Smartrise Fault Table & Troubleshooting Guide

Version 1.00

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TABLE OF CONTENTS

Fault	Description	How to Reset	Remedy
F11: (2-0) B Cont. Fail	The controller is trying to de-energize the B1 Cont. but the feedback shows it is closed	Dip A:1 Reset	Pg. 9-10
F11: (3-0) B Cont. Fail	The controller is trying to de-energize the B2 Cont. but the feedback shows it is closed	Dip A:1 Reset	Pg. 11-12
F12: M Cont. Fail	The controller is trying to de-energize the M Cont. but the feedback shows it is closed	Dip A:1 Reset	Pg. 13-14
F13: MS CT Mode	The Inspections inputs (504-507 on the CT) are in a different state then there RDN inputs	Dip A:1 Reset	Contact Smartrise
F22: Gate Switch	The doors should be closed but the GSW inputs (508-509 on the CT) are not high	Self-Resetting	Pg. 15
F23: Hall Locks	The doors should be closed but one of the hall locks are not made (501-506 in the MR)	Dip A:1 Reset	Pg. 16
F24: In Car Stop	The In Car Stop Switch is on	Self-Resetting	Pg. 17
F27: Drive Comm.	The controller has lost communication with the drive	Dip A:1 Reset	Pg. 18
F29: (0-2) Out Of Service	The car cannot run up	Dip A:1 Reset	Pg. 19

Fault	Description	How to Reset	Remedy
F29: (1-0) Out Of Service	The car has exceeded the maximum number of starts per minute	Dip A:1 Reset	Pg. 20
F29: (2-0) Out Of Service	The car has exceeded the maximum number of faults per hour	Dip A:1 Reset	Pg. 21
F29: (4-0) Out Of Service	The Battery Lowering self-check has failed to many times in a row	Dip A:1 Reset	Contact Smartrise
F29: (7-N) Out Of Service	Car has gone out of service due to the HUGS infant abduction security system	Dip A:1 Reset	Contact Smartrise
F29: (8-8) Out Of Service	An Out of Service Input is active	Dip A:1 Reset	Pg. 22
F29: (9-9) Out Of Service	The Out Of Service timer has expired	Self-Resetting	Contact Smartrise
F30: Rdn Insp. MR	The Inspection inputs (507-508 in the MR) are in different states	Power Cycle	Pg. 23
F31: Rdn Insp. CT	The Inspection inputs (503-504 on the CT) are in different states	Power Cycle	Pg. 24
F32: Rdn Insp. IC	The IC Inspection inputs (512-513 on the CT) are in different states	Power Cycle	Pg. 25-26

Fault	Description	How to Reset	Remedy
F33: Rdn IC Stop	The In Car Stop inputs (509-510 on the CT) are in different states	Power Cycle	Pg.27
F35: Rdn Uets	The Uets inputs (509 and 510 in the MR) are in different states	Power Cycle	Pg. 28
F36: Rdn Dets	The Dets inputs (511 and 512 in the MR) are in the different states	Power Cycle	Pg.29
F37: Rdn GSW (F)	The front door Gate Switch inputs (507 and 508 on the CT) are in different states	Power Cycle	Pg. 30
F38: Rdn Access	The Access enable inputs (505-506 in the CT) are in different states	Power Cycle	Pg. 31
F39: Rdn Top Lock	The Top Lock inputs (505 and 506 in the MR) are in different states	Power Cycle	Pg. 32
F40: Rdn Intr Lock	The Intermediate Lock inputs (503 and 504 in the MR) are in different states	Power Cycle	Pg. 33
F41: Rdn Btm Lock	The Bottom Lock inputs (501-502 in the MR) are in different states	Power Cycle	Pg. 34
F47: Main <-> Saf MR	Fault During Programming (This Fault will occur during programming and is normal)	Power Cycle	Contact Smartrise

Fault	Description	How to Reset	Remedy
F48: Main <-> Saf CT	Fault During Programming (This Fault will occur during programming and is normal)	Power Cycle	Contact Smartrise
F49: Drive Fault	The Drive or Soft Start is faulted	Dip A:1 Reset	Pg. 35
F52: Over Speed CMD	The car was given a command that exceeded contract speed	Dip A:1 Reset	Pg. 36
F53: Fault Log Cleared	You have cleared your fault log	Self-Resetting	N/A
F56: Rdn GSW (R)	The Rear Gate Switch inputs (514 and 515 on the CT) are in different states	Power Cycle	Pg. 37-38
F71: Speed Dev.	We have received 0 speed feedback for over 5 seconds while commanding a run	Dip A:1 Reset	Pg. 39-40
F75: Over Speed FPM	The actual car speed is over the contract car speed	Dip A:1 Reset	Pg. 41-42
F77: CPU Stop Switch	The CPU stop switch is on	Self-Resetting	Pg. 43
F80: Uets Over Speed	The car was traveling 95% of contract speed when the UETS inputs went low	Dip A:1 Reset	Pg. 44

Fault	Description	How to Reset	Remedy
F81: Dets Over Speed	The car was traveling 95% of contract speed when the DETS inputs went low	Dip A:1 Reset	Pg. 45
F91: Learn Error	An Error occurred while trying to Learn the hoist way	Self-Resetting	Pg. 46
F100: CN: 0	There is no communication between the MR and CT Boards	Self-Resetting	Pg. 47
F111: Closing Saf1	The Controller is trying to close the SF1 relay but the feedback shows it as open	Dip A:1 Reset	Pg. 48-50
F112: Closing Saf2	The Controller is trying to close the SF2 relay but the feedback shows it as open	Dip A:1 Reset	Pg. 51-53
F118: Rdn Hall Byp.	The Hall Bypass inputs are in two different states	Power Cycle	Contact Smartrise
F119: Rdn Car Byp.	The Car Bypass inputs are in two different states	Power Cycle	Contact Smartrise
F120: Hall Bypass	The Hall Bypass switch is on in a form of operation where it is not allowed	Self-Resetting	Pg. 54
F121: Car Bypass	The Car Bypass switch is on in a form of operation where it is not allowed	Self-Resetting	Pg. 55

Fault	Description	How to Reset	Remedy
F122: Low Pressure	The Low Pressure input is active	Self-Resetting	Pg. 56
F123: Emergency Power	The Emergency Power Input is flagged and the car is on Emergency Power.	Self-Resetting	N/A
F127: Term Limits	Bypass Terminal Limits is turned on in automatic operation	Self-Resetting	Pg. 57
F128: Overloaded	The load weighing device is indicating the car is overloaded	Self-Resetting	Contact Smartrise
F129: Reset	One of the boards has reset. This fault is normal when resetting the controller	Self-Resetting	Contact Smartrise
F130: Power On	The Controller is turning on. This is normal when cycling power to the controller	Self-Resetting	Contact Smartrise
F131-136: Reset	One of the boards has reset. This fault is normal when resetting the controller	Self-Resetting	Contact Smartrise
F138: Construction	Your car is on construction mode. Input 523 in the MR is high	Self-Resetting	N/A
F139: Governor	The Governor input is showing the governor switch is tripped	Dip A:1 Reset	Pg. 58

Fault	Description	How to Reset	Remedy
F140: E. Brake	The Emergency brake is dropped	Dip A:1 Reset on MR and CT	Pg. 59
F146: Gate Coupling	The Gate Switch input did not change state during a door cycle	Dip A:1 Reset	Pg. 60
F147: Hall Coupling	The Hall Lock inputs did not change state during a door cycle	Dip A:1 Reset	Pg. 61
F148: Brake Pick Switch	The Brake Pick switch input did not change state when the brakes are supposed to be picked	Dip A:1 Reset	Pg. 62
F151: Passcode	The Passcode has not been entered	Self-Resetting	Pg. 63
F160: Critical Parameters	One of the Critical Parameters is not set to a valid value	Self-Resetting	Contact Smartrise
F161: Invalid Parameters	One or more of the critical parameters are not set to a valid value	Self-Resetting	Contact Smartrise
F200: Software Error	Software has experienced an unexpected problem	Dip A:1 Reset	Contact Smartrise

Fault	Description	How to Reset	Remedy
F201: Control	Commands to the drive are out of sequence	Dip A:1 Reset	Contact Smartrise
F202: DPM	The doors should be closed but the DPM input is low	Self-Resetting	Pg. 64
F203: Test Condition	Test Condition	Dip A:1 Reset	Contact Smartrise
F204: Fire Stop Switch	The Fire Stop Switch is on	Self-Resetting	Pg. 65
F205: Need To Learn	The controller has not successfully completed a learn run	Self-Resetting	Pg. 66 - 68
F206: Brake w/o Drive	The brake is picked but there is no drive ready signal	Dip A:1 Reset	Contact Smartrise
F207: Door Close Fail	The Doors failed to close	Dip A:1 Reset	Pg. 69
F208: Door Open Fail	The Doors failed to open	Dip A:1 Reset	Pg. 70
F209: Can’t Run Up	The Car cannot run up	Dip A:1 Reset	Pg. 71

Fault	Description	How to Reset	Remedy
F214: Drv Enb Relay	The M Cont. is picked but the drive enable relay is in the wrong state	Dip A:1 Reset	Pg. 72
F218: Safety String	The Safety String is Open	Dip A:1 Reset	Pg. 73
F219: Flood Sensor	The Flood Sensor is active	Self-Resetting	Pg. 74
F220: Uets & Dets	Both the Uets and Dets inputs are low	Dip A:1 Reset	Pg. 75-76
F221: Redundancy	There is a communication problem on the CPLD network	Dip A:1 Reset	Pg. 77
F222: Relay Feedback	The software and the safety hardware circuit are not seeing the same feedback from one of the relays	Dip A:1 Reset	Contact Smartrise
F223: Rnd CT	One of the Redundant input sets on the CT board are in different state	Power Cycle	Pg. 78
F224: Lock w/o Close	The controller has swing doors and the locks are made but the close is not	Dip A:1 Reset	Contact Smartrise

