

Section 7 – Troubleshooting

7.1 – Diagnostic Screen and States

The key to troubleshooting the system is to first determine what state the elevator is in. To do this, look at the main screen on the diagnostic display. The display is described in Section 4.2.

Look at the present status of the elevator on the lower right part of the diagnostic screen. A status of 01 indicates that the car is on automatic operation and available for passenger travel. Any other status indicates that the system is not on automatic operation. Refer to the chart below for common states that may be seen.

State	Description
00	Out of Service
01	Automatic Operation
02	Independent Operation
03	Fire Phase I
04	Fire Phase II
05	Emergency Power Operation
06	Earthquake Operation
07	Code Blue Operation
09	Water in pit sensor active
11	Automatic Operation with load weigh disabled (parameter 107 active)
12	Passenger release operation (power lost, moving to closest landing on battery power)
14	Emergency power recall
29	Move around operation (parameter 199 active)
36	Emergency Power Halt
37	Stop switch in car open
38	Stop switch in FF panel open
39	Elevator is overloaded
40	Invalid configuration (see note below)
41	Invalid hoistway image (must perform learn trip)
42	Invalid load weigh configuration
43	Invalid drive configuration
44	Out of service from remote
45	Belt life exceeded
51	Installation travel (parameter 105 active)
52	Configuration (parameter 40 active)
53	Controller Inspection Operation
54	Car Top Inspection Operation
55	In car inspection operation (not present in North America)
56	Hoistway Access Operation
57	Test Travel Operation (parameter 104 active)
58	Acceptance Test mode
59	Hoistway Learn
70	Recovery mode (elevator recovering after power loss, etc.)
71	Recovery from over/under temperature
72	Position recovery (elevator recovering after position loss)
74	Low backup battery power
80	Stop switch in hoistway pressed

81	Stop switch on car top pressed
82	Stop switch on controller pressed
88	Safety circuit open
89	Bypass (car door and/or hoistway door) switch activated
90	System status invalid (will attempt to recover when on automatic operation)
91	Power up
92	Subsystem firmware downloaded
95	Power lost to controller
97	Out of service but available for inspection operation (check error log for cause)
98	Out of service & NOT available for inspection operation (check error log for cause)
99	Out of service – must perform 101 reset to operate
W!	Belt life warning – belt life has exceeded 80%

NOTE: Status 40 indicates that the software configuration has become corrupted. Refer to Section 6.4 for further information.

Status 98 and 99 will not allow the elevator to run on inspection operation. Status 98 may be cleared by performing a 101 reset at the controller or by a 'soft reset' from the car top or controller inspection run box.

7.2 – Check Error/Event Log

As described in Section 5.5.1, view the event log to see what faults or events have been logged. These events are time stamped, so it is possible to determine when the event occurred. As previously mentioned, not all information in the log is an error, and many events are logged to assist in determine what has happened with the elevator.

7.3 – Common Error/Event Codes

The following is list of common error or event codes.

Code	Description
Status Messages	
0019	Watchdog reset. Processor problem has been detected and processor restarted.
0033	Start up. The system was reset and the processor restarted.
0040	Manual reset (101) commanded by user.
0041	Earthquake mode reset by user.
0042	Governor overspeed contact reset by user.
0043	Unintended movement reset by user.
0044	Water in pit reset by user.
0050	Recall trip (fire, earthquake, etc.) started.
0051	Recall trip complete.
0052	Recall trip interrupted. Car stopped trip due to other condition (inspection, etc.)
0053	Recall trip destination changed.
0055	Processor start up failed. Refer to other error for possible cause.
0056	Processor start up recovery successful. Processor recovered from a startup failure.
0060	Counterweight derailment.
0061	Speed too fast at terminal landing.
0062	Backup battery insufficient charge.
0063	Backup battery insufficient charge.

