or a control configuration error. The control displays "Machine ID Chip Error (XXX)". "XXX" indicates an error code value. Refer to *Table 19*.

Error Code	Description	Type
05	Read Error	Notification
06	Write Error	Notification
31	Product byte 1 mismatch	Power Up
32	Product byte 2 mismatch	Power Up

Table 19 *continues...*

Error Code	Description	Type
33	Product byte 3 mismatch	Power Up
39	CRC error with un-configured control	Power Up
FF	No ID chip connected and no configuration in control	Power Up

Table 19

Notification errors occur when communication between the control and ID chip has failed. When the error is set, the hour, date and error code of the event are saved in *Audit Information*.

Power Up errors occur when the control is not configured and cannot get configuration data from the Machine ID chip. The error clears once the control is successfully configured.

Manual Reset Limit Error

This error will be set if there is a call for heat and the cabinet temperature caused the manual reset limit to open. Instead of immediately ending the cycle, the heater will be turned off and the control will advance to cool down with the cool down time set to fifteen (15) minutes. This is to make sure that the machine has adequate time to cool down prior to stopping since this error indicates an unsafe temperature. While cool down is running, the error status indicator will be shown. Once the cool down time expires, the control will display "Manual Reset Limit Error". While running the factory test cycle, the test cycle will end and the error display message will be shown immediately.

Network Communications Error

This error occurs if communication fail between the control and the ALS Wi-Fi board. When the error sets, the control displays "Network Error". The error code is not shown, but it is recorded in audit data. Refer to *Table 20*.

Error Code	Description
02	Time-Out Error
03	Invalid Command Code
05	Invalid or Out of Range Data
06	Invalid Data Code
09	CRC-16 Error
19	No Communication

Table 20

Open Thermistor Error 1 (Cylinder Output)

This error will be set when the I/O board senses a temperature less than 0°F [-18°C] and the heater has been active for at least three (3) minutes. Once the cycle has ended and the error is active, the error will not be allowed to be cleared until the temperature reading is greater than 0°F [-18°C]. When this error occurs, the display will show "Open Thermistor Error". If this error occurs during a cycle, the machine will go to cool down.

Open Thermistor Error 2 (Cylinder Input)

This error will be set when the I/O board senses a temperature less than 10°F [-12°C] and the heater has been active for at least three (3) minutes. Once the cycle has ended and the error is active, the error will not be allowed to be cleared until the temperature reading is greater than 10°F [-12°C]. When this error occurs, the display will show "Open Thermistor Error". If this error occurs during a cycle, the machine will go to cool down.

Output Board Errors

This error occurs if the control receives error code from the Output Board. The control turns off all outputs, sounds the Machine Error Tone for 15 seconds, and displays "Output Board Error (XXX)" where "XXX" is the specific error code (refer to *Table 21*). When an Output Error occurs, the specific error is counted in Audit Data Menu.

Output Board Errors	
"XX"	Description
5	24VDC Over Voltage
6	24VDC Under Voltage
7	Heat Output Shorted
32	MOSFET Enable Shorted

Table 21

Payment System Communications Error

These errors may occur during communication with the Serial Payment System. The display shows "No Payment System initialization performed", "Loss of communication" or "No initialization and no communication", according to the error. Once communications are restored, the control returns to the previous state. The hour, date and error code of the event are saved.

SCI Communication Error (Fatal)

This error occurs if communication fails between the control and the drive or output board. SCI Communications Errors can also be caused by drive or output board detecting a *System Integrity Error*. The control displays "SCI Comm Error".

Shorted Output Error

This error is caused by one of the 7 MOSFET controlled outputs on the I/O board being detected as a short. This error will be treated as a fatal error and will display "Output Board Error XXX" where "XXX" is the specific error code. Refer to *Table 22*.

Shorted Output	Error Code
Optional Heat Output	11
Motor Enable Relay Output (KM1)	12
Spare Enable Relay Output (KM2)	13
Auxiliary Relay 1 Output (KA1)	14
Auxiliary Relay 2 Output (KA2)	15
Gas Valve 1 Output (GV1)	16
Gas Valve 2 Output (GV2)	17

Table 22

Shorted Thermistor Error 1 (Cylinder Output)

This error will be set when the I/O board senses a temperature greater than 210°F [99°C] and the motor is active. Once the cycle has ended and the error is active, the error will not be allowed to be cleared until the temperature reading is less than 210°F [99°C]. When this error occurs, the display will show "Shorted Thermistor Error". If this error occurs during a cycle, the machine will go to cool down.

Shorted Thermistor Error 2 (Cylinder Input)

This error will be set when the I/O board senses a temperature greater than 563°F [295°C] and the motor is active. Once the cycle has ended and the error is active, the error will not be allowed to be cleared until the temperature reading is less than 563°F [295°C]. When this error occurs, the display will show "Shorted Thermistor Error". If this error occurs during a cycle, the machine will go to cool down.

Stove Limit Cycles

Depending on the configuration, machines either have 1 or 2 limit thermostats monitoring the stove temperature. If at any point during the cycle, the stove temperature exceeds the limit temperature and one of these limits opens, the heat will be turned off until the limit is reset. If the Display Limit Cycles parameter is enabled, an error will be set. These errors will be treated as end of cycle errors. If the first limit opens causing an error, the display will show "Stove Limit 1 Cycle", while the second limit opening will display "Stove Limit 2 Cycle".

The control will increment the individual audit counter only once per cycle. The error will only be displayed for the two (2) minute pause between cycles.

System Integrity Error

This error occurs if a *SCI Communication Error (Fatal)* happens on the drive or output board. When the error sets, drive or output board stops communication with the control. The output board displays the error by flashing LEDs on and off. The machine must be powered down to clear the error.

Error Description	Number of LED Flashes
CPU Error	1
SFR Error	2
ROM Error	3
RAM Error	4
Stack Error	5
RAM Buffer and Empty Error	6
Software Watchdog Error	7
Slow Monitoring Error	8

Washer-Extractor – Error Codes for F control

Error Codes

NOTE: Fatal Errors will show *oUt oF oRdEr* along with the error on the display.

Following is a list of possible error codes for an electronic control.

Display	Description	Cause/Corrective Action
<i>E id oUtPUt</i>	Input/Output Board ID Error	The control detects the wrong output board is connected for the machine configuration. The control sounds an alarm tone for 15 seconds. To clear the error, replace with the correct board.
<i>E id dr iUE</i>	Drive Board ID Error	The control detects the wrong drive board is connected for the machine configuration. The control sounds an alarm tone for 15 seconds. To clear the error, replace with the correct board.
<i>E d5</i>	Brownout/Voltage Configuration	An incorrect dip switch configuration is detected. To clear the error, the machine must be powered down and the dip switch configuration must be corrected.
<i>E nr</i>	Input/Output Board Not Ready	Indicates an input/output board communication error. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E b5</i>	Input/Output Board Shorted	Indicates that the input/output board is shorted. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E Co</i>	SCI Communications	Indicates a communication error between the FEC and the input/output board. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E d Co</i>	Drive Board Communication Error	After 3 unsuccessful communication attempts, the control will turn the drive power contactor off for 5 minutes to reset the drive. This procedure will be executed up to 3 times before the drive communication error appears. The control enters Door Unlocking Mode after basket rotation has stopped. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.

Table 23 *continues...*

Display	Description	Cause/Corrective Action
<i>E dr</i>	Drain Error	If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and sounds. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E FL</i>	Fill Error	This error may be programmed on or off. The machine does not reach the programmed fill level within 30 minutes. The machine enters Door Unlocking Mode and drains for 90 seconds. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E nFLo</i>	No Water Flow Error	This error may be programmed on or off. The water level does not reach the basket within 5 minutes. The machine enters Door Unlocking Mode and attempts to drain for 90 seconds. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E oF</i>	Overflow Error	The control continues to see an overflow error after 5 minutes of being in the Overflow Mode or after 1 minute with the door open or unable to lock. The control sounds an alarm tone continuously. To clear the error, disconnect and then reconnect power to the machine.
<i>E PS</i>	Pressure Sensor Error	The control does not detect a valid water level sensor input for thirty (30) seconds, or the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Cycle, or Overflow Mode. The machine enters the Door Unlocking Mode and attempts to drain for 30 seconds. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 5d</i>	Slow Drain Error	This error is shown at the end of a cycle. The machine exceeds the programmed slow drain adjustment time. After the cycle has been completed and the door has been opened, the control will continue to show the error code until any keypad is pressed.
<i>E Ld</i>	Water Leak Drain Error	If water leak detection is enabled, this error is shown at the end of a cycle. The control senses a water leak in the drain. After the cycle has been completed and the door has been opened, the control will continue to show the error code until any keypad is pressed.

Table 23 *continues...*

Display	Description	Cause/Corrective Action
<i>E LF</i>	Water Leak Fill Error	If water leak detection is enabled, this error is shown at the end of a cycle. The control senses a water leak in the fill valves. After the cycle has been completed and the door has been opened, the control will continue to show the error code until any keypad is pressed.
<i>E bELt</i>	Broken Belt Error	After basket rotation has ended, the machine's door unlocks. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E dL</i>	Door Lock Fatal Error	The output board reports that the door unlocks while running a cycle. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E dL1</i>	Door Lock Non-Fatal Error	The door fails to lock after an attempt. The output board attempts to lock the door for 60 seconds. If the door fails to lock, the machine returns to Start Mode.
<i>E dL2</i>	Door Unlock Non-Fatal Error	If the door fails to unlock. The output board attempts to lock the door 2 more times. If the door fails to lock, the machine returns to Start Mode. Press the START keypad to clear the error.
<i>E door</i>	Door Opened During A Running Cycle	Control detects door open and door locked inputs high. Can be caused by pulling on door while locked or about to lock. Correct in-operative door locking system. Power down machine to clear error.
<i>E FbAL</i>	Frame Balance Switch Error	During a cycle, the frame balance switch becomes unsatisfied. The machine enters the Door Unlocking Mode. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E Ht</i>	Heat Error (Heat Models Only)	The water has not reached the desired temperature within 2 hours. The heater output turns off and the cycle continues. After the cycle is complete, the error code is shown in the display. The control sounds a pulsing alarm tone for two (2) minutes.
<i>E UbAL</i>	Non-Fatal Unbalance Limit Error	If enabled, this error is shown at the end of a cycle. The machine exceeds the maximum number of balance attempts. If enabled, the error code is shown in the display after a cycle is complete. The control sounds a pulsing alarm tone for two (2) minutes.
<i>E tE</i>	Max Water Temperature Exceeded Error	This error is shown at the end of a cycle. The maximum water temperature (203°F [95°C]) is exceeded for 10 seconds. The input/output board shuts off all outputs. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.

Table 23 *continues...*

Display	Description	Cause/Corrective Action
<i>E oP</i>	Open Temperature/Thermistor Sensor Error	<p>This error is shown at the end of a cycle. The input/output board reports an open thermistor. The heater output is turned off for the remainder of the current cycle. After the cycle is complete, the error code is shown in the display.</p> <p>The control sounds a pulsing alarm tone for two (2) minutes.</p>
<i>E LP</i>	Low Level Pressure Switch Error (Heat Models Only)	<p>This error is only enabled during the Factory Test Cycle. The control fills to low level and the low level pressure switch then becomes dissatisfied. The machine enters Door Unlocking Mode.</p> <p>The control sounds a pulsing alarm tone for two (2) minutes.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E 5H</i>	Shorted Temperature/Thermistor Sensor Error	<p>This error is shown at the end of a cycle. The input/output board reports a shorted thermistor. The heater output is turned off for the remainder of the current cycle. After the cycle is complete, the error code is shown in the display.</p> <p>The control sounds a pulsing alarm tone for two (2) minutes.</p>
<i>E io 30</i>	Door Lock Solenoid Disable Pin Failure	<p>The Input/Output Board senses a problem with the hardware.</p> <p>The control sounds a pulsing alarm tone for two (2) minutes.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E io 39</i>	Mosfet Enable Cannot Be Disabled	<p>The Input/Output Board senses a problem with the hardware.</p> <p>The control sounds a pulsing alarm tone for two (2) minutes.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E io 43</i>	Hot Fill Valve Shorted	<p>The Input/Output Board senses a problem with the hardware.</p> <p>The control sounds a pulsing alarm tone for two (2) minutes.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E io 44</i>	Cold Fill Valve Shorted	<p>The Input/Output Board senses a problem with the hardware.</p> <p>The control sounds a pulsing alarm tone for two (2) minutes.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E io 45</i>	Hot Fill Tub Valve Shorted	<p>The control sounds a pulsing alarm tone for two (2) minutes.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E io 46</i>	Cold Fill Tub Valve Shorted	<p>The control sounds a pulsing alarm tone for two (2) minutes.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>

Table 23 *continues...*

Display	Description	Cause/Corrective Action
<i>E 10 47</i>	Hot Spray Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 48</i>	Cold Spray Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 49</i>	Cold Hard Fill Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 50</i>	Auxiliary Fill Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 51</i>	Compartment 1 Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 52</i>	Compartment 2 Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 53</i>	Compartment 3 Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 54</i>	Compartment 4 Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 55</i>	Drive Power Contractor Coil Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 56</i>	Electric Heat Contractor Coil Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 57</i>	Steam Heat Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 62</i>	24 Volt Supply Over Voltage	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.

Table 23 *continues...*

Display	Description	Cause/Corrective Action
<i>E 10 63</i>	24 Volt Supply Under Voltage	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E dr</i>	Drain Error	If enabled, the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E d 01</i>	Setup Command Error	Drive received incorrect parameters. Power down machine to clear. Call a service technician if error persists.
<i>E d 21</i>	Over Voltage DC Bus Error	Power down to clear error. Check voltage input to machine. If it happens only at start of spin, replace motor. Replace drive board if error persists.
<i>E d 22</i>	Over Motor Temperature Error	Motor temperature is detected to be too high. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace drive board if error persists.
<i>E d 23</i>	Fatal IPM Over Current Shunt Error	Check that drum and motor spins freely. Power down to clear error. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Replace drive board if error persists.
<i>E d 24</i>	Fatal I2T Hardware Over Current Error	Check that drum and motor spins freely. Rotor may be locked up. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Power down to clear error. Replace drive board if error persists.
<i>E d 25</i>	IPM Over Temperature Error	IPM temperature is detected to be too high. Check that drum spins freely when empty, check for overloading of machine, reduce agitation time, and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Check for lint build-up on heat sink on drive board. Replace drive board if error persists.
<i>E d 29</i>	Motor Not Connected Error	The motor or one of its electrical phases is not connected. Check that the harness from the motor to the drive board is fully plugged in on both ends and that there is no damage to the motor harness. Make sure to push in the motor harness on both ends just in case it is a little loose and not fully inserted. If the harness looks fine and the error still occurs, try replacing the drive board or harness. Power down to clear error.

Table 23 *continues...*

Display	Description	Cause/Corrective Action
<i>E d 31</i>	Overload Current Detection	The drive has expended too much energy which means the system is being overloaded. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace drive board if error persists.
<i>E d 32</i>	Back EMF Error	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 33</i>	Fatal Start-Up Failure	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 34</i>	Locked Rotor Error	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 44</i>	Overcurrent Shunt Detection Circuit Fail Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 51</i>	Inrush Pin HW On/Off Fail	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 63</i>	Fatal IPM Temperature Short Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 64</i>	Fatal IPM Temperature Open Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 65</i>	Inverter Hardware Acquisition Failure	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 66</i>	Voltage Bus Acquisition Failure	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 67</i>	Motor Initialization Error	Hardware failure. Power down to clear error. Replace drive board if error persists.

Table 23

Washer-Extractor – Error Codes for N control with N, 1, or 2 in 8th position

Error Codes

Following is a list of possible error codes for an electronic control.

Errors beginning with *E d* refer to drive errors. Errors beginning with *E i* refer to external device Infra-red communication errors.

NOTE: Fatal Errors will show *oUt oF oRdEr* along with the error on the display.

Display	Description	Cause/Corrective Action
<i>E .01</i>	Transmission Failure	Communication failure. Re-aim external device and try again.
<i>E .02</i>	Time-out Error	Communication failure. Re-aim external device and try again.
<i>E .03</i>	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
<i>E .04</i>	Expecting Upload Request	Communication failure. Re-aim external device and try again.
<i>E .05</i>	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Recheck the programming option's value and try again.
<i>E .09</i>	CRC-16 Error	Communication failure. Re-aim external device and try again.
<i>E .0A</i>	Framing Error	Communication error. Re-aim external device and try again.
<i>E .0C</i>	Time-out Exceeded	Communication error. Re-aim external device and try again.
<i>E .0E</i>	Encryption Error	Communication error. Re-aim external device and try again. If the problem persists, check that the security code is correct.
<i>E .0F</i>	Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
<i>E id oUtPUT</i>	Input/Output Board ID Error	The control detects the wrong output board is connected for the machine configuration. The control sounds an alarm tone for 15 seconds. To clear the error, replace with the correct board.
<i>E id dr iuE</i>	Drive Board ID Error	The control detects the wrong drive board is connected for the machine configuration. The control sounds an alarm tone for 15 seconds. To clear the error, replace with the correct board.
<i>E d5</i>	Brownout/Voltage Configuration	An incorrect dip switch configuration is detected. To clear the error, the machine must be powered down and the dip switch configuration must be corrected.
<i>E nr</i>	Input/Output Board Not Ready	Indicates an input/output board communication error. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.