Fault	Description	How to Reset	Remedy
F226: Over Speed I/L	The car exceeded the allowed speed for traveling with doors open	Dip A:1 Reset	Pg. 79
F227: Preflight Check	The system has found a safety concern while running its preflight check	Dip A:1 Reset	Pg. 80
F228: E24 Stuck High	One of the E24 inputs did not change state during the preflight check	Dip A:1 Reset	Pg. 81
F229: Nts Over Speed	The car was traveling to fast while crossing the NTS switch	Dip A:1 Reset	Contact Smartrise
F230: Rdn MR Input	One of the Redundant input sets on the MR board are in different state	Power Cycle	Pg. 82

F6 (1-0) Safety String

Type	Problem
Fault	SF1 and SF2 picked correctly, but feedback from the M contactor shows it open (F6 (1-0) Safety String)

Cause	Resolution
Open Safety Contact Parts Failure Incorrect Wiring	Check and see if the M contactor is pulling in when you try to run. o If the M contactor does not pull in check the voltage of your safety string. ▪ Measure terminal SF2 to N. It should measure 120vac. If it does not, continue your way back through the safety string until you find the open safety switch. ▪ If SF2 has 120vac measure voltage at SF1 to N when trying to run. This should measure the same 120vac. If you have voltage at SF2 and when you try to run there is no voltage at SF1 check your SF2 relay it may need to be replaced. ▪ If you have voltage at SF1. Perform the same measurement at A1 of the M contactor while trying to run. This should measure 120vac also. If it does not you may need to replace the SF1 relay. ▪ If you have voltage at A1 verify that A2 is wired to N. If it is not correct the wiring mistake. If it is the M contactor may have gone bad. Try jumping A1 to 120 and A2 to N. If the contactor does not pull in it needs to be replaced. o If the contactor is pulling in, check the status of input number 519. It should change state with the M contactor. ▪ If the input does not change state with the contactor. Measure the voltage at 21 on the aux contact to ref it should be 24vdc. If it is not, there is a wiring mistake. • If you have voltage at 21. Measure 22 of the aux contact to ref it should also be 24vdc when the contactor is not pulled in. This voltage should drop out when you press the M contactor in. • If contact 22 remains at 24vdc when the contactor is pulled in detach and reseat the AUX contact. If the problem continues replace the AUX contact.

F6 (1-0) Safety String (Cont.)

Type	Problem
Fault	SF1 and SF2 picked correctly, but feedback from the M contactor shows it open (F6 (1-0) Safety String)

Cause	Resolution
	• If 21 has 24vdc and 22 has no voltage. Detach and reseat the aux contact. If the problem continues replace the aux contact. • If the input does change state. Check the status menu, under I/O, Input Groups, then Controller locate M Contactor NO. Verify that the there is an x in the brackets when the input is high and no x when the input is low. • If the X does not appear when the input is high move the input to an unused input.

F6 (2-0) Safety String

Type	Problem
Fault	Feedback from the B1 contactor shows it did not pick when a pick command was given (F06 Extra Bytes 2-0)

Cause	Resolution
(Hydro)	Go to the debug menu and then to binary parameters. Adjust parameter 00-019.2 to off.
(Traction)	Does the B1 contactor pull in when you try to run? • If it does verify that input 517 changes state when the contactor does. o If the Input does not change state
Incorrect Wiring	▪ Measure voltage at the contact number 13 to ref on the B1 Cont. This should measure 24vdc. If it does not there is a wiring mistake to the contact. ▪ If it does perform the same measurement on 14 of the contact. This voltage should cycle when you press in and release the B contactor.
Part Failure	▪ If there is no voltage at 14 or if the voltage stays high when you cycle the contactor. If you have an Aux contact detach the aux contact and reseat it. If the problem continues replace the contactor or aux contact. o If the input does change state with the contactor. ▪ Check the status, I/O, Input Groups, the controller find the B1 Cont NO. Verify that an X appears in the brackets when the input in high and goes away when it is low. ▪ If this does not happen move the B cont. input to an unused input.

F6 (2-0) Safety String (Cont.)

Type	Problem
Fault	Feedback from the B1 contactor shows it did not pick when a pick command was given (F06 Extra Bytes 2-0)

Cause	Resolution
	• If the contactor does not pull in. Measure the voltage at A1 of the B contactor to N while giving a run command. This should measure 120vac. ▪ If it does not trouble shoot your pick relay. ▪ If it does make sure that A2 is wired to N. ▪ If the wiring looks correct jump A1 to 120 and A2 to N. If the contactor does not pull in replace the B contactor.

F6 (3-0) Safety String

Type	Problem
Fault	Feedback from the B2 contactor shows it did not pick when a pick command was given (F06 Extra Bytes 3-0)

Cause	Resolution
(Hydro)	Go to the debug menu and then to binary parameters. Adjust parameter 00-019.2 to off.
(Traction)	If this car does not have a B2 contactor go to the debug menu then binary parameters. Adjust 00-019.5 to off
	Does the B2 contactor pull in when you try to run?
Incorrect Wiring	o If it does verify that input 518 changes state when the contactor does. ▪ If the Input does not change state • Measure voltage at contact number 13 to ref on the B2 Cont. This should measure 24vdc. If it does not there is a wiring mistake to the aux contact. • If it does perform the same measurement on contact 14. This voltage should cycle when you press in and release the B2 contactor.
Part Failure	• If there is no voltage at 14 or if the voltage stays high when you cycle the contactor. Detach the aux contact and reseat it if present. If the problem continues replace the B2 Cont. or aux contact if present. ▪ If the input does change state with the contactor. • Check the status, I/O, Input Groups, the controller find the B2 Cont. NO. Verify that an X appears in the brackets when the input in high and goes away when it is low. • If this does not happen move the B2 Cont. input to an unused input. o If the contactor does not pull in. Measure the voltage at A1 of the B contactor to N. This should measure 120vac. ▪ If it does not trouble shoot the CT safety relays.

F6 (3-0) Safety String (Cont.)

Type	Problem
Fault	Feedback from the B2 contactor shows it did not pick when a pick command was given (F06 Extra Bytes 3-0)

Cause	Resolution
	▪ If it does make sure that A2 is wired to N. ▪ If the wiring looks correct jump A1 to 120 and A2 to N. If the contactor does not pull in replace the B2 contactor.

F9 Saf1 Open Fail

Type	Problem
Fault	The SF1 relay should not be picked, but the feedback shows it is (F9: Saf1 Open Fail)

Cause	Resolution
Jumper set incorrectly	Check jumpers on the MR board, Jumper #1 on the j24 jumper block should be moved to the right Pins 2-3. (Older Jobs) J19 jumper should be in the up position pins 2-3
Wiring mistake	Make sure that the SF1 relay is not picked (led on the relay should be off) • If the led on the relay is on check output 601 on the machine room board. If it is low there is a wiring mistake. Check input number 520 on the machine room board, it should be high. • If it is not high verify the wiring from 520 to 22 of the SF1 relay. • If it is connected correctly check the voltage on 21 of the SF1 relay it should be 24vdc, if it is not there is a wiring mistake.
Part failure	• Replace the SF1 relay If the input is high • Check the status menu, I/0, input groups, then find SAF1 relay NC there should be an X in the brackets. • If there is not try jumping M24 to input 520. If an [X] appears there is not enough voltage getting to the input, check voltages on the SF1 relay. • If after jumping the input an [X] still does not appear the input is bad and since this is a fixed input the MR board needs to be replaced.

F10 Saf2 Open Fail

Type	Problem
Fault	The SF2 relay should not be picked, but the feedback shows it is (F10: Saf2 Open Fail)

Cause	Resolution
Jumper set incorrectly	Check jumpers on the CT board, Jumper #1 on the j24 jumper block should be moved to the right Pins 2-3. (Older Jobs) J19 jumper should be in the up position pins 2-3
Wiring mistake	Make sure that the SF2 relay is not picked (led on the relay should be off) • If the led is on the relay is on check output 601 on the Car Top board. If it is low there is a wiring mistake. Check input number 526 on the Car Top board, it should be high. • If it is not high verify the wiring from 526 (S22 Traveler Wire) to 22 of the SF2 relay. • If it is connected correctly check the voltage on 21 of the SF2 relay it should be 24vdc, if it is not there is a wiring mistake.
Part failure	• Replace the SF2 relay If the input is high • Check the status menu, I/0, input groups, then find SAF2 relay NC there should be an [X] in the brackets. • If there is not try jumping C24 to input 526. If an [X] appears there is not enough voltage getting to the input, check voltages on the SF2 relay. • If after jumping the input an [X] still does not appear the input is bad and since this is a fixed input the CT board needs to be replaced.

F11(2-0) B Cont. Fail

Type	Problem
Fault	The B1 Contactor should be open, but the feedback shows it is closed (F11: B Contactor Fail, extra bytes 2-0)

Cause	Resolution
(Hydro)	Adjust binary parameter 00-019.2 to off
(Traction)	Check and see if the B1 contactor is pulled in
	The contactor is open or not pulled in. • Check the status of input 517 on the machine room board. o The input is high.
Wiring Mistake	▪ Verify the wiring from input 517 of the MR board to 14 of the B1 contactor.
Part Failure	▪ Check the contacts on the B1 contactor. Measure terminal 14 to ref it should read 0vdc. If there is voltage un-seat and reattach the aux contact if you have one. Cycle the contactor by hand a few times. Measure again, if the voltage is still present replace the B1 Contactor or Aux Contact if present.
	o The input is low.
	▪ Check the status menu, I/O, Input Groups, Controller, and then find B1 Cont. NO. If there is an [X] in the brackets move the B1 Cont. NO input to an unused input

F11(2-0) B Cont. Fail (Cont.)

Type	Problem
Fault	The B1 Contactor should be open, but the feedback shows it is closed (F11: B Contactor Fail, extra bytes 2-0)

Cause	Resolution
	The contactor is closed or pulled in. o Is the pick relay picked? ▪ If it is trouble shoot your pick relay. o If it is not measure voltage at A1 to N. It should be 0vac. If there is voltage at A1 (around 120vac) there is a wiring mistake to the coil of the contactor. o If there is no voltage, the contactor it is stuck or welded closed. In either case replace the B1 contactor.

