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## SECTION 9 - CONTROLLER ERROR CODE DEFINITIONS

The following sequential list of error codes indicates various fault conditions on the controller and elevator.

ERROR	DEFINITION OF CONTROLLER ERROR CODE
1	Division by zero.
2	Program Sequencing error
3	Real Time Clock program processing error: Indicates that insufficient time was available to process the control information.
4	Invalid internal car position (such as zero): The position of car was internally set to zero in program.
5	<b>Not used on <i>FUTURA™ HYDRO</i>.</b>
6	Invalid Motion Control sequence or control parameter: This is related to the Digital drive system
7	Calculated slowdown target to floor was negative during Deceleration or Leveling modes.
8	Velocity of the car is 25% in excess of contract speed. Verify Car top encoder alignment and associated wiring. Digital encoder feedback from digitizer was under 9 fpm (0.046 m/s) while demand velocity exceeded VEE parameter setting.
9	Panic motion fault error: This error occurs when: a) There is an opposite direction between demand and velocity. b) There is a demand direction but no velocity. c) There is a velocity direction but no demand.
10	Digital Tach error: Indicates excessive differential between the "Demand" velocity (digital speed pattern) and the Digital speed reference (from encoder DPP). <u>Possible problems:</u> a) Improper setting of the Regulator on the drive. Check response and inertia settings. b) Verify the connections to DPP from encoder and the encoder alignment on the rail. c) The drive system motor field response (Make sure that motor field is producing proper torque).
11	Limit position reference error: When a terminal slowdown limit switch first opens, the switch's actual position count is compared against its reference position count (ULR or DLR parameter settings), check ULB and DLB. If the <u>difference</u> between the actual position and the reference position is greater than the LPE parameter setting, an emergency slowdown will occur. Remedy this problem by adjusting ULR and DLR accordingly.



<b>ERROR</b>	<b>DEFINITION OF CONTROLLER ERROR CODE</b>
12	Preset Parity error.
13	Invalid Direction error: Mismatch between Up or Down direction signal & encoder. Check Motor encoder coupling for tightness.
14	Terminal limit position error: The position of the car was invalid at the bottom most or top most limit switch (SD1 or SU1). Check to see if there were preset errors prior to this. (See error 15.)
15	Position preset error: Error 12 is a parity error from input signals. Position of car is not altered. When a preset position error occurs, the car position <u>is</u> altered and the DPP will be reset to floor position reference when car leaves the floor. Run the car floor to floor to ascertain that floor preset signals are valid. This error is more likely to occur after an emergency stop, or from Inspection to Auto operation. It is also possible for DPP to go "off" but that is not usually the source of problem.
16	Dispatch communication time-out: Verify serial communication link connections to each controller. This error usually occurs if the dispatch controller or car #1 for duplex installation is operational.
17	Motion time-out: This error occurs when too much time elapses during a run sequence.
18	Control response time-out: Occurs when a start sequence is initiated from computer and the BK relay fails to energize. Verify connections to the Up and Down output modules, the SM and MC circuitry, and connections to the BK input module. Check hoistway doors for any bounce when final close occurs. Check door interlock time parameter DIT and increase if necessary.
19	Up Pilot and Down Pilot signal wire on at the same time. Check wiring.
20	Digital Encoder loss time-out: No DPP input signal. This will initiate an emergency slowdown. Check operation and alignment of car top encoder.
21	FLASH EPROM Read/Write error: This error will prevent the car from operating. Verify the settings of PAR, FCP, ULR, DLR, TSV and ESV parameters with the terminal.
22	Terminal limit switch emergency slowdown: Velocity of car > TSV adjustment at terminal landing. Verify car velocity when terminal limit switches open with <ULB> and <DLB> commands.
23	Digitizer board fault.