Table 24 *continues...*

Display	Description	Cause/Corrective Action
<i>E b5</i>	Input/Output Board Shorted	Indicates that the input/output board is shorted. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E ,HH</i>	IR Communications Error	This error may occur during IR communications. When this error occurs, the control shows Display 1, where <i>HH</i> indicates the IR code value. The error display is automatically cleared after two (2) seconds.
<i>E nHH</i>	Machine ID Chip Errors	Communication failure. Power down, power up and try again. If error persists, check connection between user control and Machine ID Chip, or replace the user control or the Machine ID Chip.
<i>E Co</i>	SCI Communications	Indicates a communication error between the FEC and the input/output board. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E d Co</i>	Drive Board Communication Error	After 3 unsuccessful communication attempts, the control will turn the drive power contactor off for 5 minutes to reset the drive. This procedure will be executed up to 3 times before the drive communication error appears. The control enters Door Unlocking Mode after basket rotation has stopped. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E dr</i>	Drain Error	If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and sounds. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E FL</i>	Fill Error	This error may be programmed on or off. The machine does not reach the programmed fill level within 30 minutes. The machine enters Door Unlocking Mode and drains for 90 seconds. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.

Table 24 *continues...*

Display	Description	Cause/Corrective Action
<i>E nFLo</i>	No Water Flow Error	<p>This error may be programmed on or off. The water level does not reach the basket within 5 minutes. The machine enters Door Unlocking Mode and attempts to drain for 90 seconds. The control sounds a pulsing alarm tone for two (2) minutes.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E oF</i>	Overflow Error	<p>The control continues to see an overflow error after 5 minutes of being in the Overflow Mode or after 1 minute with the door open or unable to lock. The control sounds an alarm tone continuously.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E P5</i>	Pressure Sensor Error	<p>The control does not detect a valid water level sensor input for thirty (30) seconds, or the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Cycle, or Overflow Mode. The machine enters the Door Unlocking Mode and attempts to drain for 30 seconds. The control sounds a pulsing alarm tone for two (2) minutes.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E 5d</i>	Slow Drain Error (right most decimal point)	<p>If a slow drain is detected in the Drain step of a running cycle, the control will light the right-most decimal point. The decimal point will remain illuminated after the slow drain error display has expired. The decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds, or by cycling the power to the machine.</p>
<i>E Ld</i>	Water Leak Drain Error (right most decimal point)	<p>Error will display if there is a leak after the door is opened at the End of Cycle for 1 minute. To clear the error, press any keypad. If the water level has dropped more than an acceptable amount in a during a water leak drain check, the control will save a water leak drain error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.</p>
<i>E LF</i>	Water Leak Fill Error (right most decimal point)	<p>If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.</p>
<i>E bELt</i>	Broken Belt Error	<p>After basket rotation has ended, the machine's door unlocks.</p> <p>The control sounds a pulsing alarm tone for two (2) minutes.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>

Table 24 *continues...*

Display	Description	Cause/Corrective Action
<i>E dL</i>	Door Lock Fatal Error	The output board reports that the door unlocks while running a cycle. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E dL 1</i>	Door Lock Non-Fatal Error	The door fails to lock after an attempt. The output board attempts to lock the door for 60 seconds. If the door fails to lock, the machine returns to Start Mode .
<i>E dL 2</i>	Door Unlock Non-Fatal Error	If the door fails to unlock. The output board attempts to lock the door 2 more times. If the door does not unlock, the control will flash the START LED. If the START keypad is pressed, unlocking attempts will restart.
<i>E door</i>	Door Opened During A Running Cycle	Control detects door open and door locked inputs high. Can be caused by pulling on door while locked or about to lock. Correct in-operative door locking system. Power down machine to clear error.
<i>E Ht</i>	Heat Error (Heat Models Only)	The water has not reached the desired temperature within 2 hours. The heater output turns off and the cycle continues. After the cycle is complete, the error code is shown in the display. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, open the door or press any keypad.
<i>E tE</i>	Max Water Temperature Exceeded Error	The Input/Output Board flags the Max Water Temperature Exceeded Error and the control sets the fatal error. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E oP</i>	Open Temperature/Thermistor Sensor Error	This error is shown at the end of a cycle. The input/output board reports an open thermistor. The heater output is turned off for the remainder of the current cycle. After the cycle is complete, the error code is shown in the display. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, open the door or press any keypad.
<i>E LP</i>	Low Level Pressure Switch Error (Heat Models Only)	This error is only enabled during the Factory Test Cycle . The control fills to low level and the low level pressure switch then becomes dissatisfied. The machine enters Door Unlocking Mode. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.

Table 24 *continues...*

Display	Description	Cause/Corrective Action
<i>E 5H</i>	Shorted Temperature/Thermistor Sensor Error	This error is shown at the end of a cycle. The input/output board reports a shorted thermistor. The heater output is turned off for the remainder of the current cycle. After the cycle is complete, the error code is shown in the display. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, open the door or press any keypad.
<i>E 5tHt</i>	Slow To Heat Error (Heat Models Only)	Non-Fatal Error that will appear during the running cycle without affecting the cycle. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, press any keypad.
<i>E 5ud5</i>	Suds Lock Error	In the spin steps, if the control determines that there are suds in the machine after running all programmed Suds Routines, it will display a Suds Lock Error at the end of the cycle after the door is opened. To clear the error, open the door or press any keypad.
<i>E Hd</i>	Too Hot to Drain Error	If enabled, the Drive or Input/Output Board senses the water temperature is too hot to drain during a drain or extract step. To clear the error, press any keypad.
<i>E 10 29</i>	Mosfet Enable Pin Failure	The Input/Output Board senses a problem with the hardware. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 30</i>	Door Lock Solenoid Disable Pin Failure	The Input/Output Board senses a problem with the hardware. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 31</i>	Door Lock Solenoid Pulse Pin Failure	The Input/Output Board senses a problem with the hardware. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 32</i>	Door Lock Solenoid Relay Pin Failure	The Input/Output Board senses a problem with the hardware. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 33</i>	Mosfet Enable Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.

Table 24 *continues...*

Display	Description	Cause/Corrective Action
<i>E 10 34</i>	Door Lock Solenoid Disable Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 35</i>	Door Lock Solenoid Hardware Output Failure	The Input/Output Board senses a problem with the hardware. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 36</i>	Door Lock Solenoid Pulse Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 37</i>	Door Lock Solenoid Full Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 38</i>	Mosfet Enable Cannot Be Enabled	The Input/Output Board senses a problem with the hardware. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 39</i>	Mosfet Enable Cannot Be Disabled	The Input/Output Board senses a problem with the hardware. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 42</i>	Door Lock Input Pin Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 43</i>	Hot Fill Valve Shorted	The Input/Output Board senses a problem with the hardware. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 44</i>	Cold Fill Valve Shorted	The Input/Output Board senses a problem with the hardware. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.

Table 24 *continues...*

Display	Description	Cause/Corrective Action
<i>E 10 45</i>	Hot Fill Tub Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 46</i>	Cold Fill Tub Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 47</i>	Hot Spray Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 48</i>	Cold Spray Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 49</i>	Cold Hard Fill Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 50</i>	Auxiliary Fill Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 51</i>	Compartment 1 Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 52</i>	Compartment 2 Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 53</i>	Compartment 3 Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 54</i>	Compartment 4 Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 55</i>	Drive Power Contractor Coil Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 56</i>	Electric Heat Contractor Coil Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.

Table 24 *continues...*

Display	Description	Cause/Corrective Action
<i>E 10 57</i>	Steam Heat Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 62</i>	24 Volt Supply Over Voltage	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 63</i>	24 Volt Supply Under Voltage	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E dr</i>	Drain Error	If enabled, the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E LF</i>	Water Leak Fill Error	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
<i>E d 01</i>	Setup Command Error	Drive received incorrect parameters. Power down machine to clear. Call a service technician if error persists.
<i>E d 21</i>	Over Voltage DC Bus Error	Power down to clear error. Check voltage input to machine. If it happens only at start of spin, replace motor. Replace drive board if error persists.
<i>E d 22</i>	Over Motor Temperature Error	Motor temperature is detected to be too high. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace drive board if error persists.
<i>E d 23</i>	Fatal IPM Over Current Shunt Error	Check that drum and motor spins freely. Power down to clear error. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Replace drive board if error persists.
<i>E d 24</i>	Fatal I2T Hardware Over Current Error	Check that drum and motor spins freely. Rotor may be locked up. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Power down to clear error. Replace drive board if error persists.

Table 24 *continues...*

Display	Description	Cause/Corrective Action
<i>E d 25</i>	IPM Over Temperature Error	IPM temperature is detected to be too high. Check that drum spins freely when empty, check for overloading of machine, reduce agitation time, and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Check for lint build-up on heat sink on drive board. Replace drive board if error persists.
<i>E d 29</i>	Motor Not Connected Error	The motor or one of its electrical phases is not connected. Check that the harness from the motor to the drive board is fully plugged in on both ends and that there is no damage to the motor harness. Make sure to push in the motor harness on both ends just in case it is a little loose and not fully inserted. If the harness looks fine and the error still occurs, try replacing the drive board or harness. Power down to clear error.
<i>E d 31</i>	Overload Current Detection	The drive has expended too much energy which means the system is being overloaded. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace drive board if error persists.
<i>E d 32</i>	Back EMF Error	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 33</i>	Fatal Start-Up Failure	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 34</i>	Locked Rotor Error	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 44</i>	Overcurrent Shunt Detection Circuit Fail Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 51</i>	Inrush Pin HW On/Off Fail	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 63</i>	Fatal IPM Temperature Short Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 64</i>	Fatal IPM Temperature Open Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 65</i>	Inverter Hardware Acquisition Failure	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 66</i>	Voltage Bus Acquisition Failure	Hardware failure. Power down to clear error. Replace drive board if error persists.

Table 24 *continues...*

Display	Description	Cause/Corrective Action
<i>E d 57</i>	Motor Initialization Error	Hardware failure. Power down to clear error. Replace drive board if error persists.

Table 24

Washer-Extractor – Error Codes for N and W control with B and P in 1st position and C, D, E, F, H, L, Q, X, Y in 8th position and H in 1st position with T in 3rd position

Error Codes

NOTE: Fatal Errors will show *oUt oF orDEr* along with the error on the display. If enabled, press the Blankets Cold and Delicate Warm keypads to clear fatal errors.

Following is a list of possible error codes for an electronic control.

Errors beginning with *E* refer to external device Infra-red communication errors. Errors beginning with *EC* refer to card reader errors. All other errors refer to machine errors.

Display	Description	Cause/Corrective Action
<i>E .01</i>	Transmission Failure	Communication failure. Re-aim external device and try again.
<i>E .02</i>	Time-out Error	Communication failure. Re-aim external device and try again.
<i>E .03</i>	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
<i>E .04</i>	Expecting Upload Request	Communication failure. Re-aim external device and try again.
<i>E .05</i>	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Recheck the programming option's value and try again.
<i>E .09</i>	CRC-16 Error	Communication failure. Re-aim external device and try again.
<i>E .0A</i>	Framing Error	Communication error. Re-aim external device and try again.
<i>E .0C</i>	Time-out Exceeded	Communication error. Re-aim external device and try again.
<i>E .0E</i>	Encryption Error	Communication error. Re-aim external device and try again. If the problem persists, check that the security code is correct.
<i>E .0F</i>	Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
<i>EC02</i>	Time-out Error	Communication failure. Try card again.
<i>EC03</i>	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
<i>EC05</i>	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Recheck the programming option's value and try again.

Table 25 *continues...*

Display	Description	Cause/Corrective Action
<i>EC 11</i>	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
<i>EC 1B</i>	No Communication	Card reader is initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
<i>EC 19</i>	No Card Reader Communication	Communication failure. Power down, power up and try again. If error persists, replace control or card reader.
<i>EC HH</i>	Payment System Error	The control communicates with the Payment System in order to perform vending transactions. If an error should occur, which, terminates communication during a transaction, the LED Display will show <i>EC HH</i> for a control generated error, where the <i>HH</i> represents an error code.
<i>E id oUePUt</i>	Input/Output Board ID Error	The control detects the wrong output board is connected for the machine configuration. The control sounds an alarm tone for 15 seconds. To clear the error, replace with the correct board.
<i>E id dr uE</i>	Drive Board ID Error	The control detects the wrong drive board is connected for the machine configuration. The control sounds an alarm tone for 15 seconds. To clear the error, replace with the correct board.
<i>ALArn</i>	Break-in Alarm Error	Check the service door and coin vault switches.
<i>aFF</i>	Break-in Alarm Shutdown Error	Check the service door and coin vault switches.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dip switch #1 to the same setting as the previous control. If reworking the machine to use a different voltage supply, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>Co in Error</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E nr</i>	Input/Output Board Not Ready	Indicates an input/output board communication error. The control sounds an alarm tone for 15 seconds. To clear the error, disconnect and then reconnect power to the machine.
<i>EnHH</i>	Machine ID Chip Errors	Communication failure. Power down, power up and try again. If error persists, check connection between user control and Machine ID Chip, or replace the user control or the Machine ID Chip.
Right most decimal point blinking	Machine ID Error	Machine ID is no longer communicating with the control. Check Machine ID connection.
<i>E Co</i>	Input/Output Board Communication Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and input/output board, or try replacing the user control or the input/output board.

Table 25 continues...

Display	Description	Cause/Corrective Action
<i>E d Co</i>	Drive Board Communication Error	After 3 unsuccessful communication attempts, the control will turn the drive power contactor off for 5 minutes to reset the drive. This procedure will be executed up to 3 times before the drive communication error appears. The control enters Door Unlocking Mode after basket rotation has stopped. The control sounds an alarm tone for 15 seconds. To clear the error, disconnect and then reconnect power to the machine.
<i>E dr</i>	Drain Error	If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and sounds. The control sounds an alarm tone for 15 seconds. To clear the error, disconnect and then reconnect power to the machine.
<i>E FL</i>	Fill Error	This error may be programmed on or off. The machine does not reach the programmed fill level within 30 minutes. The machine enters Door Unlocking Mode and drains for 90 seconds. The control sounds an alarm tone for 15 seconds. To clear the error, disconnect and then reconnect power to the machine.
<i>E nFLo</i>	No Water Flow Error	If the control does not reach a water level of 4 inches within the programmed time it may mean the hose to the pressure sensor has a leak or no water is flowing into the machine. The control enters Machine Error Mode. The control drains for 90 seconds and then turns off all outputs. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E oF</i>	Overflow Error	The control senses an unsafe high water level is detected in the machine and water is unable to drain. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E PS</i>	Pressure Sensor Error	The control does not detect a valid water level sensor input for thirty (30) seconds, or the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Cycle, or Overflow Mode. The machine enters the Door Unlocking Mode and attempts to drain for 30 seconds. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 5d</i>	Slow Drain Error (right most decimal point)	If a slow drain is detected in the Drain step of a running cycle, the control will light the right-most decimal point. The decimal point will remain illuminated after the slow drain error display has expired. The decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds, or by cycling the power to the machine.

Table 25 *continues...*

Display	Description	Cause/Corrective Action
<i>E Ld</i>	Water Leak Drain Error (right most decimal point)	Error will display if there is a leak after the door is opened at the End of Cycle for 1 minute. Clears after 1 minute or until a key is pressed. If the water level has dropped more than an acceptable amount in a during a water leak drain check, the control will save a water leak drain error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
<i>E LF</i>	Water Leak Fill Error (right most decimal point)	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
Right most decimal point Lit	Water Leak (Fill or Drain) Detection or Slow Drain Detection Error	Water leak test has detected a water leak during a cycle or slow drain is detected in the drain step of a running cycle. The decimal point will remain lit after the error display has expired. Clear the decimal point by pressing the START keypad three (3) times within five seconds (5) or by cycling the power to the machine.
<i>E bELL</i>	Broken Belt Error	After basket rotation has ended, the machine's door unlocks. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E dL</i>	Door Lock Fatal Error	The output board reports that the door unlocks while running a cycle. The control sounds an alarm tone for 15 seconds. To clear the error, disconnect and then reconnect power to the machine.
<i>E dL 1</i>	Door Lock Non-Fatal Error	The door fails to lock after an attempt. The output board attempts to lock the door for 70 seconds. If the door fails to lock, the machine returns to Start Mode.
<i>E dL 2</i>	Door Unlock Non-Fatal Error	If the door fails to unlock. The output board attempts to lock the door 2 more times. If the door does not unlock, the control will flash the START LED. If the START keypad is pressed, unlocking attempts will restart.
<i>E door</i>	Door Opened During A Running Cycle	Control detects door open and door locked inputs high. Can be caused by pulling on door while locked or about to lock. Correct in-operative door locking system. Power down machine to clear error.
<i>E FbAL</i>	Frame Balance Switch Error	During a cycle, the frame balance switch becomes unsatisfied. The machine enters the Door Unlocking Mode. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.