F11(3-0) B Cont. Fail

Type	Problem
Fault	The B2 Contactor should be open, but the feedback shows it is closed (F11: B Contactor Fail, extra bytes 3-0)

Cause	Resolution
(Hydro)	Adjust binary parameter 00-019.2 to off
(Traction)	Check and see if the B2 contactor is pulled in
Part Failure	o The contactor is open or not pulled in. ▪ Check the status of input 518 on the machine room board. ▪ The input is high. • Check the contacts on the B2 contactor. Measure terminal 14 to ref it should read 0vdc. If there is voltage re-seat the wires or un-seat and reattach the aux contact if you have one to the B2 contactor. Measure again, if the voltage is still present replace the B2 Cont. or Aux Contact.
Incorrect Wiring	• Verify the wiring from input 518 of the MR board to 14 of the Aux contact ▪ The input is low. • Check the status menu, I/O, Input Groups, Controller, and then find B2 Cont. NO. If there is an [X] in the brackets move the B2 Cont. NO input to an unused input

F11(3-0) B Cont. Fail (Cont.)

Type	Problem
Fault	The B2 Contactor should be open, but the feedback shows it is closed (F11: B Contactor Fail, extra bytes 3-0)

Cause	Resolution
Relays stuck high Incorrect Wiring	o The contactor is closed or pulled in. ▪ Perform a Dip 1 Reset on the CT box. ▪ Measure voltage at A1 to N. It should be 0vac. ▪ If there is voltage at A1 (around 120vac) ▪ If there is no voltage, the contactor it is stuck or welded closed. In either case replace the B contactor.

F12 M Cont. Fail

Type	Problem
Fault	The M Contactor should be open, but the feedback shows it is closed (F12: M Contactor Fail)

Cause	Resolution
Incorrect Wiring Part Failure Wiring mistake	Is the contactor pulled in? o If the contactor is open or up. ▪ Check input number 519 on the MR board is it high ▪ No. • Verify the wiring from 519 on the MR board to 22 of the AUX contact on the M contactor. • Detach and re attach the AUX contact on the M contactor make sure it is not stuck in one position. • Replace Aux Contact ▪ Yes • Perform a Dip1 Reset • Move the M Cont. NC input to an unused input and rewire to this input. o If the contactor is closed or pulled in • Check to see if the SF1 relay is picked. If so trouble shoot why your SF1 relay is picked with no demand on the car. • Verify the wiring from A1 to 14 of the SF1 relay. Measure 14 on the SF1 relay it should be 0vac when it is not picked. If there is voltage replace the relay

F12 M Cont. Fail (Cont.)

Type	Problem
Fault	The M Contactor should be open, but the feedback shows it is closed (F12: M Contactor Fail)

Cause	Resolution
Part Failure	• Measure the voltage on A1 of the M contactor to ground. It should have 0vac if it has voltage there is a wiring mistake. • If there is no voltage and the contactor is closed it is either stuck or welded shut. Replace the M contactor.

F22 Gate Switch

Type	Problem
Fault	The Gate Switch Input is low when the doors are supposed to be closed(F22: Gate Switch)

Cause	Resolution
	Check Inputs 501 through 506 with the door closed they should all be high. o Are the input high with the door closed and the car is in flight? ▪ Yes.
Clipping a Door Lock	• You are most likely clipping a door lock. Either correct the issue mechanically, or go to the main menu, setup, door setup, and increase your lock clip time.
	▪ No.
Incorrect Wiring	• Correct the wiring from the door locks to the lock board.
Part Failure	• Verify the lock board is functioning correctly by jumping 120 to THL, MCL, and BHL. All the lock inputs should come high (501-506) If they don't replace the lock board

F23 Hall Locks

Type	Problem
Fault	One of the Hall Lock inputs went low while the car is in flight(F23: Hall Locks)

Cause	Resolution
	Check Inputs 501 through 506 with the door closed they should all be high. o Are the input high with the door closed and the car is in flight? ▪ Yes.
Clipping a Door Lock	• You are most likely clipping a door lock. Either correct the issue mechanically, or go to the main menu, setup, door setup, and increase your lock clip time.
	▪ No.
Incorrect Wiring	• Correct the wiring from the door locks to the lock board.
Part Failure	• Verify the lock board is functioning correctly by jumping 120 to THL, MCL, and BHL. All the lock inputs should come high (501-506) If they don't replace the lock board

F24 In Car Stop

Type	Problem
Fault	The In Car Stop Switch is on(F24: In Car Stop)

Cause	Resolution
Part failure Incorrect Wiring Part failure	Check inputs 509 & 510 on the car top board. • The inputs are high. ▪ Check the Status I/O, Input groups, Safety, and look for Stop Sw. IC there should be an [X] in the brackets on both 1 and 2. ▪ If there is not, jump inputs 509 & 510 in the CT to 24vdc. If no [X] appears replace the CT board. ▪ If an [X] does appear there is a wiring mistake from the switch to the inputs. o The inputs are low ▪ Measure the voltage at 509 and 510 to ref. ▪ Verify 509 and 510 are jumped together they should always be in the same state. ▪ If there is 0vdc check the wiring from the in car stop switch to inputs 509 and 510. The inputs need to be high when the switch is in run mode. ▪ Measure voltage at the switch. There should be 24vdc through the switch contacts. ▪ If there is 24vdc at the inputs and they are still low. Replace CT board.

F27 Drive Comm.

Type	Problem
Fault	The SRU cannot communicate with the drive (F27: Drive Comm.)

Cause	Resolution
(Hydro)	Go to the Debug Menu, then adjust parameters then set parameter 00-020 to xFC
(L1000 or KEB)	Go to the Debug Menu, then adjust parameters then set Parameter 00-020 to xFD
(Magnetek HPV 600 or 900)	
Miss wire	o Verify that the Cat5 cable going to the drive is in the drive port. Located on the top right corner of the smart rise SRU. o Verify the correct wiring to the drive. It is on page 4 of your prints.
Parameters set incorrectly	o Go to the Debug Menu, then adjust parameters then set parameter 00-020 (Version 2 xFB, Version 3 xFF) o Go to the C1 menu on the Magnetek drive verify that; Spd Command Src, Run Command Src, Fault o Reset Src, Brake Pick Src, and Brake Hold Src are all set to SERIAL.
Part Failure	o Go to the C1 menu on the Magnetek drive and verify that serial mode is set to MODE1 o Replace Cat 5 cable going from the MR board to the drive. o Re-program the CT/COP board as the MR and vice versa. o If the fault continues there is a problem with the drives communication board. Replace the drive.

F29(0-2) Out of Service

Type	Problem
Fault	Car Cannot Run Up (F29 Extra Bytes 0-2. [Hydraulic Applications Only])

Cause	Resolution
Safety string open	Make sure car is not on the final limit switch. If you think it may be, place a jumper from SF1 to 120 on the din rail and try to run the car. If the car moves, run it until you are sure it is no longer on the final limit. Remove jumper and try to run the car, if it runs you were on the limit. If it does not your safety circuit is still open. Check voltages on safety string terminals to find the open safety switch and correct the problem.
Low oil	Check the oil level in the tank. If the oil level is to low add oil.
Incorrect Wiring	Check and make sure the battery power input is high. This is usually input 516. If this input is low check the wiring from your battery lowering device to the controller.
Part Failure	Check that outputs 602 through 606 are flagging correctly (IE: If you are trying to run up on inspection 602 and 604 should come on. If you are trying to run down on inspection only 606 should come on) Check and make sure your valves are picking. Check voltages at the UPH (Up High), UPL (Up Leveling), DNH (Down High), and DNL (Down Leveling) terminals when giving the car a run command. If voltage is missing there may be a problem with the valve, valve coil, or valve board. Check and make sure the low oil input is high. This is usually input 518. If input is low check to make sure your low oil switch is working properly
Parameters set incorrectly	Check your maximum run time. This timer is located in the set up menu, under timers. Make sure that this timer is set high enough for the elevator to make its longest run. If this is the problem there should be an A50: MLT along with the F29.

F29(1-0) Out of Service

Type	Problem
Fault	Car Has Exceeded Maximum Starts Per Minute (F29 Extra Bytes 1-0)

Cause	Resolution
Parameter set incorrectly	Check Parameter 00-042 make sure it is set to 10 (= x0A) If it is not change this value, and perform a Dip1 Reset.
To many faults	Check and make sure you are not exceeding the maximum number of Runs per minute hour. If you have tried to run more than 10 times in a minute the car will shut down until the real time clock rolls over. Correct the issues causing the car to start and stop..
Part failure	Verify that the real time clock rolls over. Go into the real time clock in the setup menu and watch the minutes and hour roll over. If they do not roll over you need a new real time clock chip. If you have a three board system you can remove the clock chip from the COP and swap it with the real time clock chip on the MR. If you do not have a three board system set 00-041 and 00-042 to x00 until you receive the a new chip.

F29(2-0) Out of Service

Type	Problem
Fault	Car Has Exceeded Maximum Faults Per Hour (F29 Extra Bytes 2-0)

Cause	Resolution
Parameter set incorrectly	Check Parameter 00-041 make sure it is set to 10 (= x0A) If it is not change this value, and perform a Dip1 Reset.
To many faults	Check and make sure you are not exceeding the maximum number of faults per hour. Check your fault log and see if you have an unusual amount of faults. If you have more than 10 faults recorded in an hour the car will shut down until the real time clock rolls over. Correct the issues that are generating the faults.
Part failure	Verify that the real time clock rolls over. Go into the real time clock in the setup menu and watch the minutes and hour roll over. If they do not roll over you need a new real time clock chip. If you have a three board system you can remove the clock chip from the COP and swap it with the real time clock chip on the MR. If you do not have a three board system set 00-041 and 00-042 to x00 until you receive the a new chip.

F29(8-8) Out of Service

Type	Problem
Fault	Out of service input has been activated on one of the SRU boards (F29 Extra Bytes 8-8)

Cause	Resolution
Input assigned incorrectly	Find the OOS input that is high. Go through the local inputs on all of your boards, by going into the setup menu and then selecting local inputs. Once in the menu scroll up through all of your inputs. You are looking for an input set as Controller: Go OOS. If you reach input #48/548 and have not located it you can go to the next board. If you do not need this input for anything return to the local inputs menu and set it to unused.
Wiring mistake	If you do need this input, correct the wiring mistake that is causing the input to go high.