<b>ERROR</b>	<b>DEFINITION OF CONTROLLER ERROR CODE</b>
24	Drive fault: Indicates an encoder fault from the drive. This error occurs when there is excessive variance between the analog demand velocity and the analog tach reference velocity on non serial drives and M.G.'s.
25	Start Sequence Error: A start sequence was initiated, in auto or inspection, during a drive fault. Reset and/or correct fault trip condition on drive. Also, verify associated wiring. Check CCU display.
26	Motion Fault Error: If doors were closed, there was an Up or Down signal without Delta (M.G.), ICS, or GLR input modules. Check CCU display. If doors were already open, either of the following occurred: a) an up or down signal without Delta, ICS, GV, HS, CS, Normal Power or Auto input modules; or b) an up or down signal without LVE output.
27	<b>Not used on FUTURA™ HYDRO.</b>
28	<b>Not used on FUTURA™ HYDRO.</b>
29	Slowdown Terminal Limit Switch Error: Occurs when start sequence is in up direction with an up slowdown limit open and position count indicates that car is not at that limit switch. The reverse is true for a start sequence in down direction with a bottom limit switch incorrectly open.
30	Car is moving without a demand velocity from SPU, meaning that Up or Down relays were on.
31	Car was on Next-Up (dispatch mode) and went into service protect mode. Check AST parameter.
32	Reserved.
33	Reserved.
34	Reserved.
35	Look-ahead distance calculated too short. Decel Roll Time is set too long (DRT); or Distance Look Ahead Multiplier (DLM), Performance Constant (PEK) or Top Speed Travel Distance (TFD) are set too small.
36	Variable has wrong value
37	<b>Not used on FUTURA™ HYDRO.</b>



ERROR	DEFINITION OF CONTROLLER ERROR CODE
38	<b>Not used on <i>FUTURA™ HYDRO</i>.</b>
39	<b>Not used on <i>FUTURA™ HYDRO</i>.</b>
40	Level velocity too high when car reached final leveling. Velocity of car was greater than 70 fpm (0.36 m/s) at 2 inch (5 cm) point. Check valve.
41	Trying to re-level in level mode. Indicates software error. Should not occur - Call CEC.
42	Doing a final stop in wrong digitizer mode. Indicates software error. Should not occur - <b>Call CEC.</b>
43	Gate and Lock switch opened when car velocity was greater than maximum level (MLV parameter) setting when doors are open. Check valve.
44	The Gate and Lock (GL) input was not activated when the doors were fully closed. Check interlock clearance.
45	The Door Closed Limit (DCL) input was not activated when the doors closed. Check limit switch for proper operation.
46	The Door Open Limit (DOL) input was not activated when the doors open. Check limit switch for proper operation.
47	Reserved.
48	Reserved.
49	Reserved.
50	<b>Not used on <i>FUTURA™ HYDRO</i>.</b>
51	<b>Not used on <i>FUTURA™ HYDRO</i>.</b>
52	Car out of mid level zone with gate and lock input modules not activated (GL); Car not moving. Car SPU must be powered off and then on to allow the car to run. Check valve.



<b>ERROR</b>	<b>DEFINITION OF CONTROLLER ERROR CODE</b>
53	Car out of mid level zone with gate and lock input modules not activated; Car still moving without demand from the SPU.
54	Up or Down encoder motion detected 1.5 seconds after the valve de-energized.
55	<b><i>Not used on FUTURA™ HYDRO.</i></b>
56	Max run timer timed-out during a run: Run sequence of elevator exceeded the Maximum Run Timer (MRT parameter) adjustment.
57	<b><i>Not used on FUTURA™ HYDRO.</i></b>
58	An auto fault reset occurred. A fault condition caused by drive system has been reset by SPU. If fault occurs more than 3 times within 1 hour, SPU will not reset automatically. After the 3rd time, the fault must be reset manually.
59	Up or Down motion but no Up or Down signal.
60	Up or Down signal but no Up or Down motion.
61	Car did not decelerate during a drive fault.
62	<b><i>Not used on FUTURA™ HYDRO.</i></b>
63	<b><i>Not used on FUTURA™ HYDRO.</i></b>
64	Low Oil Timer (LOT) tripped and returned car to bottom floor.
65	<b><i>Not used on FUTURA™ HYDRO.</i></b>
66	Both ACU & ACD input modules on simultaneously, or, AUTO input module was on with either ACU or ACD input module on. Check module and wiring.
67	Both PTU & PTD input modules on simultaneously, or, AUTO input module was on with either PTU or PTD input module on. Check module and wiring.