0064	Control system power on.
0065	Control system power removed.
0066	Control cabinet excessive heat.
0067	Control cabinet excessive heat recovery successful.
0068	Drive reduced error mode (parameter 102) active.
0069	Drive reduced error mode (parameter 102) complete.
0070	Technician on site (parameter 117) active.
0071	Technician on site (parameter 117) complete.
0072	Car light/alarm bell battery insufficient charge.
0083	24-NGL power supply failure.
0086	Node list invalid.
Door Errors	
0301	Door closing timeout.
0302	Door opening timeout.
0350	Door position signal invalid.
0351	Door position recovery successful.
0352	Door position recovery failure.
0353	Door unavailable.
0354	Door availability recovered.
Invertor (Drive) Errors	
0430	Brake switch(es) do not match commanded state of brake.
0431	Brake switch(es) do not match commanded state of brake, fatal.
0432	Brake contactor contacts do not match commanded state. Check auxiliary contacts.
0433	Main contactor contacts do not match commanded state. Check auxiliary contacts.
0435	Motor overtemperature.
0436	Motor temperature recovery successful.
0437	Drive dynamic braking resistance overtemperature.
0438	Drive dynamic braking resistance temperature recovery successful.
0439	Drive overtemperature.
0440	Drive temperature recovery successful.
0441	Drive overtemperature.
0444	Trip timeout. Car did not reach desired floor within the maximum amount of time.
0445	Drive trip preparation data from control system invalid.
0446	Drive trip start failure. Drive commanded start, but no car movement.
0447	Excess encoder position deviation. May be slipping belts, loose motor encoder, etc.
0448	Drive inverter controller failure. Internal drive failure.
0449	Drive output power failure. Drive commanded run, but detected no output.
0450	Elevator releveling failure. Overshot floor, level distance exceeded, or leveling sensor bad.
Load Weigh Device Errors	
1105	Load weigh device needs to be calibrated.
1109	Load weigh device needs to be calibrated.
1110	Load weigh device needs to be calibrated.
1112	Load weigh device needs to be calibrated.
1119	Load weigh device signal unstable.
1120	Load weigh signal missing.
1121	Load weigh signal out of range.
1123	Load weigh zero calibration successful.
1125	Load weigh reference load calibration successful.
1126	Load weigh recovery successful.

1127	Load weigh device disabled (parameter 107 set to 1)
1128	Load weigh enabled.
1130	Load weigh disabled.
Drive Errors	
1501	Drive overcurrent.
1502	Drive overvoltage.
1503	Drive ground fault. Check motor stator resistance and check for grounded stator.
1505	Drive charging contactor fault. DC bus unstable. May be bad contactor, capacitors, etc.
1509	Drive DC bus low voltage.
1510	Drive AC input fault. 1 or more phases of AC input not present.
1511	Drive output current fault. Low current to 1 or more motor phases.
1512	Drive DC bus braking IGBT failure.
1515	Motor stalled.
1517	Motor current too low.
1531	Motor encoder signal fault. 1 or more encoder channels bad or missing.
1533	Speed differential fault. Excessive difference between motor speed and commanded speed.
1567	Motor movement during standstill.
1589	Safety signal opened while drive is active.
1599	Internal drive fault. Refer to extra information for further details.
Learn Trip Errors	
2004	Number of detected floors does not agree with configuration (BOD file) data.
2013	Learn trip aborted due to higher priority function (inspection, safety circuit open, etc.).
2061	Learn trip detected incorrect door zone length.
2078	Learn trip terminal slowdown signal distance incorrect.
2081	Learn trip adjacent floors incorrect distance (too close or too far apart).
Leveling Zone Signal Errors	
2138	Leveling zone signal invalid.
Safety Circuit Errors	
3552	Safety circuit not closed at IKTC (car door contact not closing).
3556	Safety circuit not closed at IKTS (shaft door contact not closing)
3561	Safety circuit NOT opened at IKTC (jumper detected on car door contact).
3563	Safety circuit NOT opened at IKTS (jumper detected on shaft door contact).
3572	Safety circuit opened unexpectedly at IKTC (car door contact open).
3574	Safety circuit opened unexpectedly at IHC (plank switch, etc.) open.
3575	Safety circuit opened at IUSK (DUEISK-A circuit breaker open).
3576	Safety circuit opened unexpectedly at IKTS (shaft door contact open).
3577	Safety circuit opened unexpectedly at IHW (pit safety circuit open).
3578	Safety circuit opened unexpectedly at IC (car top exit switch open).
3580	Safety circuit power supply not present (power to circuit prior to DUEISK-A breaker).
3581	Safety circuit power supply overcurrent (power to circuit prior to DUEISK-A breaker).
3596	Safety circuit failure recovery successful.
3599	Safety circuit failure recovery at door NOT successful.
Communication Errors	
3610	No communication to LOP. See extra information for further details.
3611	Communication to LOP reestablished (recovery from 3610).
3612	No communication to LOP. See extra information for further details.
3613	Communication LOP reestablished (recovery from 3612).
3614	No communication to I/O node. See extra information for further details.
3615	Communication to I/O node reestablished (recovery from 3614).