F30 Rdn. Insp. MR

Type	Problem
Fault	The Two Machine Room Inspection Inputs are in Different States (F30: RDN INSP MR)

Cause	Resolution
	Check inputs 507 and 508 on the machine room board to see if they are in the same state. o They are in the same state. ▪ Perform a Dip A: 1 Reset on the MR board ▪ Check the status I/O, input groups, Inspection / Access, Insp MR Enbl (1) and Insp MR Enbl (2). There should be an [X] in both brackets. ▪ If there is no [X] jump M24 to 507 and 508.
Incorrect Wiring Part Failure	▪ If the status now shows them in the same state, check the wiring to and from the inspection board. ▪ If the status stays the same replace the MR board.
	o They are in different states
Lose Wiring	▪ Reseat the wires in 507 and 508 on the machine room board. Also reseat the wires in I1 and I2 on the inspection board. ▪ Cycle power to the controller.
Incorrect Wiring	▪ Verify the wiring from the Inspection board to 507 and 508. ▪ Jump 507 and 508 to m24.
Part Failure	▪ If they stay in different states replace the machine room board.

F31 Rdn. Insp. CT

Type	Problem
Fault	The Two Car Top Inspection Inputs are in Different States (F31: RDN INSP CT)

Cause	Resolution
	Check inputs 503 and 504 on the car top board to see if they are in the same state. o They are in the same state. ▪ Perform a Dip A: 1 Reset on the CT board ▪ Check the status I/O, input groups, Inspection / Access, Insp CT Enbl (1) and Insp CT Enbl (2). There should be an [X] in both brackets. ▪ If there is no [X] jump C24 to 503 and 504.
Incorrect Wiring Part Failure	▪ If the status now shows them in the same state, check the wiring to and from the inspection switch. ▪ If the status stays the same replace the CT board.
	o They are in different states
Lose Wiring	▪ Reseat the wires in 503 and 504 on the car top board. Also reseat the wires on the inspection switch. ▪ Cycle power to the controller.
Incorrect Wiring	▪ Verify the wiring from the Inspection switch to 503 and 504. ▪ Jump 503 and 504 to C24.
Part Failure	▪ If they stay in different states replace the car top board.

F32 Rdn. Insp. IC

Type	Problem
Fault	The Two In Car Inspection Inputs are in Different States (F32: RDN INSP IC)

Cause	Resolution
(Car does not have IC inspection)	Go to the debug menu then adjust parameters, adjust 00-004 to x51 Check inputs 512 and 513 on the car top board to see if they are in the same state. o They are in the same state. ▪ Perform a Dip A: 1 Reset on the CT board ▪ Check the status I/O, input groups, Inspection / Access, Insp IC Enbl (1) and Insp IC Enbl (2). There should be an [X] in both brackets. ▪ If there is no [X] jump C24 to 512 and 513. ▪ If the status now shows them in the same state, check the wiring to and from the inspection switch. ▪ If the status stays the same replace the CT board. o They are in different states ▪ Reseat the wires in 512 and 513 on the car top board. Also reseat the wires on the inspection switch. ▪ Cycle power to the controller.
Incorrect Wiring	
Part Failure	
Lose Wiring	
Incorrect Wiring	

F32 Rdn. Insp. IC (Cont.)

Type	Problem
Fault	The Two In Car Inspection Inputs are in Different States (F32: RDN INSP IC)

Cause	Resolution
Part Failure	▪ Verify the wiring from the Inspection switch to 512 and 513. ▪ Jump 512 and 513 to C24. ▪ If they stay in different states replace the car top board.

F33 Rdn. IC Stop

Type	Problem
Fault	The Two In Car Stop Inputs are in Different States (F33: RDN IC Stop)

Cause	Resolution
	Check inputs 509 and 510 on the car top board to see if they are in the same state. o They are in the same state. ▪ Perform a Dip A: 1 Reset on the CT board ▪ Check the status I/O, input groups, Stop SW IC (1) and Stop SW IC (2). There should be an [X] in both brackets. ▪ If there is no [X] jump C24 to 509 and 510. ▪ If the status now shows them in the same state, check the wiring to and from the in car stop switch.
Incorrect Wiring	
Part Failure	▪ If the status stays the same replace the CT board.
	o They are in different states
Lose Wiring	▪ Reseat the wires in 509 and 510 on the car top board. Also reseat the wires on the in car stop switch. ▪ Cycle power to the controller.
Incorrect Wiring	▪ Verify the wiring from the in car stop switch to 509 and 510. ▪ Jump 509 and 510 to C24.
Part Failure	▪ If they stay in different states replace the car top board.

F35 Rdn. UETS

Type	Problem
Fault	The Two UETS Inputs are in Different States (F35: RDN UETS)

Cause	Resolution
	Check inputs 509 and 510 on the machine board to see if they are in the same state. o They are in the same state. ▪ Perform a Dip A: 1 Reset on the MR board ▪ Check the status I/O, input groups, Safety, UETS (1) and UETS (2). There should be an [X] in both brackets. ▪ If there is no [X] jump M24 to 509 and 510. ▪ If the status now shows them in the same state, check the wiring. This include the wiring from the selector to the traveler and the traveler to the MR board
Incorrect Wiring	
Part Failure	▪ If the status stays the same replace the MR board.
	o They are in different states
Lose Wiring	▪ Reseat the wires in 509 and 510 on the machine room board. Also reseat the UETS traveler wire and check the connections to the selector. ▪ Cycle power to the controller.
Incorrect Wiring	▪ Verify the wiring from the selector to 509 and 510. ▪ Jump 509 and 510 to M24.
Part Failure	▪ If they stay in different states replace the machine room board.

F36 Rdn. DETS

Type	Problem
Fault	The Two DETS Inputs are in Different States (F36: RDN DETS)

Cause	Resolution
	Check inputs 511 and 512 on the machine board to see if they are in the same state. o They are in the same state. ▪ Perform a Dip A: 1 Reset on the MR board • Reseat the grey jumper in 511 and 512 ▪ Check the status I/O, input groups, Safety, UETS (1) and UETS (2). There should be an [X] in both brackets. ▪ If there is no [X] jump M24 to 511 and 512.
Incorrect Wiring Part Failure	▪ If the status now shows them in the same state, check the wiring. This include the wiring from the selector to the traveler and the traveler to the MR board ▪ If the status stays the same replace the MR board.
	o They are in different states
Lose Wiring	▪ Reseat the wires in 511 and 512 on the machine room board. Also reseat the DETS traveler wire and check the connections to the selector. ▪ Cycle power to the controller.
Incorrect Wiring	▪ Verify the wiring from the selector to 511 and 512. ▪ Jump 511 and 512 to M24.
Part Failure	▪ If they stay in different states replace the machine room board.

F37 Rdn. GSW(F)

Type	Problem
Fault	The Two Front Door Gate Switch Inputs are in Different States (F37: RDN GSW(F))

Cause	Resolution
	Check inputs 507 and 508 on the car top board to see if they are in the same state. o They are in the same state. ▪ Perform a Dip A: 1 Reset on the CT board • Reseat the grey jumper in 507 and 508 ▪ Check the status I/O, input groups, Doors (Front), GSW (1) and GSW (2). There should be an [X] in both brackets. ▪ If there is no [X] jump C24 to 507 and 508.
Incorrect Wiring Part Failure	▪ If the status now shows them in the same state, check the wiring from the door operator to the GSW inputs ▪ If the status stays the same replace the CT board.
	o They are in different states
Lose Wiring	▪ Reseat the wires in 507 and 508 on the car top board. Also reseat the wires on the gate switch output on the door operator. ▪ Cycle power to the controller.
Incorrect Wiring	▪ Verify the wiring from the door operator to 507 and 508. ▪ Jump 507 and 508 to C24.
Part Failure	▪ If they stay in different states replace the car top board.

F38 Rdn. Access

Type	Problem
Fault	The Two Access Inspection Inputs are in Different States (F38: RDN Access)

Cause	Resolution
	Check inputs 505 and 506 on the car top board to see if they are in the same state. o They are in the same state. ▪ Perform a Dip A: 1 Reset on the MR board • Reseat the grey jumper in 505 and 506 ▪ Check the status I/O, input groups, Inspect/Access, Access Enbl. (1) and Access Enbl. (2). There should be an [X] in both brackets. ▪ If there is no [X] jump C24 to 505 and 506.
Incorrect Wiring	▪ If the status now shows them in the same state, check the wiring from the access switch to the inputs
Part Failure	▪ If the status stays the same replace the CT board.
	o They are in different states
Lose Wiring	▪ Reseat the wires in 505 and 506 on the car top board. Also reseat the wires on the Access switch. ▪ Cycle power to the controller.
Incorrect Wiring	▪ Verify the wiring from the switch to 505 and 506. ▪ Jump 505 and 506 to C24.
Part Failure	▪ If they stay in different states replace the car top board.

F39 Rdn. Top Locks

Type	Problem
Fault	The Two Top Door Lock Inputs are in Different States (F39: RDN Top Lock)

Cause	Resolution
	Check inputs 501 and 502 on the machine room board to see if they are in the same state. o They are in the same state. ▪ Perform a Dip A: 1 Reset on the MR board • Check the status I/O, input groups, Safety, Locks Top (1) and Locks Top (2). There should be an [X] in both brackets. ▪ If there is no [X] jump M24 to 501 and 502.
Incorrect Wiring	▪ If the status now shows them in the same state, check the wiring from the lock board to the inputs. If the problem continues intermittently replace the lock board (or relays if used)
Part Failure	▪ If the status stays the same replace the MR board.
	o They are in different states
Lose Wiring	▪ Reseat the wires in 501 and 502 on the machine room board. Also reseat the wires on the lock board (or relays if used). ▪ Cycle power to the controller.
Incorrect Wiring	▪ Verify the wiring from the lock board to 501 and 502. ▪ Jump 501 and 502 to M24.
Part Failure	▪ If they stay in different states replace the MR board.