Table 25 continues...

Display	Description	Cause/Corrective Action
E UbAL	Non-Fatal Unbalance Limit Error	If enabled, this error is shown at the end of a cycle. The machine exceeds the maximum number of balance attempts. If enabled, the error code is shown in the display after a cycle is complete. The control sounds an alarm tone for 15 seconds. To clear the error, wait 1 minute, open the door, or press any keypad.
E tE	Max Water Temperature Exceeded Error (Heat Models Only)	The Input/Output Board flags the Max Water Temperature Exceeded Error and the control sets the fatal error. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
E oP	Open Temperature/Thermistor Sensor Error (Heat Models Only)	This error is shown at the end of a cycle. The input/output board reports an open thermistor. The heater output is turned off for the remainder of the current cycle. After the cycle is complete, the error code is shown in the display. The control sounds an alarm tone for 15 seconds. To clear the error, wait 1 minute, open the door, or press any keypad.
E LP	Low Level Pressure Switch Error (Heat Models Only)	This error is only enabled during the Factory Test Cycle. The control fills to low level and the low level pressure switch then becomes dissatisfied. The machine enters Door Unlocking Mode. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
E SH	Shorted Temperature/Thermistor Sensor Error (Heat Models Only)	This error is shown at the end of a cycle. The input/output board reports a shorted thermistor. The heater output is turned off for the remainder of the current cycle. After the cycle is complete, the error code is shown in the display. The control sounds an alarm tone for 15 seconds. To clear the error, wait 1 minute, open the door, or press any keypad.
E 5tHt	Slow To Heat Error (Heat Models Only)	Non-Fatal Error that will appear during the running cycle without affecting the cycle. The control sounds an alarm tone for 15 seconds. To clear the error, press any keypad.
E 5ud5	Suds Lock Error	In the spin steps, if the control determines that there are suds in the machine after running all programmed Suds Routines, it will display a Suds Lock Error at the end of the cycle after the door is opened. To clear the error, wait 1 minute, open the door, or press any keypad.
E io 29	Mosfet Enable Pin Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.

Table 25 continues...

Display	Description	Cause/Corrective Action
<i>E 10 30</i>	Door Lock Solenoid Disable Pin Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 31</i>	Door Lock Solenoid Pulse Pin Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 32</i>	Door Lock Solenoid Relay Pin Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 33</i>	Mosfet Enable Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 34</i>	Door Lock Solenoid Disable Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 35</i>	Door Lock Solenoid Hardware Output Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 36</i>	Door Lock Solenoid Pulse Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 37</i>	Door Lock Solenoid Full Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 38</i>	Mosfet Enable Cannot Be Enabled	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 39</i>	Mosfet Enable Cannot Be Disabled	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.

Table 25 *continues...*

Display	Description	Cause/Corrective Action
<i>E 10 42</i>	Door Lock Input Pin Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 43</i>	Hot Fill Valve Shorted	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 44</i>	Cold Fill Valve Shorted	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 45</i>	Hot Fill Tub Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 46</i>	Cold Fill Tub Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 47</i>	Hot Spray Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 48</i>	Cold Spray Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 49</i>	Cold Hard Fill Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 50</i>	Auxiliary Fill Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 51</i>	Compartment 1 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 52</i>	Compartment 2 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 53</i>	Compartment 3 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 54</i>	Compartment 4 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.

Table 25 *continues...*

Display	Description	Cause/Corrective Action
<i>E 10 55</i>	Drive Power Contractor Coil Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 56</i>	Electric Heat Contractor Coil Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 57</i>	Steam Heat Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 62</i>	24 Volt Supply Over Voltage	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E 10 63</i>	24 Volt Supply Under Voltage	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Blankets Cold and Delicate Warm keypads.
<i>E dr</i>	Drain Error	If enabled, the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). The control sounds an alarm tone for 15 seconds. To clear the error, disconnect and then reconnect power to the machine.
<i>E LF</i>	Water Leak Fill Error	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
<i>E d 01</i>	Setup Command Error	Drive received incorrect parameters. Power down machine to clear. Call a service technician if error persists.
<i>E d 21</i>	Over Voltage DC Bus Error	Power down to clear error. Check voltage input to machine. If it happens only at start of spin, replace motor. Replace drive board if error persists.
<i>E d 22</i>	Over Motor Temperature Error	Motor temperature is detected to be too high. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace drive board if error persists.
<i>E d 23</i>	Fatal IPM Over Current Shunt Error	Check that drum and motor spins freely. Power down to clear error. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Replace drive board if error persists.

Table 25 *continues...*

Display	Description	Cause/Corrective Action
<i>E d 24</i>	Fatal I2T Hardware Over Current Error	Check that drum and motor spins freely. Rotor may be locked up. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Power down to clear error. Replace drive board if error persists.
<i>E d 25</i>	IPM Over Temperature Error	IPM temperature is detected to be too high. Check that drum spins freely when empty, check for overloading of machine, reduce agitation time, and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Check for lint build-up on heat sink on drive board. Replace drive board if error persists.
<i>E d 29</i>	Motor Not Connected Error	The motor or one of its electrical phases is not connected. Check that the harness from the motor to the drive board is fully plugged in on both ends and that there is no damage to the motor harness. Make sure to push in the motor harness on both ends just in case it is a little loose and not fully inserted. If the harness looks fine and the error still occurs, try replacing the drive board or harness. Power down to clear error.
<i>E d 31</i>	Overload Current Detection	The drive has expended too much energy which means the system is being overloaded. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace drive board if error persists.
<i>E d 32</i>	Back EMF Error	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 33</i>	Fatal Start-Up Failure	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 34</i>	Locked Rotor Error	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 44</i>	Overcurrent Shunt Detection Circuit Fail Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 51</i>	Inrush Pin HW On/Off Fail	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 63</i>	Fatal IPM Temperature Short Error	Hardware failure. Power down to clear error. Replace drive board if error persists.

Table 25 *continues...*

Display	Description	Cause/Corrective Action
<i>E d 64</i>	Fatal IPM Temperature Open Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 65</i>	Inverter Hardware Acquisition Failure	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 66</i>	Voltage Bus Acquisition Failure	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 67</i>	Motor Initialization Error	Hardware failure. Power down to clear error. Replace drive board if error persists.

Table 25

Washer-Extractor – Error Codes for N or W control with S in 1st position

Error Codes

Following is a list of possible error codes for an electronic control.

Errors beginning with **E**, refer to external device Infra-red communication errors. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

NOTE: Fatal Errors will show *out of order* along with the error on the display. If enabled, press the Permanent Press 60C and Delicates 30C keypads to clear fatal errors.

Display	Description	Cause/Corrective Action
E .01	Transmission Failure	Communication failure. Re-aim external device and try again.
E .02	Time-out Error	Communication failure. Re-aim external device and try again.
E .03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
E .04	Expecting Upload Request	Communication failure. Re-aim external device and try again.
E .05	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Recheck the programming option's value and try again.
E .09	CRC-16 Error	Communication failure. Re-aim external device and try again.
E .0A	Framing Error	Communication error. Re-aim external device and try again.
E .0C	Time-out Exceeded	Communication error. Re-aim external device and try again.
E .0E	Encryption Error	Communication error. Re-aim external device and try again. If the problem persists, check that the security code is correct.
E .0F	Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
EC02	Time-out Error	Communication failure. Try card again.
EC03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
EC05	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Recheck the programming option's value and try again.
EC 11	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
EC 1B	No Communication	Card reader is initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.

Table 26 *continues...*

Display	Description	Cause/Corrective Action
<i>EC 19</i>	No Card Reader Communication	Communication failure. Power down, power up and try again. If error persists, replace control or card reader.
<i>ECHH</i>	Payment System Error	The control communicates with the Payment System in order to perform vending transactions. If an error should occur, which, terminates communication during a transaction, the LED Display will show <i>ECHH</i> for a control generated error, where the <i>HH</i> represents an error code.
<i>E id oUtPUT</i>	Input/Output Board ID Error	The control detects the wrong output board is connected for the machine configuration. The control sounds an alarm tone for 15 seconds. To clear the error, replace with the correct board.
<i>E id dr iUE</i>	Drive Board ID Error	The control detects the wrong drive board is connected for the machine configuration. The control sounds an alarm tone for 15 seconds. To clear the error, replace with the correct board.
<i>ALARn</i>	Break-in Alarm Error	Check the service door and coin vault switches.
<i>aFF</i>	Break-in Alarm Shutdown Error	Check the service door and coin vault switches.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dip switch #1 to the same setting as the previous control. If reworking the machine to use a different voltage supply, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>Co in Error</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E nr</i>	Input/Output Board Not Ready	Indicates an input/output board communication error. The control sounds an alarm tone for 15 seconds. To clear the error, disconnect and then reconnect power to the machine.
<i>EnHH</i>	Machine ID Chip Errors	Communication failure. Power down, power up and try again. If error persists, check connection between user control and Machine ID Chip, or replace the user control or the Machine ID Chip.
Right most decimal point blinking	Machine ID Error	Machine ID is no longer communicating with the control. Check Machine ID connection.
<i>E Co</i>	Input/Output Board Communication Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and input/output board, or try replacing the user control or the input/output board.

Table 26 *continues...*

Display	Description	Cause/Corrective Action
<i>E d Co</i>	Drive Board Communication Error	<p>After 3 unsuccessful communication attempts, the control will turn the drive power contactor off for 5 minutes to reset the drive. This procedure will be executed up to 3 times before the drive communication error appears. The control enters Door Unlocking Mode after basket rotation has stopped. The control sounds an alarm tone for 15 seconds.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E dr</i>	Drain Error	<p>If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and sounds. The control sounds an alarm tone for 15 seconds.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E FL</i>	Fill Error	<p>This error may be programmed on or off. The machine does not reach the programmed fill level within 30 minutes. The machine enters Door Unlocking Mode and drains for 90 seconds. The control sounds an alarm tone for 15 seconds.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E nFLo</i>	No Water Flow Error	<p>If the control does not reach a water level of 4 inches within the programmed time it may mean the hose to the pressure sensor has a leak or no water is flowing into the machine. The control enters Machine Error Mode. The control drains for 90 seconds and then turns off all outputs. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.</p>
<i>E oF</i>	Overflow Error	<p>The control senses an unsafe high water level is detected in the machine and water is unable to drain. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.</p>
<i>E PS</i>	Pressure Sensor Error	<p>The control does not detect a valid water level sensor input for thirty (30) seconds, or the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Cycle, or Overflow Mode. The machine enters the Door Unlocking Mode and attempts to drain for 30 seconds. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.</p>
<i>E 5d</i>	Slow Drain Error (right most decimal point)	<p>If a slow drain is detected in the Drain step of a running cycle, the control will light the right-most decimal point. The decimal point will remain illuminated after the slow drain error display has expired. The decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds, or by cycling the power to the machine.</p>

Table 26 *continues...*

Display	Description	Cause/Corrective Action
<i>E Ld</i>	Water Leak Drain Error (right most decimal point)	Error will display if there is a leak after the door is opened at the End of Cycle for 1 minute. Clears after 1 minute or until a key is pressed. If the water level has dropped more than an acceptable amount in a during a water leak drain check, the control will save a water leak drain error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
<i>E LF</i>	Water Leak Fill Error (right most decimal point)	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
Right most decimal point Lit	Water Leak (Fill or Drain) Detection or Slow Drain Detection Error	Water leak test has detected a water leak during a cycle or slow drain is detected in the drain step of a running cycle. The decimal point will remain lit after the error display has expired. Clear the decimal point by pressing the START keypad three (3) times within five seconds (5) or by cycling the power to the machine.
<i>E bELL</i>	Broken Belt Error	After basket rotation has ended, the machine's door unlocks. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E dL</i>	Door Lock Fatal Error	The output board reports that the door unlocks while running a cycle. The control sounds an alarm tone for 15 seconds. To clear the error, disconnect and then reconnect power to the machine.
<i>E dL 1</i>	Door Lock Non-Fatal Error	The door fails to lock after an attempt. The output board attempts to lock the door for 70 seconds. If the door fails to lock, the machine returns to Start Mode.
<i>E dL 2</i>	Door Unlock Non-Fatal Error	If the door fails to unlock. The output board attempts to lock the door 2 more times. If the door does not unlock, the control will flash the START LED. If the START keypad is pressed, unlocking attempts will restart.
<i>E door</i>	Door Opened During A Running Cycle	Control detects door open and door locked inputs high. Can be caused by pulling on door while locked or about to lock. Correct in-operative door locking system. Power down machine to clear error.
<i>E FbAL</i>	Frame Balance Switch Error	During a cycle, the frame balance switch becomes unsatisfied. The machine enters the Door Unlocking Mode. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.

Table 26 *continues...*

Display	Description	Cause/Corrective Action
<i>E UbAL</i>	Non-Fatal Unbalance Limit Error	If enabled, this error is shown at the end of a cycle. The machine exceeds the maximum number of balance attempts. If enabled, the error code is shown in the display after a cycle is complete. The control sounds an alarm tone for 15 seconds. To clear the error, wait 1 minute, open the door, or press any keypad.
<i>E tE</i>	Max Water Temperature Exceeded Error (Heat Models Only)	The Input/Output Board flags the Max Water Temperature Exceeded Error and the control sets the fatal error. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E oP</i>	Open Temperature/Thermistor Sensor Error (Heat Models Only)	This error is shown at the end of a cycle. The input/output board reports an open thermistor. The heater output is turned off for the remainder of the current cycle. After the cycle is complete, the error code is shown in the display. The control sounds an alarm tone for 15 seconds. To clear the error, wait 1 minute, open the door, or press any keypad.
<i>E LP</i>	Low Level Pressure Switch Error (Heat Models Only)	This error is only enabled during the Factory Test Cycle. The control fills to low level and the low level pressure switch then becomes dissatisfied. The machine enters Door Unlocking Mode. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E SH</i>	Shorted Temperature/Thermistor Sensor Error (Heat Models Only)	This error is shown at the end of a cycle. The input/output board reports a shorted thermistor. The heater output is turned off for the remainder of the current cycle. After the cycle is complete, the error code is shown in the display. The control sounds an alarm tone for 15 seconds. To clear the error, wait 1 minute, open the door, or press any keypad.
<i>E 5tHt</i>	Slow To Heat Error (Heat Models Only)	Non-Fatal Error that will appear during the running cycle without affecting the cycle. The control sounds an alarm tone for 15 seconds. To clear the error, press any keypad.
<i>E 5ud5</i>	Suds Lock Error	In the spin steps, if the control determines that there are suds in the machine after running all programmed Suds Routines, it will display a Suds Lock Error at the end of the cycle after the door is opened. To clear the error, wait 1 minute, open the door, or press any keypad.
<i>E io 29</i>	Mosfet Enable Pin Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.

Table 26 *continues...*

Display	Description	Cause/Corrective Action
<i>E 10 30</i>	Door Lock Solenoid Disable Pin Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 31</i>	Door Lock Solenoid Pulse Pin Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 32</i>	Door Lock Solenoid Relay Pin Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 33</i>	Mosfet Enable Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 34</i>	Door Lock Solenoid Disable Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 35</i>	Door Lock Solenoid Hardware Output Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 36</i>	Door Lock Solenoid Pulse Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 37</i>	Door Lock Solenoid Full Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 38</i>	Mosfet Enable Cannot Be Enabled	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 39</i>	Mosfet Enable Cannot Be Disabled	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.

Table 26 *continues...*

Display	Description	Cause/Corrective Action
<i>E 10 42</i>	Door Lock Input Pin Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 43</i>	Hot Fill Valve Shorted	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 44</i>	Cold Fill Valve Shorted	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 45</i>	Hot Fill Tub Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 46</i>	Cold Fill Tub Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 47</i>	Hot Spray Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 48</i>	Cold Spray Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 49</i>	Cold Hard Fill Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 50</i>	Auxiliary Fill Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 51</i>	Compartment 1 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 52</i>	Compartment 2 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 53</i>	Compartment 3 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 54</i>	Compartment 4 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.

Table 26 *continues...*

Display	Description	Cause/Corrective Action
<i>E 10 55</i>	Drive Power Contractor Coil Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 56</i>	Electric Heat Contractor Coil Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 57</i>	Steam Heat Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 62</i>	24 Volt Supply Over Voltage	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E 10 63</i>	24 Volt Supply Under Voltage	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Permanent Press 60C and Delicates 30C keypads.
<i>E dr</i>	Drain Error	If enabled, the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). The control sounds an alarm tone for 15 seconds. To clear the error, disconnect and then reconnect power to the machine.
<i>E LF</i>	Water Leak Fill Error	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
<i>E d 01</i>	Setup Command Error	Drive received incorrect parameters. Power down machine to clear. Call a service technician if error persists.
<i>E d 21</i>	Over Voltage DC Bus Error	Power down to clear error. Check voltage input to machine. If it happens only at start of spin, replace motor. Replace drive board if error persists.
<i>E d 22</i>	Over Motor Temperature Error	Motor temperature is detected to be too high. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace drive board if error persists.
<i>E d 23</i>	Fatal IPM Over Current Shunt Error	Check that drum and motor spins freely. Power down to clear error. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Replace drive board if error persists.