3616	No communication to I/O node. See extra information for further details.
3617	Communication to I/O node reestablished (recovery from 3616).
3618	No communication to car CANCNA. See extra information for further details.
3619	Communication to CANCNA reestablished (recovery from 3618).
3620	No communication to drive.
3621	Communication to drive reestablished (recovery from 3620).
3622	No communication to car SCOPNA.
3623	Communication to SCOPNA reestablished (recovery from 3622).
3624	No communication to load weigh system.
3625	Communication to load weigh system reestablished (recovery from 3624).
3626	No communication to main board. See extra information for further details.
3627	Communication to main board reestablished (recovery from 3626).
3630	Node list stored successfully.
3631	Node list NOT stored successfully.
3633	Node incompatibility.
Acceptance Test Status Messages	
4000	Current test failed.
4001	Current test completed successfully.
4002	Current test completed, but the system was unable to determine if it was successful due to another safety device opening.
4003	Current test canceled by user.
4004	Current test aborted – higher priority function (safety circuit opened, etc.).
4005	Current test aborted – missing user input.
4006	Current test aborted – speed not reached.
4007	Current test aborted – load not present.
4008	Current test aborted – brake dropped unexpectedly.
4021	Trip time monitor test started.
4022	Ascending car overspeed test started.
4023	Unintended movement test – down direction started.
4024	Unintended movement test – up direction started.
4025	NTS test – down direction started.
4026	NTS test – up direction started.
4027	Normal brake stopping test – down direction started.
4028	Normal brake stopping test – up direction started.
4029	Counterweight balancing test started.
4032	Car safety test started.
4033	Emergency brake stopping test – down direction started.
4034	Emergency brake stopping test – up direction started.
4036	Car safety actuation test started.
4037	Car low speed limit device (SPDLIM board) started.
4039	Overspeed monitor test – down direction started.
4040	Overspeed monitor test – up direction started.
4041	Traction media residual strength test started.
4042	Traction media aging test started.
4043	Normal stopping half brake down direction at rated load test started.
4044	Normal stopping half brake down direction at overload test started.
4045	Brake test, overload in down direction started.
4046	Unintended movement test – down direction opposite side of LDU started.
4047	Unintended movement test – up direction opposite side of LDU started.

Building Status Messages	
4100	Earthquake mode active.
4101	Earthquake mode reset.
4102	Machine room smoke signal active.
4103	Machine room smoke signal reset.
4104	Fire Service active.
4105	Fire Service reset.
4106	Water in pit active.
4107	Water in pit reset.
Hoistway Information Errors	
4201	KSE_U or KSE_D signals missing or incorrect distance.
4202	Door zone signal invalid.
4203	Door zone signal position invalid. Vane not at learned position.
4204	Position lost, synch trip required.
4205	KSE_D or KSE_D signals do not agree with car direction.
Safety Device Errors	
4304	SPDLIM detected speed exceeded .75 m/s while on inspection operation.
4305	Unintended movement detected. Refer to reset procedure to clear.
4330	Car door contact fault. Car door contact not opening when Door Open Limit active.
4331	Hoistway door contact fault. Door locks not opening when Door Open Limit active.
4350	Unintended movement signal not operating. Check door zone signal.
4351	SPDLIM board error. Missing feedback, etc.
4352	Jumper detected on safety circuit.
4390	Car door bypass device (hoistway access) not operating properly.
4391	In car stop switch bypass device (Fire Phase I) not operating properly.
4392	Hoistway door bypass device (hoistway access) not operating properly.
4393	Overtraction detected. Slack belt switches activated.
4394	Governor tension sheave switch open.
Redundancy Errors	
4401	Fire Service signals invalid, do not agree.
4402	Top of car inspection signals invalid, do not agree.
4403	Machine room (LDU) inspection signals invalid, do not agree.
4404	Hoistway access switch signals invalid, do not agree.
4405	Run commanded from car top inspection station while not on car top inspection operation.
4406	Run commanded from controller inspection station while not on controller inspection.
4407	Run commanded from access switch at landing while not on access operation.
Software Errors	
4501	Software download rejected.
4502	Software on USB not found.
4503	Software on USB incompatible.
4504	Software on USB corrupt.
4505	Files missing on USB.
4506	Node firmware data from software download is invalid.
4510	Software download successful
4511	Software download NOT successful.
4512	Configuration download successful.
4513	Configuration download NOT successful.
4514	Main control board firmware download successful.
4515	Main control board firmware download NOT successful.