F40 Rdn. Intr. Locks

Type	Problem
Fault	The Two Intermediate Door Lock Inputs are in Different States (F40: RDN Intr Lock)

Cause	Resolution
	Check inputs 503 and 504 on the machine room board to see if they are in the same state. o They are in the same state. ▪ Perform a Dip A: 1 Reset on the MR board • Check the status I/O, input groups, Safety, Locks Mid (1) and Locks Mid (2). There should be an [X] in both brackets. ▪ If there is no [X] jump M24 to 503 and 504.
Incorrect Wiring	▪ If the status now shows them in the same state, check the wiring from the lock board to the inputs. If the problem continues intermittently replace the lock board (or relays if used)
Part Failure	▪ If the status stays the same replace the MR board.
	o They are in different states
Lose Wiring	▪ Reseat the wires in 503 and 504 on the machine room board. Also reseat the wires on the lock board (or relays if used). ▪ Cycle power to the controller.
Incorrect Wiring	▪ Verify the wiring from the lock board to 503 and 504. ▪ Jump 503 and 504 to M24.
Part Failure	▪ If they stay in different states replace the MR board.

F41 Rdn. Btm. Locks

Type	Problem
Fault	The Two Bottom Door Lock Inputs are in Different States (F41: RDN Btm Lock)

Cause	Resolution
	Check inputs 505 and 506 on the machine room board to see if they are in the same state. o They are in the same state. ▪ Perform a Dip A: 1 Reset on the MR board • Check the status I/O, input groups, Safety, Locks Btm (1) and Locks Btm (2). There should be an [X] in both brackets. ▪ If there is no [X] jump M24 to 505 and 506.
Incorrect Wiring	▪ If the status now shows them in the same state, check the wiring from the lock board to the inputs. If the problem continues intermittently replace the lock board (or relays if used)
Part Failure	▪ If the status stays the same replace the MR board.
	o They are in different states
Lose Wiring	▪ Reseat the wires in 505 and 506 on the machine room board. Also reseat the wires on the lock board (or relays if used). ▪ Cycle power to the controller.
Incorrect Wiring	▪ Verify the wiring from the lock board to 505 and 506. ▪ Jump 505 and 506 to M24.
Part Failure	▪ If they stay in different states replace the MR board.

F49 Drive Fault

Drive	Problem
Fault	The Drive of Soft Start is in a Faulted State (F49: Drive Fault)

Cause	Resolution
(Hydro)	The Drive Fault input has changed state. Check your soft start for the fault being displayed and refer to the soft start manual for recommended solutions.
(Traction)	The drive had reported a fault. Check the drives fault log and refer to the drive manual for recommended solutions

F52 Over speed CMD

Type	Problem
Fault	The Command speed is over contract speed (F52: Over speed CMD)

Cause	Resolution
	Go to the main menu, then speeds and slowdowns, and then verify that both your inspection speed and leveling speed are set to a value under 150FPM.
(Hydro)	Go to the main menu, then speeds and slowdowns, and then verify S1 speed is set equal to the contract speed of your car.
(Traction)	Go to the main menu, then speeds and slowdowns. And then verify that all of your speed profiles are set under contract speed, except your highest speed profile which should be set equal to contract speed.

F56 RDN GSW(R)

Type	Problem
Fault	The Two Rear Door Gate Switch Inputs are in Different States (F57: RDN GSW(R))

Cause	Resolution
Car does not have rear doors	On the machine room board go to the main menu, about. Verify you have proper job software installed on the board. o If you do go to the setup menu and perform a default all o If you don't install correct software, then go to the setup menu and default all.
	Check inputs 514 and 515 on the car top board to see if they are in the same state. o They are in the same state. ▪ Perform a Dip A: 1 Reset on the CT board • Reseat the grey jumper in 514 and 515
Incorrect Wiring	▪ Check the status I/O, input groups, Doors (Rear), GSW (1) and GSW (2). There should be an [X] in both brackets. ▪ If there is no [X] jump C24 to 514 and 515. ▪ If the status now shows them in the same state, check the wiring from the door operator to the GSW inputs
Part Failure	▪ If the status stays the same replace the CT board.

F56 RDN GSW(R) (Cont.)

Type	Problem
Fault	The Two Rear Door Gate Switch Inputs are in Different States (F57: RDN GSW(R))

Cause	Resolution
Lose Wire Incorrect Wiring Part Failure	o They are in different states ▪ Reseat the wires in 514 and 515 on the car top board. Also reseat the wires on the gate switch output on the door operator. ▪ Cycle power to the controller. ▪ Verify the wiring from the door operator to 514 and 515. ▪ Jump 514 and 515 to C24. • If they stay in different states replace the car top board.

F71 Speed Dev.

Type	Problem
Fault	The speed feedback from the selector is different from expected speed (F71: Speed Dev)

Cause	Resolution
	Verify inspection speed is set to a value less than 150fpm
(Hydro)	Run the car at full speed. Check that the CMD: speed (located in the bottom left corner of the main screen on the sru) and the FPM: speed feedback from the selector (located in the bottom right corner of the main screen) verify that they match. If they do not you can either adjust your valves so that they match, or go to the main menu, then speeds and slowdowns, then change the contract speed and the S1 speed to match the FPM feedback you are receiving.
(Traction)	• Magnetek HPV 900 ▪ Put the car on inspection and run the car. Check the CMD: speed (located in the bottom left corner of the main screen on the sru) and the FPM: speed feedback from the selector (located in the bottom right corner of the main screen) verify that they match. ▪ If they do not go to the A1 menu in the drive. Adjust the contract motor speed so your feedback and command speed match. • L1000A
Parameters set incorrectly	▪ In the drive verify that D1-02 through D1-08 are set correctly. You can find these values on page 4 of your prints. ▪ Go to the setup menu on our board. Go to the speeds and slowdowns menu, and verify that the speed values entered in this menu match the values in the drive. ▪ Put the car on inspection and run the car. Check the CMD: speed (located in the bottom left corner of the main screen on the sru) and the FPM: speed feedback from the selector (located in the bottom right corner of the main screen) verify that they match. ▪ If they do not go to O1-22(Gear Ratio) in the L1000 menu. Adjust this parameter until your command speed and FPM feedback match.

F71 Speed Dev. (Cont.)

Type	Problem
Fault	The speed feedback from the selector is different from expected speed (F71: Speed Dev)

Cause	Resolution
	• KEB ▪ In the drive verify that LS01 through LS06 are set correctly. You can find these values on page 4 of your prints. ▪ Go to the setup menu on our board. Go to the speeds and slowdowns menu, and verify that the speed values entered in this menu match the values in the drive. ▪ Put the car on inspection and run the car. Check the CMD: speed (located in the bottom left corner of the main screen on the sru) and the FPM: speed feedback from the selector (located in the bottom right corner of the main screen) verify that they match. ▪ If they do not go to LN 02(Gear Ratio) in the KEB menu. Adjust this parameter until your command speed and FPM feedback match. ▪ If your speeds are so far off that you cannot match the speed using the gear ration alone. Set it back to default and then adjust LN03 (Roping Ratio) and then adjust LN02 until the command and FPM speeds match.

F75 Over Speed FPM

Type	Problem
Fault	The speed feedback from the selector is over contract speed (F75: Over Speed FPM)

Cause	Resolution
	Verify inspection speed is set to a value less than 150fpm
(Hydro)	Run the car at full speed. Check that the CMD: speed (located in the bottom left corner of the main screen on the sru) and the FPM: speed feedback from the selector (located in the bottom right corner of the main screen) verify that they match. If they do not you can either adjust your valves so that they match, or go to the main menu, then speeds and slowdowns, then change the contract speed and the S1 speed to match the FPM feedback you are receiving.
(Traction)	• Magnetek HPV 900 ▪ Put the car on inspection and run the car. Check the CMD: speed (located in the bottom left corner of the main screen on the sru) and the FPM: speed feedback from the selector (located in the bottom right corner of the main screen) verify that they match. ▪ If they do not go to the A1 menu in the drive. Adjust the contract motor speed so your feedback and command speed match. • L1000A
Parameters set incorrectly	▪ In the drive verify that D1-02 through D1-08 are set correctly. You can find these values on page 4 of your prints. ▪ Go to the setup menu on our board. Go to the speeds and slowdowns menu, and verify that the speed values entered in this menu match the values in the drive. ▪ Put the car on inspection and run the car. Check the CMD: speed (located in the bottom left corner of the main screen on the sru) and the FPM: speed feedback from the selector (located in the bottom right corner of the main screen) verify that they match. ▪ If they do not go to O1-22(Gear Ratio) in the L1000 menu. Adjust this parameter until your command speed and FPM feedback match.

F75 Over Speed FPM (Cont.)

Type	Problem
Fault	The speed feedback from the selector is over contract speed (F75: Over Speed FPM)

Cause	Resolution
	• KEB ▪ In the drive verify that LS01 through LS06 are set correctly. You can find these values on page 4 of your prints. ▪ Go to the setup menu on our board. Go to the speeds and slowdowns menu, and verify that the speed values entered in this menu match the values in the drive. ▪ Put the car on inspection and run the car. Check the CMD: speed (located in the bottom left corner of the main screen on the sru) and the FPM: speed feedback from the selector (located in the bottom right corner of the main screen) verify that they match. ▪ If they do not go to LN 02(Gear Ratio) in the KEB menu. Adjust this parameter until your command speed and FPM feedback match. ▪ If your speeds are so far off that you cannot match the speed using the gear ration alone. Set it back to default and then adjust LN03 (Roping Ratio) and then adjust LN02 until the command and FPM speeds match.

F77 CPU Stop Switch

Type	Problem
Fault	Dip Switch 1 on Dip A is on (F77: CPU Stop Switch)

Cause	Resolution
Dip 1 is on	Extra bytes X-X-(1 or 2)-X • Please turn off Dip Switch 1 on Dip A in the Machine Room SRU. The fault should clear Extra bytes X-X-(3 or 4)-X • Please turn off Dip Switch 1 on Dip A on the Car Top SRU. The fault should clear.