Table 26 *continues...*

Display	Description	Cause/Corrective Action
<i>E d 24</i>	Fatal I2T Hardware Over Current Error	Check that drum and motor spins freely. Rotor may be locked up. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Power down to clear error. Replace drive board if error persists.
<i>E d 25</i>	IPM Over Temperature Error	IPM temperature is detected to be too high. Check that drum spins freely when empty, check for overloading of machine, reduce agitation time, and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Check for lint build-up on heat sink on drive board. Replace drive board if error persists.
<i>E d 29</i>	Motor Not Connected Error	The motor or one of its electrical phases is not connected. Check that the harness from the motor to the drive board is fully plugged in on both ends and that there is no damage to the motor harness. Make sure to push in the motor harness on both ends just in case it is a little loose and not fully inserted. If the harness looks fine and the error still occurs, try replacing the drive board or harness. Power down to clear error.
<i>E d 31</i>	Overload Current Detection	The drive has expended too much energy which means the system is being overloaded. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace drive board if error persists.
<i>E d 32</i>	Back EMF Error	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 33</i>	Fatal Start-Up Failure	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 34</i>	Locked Rotor Error	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 44</i>	Overcurrent Shunt Detection Circuit Fail Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 51</i>	Inrush Pin HW On/Off Fail	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 63</i>	Fatal IPM Temperature Short Error	Hardware failure. Power down to clear error. Replace drive board if error persists.

Table 26 *continues...*

Display	Description	Cause/Corrective Action
<i>E d 64</i>	Fatal IPM Temperature Open Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 65</i>	Inverter Hardware Acquisition Failure	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 66</i>	Voltage Bus Acquisition Failure	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 67</i>	Motor Initialization Error	Hardware failure. Power down to clear error. Replace drive board if error persists.

Table 26

Washer-Extractor – Error Codes for N and W controls with H in 1st position and A, D G, E, H, J, and U in 3rd position

Error Codes

Following is a list of possible error codes for an electronic control.

Errors beginning with **E**, refer to external device Infra-red communication errors. Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

NOTE: Fatal Errors will show *OUT OF ORDER* along with the error on the display. If enabled, press the Perm Press 90C and Perm Press 60C keypads to clear fatal errors.

Display	Description	Cause/Corrective Action
E .01	Transmission Failure	Communication failure. Re-aim external device and try again.
E .02	Time-out Error	Communication failure. Re-aim external device and try again.
E .03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
E .04	Expecting Upload Request	Communication failure. Re-aim external device and try again.
E .05	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Recheck the programming option's value and try again.
E .09	CRC-16 Error	Communication failure. Re-aim external device and try again.
E .0A	Framing Error	Communication error. Re-aim external device and try again.
E .0C	Time-out Exceeded	Communication error. Re-aim external device and try again.
E .0E	Encryption Error	Communication error. Re-aim external device and try again. If the problem persists, check that the security code is correct.
E .0F	Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
EC02	Time-out Error	Communication failure. Try card again.
EC03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
EC05	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Recheck the programming option's value and try again.
EC11	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.

Table 27 *continues...*

Display	Description	Cause/Corrective Action
<i>EC 1B</i>	No Communication	Card reader is initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
<i>EC 19</i>	No Card Reader Communication	Communication failure. Power down, power up and try again. If error persists, replace control or card reader.
<i>EC HH</i>	Payment System Error	The control communicates with the Payment System in order to perform vending transactions. If an error should occur, which, terminates communication during a transaction, the LED Display will show <i>EC HH</i> for a control generated error, where the <i>HH</i> represents an error code.
<i>E id oUtPUt</i>	Input/Output Board ID Error	The control detects the wrong output board is connected for the machine configuration. The control sounds an alarm tone for 15 seconds. To clear the error, replace with the correct board.
<i>E id dr iUE</i>	Drive Board ID Error	The control detects the wrong drive board is connected for the machine configuration. The control sounds an alarm tone for 15 seconds. To clear the error, replace with the correct board.
<i>ALArn</i>	Break-in Alarm Error	Check the service door and coin vault switches.
<i>aFF</i>	Break-in Alarm Shutdown Error	Check the service door and coin vault switches.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dip switch #1 to the same setting as the previous control. If reworking the machine to use a different voltage supply, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>Co in Error</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E nr</i>	Input/Output Board Not Ready	Indicates an input/output board communication error. The control sounds an alarm tone for 15 seconds. To clear the error, disconnect and then reconnect power to the machine.
<i>EnHH</i>	Machine ID Chip Errors	Communication failure. Power down, power up and try again. If error persists, check connection between user control and Machine ID Chip, or replace the user control or the Machine ID Chip.
Right most decimal point blinking	Machine ID Error	Machine ID is no longer communicating with the control. Check Machine ID connection.
<i>E Co</i>	Input/Output Board Communication Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and input/output board, or try replacing the user control or the input/output board.

Table 27 continues...

Display	Description	Cause/Corrective Action
<i>E d Co</i>	Drive Board Communication Error	<p>After 3 unsuccessful communication attempts, the control will turn the drive power contactor off for 5 minutes to reset the drive. This procedure will be executed up to 3 times before the drive communication error appears. The control enters Door Unlocking Mode after basket rotation has stopped. The control sounds an alarm tone for 15 seconds.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E dr</i>	Drain Error	<p>If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and sounds. The control sounds an alarm tone for 15 seconds.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E FL</i>	Fill Error	<p>This error may be programmed on or off. The machine does not reach the programmed fill level within 30 minutes. The machine enters Door Unlocking Mode and drains for 90 seconds. The control sounds an alarm tone for 15 seconds.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E nFLo</i>	No Water Flow Error	<p>If the control does not reach a water level of 4 inches within the programmed time it may mean the hose to the pressure sensor has a leak or no water is flowing into the machine. The control enters Machine Error Mode. The control drains for 90 seconds and then turns off all outputs. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.</p>
<i>E oF</i>	Overflow Error	<p>The control senses an unsafe high water level is detected in the machine and water is unable to drain. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.</p>
<i>E PS</i>	Pressure Sensor Error	<p>The control does not detect a valid water level sensor input for thirty (30) seconds, or the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Cycle, or Overflow Mode. The machine enters the Door Unlocking Mode and attempts to drain for 30 seconds. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.</p>
<i>E 5d</i>	Slow Drain Error (right most decimal point)	<p>If a slow drain is detected in the Drain step of a running cycle, the control will light the right-most decimal point. The decimal point will remain illuminated after the slow drain error display has expired. The decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds, or by cycling the power to the machine.</p>

Table 27 *continues...*

Display	Description	Cause/Corrective Action
<i>E Ld</i>	Water Leak Drain Error (right most decimal point)	Error will display if there is a leak after the door is opened at the End of Cycle for 1 minute. Clears after 1 minute or until a key is pressed. If the water level has dropped more than an acceptable amount in a during a water leak drain check, the control will save a water leak drain error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
<i>E LF</i>	Water Leak Fill Error (right most decimal point)	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
<i>E bELt</i>	Broken Belt Error	After basket rotation has ended, the machine's door unlocks. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.
<i>E dL</i>	Door Lock Fatal Error	The output board reports that the door unlocks while running a cycle. The control sounds an alarm tone for 15 seconds. To clear the error, disconnect and then reconnect power to the machine.
<i>E dL 1</i>	Door Lock Non-Fatal Error	The door fails to lock after an attempt. The output board attempts to lock the door for 70 seconds. If the door fails to lock, the machine returns to Start Mode.
<i>E dL2</i>	Door Unlock Non-Fatal Error	If the door fails to unlock. The output board attempts to lock the door 2 more times. If the door does not unlock, the control will flash the START LED. If the START keypad is pressed, unlocking attempts will restart.
<i>E door</i>	Door Opened During A Running Cycle	Control detects door open and door locked inputs high. Can be caused by pulling on door while locked or about to lock. Correct in-operative door locking system. Power down machine to clear error.
<i>E tE</i>	Max Water Temperature Exceeded Error (Heat Models Only)	The Input/Output Board flags the Max Water Temperature Exceeded Error and the control sets the fatal error. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.

Table 27 *continues...*

Display	Description	Cause/Corrective Action
<i>E oP</i>	Open Temperature/Thermistor Sensor Error (Heat Models Only)	<p>This error is shown at the end of a cycle. The input/output board reports an open thermistor. The heater output is turned off for the remainder of the current cycle. After the cycle is complete, the error code is shown in the display.</p> <p>The control sounds an alarm tone for 15 seconds. To clear the error, wait 1 minute, open the door, or press any keypad.</p>
<i>E LP</i>	Low Level Pressure Switch Error (Heat Models Only)	<p>This error is only enabled during the Factory Test Cycle. The control fills to low level and the low level pressure switch then becomes dissatisfied. The machine enters Door Unlocking Mode.</p> <p>The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.</p>
<i>E 5H</i>	Shorted Temperature/Thermistor Sensor Error (Heat Models Only)	<p>This error is shown at the end of a cycle. The input/output board reports a shorted thermistor. The heater output is turned off for the remainder of the current cycle. After the cycle is complete, the error code is shown in the display.</p> <p>The control sounds an alarm tone for 15 seconds. To clear the error, wait 1 minute, open the door, or press any keypad.</p>
<i>E io 30</i>	Door Lock Solenoid Disable Pin Failure	<p>The Input/Output Board senses a problem with the hardware.</p> <p>The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.</p>
<i>E io 39</i>	Mosfet Enable Cannot Be Disabled	<p>The Input/Output Board senses a problem with the hardware.</p> <p>The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.</p>
<i>E io 43</i>	Hot Fill Valve Shorted	<p>The Input/Output Board senses a problem with the hardware.</p> <p>The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.</p>
<i>E io 44</i>	Cold Fill Valve Shorted	<p>The Input/Output Board senses a problem with the hardware.</p> <p>The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.</p>
<i>E io 45</i>	Hot Fill Tub Valve Shorted	<p>The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.</p>
<i>E io 46</i>	Cold Fill Tub Valve Shorted	<p>The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.</p>

Table 27 *continues...*

Display	Description	Cause/Corrective Action
E 10 47	Hot Spray Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.
E 10 48	Cold Spray Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.
E 10 49	Cold Hard Fill Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.
E 10 50	Auxiliary Fill Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.
E 10 51	Compartment 1 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.
E 10 52	Compartment 2 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.
E 10 53	Compartment 3 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.
E 10 54	Compartment 4 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.
E 10 55	Drive Power Contractor Coil Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.
E 10 56	Electric Heat Contractor Coil Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.
E 10 57	Steam Heat Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.
E 10 62	24 Volt Supply Over Voltage	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.
E 10 63	24 Volt Supply Under Voltage	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Perm Press 90C and Perm Press 60C keypads.

Table 27 *continues...*

Display	Description	Cause/Corrective Action
<i>E dr</i>	Drain Error	If enabled, the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). The control sounds an alarm tone for 15 seconds. To clear the error, disconnect and then reconnect power to the machine.
<i>E LF</i>	Water Leak Fill Error	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
<i>E d 01</i>	Setup Command Error	Drive received incorrect parameters. Power down machine to clear. Call a service technician if error persists.
<i>E d 21</i>	Over Voltage DC Bus Error	Power down to clear error. Check voltage input to machine. If it happens only at start of spin, replace motor. Replace drive board if error persists.
<i>E d 22</i>	Over Motor Temperature Error	Motor temperature is detected to be too high. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace drive board if error persists.
<i>E d 23</i>	Fatal IPM Over Current Shunt Error	Check that drum and motor spins freely. Power down to clear error. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Replace drive board if error persists.
<i>E d 24</i>	Fatal I2T Hardware Over Current Error	Check that drum and motor spins freely. Rotor may be locked up. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Power down to clear error. Replace drive board if error persists.
<i>E d 25</i>	IPM Over Temperature Error	IPM temperature is detected to be too high. Check that drum spins freely when empty, check for overloading of machine, reduce agitation time, and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Check for lint build-up on heat sink on drive board. Replace drive board if error persists.
<i>E d 29</i>	Motor Not Connected Error	The motor or one of its electrical phases is not connected. Check that the harness from the motor to the drive board is fully plugged in on both ends and that there is no damage to the motor harness. Make sure to push in the motor harness on both ends just in case it is a little loose and not fully inserted. If the harness looks fine and the error still occurs, try replacing the drive board or harness. Power down to clear error.

Table 27 *continues...*

Display	Description	Cause/Corrective Action
<i>E d 31</i>	Overload Current Detection	The drive has expended too much energy which means the system is being overloaded. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace drive board if error persists.
<i>E d 32</i>	Back EMF Error	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 33</i>	Fatal Start-Up Failure	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 34</i>	Locked Rotor Error	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 44</i>	Overcurrent Shunt Detection Circuit Fail Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 51</i>	Inrush Pin HW On/Off Fail	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 63</i>	Fatal IPM Temperature Short Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 64</i>	Fatal IPM Temperature Open Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 65</i>	Inverter Hardware Acquisition Failure	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 66</i>	Voltage Bus Acquisition Failure	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 67</i>	Motor Initialization Error	Hardware failure. Power down to clear error. Replace drive board if error persists.

Table 27

Washer-Extractor – Error Codes for Q control with N in 8th position

Error Codes

Errors beginning with **E**, refer to external device Infra-red communication errors.

Following is a list of possible error codes for an electronic control.

NOTE: Fatal Errors will show *oUt oF orDEr* along with the error on the display.

Display	Description	Cause/Corrective Action
<i>E .01</i>	Transmission Failure	Communication failure. Re-aim external device and try again.
<i>E .02</i>	Time-out Error	Communication failure. Re-aim external device and try again.
<i>E .03</i>	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
<i>E .04</i>	Expecting Upload Request	Communication failure. Re-aim external device and try again.
<i>E .05</i>	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Recheck the programming option's value and try again.
<i>E .09</i>	CRC-16 Error	Communication failure. Re-aim external device and try again.
<i>E .0A</i>	Framing Error	Communication error. Re-aim external device and try again.
<i>E .0C</i>	Time-out Exceeded	Communication error. Re-aim external device and try again.
<i>E .0E</i>	Encryption Error	Communication error. Re-aim external device and try again. If the problem persists, check that the security code is correct.
<i>E .0F</i>	Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
<i>E id oUtPUt</i>	Input/Output Board ID Error	The control detects the wrong output board is connected for the machine configuration. The control sounds an alarm tone for 15 seconds. To clear the error, replace with the correct board.
<i>E id dr iUE</i>	Drive Board ID Error	The control detects the wrong drive board is connected for the machine configuration. The control sounds an alarm tone for 15 seconds. To clear the error, replace with the correct board.
<i>E d5</i>	Brownout/Voltage Configuration	An incorrect dip switch configuration is detected. To clear the error, the machine must be powered down and the dip switch configuration must be corrected.
<i>E nr</i>	Input/Output Board Not Ready	Indicates an input/output board communication error. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.

Table 28 *continues...*

Display	Description	Cause/Corrective Action
<i>E b5</i>	Input/Output Board Shorted	Indicates that the input/output board is shorted. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E ,HH</i>	IR Communications Error	This error may occur during IR communications. When this error occurs, the control shows Display 1, where <i>HH</i> indicates the IR code value. The error display is automatically cleared after two (2) seconds.
<i>E nHH</i>	Machine ID Chip Errors	Communication failure. Power down, power up and try again. If error persists, check connection between user control and Machine ID Chip, or replace the user control or the Machine ID Chip.
<i>E Co</i>	SCI Communications	Indicates a communication error between the FEC and the input/output board. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E d Co</i>	Drive Board Communication Error	After 3 unsuccessful communication attempts, the control will turn the drive power contactor off for 5 minutes to reset the drive. This procedure will be executed up to 3 times before the drive communication error appears. The control enters Door Unlocking Mode after basket rotation has stopped. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E dr</i>	Drain Error	If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and sounds. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E FL</i>	Fill Error	This error may be programmed on or off. The machine does not reach the programmed fill level within 30 minutes. The machine enters Door Unlocking Mode and drains for 90 seconds. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.