4516	Car firmware download successful.
4517	Car firmware download NOT successful.
STM (Belts) Errors/Messages	
4600	Slack belt switch activated.
4601	Belt life nearing limit.
4602	Belt life limit reached.
4603	Belt life monitor reset.
4604	Belt life monitor warning limit changed.
4605	Belt life monitor maximum limit changed.
4606	Belt life monitor clock failure.
4607	Belt age nearing limit.
4608	Belt life limit reached.
4609	Belt life monitor configuration failure.
4610	Belt life monitor data location empty (new CM11 or CANIVF board installed).
4611	Belt life monitor data mismatch (belt data on CM11 and CANIVF do not agree).
4612	Belt life monitor data mismatch (bend cycle data on CM11 and CANIVF do not agree).
4615	Belt life data recovered successfully.
4616	Belt life data NOT recovered successfully.
4617	Belt installation data entered.
4618	Belt bend cycle data count entered successfully.
4619	Belt life aging clock recovered successfully.
4620	Belt life aging clock NOT recovered successfully.
Remote Monitoring Errors/Messages	
5002	Remote monitoring fault. Remove CLSD board.
5003	Remote monitoring fault. Remove CLSD board.
5004	Remote monitoring fault. Remove CLSD board.
5005	Remote monitoring fault. Remove CLSD board.
5006	Remote monitoring fault. Remove CLSD board.
5007	Remote monitoring fault. Remove CLSD board.
5008	Remote monitoring fault. Remove CLSD board.
5009	Remote monitoring fault. Remove CLSD board.
State Messages	
9000	Out of Service
9001	Automatic Operation
9002	Independent Operation
9003	Fire Phase I
9004	Fire Phase II
9005	Emergency Power Operation
9006	Earthquake Operation
9007	Code Blue Operation
9009	Water in pit sensor active
9011	Automatic Operation with load weigh disabled (parameter 107 active)
9036	Emergency Power Halt
9037	Stop switch in car open
9038	Stop switch in FF panel open
9039	Elevator is overloaded
9040	Invalid configuration (see note below)
9041	Invalid hoistway image (must perform learn trip)
9042	Invalid load weigh configuration

9045	Belt life exceeded
9051	Installation travel (parameter 105 active)
9052	Configuration (parameter 40 active)
9053	Controller Inspection Operation
9054	Car Top Inspection Operation
9056	Hoistway Access Operation
9057	Test Travel Operation (parameter 104 active)
9058	Acceptance Test mode
9059	Hoistway Learn
9070	Recovery mode (elevator recovering after power loss, etc.)
9072	Position recovery (elevator recovering after position loss)
9074	Low backup battery power
9080	Stop switch in hoistway pressed
9081	Stop switch on car top pressed
9082	Stop switch on controller pressed
9089	Bypass (car door and/or hoistway door) switch activated
9090	System status invalid (will attempt to recover when on automatic operation)
9091	Power up
9095	Power lost to controller
9097	Out of service but available for inspection operation (check error log for cause)
9098	Out of service & NOT available for inspection operation (check error log for cause)
9099	Out of service & NOT available for inspection operation (check error log for cause)