F80 UETS Over Speed

Type	Problem
Fault	The car was traveling at 95% of contract speed when the UETS inputs went low (F80: Uets Overspeed)

Cause	Resolution
(Hydro)	
Parameters set incorrectly	Go to the main menu, then speeds and slowdowns, then S1, and then increase the S1 slowdowns all parameter. Increase this parameter by six inches, if leveling time becomes too long decrease this parameter until you reach the desired leveling time.
Incorrect Wiring	If this fault occurs in the middle of the hoist way check the wiring to the UETS inputs. These inputs should only be low if you are above the UETS magnets or switch.
Parts Failure	If these inputs are in the wrong state check your selector head or UETS switch. Move the UETS magnet or switch closer to the bottom terminal.
(Traction)	
Parameters set incorrectly	Go to the main menu, then speeds and slowdowns, then find your highest used speed profile, and then increase the slowdowns all parameter for that speed. Increase this parameter by six inches, if leveling time becomes too long decrease this parameter until you reach the desired leveling time.
Incorrect Wiring	If this fault occurs in the middle of the hoist way check the wiring to the UETS inputs. These inputs should only be low if you are above the UETS magnets or switch.
Parts Failure	If these inputs are in the wrong state check your selector head or UETS switch. Move the UETS magnet or switch closer to the bottom terminal.

F81 DETS Over Speed

Type	Problem
Fault	The car was traveling at 95% of contract speed when the DETS inputs went low (F81: DETS Over speed)

Cause	Resolution
(Hydro)	
Parameters set incorrectly	Go to the main menu, then speeds and slowdowns, then S1, and then increase the S1 slowdowns all parameter. Increase this parameter by six inches, if leveling time becomes too long decrease this parameter until you reach the desired leveling time.
Incorrect Wiring	If this fault occurs in the middle of the hoist way check the wiring to the DETS inputs. These inputs should only be low if you are below the DETS magnets or switch.
Parts Failure	If these inputs are in the wrong state check your selector head or DETS switch. Move the DETS magnet or switch closer to the bottom terminal.
(Traction)	
Parameters set incorrectly	Go to the main menu, then speeds and slowdowns, then find your highest used speed profile, and then increase the slowdowns all parameter for that speed. Increase this parameter by six inches, if leveling time becomes too long decrease this parameter until you reach the desired leveling time.
Incorrect Wiring	If this fault occurs in the middle of the hoist way check the wiring to the DETS inputs. These inputs should only be low if you are below the DETS magnets or switch.
Parts Failure	If these inputs are in the wrong state check your selector head or DETS switch. Move the DETS magnet or switch closer to the bottom terminal.

F91 Learn Error

Type	Problem
Fault	The Learn Magnets command was given out of order (F91: Learn Error)

Cause	Resolution
Out of Order Commands	Verify that you have performed both a homing run and a move to bottom before attempting to learn the magnets. The learn mode commands need to be given in order. (IE Homing Run, then Move to Bottom, and then Learn Magnets) All learn commands must finish without faulting. If the controller faults during a learn command correct the fault and start over.

F100 CN: 0

Type	Problem
Fault	No communication between MR and CT SRU bds. (F100:CN0)

Cause	Resolution
No power	Verify that both boards are powered up.
Incorrect Wiring	Verify the correct wiring from cat5 to terminal blocks Orange White to CN+, Orange to CN- on both the MR & CT boards Measure voltage on CN+ to ref and CN- to ref should be between 2-4vdc in MR if voltage is extremely high like around 10vdc or higher on either line. There is a wiring mistake. Swap CN +/- on the terminal blocks, if this does not work swap them back. Swap out your twisted shielded pair for a spare in the traveler.
Incorrect jumpers	Check to make sure jumper j26 is removed on both MR and CT board (On older jobs this jumper may need to be put on in the MR, CT or both in order to get communication back) Swap the Net port that the cat 5 is plugged into.
Part failure	Bring the CT board to the MR, plug in a cat5 cable to the machine rooms net port and attach it directly to the CT net port. This should power up the board. If the F100 fault clears (There will be other faults that appear just not the F100) the problem is in the wiring. If the fault does not clear there is a problem with the board. (Older Job) Check for Dongle boards if they are present remove them and attach the cat 5 cable directly to the net port.
Wrong software	Go to the main menu on our SRU board scroll down to the about menu and verify that you have the correct board in the top place and that the versions match

F111 Closing Saf. 1

Type	Problem
Fault	The SF1 relay should be closed, but the feedback shows it as open (F111: Closing Saf. 1)

Cause	Resolution
Incorrect Jumper Placement	Verify that jumper number 1 in the J: 24 jumper block (Jumper J: 19 on older style boards) on the machine room board is to the right (In the up position on older boards) Pins 2 & 3 Does the SF1 relay pick when you try to run? o Yes, the relay does pick ▪ Check input 520 on the MR board is it high (LED on) when you try to run the car. • Yes
Incorrect Wiring	o Check you wiring. Verify that the wire from 520 goes to contact number 22 on the SF1 relay.
Part Failure	o Measure the voltage on contact 22 of the SF1 relay to REF. With the relay picked this should read 0vdc. If it reads 24vdc replace the SF1 relay.
	• No. o Go to the Status I/O screen, then input groups, then controller. Scroll down until you see SAF1 relay NC. The brackets in front of the label should be empty. If it has an [X] measure the voltage at input 520 if it measures 0vdc replace the MR SRU. o If it has voltage refer to the section on the input being high.

F111 Closing Saf. 1 (Cont.)

Type	Problem
Fault	The SF1 relay should be closed, but the feedback shows it as open (F111: Closing Saf. 1)

Cause	Resolution
Incorrect Wiring Part Failure Doors are not closed	o No, the relay does not pick ▪ When you try to run does output 601 on the machine room board come on. • Yes. o Verify the wiring from output 601 goes to contact A2 on the SF1 relay o Measure the voltage on A1 of the SF1 relay to REF. It should be 24vdc if it does not verify the wire coming from A1 goes to M24 on the din rail. o If it does read 24vdc take a jumper from A2 of the relay to REF if the relay picks output 601 may be bad and the MR board should be replaced. If it does not pick replace the SF1 relay. • No o Verify that you have the correct door data flagged showing our controller it is safe to run. On the main screen scroll down until you see Car Door Data the only things you should have flagged are (GSW, DCL, and DPM) if there are other signals showing correct the wiring from the CT board to the door operator.

F111 Closing Saf. 1 (Cont.)

Type	Problem
Fault	The SF1 relay should be closed, but the feedback shows it as open (F111: Closing Saf. 1)

Cause	Resolution
Active Fault	o Continue scrolling down until you see hall door data. Verify that all of your locks are made. You should see (BL, BC, ML, MC, TL, TC) If any of these are missing one of your locks is open. o Verify there are no active faults. Red light blinking on the top of the SRU board. If there is an active fault correct it and try to run again.

F112 Closing Saf. 2

Type	Problem
Fault	The SF2 relay should be closed, but the feedback shows it as open (F112: Closing Saf. 2)

Cause	Resolution
Incorrect Jumper Placement	Verify that jumper number 1 in the J: 24 jumper block (Jumper J: 19 on older style boards) on the machine room board is to the right (In the up position on older boards) Pins 2 & 3
Incorrect Traveler Wiring	Swap the SA2 and S22 traveler wires. Try to run the car. If this does not clear the fault swap the wires back. Does the SF2 relay pick when you try to run? o Yes, the relay does pick ▪ Check input 526 on the CT board is it high (LED on) when you try to run the car. • Yes o Check your wiring. Verify that the wire from 526 (S22 traveler) on the car top board goes to contact number 22 on the SF2 relay.
Part Failure	o Measure the voltage on contact 22 of the SF2 relay to REF. With the relay picked this should read 0vdc. If it reads 24vdc replace the SF2 relay. • No. o Go to the Status I/O screen, then input groups, then controller. Scroll down until you see SAF2 relay NC. The brackets in front of the label should be empty. If it has an [X] measure the voltage at input 526 on the car top board if it measures 0vdc replace the CT SRU. o If it has voltage refer to the section on the input being high.

F112 Closing Saf. 2 (Cont.)

Type	Problem
Fault	The SF2 relay should be closed, but the feedback shows it as open (F112: Closing Saf. 2)

Cause	Resolution
	o No, the relay does not pick ▪ When you try to run does output 601 on the car top board come on. • Yes.
Incorrect Wiring	o Verify the wiring from output 601 (SA2 traveler wire) on the car top board goes to contact A2 on the SF2 relay o Measure the voltage on A1 of the SF2 relay to REF. It should be 24vdc if it does not verify the wire coming from A1 goes to M24 on the din rail.
Part Failure	o If it does read 24vdc take a jumper from A2 of the relay to REF if the relay picks output 601 may be bad and the CT board should be replaced. If it does not pick replace the SF2 relay.
	• No
Doors are not closed	o Verify that you have the correct door data flagged showing our controller it is safe to run. On the main screen scroll down until you see Car Door Data the only things you should have flagged are (GSW, DCL, and DPM) if there are other signals showing correct the wiring from the CT board to the door operator.

F112 Closing Saf. 2 (Cont.)

Type	Problem
Fault	The SF2 relay should be closed, but the feedback shows it as open (F112: Closing Saf. 2)

Cause	Resolution
Active Fault	o Continue scrolling down until you see hall door data. Verify that all of your locks are made. You should see (BL, BC, ML, MC, TL, TC) If any of these are missing one of your locks is open. o Verify there are no active faults. Red light blinking on the top of the SRU board. If there is an active fault correct it and try to run again.

F120 Hall Bypass

Type	Problem
Fault	Your Hall Bypass switch is on when in a mode that does not allow it (F120: Hall Bypass)

Cause	Resolution
Switch is in the Wrong State	Find your inspection board in the machine room. Turn off the Hall Bypass switch.

F121 Car Bypass

Type	Problem
Fault	Your Car Bypass switch is on when in a mode that does not allow it (F121: Car Bypass)

Cause	Resolution
Switch is in the Wrong State	Find your inspection board in the machine room. Turn off the Car Bypass switch.