Table 28 *continues...*

Display	Description	Cause/Corrective Action
<i>E nFLo</i>	No Water Flow Error	<p>This error may be programmed on or off. The water level does not reach the basket within 5 minutes. The machine enters Door Unlocking Mode and attempts to drain for 90 seconds. The control sounds a pulsing alarm tone for two (2) minutes.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E oF</i>	Overflow Error	<p>The control continues to see an overflow error after 5 minutes of being in the Overflow Mode or after 1 minute with the door open or unable to lock. The control sounds an alarm tone continuously.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E P5</i>	Pressure Sensor Error	<p>The control does not detect a valid water level sensor input for thirty (30) seconds, or the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Cycle, or Overflow Mode. The machine enters the Door Unlocking Mode and attempts to drain for 30 seconds. The control sounds a pulsing alarm tone for two (2) minutes.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E 5d</i>	Slow Drain Error	<p>If a slow drain is detected in the Drain step of a running cycle, the control will light the right-most decimal point. The decimal point will remain illuminated after the slow drain error display has expired. The decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds, or by cycling the power to the machine.</p>
<i>E Ld</i>	Water Leak Drain Error	<p>Error will display if there is a leak after the door is opened at the End of Cycle for 1 minute. To clear the error, press any keypad. If the water level has dropped more than an acceptable amount in a during a water leak drain check, the control will save a water leak drain error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.</p>
<i>E LF</i>	Water Leak Fill Error	<p>If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.</p>
<i>E bELt</i>	Broken Belt Error	<p>After basket rotation has ended, the machine’s door unlocks.</p> <p>The control sounds a pulsing alarm tone for two (2) minutes.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>

Table 28 *continues...*

Display	Description	Cause/Corrective Action
<i>E dL</i>	Door Lock Fatal Error	The output board reports that the door unlocks while running a cycle. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E dL 1</i>	Door Lock Non-Fatal Error	The door fails to lock after an attempt. The output board attempts to lock the door for 60 seconds. If the door fails to lock, the machine returns to Start Mode .
<i>E dL 2</i>	Door Unlock Non-Fatal Error	If the door fails to unlock. The output board attempts to lock the door 2 more times. If the door does not unlock, the control will flash the START LED. If the START keypad is pressed, unlocking attempts will restart.
<i>E door</i>	Door Opened During A Running Cycle	Control detects door open and door locked inputs high. Can be caused by pulling on door while locked or about to lock. Correct in-operative door locking system. Power down machine to clear error.
<i>E Ht</i>	Heat Error (Heat Models Only)	The water has not reached the desired temperature within 2 hours. The heater output turns off and the cycle continues. After the cycle is complete, the error code is shown in the display. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, open the door or press any keypad.
<i>E tE</i>	Max Water Temperature Exceeded Error	The Input/Output Board flags the Max Water Temperature Exceeded Error and the control sets the fatal error. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E oP</i>	Open Temperature/Thermistor Sensor Error	This error is shown at the end of a cycle. The input/output board reports an open thermistor. The heater output is turned off for the remainder of the current cycle. After the cycle is complete, the error code is shown in the display. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, open the door or press any keypad.
<i>E LP</i>	Low Level Pressure Switch Error (Heat Models Only)	This error is only enabled during the Factory Test Cycle. The control fills to low level and the low level pressure switch then becomes dissatisfied. The machine enters Door Unlocking Mode. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.

Table 28 *continues...*

Display	Description	Cause/Corrective Action
<i>E 5H</i>	Shorted Temperature/Thermistor Sensor Error	<p>This error is shown at the end of a cycle. The input/output board reports a shorted thermistor. The heater output is turned off for the remainder of the current cycle. After the cycle is complete, the error code is shown in the display.</p> <p>The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, open the door or press any keypad.</p>
<i>E 5ud5</i>	Suds Lock Error	<p>In the spin steps, if the control determines that there are suds in the machine after running all programmed Suds Routines, it will display a Suds Lock Error at the end of the cycle after the door is opened.</p> <p>To clear the error, open the door or press any keypad.</p>
<i>E Hd</i>	Too Hot to Drain Error	<p>If enabled, the Drive or Input/Output Board senses the water temperature is too hot to drain during a drain or extract step.</p> <p>To clear the error, press any keypad.</p>
<i>E 10 29</i>	Mosfet Enable Pin Failure	<p>The Input/Output Board senses a problem with the hardware.</p> <p>The control sounds a pulsing alarm tone for two (2) minutes.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E 10 30</i>	Door Lock Solenoid Disable Pin Failure	<p>The Input/Output Board senses a problem with the hardware.</p> <p>The control sounds a pulsing alarm tone for two (2) minutes.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E 10 31</i>	Door Lock Solenoid Pulse Pin Failure	<p>The Input/Output Board senses a problem with the hardware.</p> <p>The control sounds a pulsing alarm tone for two (2) minutes.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E 10 32</i>	Door Lock Solenoid Relay Pin Failure	<p>The Input/Output Board senses a problem with the hardware.</p> <p>The control sounds a pulsing alarm tone for two (2) minutes.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E 10 33</i>	Mosfet Enable Hardware Failure	<p>The Input/Output Board senses a problem with the hardware.</p> <p>The control sounds a pulsing alarm tone for two (2) minutes.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E 10 34</i>	Door Lock Solenoid Disable Hardware Failure	<p>The Input/Output Board senses a problem with the hardware.</p> <p>The control sounds a pulsing alarm tone for two (2) minutes.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>

Table 28 *continues...*

Display	Description	Cause/Corrective Action
<i>E 10 35</i>	Door Lock Solenoid Hardware Output Failure	The Input/Output Board senses a problem with the hardware. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 36</i>	Door Lock Solenoid Pulse Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 37</i>	Door Lock Solenoid Full Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 38</i>	Mosfet Enable Cannot Be Enabled	The Input/Output Board senses a problem with the hardware. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 39</i>	Mosfet Enable Cannot Be Disabled	The Input/Output Board senses a problem with the hardware. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 42</i>	Door Lock Input Pin Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 43</i>	Hot Fill Valve Shorted	The Input/Output Board senses a problem with the hardware. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 44</i>	Cold Fill Valve Shorted	The Input/Output Board senses a problem with the hardware. The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 45</i>	Hot Fill Tub Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.

Table 28 *continues...*

Display	Description	Cause/Corrective Action
<i>E 10 46</i>	Cold Fill Tub Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 47</i>	Hot Spray Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 48</i>	Cold Spray Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 49</i>	Cold Hard Fill Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 50</i>	Auxiliary Fill Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 51</i>	Compartment 1 Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 52</i>	Compartment 2 Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 53</i>	Compartment 3 Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 54</i>	Compartment 4 Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 55</i>	Drive Power Contractor Coil Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 56</i>	Electric Heat Contractor Coil Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 57</i>	Steam Heat Valve Shorted	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.

Table 28 *continues...*

Display	Description	Cause/Corrective Action
<i>E 10 62</i>	24 Volt Supply Over Voltage	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E 10 63</i>	24 Volt Supply Under Voltage	The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E dr</i>	Drain Error	If enabled, the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). The control sounds a pulsing alarm tone for two (2) minutes. To clear the error, disconnect and then reconnect power to the machine.
<i>E LF</i>	Water Leak Fill Error	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
<i>E d 01</i>	Setup Command Error	Drive received incorrect parameters. Power down machine to clear. Call a service technician if error persists.
<i>E d 21</i>	Over Voltage DC Bus Error	Power down to clear error. Check voltage input to machine. If it happens only at start of spin, replace motor. Replace drive board if error persists.
<i>E d 22</i>	Over Motor Temperature Error	Motor temperature is detected to be too high. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace drive board if error persists.
<i>E d 23</i>	Fatal IPM Over Current Shunt Error	Check that drum and motor spins freely. Power down to clear error. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Replace drive board if error persists.
<i>E d 24</i>	Fatal I2T Hardware Over Current Error	Check that drum and motor spins freely. Rotor may be locked up. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Power down to clear error. Replace drive board if error persists.
<i>E d 25</i>	IPM Over Temperature Error	IPM temperature is detected to be too high. Check that drum spins freely when empty, check for overloading of machine, reduce agitation time, and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Check for lint build-up on heat sink on drive board. Replace drive board if error persists.

Table 28 *continues...*

Display	Description	Cause/Corrective Action
<i>E d 29</i>	Motor Not Connected Error	The motor or one of its electrical phases is not connected. Check that the harness from the motor to the drive board is fully plugged in on both ends and that there is no damage to the motor harness. Make sure to push in the motor harness on both ends just in case it is a little loose and not fully inserted. If the harness looks fine and the error still occurs, try replacing the drive board or harness. Power down to clear error.
<i>E d 31</i>	Overload Current Detection	The drive has expended too much energy which means the system is being overloaded. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace drive board if error persists.
<i>E d 32</i>	Back EMF Error	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 33</i>	Fatal Start-Up Failure	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 34</i>	Locked Rotor Error	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 44</i>	Overcurrent Shunt Detection Circuit Fail Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 51</i>	Inrush Pin HW On/Off Fail	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 63</i>	Fatal IPM Temperature Short Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 64</i>	Fatal IPM Temperature Open Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 65</i>	Inverter Hardware Acquisition Failure	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 66</i>	Voltage Bus Acquisition Failure	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 67</i>	Motor Initialization Error	Hardware failure. Power down to clear error. Replace drive board if error persists.

Table 28

Washer-Extractor – Error Codes for Q control with S in 1st position with C, D, E, F H, L, Q, T, and V in 8th position

Error Codes

Following is a list of possible error codes for an electronic control.

Errors beginning with **E** , refer to external device Infra-red communication errors.Errors beginning with **EC** refer to card reader errors. All other errors refer to machine errors.

NOTE: Fatal Errors will show *oUt oF ordEr* along with the error on the display. If enabled, press the Heavy/Hot and Delicate/Warm keypads to clear fatal errors.

Display	Description	Cause/Corrective Action
E .01	Transmission Failure	Communication failure. Re-aim external device and try again.
E .02	Time-out Error	Communication failure. Re-aim external device and try again.
E .03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
E .04	Expecting Upload Request	Communication failure. Re-aim external device and try again.
E .05	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Recheck the programming option’s value and try again.
E .09	CRC-16 Error	Communication failure. Re-aim external device and try again.
E .0A	Framing Error	Communication error. Re-aim external device and try again.
E .0C	Time-out Exceeded	Communication error. Re-aim external device and try again.
E .0E	Encryption Error	Communication error. Re-aim external device and try again. If the problem persists, check that the security code is correct.
E .0F	Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
EC02	Time-out Error	Communication failure. Try card again.
EC03	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
EC05	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Recheck the programming option’s value and try again.
EC11	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.

Table 29 *continues...*

Display	Description	Cause/Corrective Action
<i>EC 1B</i>	No Communication	Card reader is initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
<i>EC 19</i>	No Card Reader Communication	Communication failure. Power down, power up and try again. If error persists, replace control or card reader.
<i>EC HH</i>	Payment System Error	The control communicates with the Payment System in order to perform vending transactions. If an error should occur, which, terminates communication during a transaction, the LED Display will show <i>EC HH</i> for a control generated error, where the <i>HH</i> represents an error code.
<i>E id oUtPUt</i>	Input/Output Board ID Error	The control detects the wrong output board is connected for the machine configuration. The control sounds an alarm tone for 15 seconds. To clear the error, replace with the correct board.
<i>E id dr iUE</i>	Drive Board ID Error	The control detects the wrong drive board is connected for the machine configuration. The control sounds an alarm tone for 15 seconds. To clear the error, replace with the correct board.
<i>ALAr n</i>	Break-in Alarm Error	Check the service door and coin vault switches.
<i>oFF</i>	Break-in Alarm Shutdown Error	Check the service door and coin vault switches.
<i>E d5</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dip switch #1 to the same setting as the previous control. If reworking the machine to use a different voltage supply, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>Co in Error</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E nr</i>	Input/Output Board Not Ready	Indicates an input/output board communication error. The control sounds an alarm tone for 15 seconds. To clear the error, disconnect and then reconnect power to the machine.
<i>EnHH</i>	Machine ID Chip Errors	Communication failure. Power down, power up and try again. If error persists, check connection between user control and Machine ID Chip, or replace the user control or the Machine ID Chip.
Right most decimal point blinking	Machine ID Error	Machine ID is no longer communicating with the control. Check Machine ID connection.
<i>E Co</i>	Input/Output Board Communication Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and input/output board, or try replacing the user control or the input/output board.

Table 29 *continues...*

Display	Description	Cause/Corrective Action
<i>E d Co</i>	Drive Board Communication Error	<p>After 3 unsuccessful communication attempts, the control will turn the drive power contactor off for 5 minutes to reset the drive. This procedure will be executed up to 3 times before the drive communication error appears. The control enters Door Unlocking Mode after basket rotation has stopped. The control sounds an alarm tone for 15 seconds.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E dr</i>	Drain Error	<p>If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and sounds. The control sounds an alarm tone for 15 seconds.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E FL</i>	Fill Error	<p>This error may be programmed on or off. The machine does not reach the programmed fill level within 30 minutes. The machine enters Door Unlocking Mode and drains for 90 seconds. The control sounds an alarm tone for 15 seconds.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E nFLo</i>	No Water Flow Error	<p>If the control does not reach a water level of 4 inches within the programmed time it may mean the hose to the pressure sensor has a leak or no water is flowing into the machine. The control enters Machine Error Mode. The control drains for 90 seconds and then turns off all outputs. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.</p>
<i>E oF</i>	Overflow Error	<p>The control senses an unsafe high water level is detected in the machine and water is unable to drain. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.</p>
<i>E PS</i>	Pressure Sensor Error	<p>The control does not detect a valid water level sensor input for thirty (30) seconds, or the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Cycle, or Overflow Mode. The machine enters the Door Unlocking Mode and attempts to drain for 30 seconds. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.</p>
<i>E 5d</i>	Slow Drain Error (right most decimal point)	<p>If a slow drain is detected in the Drain step of a running cycle, the control will light the right-most decimal point. The decimal point will remain illuminated after the slow drain error display has expired. The decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds, or by cycling the power to the machine.</p>

Table 29 *continues...*

Display	Description	Cause/Corrective Action
<i>E Ld</i>	Water Leak Drain Error (right most decimal point)	Error will display if there is a leak after the door is opened at the End of Cycle for 1 minute. Clears after 1 minute or until a key is pressed. If the water level has dropped more than an acceptable amount in a during a water leak drain check, the control will save a water leak drain error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
<i>E LF</i>	Water Leak Fill Error (right most decimal point)	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
Right most decimal point Lit	Water Leak (Fill or Drain) Detection or Slow Drain Detection Error	Water leak test has detected a water leak during a cycle or slow drain is detected in the drain step of a running cycle. The decimal point will remain lit after the error display has expired. Clear the decimal point by pressing the START keypad three (3) times within five seconds (5) or by cycling the power to the machine.
<i>E bELL</i>	Broken Belt Error	After basket rotation has ended, the machine’s door unlocks. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
<i>E dL</i>	Door Lock Fatal Error	The output board reports that the door unlocks while running a cycle. The control sounds an alarm tone for 15 seconds. To clear the error, disconnect and then reconnect power to the machine.
<i>E dL 1</i>	Door Lock Non-Fatal Error	The door fails to lock after an attempt. The output board attempts to lock the door for 70 seconds. If the door fails to lock, the machine returns to Start Mode .
<i>E dL2</i>	Door Unlock Non-Fatal Error	If the door fails to unlock. The output board attempts to lock the door 2 more times. >If the door does not unlock, the control will flash the START LED. If the START> keypad is pressed, unlocking attempts will restart.>
<i>E door</i>	Door Opened During A Running Cycle	Control detects door open and door locked inputs high. Can be caused by pulling on door while locked or about to lock. Correct in-operative door locking system. Power down machine to clear error.
<i>E UbAL</i>	Non-Fatal Unbalance Limit Error	If enabled, this error is shown at the end of a cycle. The machine exceeds the maximum number of balance attempts. If enabled, the error code is shown in the display after a cycle is complete. The control sounds an alarm tone for 15 seconds. To clear the error, wait 1 minute, open the door, or press any keypad.

Table 29 continues...

Display	Description	Cause/Corrective Action
E EE	Max Water Temperature Exceeded Error (Heat Models Only)	<p>The Input/Output Board flags the Max Water Temperature Exceeded Error and the control sets the fatal error.</p> <p>The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.</p>
E oP	Open Temperature/Thermistor Sensor Error (Heat Models Only)	<p>This error is shown at the end of a cycle. The input/output board reports an open thermistor. The heater output is turned off for the remainder of the current cycle. After the cycle is complete, the error code is shown in the display.</p> <p>The control sounds an alarm tone for 15 seconds. To clear the error, wait 1 minute, open the door, or press any keypad.</p>
E LP	Low Level Pressure Switch Error (Heat Models Only)	<p>This error is only enabled during the Factory Test Cycle. The control fills to low level and the low level pressure switch then becomes dissatisfied. The machine enters Door Unlocking Mode.</p> <p>The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.</p>
E 5H	Shorted Temperature/Thermistor Sensor Error (Heat Models Only)	<p>This error is shown at the end of a cycle. The input/output board reports a shorted thermistor. The heater output is turned off for the remainder of the current cycle. After the cycle is complete, the error code is shown in the display.</p> <p>The control sounds an alarm tone for 15 seconds. To clear the error, wait 1 minute, open the door, or press any keypad.</p>
E 5tHt	Slow To Heat Error (Heat Models Only)	<p>Non-Fatal Error that will appear during the running cycle without affecting the cycle.</p> <p>The control sounds an alarm tone for 15 seconds.</p> <p>To clear the error, press any keypad.</p>
E 5ud5	Suds Lock Error	<p>In the spin steps, if the control determines that there are suds in the machine after running all programmed Suds Routines, it will display a Suds Lock Error at the end of the cycle after the door is opened.</p> <p>To clear the error, wait 1 minute, open the door, or press any keypad.</p>
E io 29	Mosfet Enable Pin Failure	<p>The Input/Output Board senses a problem with the hardware.</p> <p>The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.</p>
E io 30	Door Lock Solenoid Disable Pin Failure	<p>The Input/Output Board senses a problem with the hardware.</p> <p>The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.</p>

Table 29 continues...