<b>ERROR</b>	<b>DEFINITION OF CONTROLLER ERROR CODE</b>
<b>68</b>	Both TIU & TID input modules on simultaneously, or, AUTO input module was on with either TIU or TID input module on. Check Module and wiring.
<b>69</b>	Top slowdown limit switch open while in Bottom Access Mode. Check switch and wiring.
<b>70</b>	Bottom slowdown limit switch open while in Top Access Mode. Check switch and wiring.
<b>71</b>	<i>Not used on FUTURA™ HYDRO.</i>
<b>72</b>	<i>Not used on FUTURA™ HYDRO.</i>
<b>73</b>	<i>Not used on FUTURA™ HYDRO.</i>
<b>74</b>	Communication packets were lost on local COMM port (HYC, GP2, MRC) while the car was moving.
<b>75</b>	Communication packets were lost on car COMM port (TOC or COP devices) while car was moving.
<b>76</b>	Communication packets to the CPT board were lost while the car was moving.
<b>77</b>	<i>Not used on FUTURA™ HYDRO.</i>
<b>78</b>	<i>Not used on FUTURA™ HYDRO.</i>
<b>79</b>	Lost the HS (Hatch Safety) input while the car was moving.
<b>80</b>	Lost the CS (Car Safety) input while the car was moving.
<b>81</b>	Lost the ICS (In-Car Stop Switch) input while the car was moving.
<b>82</b>	<i>Not used on FUTURA™ HYDRO.</i>
<b>83</b>	Lost the RDY (Ready) module input while the car was moving.
<b>84</b>	Lost the SM (System Master) module input while the car was moving.



<b>ERROR</b>	<b>DEFINITION OF CONTROLLER ERROR CODE</b>
<b>85</b>	<i>Not used on FUTURA™ HYDRO.</i>
<b>86</b>	<i>Not used on FUTURA™ HYDRO.</i>
<b>87</b>	Car cannot be a Master (Dispatcher). GRPO was asserted but the GRPI input was not activated.
<b>88</b>	Real time clock control interrupt failed. Detected by secondary watch dog timer.
<b>89</b>	Dispatch sequencer clock interrupt failed. Detected by secondary watch dog timer.
<b>90</b>	Second interrupt timer failed.
<b>91</b>	In Car Inspection input module on while car was on auto or while both top and bottom car calls on. Check wiring.
<b>92</b>	GL, DLS, or CGS input modules on when door reached full open (DOL switch input) at the floor.
<b>93</b>	Intelligent device powered up reset after previous initialization.
<b>94</b>	EMSD was lost unexpectedly: lost FLT, EMST
<b>95</b>	DPP not in UP direction when car running up.
<b>96</b>	<i>Not used on FUTURA™ HYDRO.</i>
<b>97</b>	<i>Not used on FUTURA™ HYDRO.</i>
<b>98</b>	DPP signal not in DOWN direction when car running down.
<b>99</b>	<i>Not used on FUTURA™ HYDRO.</i>
<b>100</b>	<i>Not used on FUTURA™ HYDRO.</i>
<b>101</b>	Car did not decelerate as expected in an emergency stop.