F122 Low Pressure

Type	Problem
Fault	The Low pressure input is low (F122: Low Pressure) (Hydro applications only)

Cause	Resolution
Incorrect Wiring Part Failure	Do you have a low pressure switch? o Yes. ▪ Go to the main menu, then to local inputs, then scroll up until you see safety low pressure. In the top left hand corner is the input number assigned for low pressure write this down. ▪ The input is normally closed so check to see if the input you just found is high (LED on) on the machine room board. If it is move the low pressure input to an unused input and move the wires. ▪ If the input is low check the wiring back to your pressure switch. It is either miss wired, the switch is active, or it needs to be replaced. o No
Parameters set Incorrectly	▪ Go to the main menu, then to local inputs, then scroll up until you see safety low pressure. Scroll to the right once and then all the way down until it reads unused. Scroll to the right and save this value.

F127	Term Limits
Type	**Problem**
Fault	The Car is in Automatic and bypass term limits is on(F127: Term Limits)
Cause	**Resolution**
Parameters set Incorrectly	Go to the main menu, the setup, and then misc. Go to bypass term limits and set it to no. The car will not run in automatic if this option is set to yes.

F139 Governor

Type	Problem
Fault	The Governor switch input is Low(F139: Governor)

Cause	Resolution
Car does not have a Governor	On the machine room board go to the setup menu then local inputs scroll up to 13/513 and set it to unused. Make sure to save it Check input number 513 on the machine room board is it high (LED is on)? o Yes ▪ Go to the main menu, then status, then I/O, then input groups, and then safety. Scroll down until you see governor. There should be an [X] next to it. If there is perform a dip one reset and the fault should clear.
Part Failure	▪ If there is not go to the main menu, then setup, then local inputs scroll up to 13/513 this should read Safety and Governor. Scroll to the right once and all the way down until it reads unused then scroll to the right and save this value. Then find a different unused input and set that as safety, governor. Make sure to move the wire from the governor to this new input.
Governor is Tripped Incorrect Wiring Part Failure	o No ▪ Make sure that the governor switch is not tripped, if it is reset it. ▪ Verify your wiring from the governor to our board input number 513. ▪ Verify there is 24vdc coming back from the governor to input 513 if there is and the input still will not light, move the governor input to an unused input

F140	E Brake
Type	**Problem**
Fault	The Emergency Brake is Dropped(F140: E Brake)
Cause	**Resolution**
Relays stuck low	Perform a Dip 1 reset on car top board followed by swapping from automatic to MR inspection and back then cycle the power to the controller. Check RGM, DZM, RGP, and DZP outputs they should all be high. If they are not correct the problem causing the controller to perform an emergency stop and follow the procedure from step number one.

F146 Gate Coupling

Type	Problem
Fault	The Controller is expecting to see the GSW inputs change state and they did not(F146: Gate Coupling)

Cause	Resolution
Incorrect Order of Door Signals	Verify you are receiving your door signals in the correct order. While closing you should make your gate switch and dpm, then your hall locks, then dcl. If you are making these in the wrong order correct them. Do inputs number 507 & 508 on the car top board change state when you cycle the doors? o Yes.
Part Failure	▪ Go to the status menu, then I/O, then input groups, and then doors front. Scroll down until you see GSW (1) and GSW (2) verify that the [X] in the brackets change state with the inputs. If they do verify you are getting the rest of your door closed signals (DCL and DPM) ▪ If the [X] does not change state disconnect the wires going to inputs 507 & 508 the [X] should disappear if it does not replace the car top board. ▪ If it does connect a jumper from C24 to 507 or 508 the [X] should reappear if it does not replace the car top board.
	o No.
Jumpers not Removed	▪ Verify all Jumpers have been removed from the door signal inputs and the hall locks
Incorrect Wiring	▪ Verify your wiring from the door operator to 507 & 508 on the car top board. ▪ Verify there is 24vdc on these wires when the gate switch is made. If there is not correct the wiring mistake
Part Failure	▪ Replace CT board

F147 Hall Coupling

Type	Problem
Fault	The Controller is expecting to see the hall lock inputs change state and they did not(F147: Hall Coupling)

Cause	Resolution
Incorrect Jumper	Verify that all hall lock jumpers have been removed.
Incorrect Door Signals	Watch the doors cycle the proper order for the signals to flag is gate switch and then hall locks. If your hall locks are making before the gate switch. Adjust your gate switch to make sooner.
Incorrect Wiring	Verify that the lock inputs (501-506 on the machine room board) change state when the hall doors cycle. If they do not there is a wiring mistake.
Part Failure	Go to the status menu, then to I/O, then input groups, and then safety scroll up until you see your lock inputs. Verify the [X] changes state when your lock inputs do. If the [X] remains on even when the input is low replace the MR board.

F148 Brake Pick Switch

Type	Problem
Fault	The feedback from the brake pick switch shows the brake has not lifted(F148: Brake Pick Switch)

Cause	Resolution
	Does this job have a brake pick switch? • Yes. o Did you run the BPS wire in a conduit with high voltage wires? • Yes
Incorrect Wiring	o Re run the BPS wire in a conduit with only low voltage wires.
	• No
Parameters Set Incorrectly	o Find out whether your BPS is normally open or normally closed. This can be changed in the setup, misc menu under BPS NO. If your BPS is normally open this should be set to yes. If it is normally closed this should be set to no.
Incorrect Wiring	o Verify that input 525 changes state when the brake lifts. If it does not there is a wiring mistake or your brake is not picking. o If it takes a second before the input makes and a fault is issued mechanically adjust your BPS to make earlier. o Go to the main menu status, then I/O, then input groups, then controller, and then Brake Pick. Does the [X] change state with the input. If it does not move the BPS input to an unused input.
	• No
No BPS Switch	o Go to the main menu, then to setup, and then to misc. turn monitor BPS to no

F151 Passcode

Type	Problem
Fault	The Passcode is either not entered or incorrect(F151: Passcode)

Cause	Resolution
Passcode not Entered Incorrect Software Wrong Passcode	Do you have the passcode for this job? o Yes ▪ Go to the Debug menu then passcode enter the passcode you have and make sure to save it. ▪ Go to the main menu then about verify you have the correct software for your job loaded on the controller. ▪ Contact Smartrise and verify you have the correct passcode o No ▪ Contact the Smartrise accounting office to receive your passcode. The phone number is (530) 282-4218

F202 DPM

Type	Problem
Fault	The controller is in automatic and the doors are closed but the DPM input is low(F202: DPM)

Cause	Resolution
	Do you have a DPM terminal on your door operator? o Yes ▪ Does the DPM input on the CT board change state when you cycle the doors. • Yes
Part Failure	o Go to the status, then I/O, then input groups, and then doors front verify that the [X] changes state with the input. If it does not move DPM to an unused input and set the current one to unused.
	• No
Incorrect Jumpers	o Verify all jumpers have been removed from the door status inputs on the car top board.
Incorrect Wiring	o Verify your wiring from the door operator to the DPM input.
Part Failure	o Measure the voltage on DPM there should be 24vdc. If there is and the input does not change state move the DPM input to an unused input and set the current input to unused.
	o No
Incorrect Wiring	▪ Jump your gate switch input to your DPM input so they make and break at the same time.

F204 Fire Stop Switch

Type	Problem
Fault	The Fire Stop Switch input is low(F204: Fire Stop Switch)

Cause	Resolution
	Does this car have a fire stop switch? o Yes
Incorrect Wiring	▪ Verify that the Fire stop switch input (537 on the car top board) is high when the switch is in the run position. ▪ Verify your wiring from the switch to the input. ▪ Measure the voltage on the input it should be 24vdc. If it is not there is a wiring mistake
Part Failure	▪ Move the fire stop switch input to an unused input and set the current input to unused.
	o No
Parameters set Incorrectly	▪ On the car top board go to the main menu, then setup, then local inputs, then scroll up to 37/537. It should read fire stop sw. scroll to the right once and scroll all the way down until it reads unused. Scroll to the right and save the value.

F205 Need To Learn

Type	Problem
Fault	The Controller has not successfully performed a Learn Run (F205: Need to Learn)

Cause	Resolution
Parameters set Incorrectly	Have you tried to perform the Learn Process? o Yes. ▪ Perform a Dip A / Dip #1 Default all. ▪ Please verify the following binary parameters are set correctly. ▪ 00-015.0 = Off (Please turn this bit back on after the learn has successfully been performed.) ▪ 00-015.4 = Off (On most new software versions this will allow the controller to write the magnet values to memory even if the Learn was not successful.) ▪ 13-097.2 = On (Position Error Logic that can affect the Learn Procedure) ▪ Go to the Debug menu and then adjust parameters verify that parameter 00-000 is set to the number of landings on this job in hexadecimal. (X01 – x09 = 1-9, X0A – x0F = 10-15, Etc) ▪ Try to re-run the learn procedure (If F: 205 is still present continue on)
Incorrect Wiring	▪ Verify inputs 509-510 on the machine room controller go low after passing the UETS magnet. If they do not check your magnet placement and magnet orientation match the description in the manual. Also verify the wiring from the selector.
Magnets not being Recongnized	▪ Go to the status menu and then to magnets scroll through the saved DZ magnet position verify that the distance between these magnets reflects the actual distance between landings. Look for large gaps as this could indicate which DZ magnet is not being recognized by the controller

F205 Need To Learn (Cont.)

Type	Problem
Fault	The Controller has not successfully performed a Learn Run (F205: Need to Learn)

Cause	Resolution
	• If there are no values saved in the status menu try adjusting 00-000 down one count from the number of landings you have (Example: If you have 6 landings adjust 00-000 from x06 to x05 and try to re-run the learn process). o If the Learn completes go to the status menu and then to magnets scroll through the saved DZ magnet position verify that the distance between these magnets reflects the actual distance between landings. Look for large gaps as this could indicate which DZ magnet is not being recognized by the controller • If there are still no saved values try adjusting 00-000 one count in the opposite direction. (Example: If you have 6 landings adjust 00-000 from x06 to x07 and try to re-run the learn process.) o If the Learn completes go to the status menu and then to magnets scroll through the saved DZ magnet position verify that the distance between these magnets reflects the actual distance between landings. Look for small gaps as this could indicate which DZ magnet that is being counted twice by the controller.