Display	Description	Cause/Corrective Action
<i>E 10 31</i>	Door Lock Solenoid Pulse Pin Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
<i>E 10 32</i>	Door Lock Solenoid Relay Pin Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
<i>E 10 33</i>	Mosfet Enable Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
<i>E 10 34</i>	Door Lock Solenoid Disable Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
<i>E 10 35</i>	Door Lock Solenoid Hardware Output Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
<i>E 10 36</i>	Door Lock Solenoid Pulse Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
<i>E 10 37</i>	Door Lock Solenoid Full Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
<i>E 10 38</i>	Mosfet Enable Cannot Be Enabled	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
<i>E 10 39</i>	Mosfet Enable Cannot Be Disabled	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
<i>E 10 43</i>	Hot Fill Valve Shorted	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.

Table 29 *continues...*

Display	Description	Cause/Corrective Action
E 10 44	Cold Fill Valve Shorted	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
E 10 45	Hot Fill Tub Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
E 10 46	Cold Fill Tub Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
E 10 47	Hot Spray Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
E 10 48	Cold Spray Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
E 10 49	Cold Hard Fill Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
E 10 50	Auxiliary Fill Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
E 10 51	Compartment 1 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
E 10 52	Compartment 2 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
E 10 53	Compartment 3 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
E 10 54	Compartment 4 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
E 10 55	Drive Power Contractor Coil Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
E 10 56	Electric Heat Contractor Coil Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
E 10 57	Steam Heat Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.

Table 29 continues...

Display	Description	Cause/Corrective Action
<i>E 10 62</i>	24 Volt Supply Over Voltage	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
<i>E 10 63</i>	24 Volt Supply Under Voltage	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Quick/Warm keypads.
<i>E dr</i>	Drain Error	If enabled, the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). The control sounds an alarm tone for 15 seconds. To clear the error, disconnect and then reconnect power to the machine.
<i>E LF</i>	Water Leak Fill Error	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
<i>E d 01</i>	Setup Command Error	Drive received incorrect parameters. Power down machine to clear. Call a service technician if error persists.
<i>E d 21</i>	Over Voltage DC Bus Error	Power down to clear error. Check voltage input to machine. If it happens only at start of spin, replace motor. Replace drive board if error persists.
<i>E d 22</i>	Over Motor Temperature Error	Motor temperature is detected to be too high. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace drive board if error persists.
<i>E d 23</i>	Fatal IPM Over Current Shunt Error	Check that drum and motor spins freely. Power down to clear error. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Replace drive board if error persists.
<i>E d 24</i>	Fatal I2T Hardware Over Current Error	Check that drum and motor spins freely. Rotor may be locked up. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Power down to clear error. Replace drive board if error persists.
<i>E d 25</i>	IPM Over Temperature Error	IPM temperature is detected to be too high. Check that drum spins freely when empty, check for overloading of machine, reduce agitation time, and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Check for lint build-up on heat sink on drive board. Replace drive board if error persists.

Table 29 *continues...*

Display	Description	Cause/Corrective Action
<i>E d 29</i>	Motor Not Connected Error	The motor or one of its electrical phases is not connected. Check that the harness from the motor to the drive board is fully plugged in on both ends and that there is no damage to the motor harness. Make sure to push in the motor harness on both ends just in case it is a little loose and not fully inserted. If the harness looks fine and the error still occurs, try replacing the drive board or harness. Power down to clear error.
<i>E d 31</i>	Overload Current Detection	The drive has expended too much energy which means the system is being overloaded. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace drive board if error persists.
<i>E d 32</i>	Back EMF Error	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 33</i>	Fatal Start-Up Failure	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 34</i>	Locked Rotor Error	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 44</i>	Overcurrent Shunt Detection Circuit Fail Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 51</i>	Inrush Pin HW On/Off Fail	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 63</i>	Fatal IPM Temperature Short Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 64</i>	Fatal IPM Temperature Open Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 65</i>	Inverter Hardware Acquisition Failure	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 66</i>	Voltage Bus Acquisition Failure	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 67</i>	Motor Initialization Error	Hardware failure. Power down to clear error. Replace drive board if error persists.

Table 29

Washer-Extractor – Error Codes for Q models with H in 1st position and T in 3rd position, models starting serial number 1905

Error Codes

NOTE: Fatal Errors will show *OUT OF ORDER* along with the error on the display.

Following is a list of possible error codes for an electronic control.

Display	Description	Cause/Corrective Action
<i>E .01</i>	Transmission Failure	Communication failure. Re-aim external device and try again.
<i>E .02</i>	Time-out Error	Communication failure. Re-aim external device and try again.
<i>E .03</i>	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
<i>E .04</i>	Expecting Upload Request	Communication failure. Re-aim external device and try again.
<i>E .05</i>	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Recheck the programming option's value and try again.
<i>E .09</i>	CRC-16 Error	Communication failure. Re-aim external device and try again.
<i>E .0A</i>	Framing Error	Communication error. Re-aim external device and try again.
<i>E .0C</i>	Time-out Exceeded	Communication error. Re-aim external device and try again.
<i>E .0E</i>	Encryption Error	Communication error. Re-aim external device and try again. If the problem persists, check that the security code is correct.
<i>E .0F</i>	Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
<i>EC02</i>	Time-out Error	Communication failure. Try card again.
<i>EC03</i>	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
<i>EC05</i>	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Recheck the programming option's value and try again.
<i>EC 11</i>	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
<i>EC 1B</i>	No Communication	Card reader is initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.

Table 30 *continues...*

Display	Description	Cause/Corrective Action
<i>EC 19</i>	No Card Reader Communication	Communication failure. Power down, power up and try again. If error persists, replace control or card reader.
<i>E id oUtPUt</i>	Input/Output Board ID Error	The control detects the wrong output board is connected for the machine configuration. The control sounds an alarm tone for 15 seconds. To clear the error, replace with the correct board.
<i>E id dr iUE</i>	Drive Board ID Error	The control detects the wrong drive board is connected for the machine configuration. The control sounds an alarm tone for 15 seconds. To clear the error, replace with the correct board.
<i>ALArn</i>	Break-in Alarm Error	Check the service door and coin vault switches.
<i>aFF</i>	Break-in Alarm Shutdown Error	Check the service door and coin vault switches.
<i>E dS</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dip switch #1 to the same setting as the previous control. If reworking the machine to use a different voltage supply, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>Co in Error</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E nr</i>	Input/Output Board Not Ready	Indicates an input/output board communication error. The control sounds an alarm tone for 15 seconds. To clear the error, disconnect and then reconnect power to the machine.
<i>EnHH</i>	Machine ID Chip Errors	Communication failure. Power down, power up and try again. If error persists, check connection between user control and Machine ID Chip, or replace the user control or the Machine ID Chip.
Right most decimal point blinking	Machine ID Error	Machine ID is no longer communicating with the control. Check Machine ID connection.
<i>E Co</i>	Input/Output Board Communication Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and input/output board, or try replacing the user control or the input/output board.
<i>E d Co</i>	Drive Board Communication Error	After 3 unsuccessful communication attempts, the control will turn the drive power contactor off for 5 minutes to reset the drive. This procedure will be executed up to 3 times before the drive communication error appears. The control enters Door Unlocking Mode after basket rotation has stopped. The control sounds an alarm tone for 15 seconds. To clear the error, disconnect and then reconnect power to the machine.

Table 30 *continues...*

Display	Description	Cause/Corrective Action
<i>E dr</i>	Drain Error	<p>If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and sounds. The control sounds an alarm tone for 15 seconds.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E FL</i>	Fill Error	<p>This error may be programmed on or off. The machine does not reach the programmed fill level within 30 minutes. The machine enters Door Unlocking Mode and drains for 90 seconds. The control sounds an alarm tone for 15 seconds.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E nFLo</i>	No Water Flow Error	<p>If the control does not reach a water level of 4 inches within the programmed time it may mean the hose to the pressure sensor has a leak or no water is flowing into the machine. The control enters Machine Error Mode. The control drains for 90 seconds and then turns off all outputs. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.</p>
<i>E oF</i>	Overflow Error	<p>The control senses an unsafe high water level is detected in the machine and water is unable to drain. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.</p>
<i>E PS</i>	Pressure Sensor Error	<p>The control does not detect a valid water level sensor input for thirty (30) seconds, or the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Cycle, or Overflow Mode. The machine enters the Door Unlocking Mode and attempts to drain for 30 seconds. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.</p>
<i>E 5d</i>	Slow Drain Error (right most decimal point)	<p>If a slow drain is detected in the Drain step of a running cycle, the control will light the right-most decimal point. The decimal point will remain illuminated after the slow drain error display has expired. The decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds, or by cycling the power to the machine.</p>
<i>E Ld</i>	Water Leak Drain Error (right most decimal point)	<p>Error will display if there is a leak after the door is opened at the End of Cycle for 1 minute. Clears after 1 minute or until a key is pressed. If the water level has dropped more than an acceptable amount in a during a water leak drain check, the control will save a water leak drain error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.</p>

Table 30 *continues...*

Display	Description	Cause/Corrective Action
<i>E L F</i>	Water Leak Fill Error (right most decimal point)	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
Right most decimal point Lit	Water Leak (Fill or Drain) Detection or Slow Drain Detection Error	Water leak test has detected a water leak during a cycle or slow drain is detected in the drain step of a running cycle. The decimal point will remain lit after the error display has expired. Clear the decimal point by pressing the START keypad three (3) times within five seconds (5) or by cycling the power to the machine.
<i>E bELt</i>	Broken Belt Error	After basket rotation has ended, the machine's door unlocks. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
<i>E dL</i>	Door Lock Fatal Error	The output board reports that the door unlocks while running a cycle. The control sounds an alarm tone for 15 seconds. To clear the error, disconnect and then reconnect power to the machine.
<i>E dL 1</i>	Door Lock Non-Fatal Error	The door fails to lock after an attempt. The output board attempts to lock the door for 70 seconds. If the door fails to lock, the machine returns to Start Mode.
<i>E dL 2</i>	Door Unlock Non-Fatal Error	If the door fails to unlock. The output board attempts to lock the door 2 more times. If the door does not unlock, the control will flash the START LED. If the START keypad is pressed, unlocking attempts will restart.
<i>E door</i>	Door Opened During A Running Cycle	Control detects door open and door locked inputs high. Can be caused by pulling on door while locked or about to lock. Correct in-operative door locking system. Power down machine to clear error.
<i>E UbAL</i>	Non-Fatal Unbalance Limit Error	If enabled, this error is shown at the end of a cycle. The machine exceeds the maximum number of balance attempts. If enabled, the error code is shown in the display after a cycle is complete. The control sounds an alarm tone for 15 seconds. To clear the error, wait 1 minute, open the door, or press any keypad.
<i>E tE</i>	Max Water Temperature Exceeded Error (Heat Models Only)	The Input/Output Board flags the Max Water Temperature Exceeded Error and the control sets the fatal error. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.

Table 30 *continues...*

Display	Description	Cause/Corrective Action
<i>E oP</i>	Open Temperature/Thermistor Sensor Error (Heat Models Only)	<p>This error is shown at the end of a cycle. The input/output board reports an open thermistor. The heater output is turned off for the remainder of the current cycle. After the cycle is complete, the error code is shown in the display.</p> <p>The control sounds an alarm tone for 15 seconds. To clear the error, wait 1 minute, open the door, or press any keypad.</p>
<i>E LP</i>	Low Level Pressure Switch Error (Heat Models Only)	<p>This error is only enabled during the Factory Test Cycle. The control fills to low level and the low level pressure switch then becomes dissatisfied. The machine enters Door Unlocking Mode.</p> <p>The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.</p>
<i>E 5H</i>	Shorted Temperature/Thermistor Sensor Error (Heat Models Only)	<p>This error is shown at the end of a cycle. The input/output board reports a shorted thermistor. The heater output is turned off for the remainder of the current cycle. After the cycle is complete, the error code is shown in the display.</p> <p>The control sounds an alarm tone for 15 seconds. To clear the error, wait 1 minute, open the door, or press any keypad.</p>
<i>E 5tHt</i>	Slow To Heat Error (Heat Models Only)	<p>Non-Fatal Error that will appear during the running cycle without affecting the cycle.</p> <p>The control sounds an alarm tone for 15 seconds.</p> <p>To clear the error, press any keypad.</p>
<i>E 5ud5</i>	Suds Lock Error	<p>In the spin steps, if the control determines that there are suds in the machine after running all programmed Suds Routines, it will display a Suds Lock Error at the end of the cycle after the door is opened.</p> <p>To clear the error, wait 1 minute, open the door, or press any keypad.</p>
<i>E io 29</i>	Mosfet Enable Pin Failure	<p>The Input/Output Board senses a problem with the hardware.</p> <p>The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.</p>
<i>E io 30</i>	Door Lock Solenoid Disable Pin Failure	<p>The Input/Output Board senses a problem with the hardware.</p> <p>The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.</p>
<i>E io 31</i>	Door Lock Solenoid Pulse Pin Failure	<p>The Input/Output Board senses a problem with the hardware.</p> <p>The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.</p>

Table 30 *continues...*

Display	Description	Cause/Corrective Action
<i>E 10 32</i>	Door Lock Solenoid Relay Pin Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
<i>E 10 33</i>	Mosfet Enable Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
<i>E 10 34</i>	Door Lock Solenoid Disable Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
<i>E 10 35</i>	Door Lock Solenoid Hardware Output Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
<i>E 10 36</i>	Door Lock Solenoid Pulse Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
<i>E 10 37</i>	Door Lock Solenoid Full Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
<i>E 10 38</i>	Mosfet Enable Cannot Be Enabled	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
<i>E 10 39</i>	Mosfet Enable Cannot Be Disabled	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
<i>E 10 42</i>	Door Lock Input Pin Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
<i>E 10 43</i>	Hot Fill Valve Shorted	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.

Table 30 *continues...*

Display	Description	Cause/Corrective Action
E 10 44	Cold Fill Valve Shorted	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
E 10 45	Hot Fill Tub Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
E 10 46	Cold Fill Tub Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
E 10 47	Hot Spray Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
E 10 48	Cold Spray Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
E 10 49	Cold Hard Fill Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
E 10 50	Auxiliary Fill Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
E 10 51	Compartment 1 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
E 10 52	Compartment 2 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
E 10 53	Compartment 3 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
E 10 54	Compartment 4 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
E 10 55	Drive Power Contractor Coil Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
E 10 56	Electric Heat Contractor Coil Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
E 10 57	Steam Heat Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.

Table 30 continues...

Display	Description	Cause/Corrective Action
<i>E 10 62</i>	24 Volt Supply Over Voltage	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
<i>E 10 63</i>	24 Volt Supply Under Voltage	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Delicate/Cold and Warm keypads.
<i>E dr</i>	Drain Error	If enabled, the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). The control sounds an alarm tone for 15 seconds. To clear the error, disconnect and then reconnect power to the machine.
<i>E LF</i>	Water Leak Fill Error	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
<i>E d 01</i>	Setup Command Error	Drive received incorrect parameters. Power down machine to clear. Call a service technician if error persists.
<i>E d 21</i>	Over Voltage DC Bus Error	Power down to clear error. Check voltage input to machine. If it happens only at start of spin, replace motor. Replace drive board if error persists.
<i>E d 22</i>	Over Motor Temperature Error	Motor temperature is detected to be too high. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace drive board if error persists.
<i>E d 23</i>	Fatal IPM Over Current Shunt Error	Check that drum and motor spins freely. Power down to clear error. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Replace drive board if error persists.
<i>E d 24</i>	Fatal I2T Hardware Over Current Error	Check that drum and motor spins freely. Rotor may be locked up. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Power down to clear error. Replace drive board if error persists.
<i>E d 25</i>	IPM Over Temperature Error	IPM temperature is detected to be too high. Check that drum spins freely when empty, check for overloading of machine, reduce agitation time, and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Check for lint build-up on heat sink on drive board. Replace drive board if error persists.