<b>ERROR</b>	<b>DEFINITION OF CONTROLLER ERROR CODE</b>
<b>102</b>	<i>Not used on FUTURA™ HYDRO.</i>
<b>103</b>	<i>Not used on FUTURA™ HYDRO.</i>
<b>104</b>	DZ in the motor room not on when expected (on from the TOC). Check wiring.
<b>105</b>	DZ on TOC board not on when expected (on from the CPT). Check wiring.
<b>106</b>	DPP count off by more than 5 counts when car is level at floor. Check DDP sensor alignment.
<b>107</b>	Both UP and DOWN motion true during DPP interrupt. DPP count not updated.
<b>108</b>	No UP or DOWN motion during DPP interrupt. DPP count not updated.
<b>109</b>	DZ signal from MRC board & TOC board is on despite an absence of command from CPT board.
<b>110</b>	Car tried to re-level 25 consecutive times. Check valve operation.
<b>111</b>	SPU velocity feedback zero when demand > 40 fpm. (0.2 m/s)
<b>112</b>	<i>Not used on FUTURA™ HYDRO.</i>
<b>113</b>	<i>Not used on FUTURA™ HYDRO.</i>
<b>114</b>	GL lost during a start sequence. Check DZ aux. contacts in GL circuit.
<b>115</b>	CG or DL lost during a start sequence.
<b>116</b>	LVE not dropped during a start sequence. Check module and wiring.
<b>117</b>	Multiple cars Master at the same time. Check CTG cross connect wiring.
<b>118</b>	Too many Hall Call (HC) devices selected.



<b>ERROR</b>	<b>DEFINITION OF CONTROLLER ERROR CODE</b>
119	<i>Not used on FUTURA™ HYDRO.</i>
120	<i>Not used on FUTURA™ HYDRO.</i>
121	<i>Not used on FUTURA™ HYDRO.</i>
122	Deceleration roll error: roll target velocity higher than demand velocity.
123	Car was placed on gate and lock bypass while the car is on inspection.
124	<i>Not used on FUTURA™ HYDRO.</i>
125	<i>Not used on FUTURA™ HYDRO.</i>
126	<i>Not used on FUTURA™ HYDRO.</i>
127	<i>Not used on FUTURA™ HYDRO.</i>
128	Group EEPROM checksum error.
129	Group battery RAM checksum error.
130	Group EEPROM and battery RAM checksum error.
131	Invalid access code EEPROM byte write.
132	Invalid access code EEPROM word write.
133	<i>Not used on FUTURA™ HYDRO.</i>
134	<i>Not used on FUTURA™ HYDRO.</i>
135	<i>Not used on FUTURA™ HYDRO.</i>



<b>ERROR</b>	<b>DEFINITION OF CONTROLLER ERROR CODE</b>
136	SPU thermal switch fault. The SPU temperature is too high.
137	<i>Not used on FUTURA™ HYDRO.</i>
138	<i>Not used on FUTURA™ HYDRO.</i>
139	<i>Not used on FUTURA™ HYDRO.</i>
140	<i>Not used on FUTURA™ HYDRO.</i>
141	<i>Not used on FUTURA™ HYDRO.</i>
142	<i>Not used on FUTURA™ HYDRO.</i>
143	<i>Not used on FUTURA™ HYDRO.</i>
144	<i>Not used on FUTURA™ HYDRO.</i>
145	LTR parameter rate set too low during emergency deceleration at terminal limit.
146	DZ relay failed to drop when expected (for 2000 Code Compliant)
147	CEC String did not drop when expected (for 2000 Code Compliant)
148	CGDL (Gate Door Lock Contact) did not drop during CEC test (for 2000 Code Compliant)
149	<i>Not used on FUTURA™ HYDRO.</i>
150	Contact proven input failure (CPI or RPI Module) <i>Part of CEC Test</i>
151	<i>Not used on FUTURA™ HYDRO.</i>
152	FBPR not on when FBP or FBPA module is on <i>Part of CEN Test</i>
153	Door Bypass Fault – Both CDP & CDP1 are on at the same time or off at the same time or Both LDP & LDP1 are on at the same time or off at the same time
154	<i>Not used on FUTURA™ HYDRO</i>
155	<i>Not used on FUTURA™ HYDRO</i>