Table 30 *continues...*

Display	Description	Cause/Corrective Action
<i>E d 29</i>	Motor Not Connected Error	The motor or one of its electrical phases is not connected. Check that the harness from the motor to the drive board is fully plugged in on both ends and that there is no damage to the motor harness. Make sure to push in the motor harness on both ends just in case it is a little loose and not fully inserted. If the harness looks fine and the error still occurs, try replacing the drive board or harness. Power down to clear error.
<i>E d 31</i>	Overload Current Detection	The drive has expended too much energy which means the system is being overloaded. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace drive board if error persists.
<i>E d 32</i>	Back EMF Error	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 33</i>	Fatal Start-Up Failure	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 34</i>	Locked Rotor Error	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 44</i>	Overcurrent Shunt Detection Circuit Fail Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 51</i>	Inrush Pin HW On/Off Fail	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 63</i>	Fatal IPM Temperature Short Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 64</i>	Fatal IPM Temperature Open Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 65</i>	Inverter Hardware Acquisition Failure	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 66</i>	Voltage Bus Acquisition Failure	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 67</i>	Motor Initialization Error	Hardware failure. Power down to clear error. Replace drive board if error persists.

Table 30

Washer-Extractor – Error Codes for Q models with H in 1st position and T in 3rd position, models through serial number 1904

Error Codes

NOTE: Fatal Errors will show *OUT OF ORDER* along with the error on the display.

Following is a list of possible error codes for an electronic control.

Display	Description	Cause/Corrective Action
<i>E .01</i>	Transmission Failure	Communication failure. Re-aim external device and try again.
<i>E .02</i>	Time-out Error	Communication failure. Re-aim external device and try again.
<i>E .03</i>	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
<i>E .04</i>	Expecting Upload Request	Communication failure. Re-aim external device and try again.
<i>E .05</i>	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Recheck the programming option's value and try again.
<i>E .09</i>	CRC-16 Error	Communication failure. Re-aim external device and try again.
<i>E .0A</i>	Framing Error	Communication error. Re-aim external device and try again.
<i>E .0C</i>	Time-out Exceeded	Communication error. Re-aim external device and try again.
<i>E .0E</i>	Encryption Error	Communication error. Re-aim external device and try again. If the problem persists, check that the security code is correct.
<i>E .0F</i>	Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.
<i>EC02</i>	Time-out Error	Communication failure. Try card again.
<i>EC03</i>	Invalid Command Code	Communication successful, but the command was not valid for this machine type, or the control could not perform the command in its current mode of operation. Ensure data is for current machine type and control is in correct mode.
<i>EC05</i>	Invalid or Out-of-Range Data	The value in at least one of the programming options is invalid or out of range. Recheck the programming option's value and try again.
<i>EC 11</i>	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
<i>EC 1B</i>	No Communication	Card reader is initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.

Table 31 *continues...*

Display	Description	Cause/Corrective Action
<i>EC 19</i>	No Card Reader Communication	Communication failure. Power down, power up and try again. If error persists, replace control or card reader.
<i>E id oUtPUt</i>	Input/Output Board ID Error	The control detects the wrong output board is connected for the machine configuration. The control sounds an alarm tone for 15 seconds. To clear the error, replace with the correct board.
<i>E id dr iUE</i>	Drive Board ID Error	The control detects the wrong drive board is connected for the machine configuration. The control sounds an alarm tone for 15 seconds. To clear the error, replace with the correct board.
<i>ALArn</i>	Break-in Alarm Error	Check the service door and coin vault switches.
<i>aFF</i>	Break-in Alarm Shutdown Error	Check the service door and coin vault switches.
<i>E dS</i>	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dip switch #1 to the same setting as the previous control. If reworking the machine to use a different voltage supply, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
<i>Co in Error</i>	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
<i>E nr</i>	Input/Output Board Not Ready	Indicates an input/output board communication error. The control sounds an alarm tone for 15 seconds. To clear the error, disconnect and then reconnect power to the machine.
<i>EnHH</i>	Machine ID Chip Errors	Communication failure. Power down, power up and try again. If error persists, check connection between user control and Machine ID Chip, or replace the user control or the Machine ID Chip.
Right most decimal point blinking	Machine ID Error	Machine ID is no longer communicating with the control. Check Machine ID connection.
<i>E Co</i>	Input/Output Board Communication Error	Communication failure. Power down, power up and try again. If error persists, check connection between user control and input/output board, or try replacing the user control or the input/output board.
<i>E d Co</i>	Drive Board Communication Error	After 3 unsuccessful communication attempts, the control will turn the drive power contactor off for 5 minutes to reset the drive. This procedure will be executed up to 3 times before the drive communication error appears. The control enters Door Unlocking Mode after basket rotation has stopped. The control sounds an alarm tone for 15 seconds. To clear the error, disconnect and then reconnect power to the machine.

Table 31 *continues...*

Display	Description	Cause/Corrective Action
<i>E dr</i>	Drain Error	<p>If the control has the drain error enabled the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). In the event of a drain error, the control will turn off all outputs and sounds. The control sounds an alarm tone for 15 seconds.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E FL</i>	Fill Error	<p>This error may be programmed on or off. The machine does not reach the programmed fill level within 30 minutes. The machine enters Door Unlocking Mode and drains for 90 seconds. The control sounds an alarm tone for 15 seconds.</p> <p>To clear the error, disconnect and then reconnect power to the machine.</p>
<i>E nFLo</i>	No Water Flow Error	<p>If the control does not reach a water level of 4 inches within the programmed time it may mean the hose to the pressure sensor has a leak or no water is flowing into the machine. The control enters Machine Error Mode. The control drains for 90 seconds and then turns off all outputs. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.</p>
<i>E oF</i>	Overflow Error	<p>The control senses an unsafe high water level is detected in the machine and water is unable to drain. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.</p>
<i>E PS</i>	Pressure Sensor Error	<p>The control does not detect a valid water level sensor input for thirty (30) seconds, or the Max (Overflow) Fill Level in the control is set to 0 while in Run Mode, Factory Test Cycle, or Overflow Mode. The machine enters the Door Unlocking Mode and attempts to drain for 30 seconds. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.</p>
<i>E 5d</i>	Slow Drain Error (right most decimal point)	<p>If a slow drain is detected in the Drain step of a running cycle, the control will light the right-most decimal point. The decimal point will remain illuminated after the slow drain error display has expired. The decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds, or by cycling the power to the machine.</p>
<i>E Ld</i>	Water Leak Drain Error (right most decimal point)	<p>Error will display if there is a leak after the door is opened at the End of Cycle for 1 minute. Clears after 1 minute or until a key is pressed. If the water level has dropped more than an acceptable amount in a during a water leak drain check, the control will save a water leak drain error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.</p>

Table 31 *continues...*

Display	Description	Cause/Corrective Action
<i>E L F</i>	Water Leak Fill Error (right most decimal point)	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
Right most decimal point Lit	Water Leak (Fill or Drain) Detection or Slow Drain Detection Error	Water leak test has detected a water leak during a cycle or slow drain is detected in the drain step of a running cycle. The decimal point will remain lit after the error display has expired. Clear the decimal point by pressing the START keypad three (3) times within five seconds (5) or by cycling the power to the machine.
<i>E bELt</i>	Broken Belt Error	After basket rotation has ended, the machine’s door unlocks. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
<i>E dL</i>	Door Lock Fatal Error	The output board reports that the door unlocks while running a cycle. The control sounds an alarm tone for 15 seconds. To clear the error, disconnect and then reconnect power to the machine.
<i>E dL 1</i>	Door Lock Non-Fatal Error	The door fails to lock after an attempt. The output board attempts to lock the door for 70 seconds. If the door fails to lock, the machine returns to Start Mode.
<i>E dL 2</i>	Door Unlock Non-Fatal Error	If the door fails to unlock. The output board attempts to lock the door 2 more times. If the door does not unlock, the control will flash the START LED. If the START> keypad is pressed, unlocking attempts will restart.
<i>E door</i>	Door Opened During A Running Cycle	Control detects door open and door locked inputs high. Can be caused by pulling on door while locked or about to lock. Correct in-operative door locking system. Power down machine to clear error.
<i>E UbAL</i>	Non-Fatal Unbalance Limit Error	If enabled, this error is shown at the end of a cycle. The machine exceeds the maximum number of balance attempts. If enabled, the error code is shown in the display after a cycle is complete. The control sounds an alarm tone for 15 seconds. To clear the error, wait 1 minute, open the door, or press any keypad.
<i>E tE</i>	Max Water Temperature Exceeded Error (Heat Models Only)	The Input/Output Board flags the Max Water Temperature Exceeded Error and the control sets the fatal error. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.

Table 31 *continues...*

Display	Description	Cause/Corrective Action
<i>E oP</i>	Open Temperature/Thermistor Sensor Error (Heat Models Only)	<p>This error is shown at the end of a cycle. The input/output board reports an open thermistor. The heater output is turned off for the remainder of the current cycle. After the cycle is complete, the error code is shown in the display.</p> <p>The control sounds an alarm tone for 15 seconds. To clear the error, wait 1 minute, open the door, or press any keypad.</p>
<i>E LP</i>	Low Level Pressure Switch Error (Heat Models Only)	<p>This error is only enabled during the Factory Test Cycle. The control fills to low level and the low level pressure switch then becomes dissatisfied. The machine enters Door Unlocking Mode.</p> <p>The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.</p>
<i>E 5H</i>	Shorted Temperature/Thermistor Sensor Error (Heat Models Only)	<p>This error is shown at the end of a cycle. The input/output board reports a shorted thermistor. The heater output is turned off for the remainder of the current cycle. After the cycle is complete, the error code is shown in the display.</p> <p>The control sounds an alarm tone for 15 seconds. To clear the error, wait 1 minute, open the door, or press any keypad.</p>
<i>E 5tHt</i>	Slow To Heat Error (Heat Models Only)	<p>Non-Fatal Error that will appear during the running cycle without affecting the cycle.</p> <p>The control sounds an alarm tone for 15 seconds.</p> <p>To clear the error, press any keypad.</p>
<i>E 5ud5</i>	Suds Lock Error	<p>In the spin steps, if the control determines that there are suds in the machine after running all programmed Suds Routines, it will display a Suds Lock Error at the end of the cycle after the door is opened.</p> <p>To clear the error, wait 1 minute, open the door, or press any keypad.</p>
<i>E io 29</i>	Mosfet Enable Pin Failure	<p>The Input/Output Board senses a problem with the hardware.</p> <p>The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.</p>
<i>E io 30</i>	Door Lock Solenoid Disable Pin Failure	<p>The Input/Output Board senses a problem with the hardware.</p> <p>The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.</p>
<i>E io 31</i>	Door Lock Solenoid Pulse Pin Failure	<p>The Input/Output Board senses a problem with the hardware.</p> <p>The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.</p>

Table 31 *continues...*

Display	Description	Cause/Corrective Action
<i>E 10 32</i>	Door Lock Solenoid Relay Pin Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
<i>E 10 33</i>	Mosfet Enable Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
<i>E 10 34</i>	Door Lock Solenoid Disable Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
<i>E 10 35</i>	Door Lock Solenoid Hardware Output Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
<i>E 10 36</i>	Door Lock Solenoid Pulse Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
<i>E 10 37</i>	Door Lock Solenoid Full Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
<i>E 10 38</i>	Mosfet Enable Cannot Be Enabled	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
<i>E 10 39</i>	Mosfet Enable Cannot Be Disabled	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
<i>E 10 42</i>	Door Lock Input Pin Hardware Failure	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
<i>E 10 43</i>	Hot Fill Valve Shorted	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.

Table 31 *continues...*

Display	Description	Cause/Corrective Action
E 10 44	Cold Fill Valve Shorted	The Input/Output Board senses a problem with the hardware. The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
E 10 45	Hot Fill Tub Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
E 10 46	Cold Fill Tub Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
E 10 47	Hot Spray Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
E 10 48	Cold Spray Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
E 10 49	Cold Hard Fill Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
E 10 50	Auxiliary Fill Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
E 10 51	Compartment 1 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
E 10 52	Compartment 2 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
E 10 53	Compartment 3 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
E 10 54	Compartment 4 Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
E 10 55	Drive Power Contractor Coil Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
E 10 56	Electric Heat Contractor Coil Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
E 10 57	Steam Heat Valve Shorted	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.

Table 31 *continues...*

Display	Description	Cause/Corrective Action
<i>E 10 62</i>	24 Volt Supply Over Voltage	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
<i>E 10 63</i>	24 Volt Supply Under Voltage	The control sounds an alarm tone for 15 seconds. To clear this error either power down the machine or simultaneously press the Heavy/Hot and Delicate/Warm keypads.
<i>E dr</i>	Drain Error	If enabled, the control will enter Machine Error Mode when the water height is not below the empty level, after attempting to drain for the programmable time (default 15 minutes). The control sounds an alarm tone for 15 seconds. To clear the error, disconnect and then reconnect power to the machine.
<i>E LF</i>	Water Leak Fill Error	If the water level has raised more than an acceptable amount in a during a water leak check, the control will save a water leak error status and will continue the machine cycle. Immediately upon detecting the error the right-most decimal point will be lit. This lit decimal point can be cleared by pressing the START keypad 3 times in a period of 5 seconds or by cycling the power to the machine.
<i>E d 01</i>	Setup Command Error	Drive received incorrect parameters. Power down machine to clear. Call a service technician if error persists.
<i>E d 21</i>	Over Voltage DC Bus Error	Power down to clear error. Check voltage input to machine. If it happens only at start of spin, replace motor. Replace drive board if error persists.
<i>E d 22</i>	Over Motor Temperature Error	Motor temperature is detected to be too high. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace drive board if error persists.
<i>E d 23</i>	Fatal IPM Over Current Shunt Error	Check that drum and motor spins freely. Power down to clear error. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Replace drive board if error persists.
<i>E d 24</i>	Fatal I2T Hardware Over Current Error	Check that drum and motor spins freely. Rotor may be locked up. Check the motor phase windings. Continuity should be uniform between phases L1 and L2, L2 and L3, L1 and L3. Replace motor if not uniform. Power down to clear error. Replace drive board if error persists.
<i>E d 25</i>	IPM Over Temperature Error	IPM temperature is detected to be too high. Check that drum spins freely when empty, check for overloading of machine, reduce agitation time, and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Check for lint build-up on heat sink on drive board. Replace drive board if error persists.

Table 31 *continues...*

Display	Description	Cause/Corrective Action
<i>E d 29</i>	Motor Not Connected Error	The motor or one of its electrical phases is not connected. Check that the harness from the motor to the drive board is fully plugged in on both ends and that there is no damage to the motor harness. Make sure to push in the motor harness on both ends just in case it is a little loose and not fully inserted. If the harness looks fine and the error still occurs, try replacing the drive board or harness. Power down to clear error.
<i>E d 31</i>	Overload Current Detection	The drive has expended too much energy which means the system is being overloaded. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace drive board if error persists.
<i>E d 32</i>	Back EMF Error	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 33</i>	Fatal Start-Up Failure	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 34</i>	Locked Rotor Error	The drive has detected a problem with the motor. Check that drum spins freely when empty. Check for overloading of machine. Check motor harness for damage. Reduce agitation time and duty cycle if rotate/pause times are very short and programmable. Power down to clear error. Replace motor or drive board if error persists.
<i>E d 44</i>	Overcurrent Shunt Detection Circuit Fail Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 51</i>	Inrush Pin HW On/Off Fail	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 63</i>	Fatal IPM Temperature Short Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 64</i>	Fatal IPM Temperature Open Error	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 65</i>	Inverter Hardware Acquisition Failure	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 66</i>	Voltage Bus Acquisition Failure	Hardware failure. Power down to clear error. Replace drive board if error persists.
<i>E d 67</i>	Motor Initialization Error	Hardware failure. Power down to clear error. Replace drive board if error persists.

Table 31

Washer-Extractor - Error Codes for V Control

Machine Errors

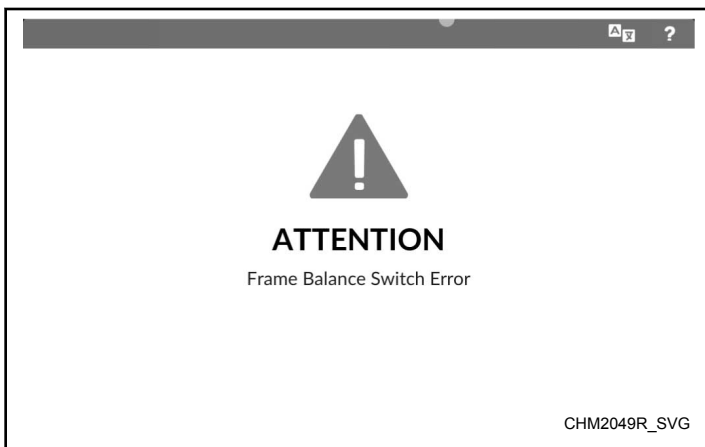


Figure 3

The control displays and logs errors as they occur. When the control senses the error condition, the audit counter for that error increases by one (1). The control saves the time and date of the last 25 errors which have occurred.

Clear errors manually (if enabled in programming) by touching CLEAR ERROR (when shown), send the clear fatal error command using a PC or cycle power to the machine.

Certain errors trigger a 15 second Machine Error Tone. Touch the display to silence the tone.

Auxiliary Communication Error (Fatal)

This error occurs if a loss of communication occurs between the auxiliary output board and the input/output board.

The control attempts to clear the error a three (3) times. The control attempts to unlock the door, then sets the error and displays "Auxiliary Comm Error".

Break-In Alarm Error

If enabled in programming, the user has (30) seconds to enter the bypass passcode after opening the Service Door and/or Coin Vault. If thirty (30) seconds expire or an incorrect passcode is entered, the control triggers the a Break-In Alarm.

The control signals a network alarm, cause a machine alarm or shut down the machine. The date and time of the break-in is recorded.

The owner can program an alarm to sound (if the passcode is not correctly entered) upon Coin Vault Opening, Service Door Opening or both. The error is non-fatal will clear by itself after 15 seconds.

The owner can also program the machine to shut down (if the passcode is not correctly entered) upon Coin Vault Opening,

Service Door Opening or both. The error is fatal and the control will shut down the machine at the end of a cycle, if one is in process.

The hour, date and error code of the event are saved in audit. The error display takes priority over any other error that is already set.

To avoid the alarm during coin collections, the alarm must be turned off or temporarily disabled

Board ID Error (Fatal)

This error occurs when an incorrect board is connected for the machine type and configuration.

The control checks that the connected drive or output board is the correct board. The control also checks that the correct drive and auxiliary output board is connected. The control sets the Board ID Error if the wrong drive motor or auxiliary board is connected for the machine configuration. The display shows "Output Board ID Error", "Drive Board ID Error" or "Auxiliary Board ID Error", according to the error.

Broken Belt Error (Fatal)

This error occurs if the control detects that the drive belt has fallen off or broken. This error is a fatal error and the control turns off all outputs. The display shows "Broken Belt Error".

Brownout/Voltage Configuration Error

This error occurs if the control senses input voltage that does not match the machine configuration. The display shows "Voltage Configuration Error". To clear the error, correct the the input voltage or the voltage configuration parameter (refer to *Settings Menu*), then cycle power to the machine power.

Coin Drop Error

If enabled in programming, a Coin Drop Error occurs if a coin input pulse is too short, if the input is too long or if the input is too close to the previous input. The control displays "Coin Error" and turn on the Machine Error Tone for five (5) seconds, after which the error terminates. The coin error #1 or #2 audit counters will be incremented. Any valid coins are accepted normally and will terminate the error condition.

If the coin error penalty parameter is enabled and the coin error is enabled in programming, when a coin error occurs all vend progress is lost and the control returns to the *Approach Page*.

Door Lock Error (Fatal)

This error occurs if the door unlocks during a cycle. The control terminates the cycle, turns off all outputs, sounds the Machine Error Tone and records the error in *Audit Data Menu*.

Door Lock Error (Non-Fatal)

This error occurs if the door fails to lock after an attempt. The control displays "Door Lock Error". The output board attempts to lock the door for an additional one (1) minute. The control continues to display "Door Lock Error" for an additional 10 seconds after ceasing attempts to lock the door.

Door Open Error (Fatal)

This error occurs if the control senses the door open during a running cycle. The control terminates the cycle and displays "Door Open Error".

Door Unlock Error

This error occurs when the door fails to unlock. The error sets on the first failed attempt to unlock the door. The control displays "Door Unlock Error". The output board attempts to unlock the door two (2) more times. If the door still fails to unlock, the control prompts the user to restart the cycle. If the cycle is restarted, the error clears and the attempts will be restarted.

Drain Error (Fatal)

This error occurs when the machine failed to drain properly.

If enabled in programming, the Drain Error is set when the water height is not below the empty level after attempting to drain for the programmed time. The control turns off all outputs and displays "Drain Error".

If disabled, the control continues draining the machine with the total remaining cycle time paused and no error display.

In the event of a fatal error, the drive will power down, allowing the door to unlock.

Drive Communication Error (Fatal)

This error occurs when a loss of communication between the drive board and I/O board is detected. The control unlocks the door and displays "Drive Comm Error". If the error is set while the basket is rotating at a dangerous speed, the control will coast down the basket to a stop before unlocking the door.

Drive Board Errors

This error occurs if the control receives error code from the Drive Board. The control turns off all outputs, sounds the Machine Error Tone for 15 seconds, and displays "Drive Error (XXX)" where "XXX" is the specific error code (refer to *Table 32* and *Table 33*). When a Drive Error occurs, the specific error is counted in *Audit Data Menu*. Fatal Drive Errors are added to the last 25 errors queue. The non-fatal errors are not.

ALS Drive Errors	
"XX"	Description
21	Over Voltage DC Bus
22	Over Motor Temperature
23	Fatal IPM Over Current Shunt
24	Fatal I2T Hardware Over Current
25	IPM Over Temperature
29	Motor Not Connected Error
31	Overload Current Detection
32	Back EMF
33	Fatal Startup
34	Locked Rotor
51	Inrush Pin HW On/Off Fail
63	Fatal IPM Temperature Short Error
64	Fatal IPM Temperature Open Error
65	Inverter Hardware Acquisition Failure
66	Voltage Bus Acquisition Failure
70	Unbalance Switch Error

Table 32

Powerflex Drive Errors	
"XX"	Description
2	Auxiliary Input
3	Power Loss
4	Under Voltage
5	Over Voltage
6	Motor Stalled
7	Motor Overload
8	Heatsink Over Temperature
9	Control Module Over Temperature
12	HW Overcurrent (300%)
13	Ground Fault
15	Load Loss
21	Output Phase Loss
29	Analog Input Loss
33	Auto Restart Tries
38	Phase U to Ground Short
39	Phase V to Ground Short
40	Phase W to Ground Short
41	Phase UV Short
42	Phase UW Short
43	Phase VW Short
48	Parameters Defaulted
59	Safety Open
63	Software Overcurrent
64	Drive Overload
70	Power Unit Fail
71	DSI Network Loss
72	Option Card Network Loss
73	Embedded Ethernet/IP Adapter Network Loss
80	Auto Tune Fail
81	DSI Communication Loss

Table 33 continues...

Powerflex Drive Errors	
"XX"	Description
82	Option Card Communication Loss
83	Embedded Ethernet/IP Adapter Communication Loss
91	Encoder Loss
94	Function Loss
100	Parameter Checksum Error
101	External Storage
105	Control Module Connect Error
106	Incompatible Control-Power Module
107	Unrecognizable Control-Power Module
109	Mismatched Control-Power Module
110	Keypad Membrane
111	Safety Hardware
114	Microprocessor Failure
122	I/O Board Fail
125	Flash Update Required
126	Non Recoverable Error
127	DSI Flash Update Required

Table 33

Drive/Output Board Not Ready Error (Fatal)

This error occurs when the Drive Board or Output Board is not set up. This error indicates the control never received a status from the Output Board indicating the Output Board is ready. When the error is set, the control displays "Board Not Ready Error".

Drive/Output Board Shorted Error (Fatal)

This error occurs if the Output Board or drive enable relay fails to change state. If the control is able to communicate to the Output Board with the Drive/Output Board relay enable output programmed to 'disabled', this indicates that the Drive or Output Board is powered when it should not be. If this is detected, the control terminates the cycle, sets the error and displays "Board Shorted Error".

Fill Error (Fatal)

If enabled in programming, this error occurs if the machine fails to fill to the desired water level within the programmed time after starting the fill. In addition to the error being programmable, the wait time before setting the error can be programmed.

When the error is set, the machine drains for 90 seconds, unlocks the door, and turns off all outputs. The display shows "Fill Error".

If the error is disabled, the machine continues filling with the total remaining cycle time paused.

Frame Balance Switch Error (Fatal)

This error occurs if the frame balance switch become unsatisfied while the control is running a cycle. The control stops the cycle, turns off all outputs and displays "Frame Balance Switch Error".

Heater Error (Heat Models)

If the error is enabled in programming, this error occurs if the desired water temperature is not reached. If the heater is enabled in programming and the water temperature has not reached the desired temperature within the programmed time, the control sets the error. The control shuts off heater output and the cycle will continue. At the end of the cycle, the control displays "Heater Error".

If the error is disabled, the control does not display "Heater Error" at the end of the cycle or log the error, but turns off the heater output and does not attempt to heat for the remainder of the cycle.

IR Communications Error

This error occurs if there is a problem with communication between the control and an IR device. The control displays "IR Comm Error (XXX)" where "XXX" indicates the error code value. Refer to *Table 34*.

Error Code	Description
01	Error detected when sending data
02	Time-Out Error
03	Invalid Command Code
05	Invalid or Out of Range Data
09	CRC-16 Error
0A	Framing Error
0C	Time-Out Exceeding While Getting Packet
0E	Encryption Error

Table 34 *continues...*

Error Code	Description
0F	IR Disabled in Control Programming

Table 34

Leak Detection (Drain) Error

This error occurs if the water level lowers more than an acceptable amount. The error sets when a Water Leak Diagnostic Test is run during a cycle and the water level lowers more than an acceptable amount during a drain cycle step. When the cycle is complete, the display shows "Leak Detection (Drain) Error".

Leak Detection (Fill) Error

This error occurs if the water level rises more than an acceptable amount. The error sets when a Water Leak Diagnostic Test is run during a cycle and the water level rises more than an acceptable amount during a fill cycle step. When the cycle is complete, the display shows "Leak Detection (Fill) Error".

Low Level Pressure Sensor Error (Heat Models) (Fatal)

Factory error detecting incorrect low level pressure sensor switch status. This error will only trigger during a factory test cycle. The error sets after the door lock step, before fill steps and when the Low Level Pressure switch has been satisfied OR when the High Water Level is verified and the control senses that the Low Level Pressure Switch is unsatisfied. The control displays "Low Level Pressure Switch Error".

Machine ID Chip Error

This error occurs if the control detects either a communication error with the machine ID chip or a control configuration error. The control displays "Machine ID Chip Error (XXX)". "XXX" indicates an error code value. Refer to *Table 35*.

Error Code	Description	Type
05	Read Error	Notification
06	Write Error	Notification
31	Product byte 1 mismatch	Power Up
32	Product byte 2 mismatch	Power Up
33	Product byte 3 mismatch	Power Up
39	CRC error with un-configured control	Power Up

Table 35 *continues...*

Error Code	Description	Type
FF	No ID chip connected and no configuration in control	Power Up

Table 35

Notification errors occur when communication between the control and ID chip has failed. When the error is set, the hour, date and error code of the event are saved in *Audit Information*.

Power Up errors occur when the control is not configured and cannot get configuration data from the Machine ID chip. The error clears once the control is successfully configured.

Max Temperature Exceeded Error (Heat Models) (Fatal)

This error occurs if the maximum water temperature was exceeded. If the water temperature exceeds the maximum allowed temperature of 194°F [95°C] for 10 seconds, the control displays "Max Temperature Exceeded Error".

Network Communications Error

This error occurs if communication fail between the control and the ALS Wi-Fi board. When the error sets, the control displays "Network Error". The error code is not shown, but it is recorded in audit data. Refer to *Table 36*.

Error Code	Description
02	Time-Out Error
03	Invalid Command Code
05	Invalid or Out of Range Data
06	Invalid Data Code
09	CRC-16 Error
19	No Communication

Table 36

No Water Flow Error (Fatal)

If enabled in programming, this error occurs if the machine fails to fill to the minimum water level on time. If the control does not reach a water level of four (4) inches within the first programmed time of starting the fill, the control displays "No Water Flow Error".

This error may mean the hose to the pressure sensor has a leak or no water is flowing into the machine.

Open Thermistor Error (Heat Models)

If enabled in programming, this error occurs if the control senses an unrealistically low temperature. The error sets if the control de-

fects a temperature less than or equal to 32°F [0°C] while trying to regulate the fill temperature by cycling water valves or heating. The display shows "Open Thermistor Error" at the end of the cycle.

If this error occurs while the control is regulating the fill temperature by cycling valves, the control will revert to non-regulated fill temperature. If this error occurs while the machine is heating, the control will turn off the heater output and not attempt to heat. The cycle will complete normally.

If the machine is in life test, the error is fatal.

Output Board Errors

This error occurs if the control receives error code from the Output Board. The control turns off all outputs, sounds the Machine Error Tone for 15 seconds, and displays "Output Board Error (XXX)" where "XXX" is the specific error code (refer to *Table 37*). When an Output Error occurs, the specific error is counted in Audit Data Menu.

Output Board Errors	
"XX"	Description
1	Setup Error
2	Voltage Select
3	Under Voltage AC-Main Input
4	Over Voltage AC-Main Input
5	Power Fail Dangerous
6	Power Fail No Danger
7	Under Voltage DC Bus Error

Table 37

Overflow Error (Fatal)

This error occurs if the machine fills beyond the overflow limit. If the error continues after five (5) minutes with the door locked or after one (1) minute with the door open or unable to lock, the error will be set. The control displays "Overflow Error" and will continuously sound the Machine Error Tone at the highest volume one second on, one second off. The machine continues to pump or the gravity drain remains open.

Payment System Communications Error

These errors may occur during communication with the Serial Payment System. The display shows "No Payment System initialization performed", "Loss of communication" or "No initialization and no communication", according to the error. Once communications are restored, the control returns to the previous state. The hour, date and error code of the event are saved.

Pressure Sensor Error (Fatal)

This error occurs if the control fails to detect a valid water level. The error sets if the control does not detect a valid water level for 30 seconds or if the Max (Overflow) Fill Level in the control is set to zero (0) while running a cycle or a factory test. The control displays "Pressure Sensor Error", *Machine Error Mode* the machine drains for 30 seconds, unlocks the door, then turns off all outputs.

SCI Communication Error (Fatal)

This error occurs if communication fails between the control and the drive or output board. SCI Communications Errors can also be caused by drive or output board detecting a *System Integrity Error*. The control displays "SCI Comm Error".

Shorted Thermistor Sensor Error (Heat Models)

If enabled in programming, this error occurs if the control senses an unrealistically high temperature. The error sets if the control detects a temperature greater than 212°F [100°C] while trying to regulate the fill temperature by cycling water valves or heating. The display shows "Shorted Thermistor Error" at the end of the cycle.

If this error occurs while the control is regulating the fill temperature by cycling valves, the control will revert to non-regulated fill temperature. If this error occurs while the machine is heating, the control will turn off the heater output and not attempt to heat. The cycle will complete normally.

If the machine is in life test, the error is fatal.

Slow Drain Detection Error

If enabled in programming, this error occurs when the control detects poor drain conditions. Poor drain conditions will cause a longer than normal time for the water level to drop. There may be several causes:

- a drain valve/pump malfunction
- a foreign object jammed in the drain valve/pump
- a poor drain connection between the machine drain and the building sewer system.
- An over-suds condition may also affect the drain and lead to a slow drain condition.

During a drain cycle step, the control tracks the time required for the water to drop from the Global Water Level value (1) to below the empty level. If the control senses a drain time greater than the amount specified, the error sets and the display shows "Slow Drain Error" .

The default slow drain time is 105 seconds for a pump and 18 seconds for a gravity drain. This value can be adjusted by programming the Slow Drain Adjust Value, extending the slow drain time for less than ideal drain plumbing situations.

Slow to Heat Error (Heat Models)

If enabled, this error occurs if the water temperature has not risen for a programmed period of time. The time it takes for this error to set from the start of heating is defined in programming. If the time is programmed to zero (0) then the error is disabled. The control displays "Slow To Heat Error" if the water temperature does not rise by 9°F [5°C] from the start of heating within the programmed time.

If the machine is in life test, the error is fatal.

Suds Lock Error

If enabled in programming, this error occurs if the control detects suds in the machine. The control checks for suds when in a spin cycle step. If the control detects suds in the machine based on the conditions noted in the Suds Removal Routine after performing the maximum number of programmed Suds Removal Routines, the error is set.

After setting the error, the control limits the basket spin to a distribution speed for the rest of the cycle. When the cycle is complete, the control displays "Suds Lock Error".

System Integrity Error

This error occurs if a *SCI Communication Error (Fatal)* happens on the drive or output board. When the error sets, drive or output board stops communication with the control. The output board displays the error by flashing LEDs on and off. The machine must be powered down to clear the error.

Error Description	Number of LED Flashes
CPU Error	1
SFR Error	2
ROM Error	3
RAM Error	4
Stack Error	5
RAM Buffer and Empty Error	6
Software Watchdog Error	7
Slow Monitoring Error	8

Too Hot to Drain Error

If enabled in programming, this error occurs if the water temperature is too high to safely drain the machine. The error sets when the drive or output board indicates the water temperature is too hot to safely drain while the machine is in a drain or extract step. The display shows "Too Hot To Drain" when the cycle has complete.

This error could indicate a problem with the heater or that the programmed agitation time is too short to effectively cool down the water before trying to spin and drain.

Unbalance Limit Error

This error occurs if the extract speed is not reached because the control detects an unbalanced load. The error sets when the maximum number of balance tries is reached and the balance result does not allow for extract at the programmed speed. If enabled in programming, the display shows "Unbalance Limit Error" when the cycle is complete.