F205	Need To Learn (Cont.)
Type	**Problem**
Fault	The Controller has not successfully performed a Learn Run (F205: Need to Learn)
Cause	**Resolution**
Learn has not been Performed	o No. ▪ Turn on Dip A / Dip #2 and put the car in automatic operation. Verify that Bypass Term Limits is set to No. Go to the setup menu under Learn Mode commands and perform all three options in order. The car should travel to the top of the hoist way and stop at this point you can turn off Dip A/ Dip #2 and see if the Learn was successful. If you receive a fault during the learn correct the fault and re-start from the beginning.

F207 Door Close Fail

Type	Problem
Fault	The Doors Failed to Close (F207: Door Close Fail)

Cause	Resolution
	Verify there are no obstructions holding the door open.
Incorrect Wiring	Make sure the door operator is receiving the correct signals from our controller. Put the car on inspection in a DZ go to the setup menu then door setup, and then manually open and close the doors. Press and hold the enter button under a command to open or close. Verify the doors respond in the correct directions.
Incorrect Door Signals	Cycle the doors, scroll down to the car door data located on the main screen of the Smartrise SRU. Verify that GSW and DCL are coming on when the doors are closed. Verify that DCL is on when the doors are fully closed. There should be nothing else lit with the doors are fully closed just (GSW, DCL, and DPM) If there is correct the signal that is flagging at the wrong time.
Parameters set Incorrectly	Go to the setup menu then door setup and then timeout close. If this value is set lower than the amount of time it takes your door to close you will receive this fault. Set this timer to a value above the amount of time it takes to close the doors fully.

F208 Door Open Fail

Type	Problem
Fault	The Door Failed to Open (F208: Door Open Fail)

Cause	Resolution
	Verify there are no obstructions holding the door closed.
Incorrect Wiring	Make sure the door operator is receiving the correct signals from our controller. Put the car on inspection in a DZ go to the setup menu then door setup, and then manually open and close the doors. Press and hold the enter button under a command to open or close. Verify the doors respond in the correct directions.
Incorrect Door Signals	Cycle the doors, scroll down to the car door data located on the main screen of the Smartrise SRU. Verify that DOL comes on when the doors reach their limit. There should be nothing else lit when the doors are fully open only (DOL). If there is correct the signal that is flagging at the wrong time.
Parameters set Incorrectly	Go to the setup menu then door setup and then timeout open. If this value is set lower than the amount of time it takes your door to open you will receive this fault. Set this timer to a value above the amount of time it takes to open the doors fully.

F209	Can’t Run Up
Type	**Problem**
Fault	The Car can’t run up (F209: Can’t Run Up) (Hydraulic Controllers Only)
Cause	**Resolution**
Input in the Wrong State	(This fault should only be issued on a hydraulic controller) This fault indicated the car cannot run up. This fault should be issued with another fault or alarm. (IE Low Oil Input, Motor Thermostat, Motor Limit Timeout, or Battery Lowering.) Verify all of these inputs are in the correct state and reset the controller.

F214 Drv Enb Relay

Type	Problem
Fault	The M Contactor is Energized and the Drive ready is not or vice versa (F214: Drv Enb Relay)

Cause	Resolution
Safety String Open	Verify that your safety string is made. Measure the sf2 terminal to N and there should be 120vac. If not correct the open switch in the safety string.
Drive is Faulted	Check the status of the drive, verify the drive is not in a faulted state. If it is correct the fault, reset and try to run the car. Verify that the drive ready input is high when the M contactor pulls in.
Part Failure	Check the status I/O than input groups and then controller, scroll down to drive ready. Verify the X is in the brackets when the input is high if it is not move the input to an unused input. Verify the drive ready relay is in the correct state. Make sure there is 24vdc going to the drive ready input when the drive ready light is on. If there is no voltage replace the drive ready relay.

F218 Safety String

Type	Problem
Fault	The SS relay in not energized (F218: Safety String)

Cause	Resolution
Part Failure	Is the SS Relay Picked? o Yes ▪ Verify the feedback to our board from the SS relay, check the wiring. With the relay picked we should have 24vdc. If there is no voltage replace the relay. ▪ If there is voltage present on the relay contact and the input looks high. Check the status menu under I/O then input groups, and then safety scroll down and verify the Safety String is flagging with an [X] in the bracket. If it is not move this to an unused input
Open Safety Circuit	o No ▪ Check the voltage at sf2 to n this should read 120vac. If it does not work your way back through the safety string until you find the open safety contact. Correct the problem and reset the controller

F219 Flood Sensor

Type	Problem
Fault	The Flood Sensor Input is Active (F219: Flood Sensor)

Cause	Resolution
	Do you have a flood sensor? o YES
Incorrect Wiring	▪ Verify the flood sensor input is high. Measure voltage on the input to ref there should be 24vdc voltage. If there is not correct wiring to the flood sensor.
Part Failure	▪ If there is voltage present go to the status menu under I/O then input groups then safety and scroll down to flood input. If there is an [X] in the bracket perform a dip 1 reset on the controller. If there is no [X] move the flood sensor to an unused input.
	o No
Incorrect Parameters	▪ Go to the setup menu and then local inputs. Scroll through the inputs until you see safety flood sensor. Scroll to the right once and scroll down until it is unused. Scroll to the right twice and save the value. Perform a dip1 reset on the controller.

F220 Uets & Dets

Type	Problem
Fault	The controller see's both ETS switches in the off position (F220: Uets & Dets)

Cause	Resolution
Incorrect Wiring	Check inputs 509,510,511, and 512 on the machine room board are any of them high. (Version 3: Inputs 512 & 513 on the Car Top) o Yes ▪ Measure the voltage on the high input to ref and verify there is 24vdc ▪ Go to the status menu then I/O then input groups and then safety scroll down to UETS (1), UETS (2), DETS (1), and DETS (2). Check to see if there is an [X] in any of the brackets. Perform a Dip 1 reset. If the fault is still present and you verified the voltage to the input replace the board. o No ▪ Measure the voltage at Uets and Dets terminals in the machine room (Or Cart Top Version 3). If there is voltage on either check the wiring to the inputs from the selector. ▪ If there is no voltage write down the wire number you are using for Uets and Dets in the traveler.
Part Failure	▪ Go to the car top board and verify this matches the machine room wiring. (Ignore in V3: because wiring is not in the traveler) ▪ If there is no voltage find the breakout board labeled IP8300 measure pin number 3 to pin 5, and then pin number 6 to pin 5. If there is 24vdc on one of those pins check the wiring from the breakout board to the Uets and Dets terminals. ▪ If there is no voltage swap the IP8300 breakout board with the CT inspection breakout board. If the fault clears you will need a new breakout board.

F220 Uets & Dets (Cont.)

Type	Problem
Fault	The controller see's both ETS switches in the off position (F220: Uets & Dets)

Cause	Resolution
	▪ If it does not verify that you have a cat5 type B running from the selector to the breakout board, if you are using a type b cat 5 swap it out with a known good cable. ▪ Check the selector verify that the BZ and TZ leds are off. If they are both on check your UETS and DETS for the proper polarization. ▪ Replace IP8300

F221 Redundancy

Type	Problem
Fault	A Communication problem has occurred on the PN network(F221: Redundancy)

Cause	Resolution
Incorrect Dip Settings	Verify that all dip switch settings are correct on both the MR and CT boards. These setting can be located on sheet 2 & 8 of your prints
Incorrect Jumpers	Verify that all Jumpers are placed correctly on the J24 jumper block in the MR and on the CT. They should match what is on your prints. These setting can be located on sheet 2 & 8 of your prints
Incorrect Wiring	Swap PN2 and PN3 wires Verify your traveler wiring for PN1, PN2, and PN3

F223 Rdn CT

Type	Problem
Fault	One of the Redundent Car Top Input Sets are in different states (F223: Rdn CT)

Cause	Resolution
Incorrect Wiring	Go to the main menu then faults then logged faults press enter on the F223. In the right hand corner there should be two letters and two number (Example: A-M-1-2) these numbers are the rdn inputs on the car top that are in different states (Example: A-M-1-2 means inputs 501 and 502 on the car top are in different states). Correct wiring mistake causing this issue.
Part Failure	If the inputs are both high check the status I/O menu. Verify that both the inputs have an [X] in the bracket. If one does and one doesn't and both leds are lit try moving the input to an unused input. If the input is fixed replace the board

F226 Over Speed I/L

Type	Problem
Fault	Car has Exceeded speed for Inspection or Leveling with doors open (F226: Over Speed I/L)

Cause	Resolution
	Go to the main menu, speeds and slowdowns and then inspection speed. Make sure this is set to a value less than 150 FPM or 110% of leveling speed. Go to the main menu, speeds and slowdowns and then leveling speed. Make sure the leveling speed is set to a value less than 20fpm.

F227 Preflight Check

Type	Problem
Fault	The Preflight check has detected a fault (F227: Preflight check)

Cause	Resolution
Different Fault.	This fault is usually issued with another fault. If it is address other fault and this one should clear.
Incorrect Wiring	If no other fault is listed verify all of your e-24 circuits are wired correctly, along with your doors, and selector wiring.

F228 E24 Stuck High

Type	Problem
Fault	One of the E24 inputs did not change state during the pre-flight check (F228: E24 Stuck High)

Cause	Resolution
Incorrect Wiring	Go to the fault menu and then logged faults. Press enter on the E24 stuck high fault. Check the extra bytes in the right hand corner. They should read B-M-( )-( ). The Third byte should be either a one or a two (IE. B-M-1-( ), or B-M-2-( )) This will indicate if the input is stuck high on the Machine Room board or the Car Top board. A 1 indicates Machine Room. And a 2 Indicates the Car Top The Fourth byte will indicate the input that is stuck high (IE. B-M-1-24) This would mean that input 524 in the machine room board did not change state during the pre-flight check. After finding the input that is effected correct the wiring mistake to the input, and verify it changes state during the pre-flight check

F230 Rdn MR

Type	Problem
Fault	One of the Redundant Machine Room Input Sets are in different states (F230: Rdn MR)

Cause	Resolution
Incorrect Wiring	Go to the main menu then faults then logged faults press enter on the F230. In the right hand corner there should be two letters and two number (Example: A-M-1-2) these numbers are the rdn inputs on the machine room board that are in different states (Example: A-M-1-2 means inputs 501 and 502 on the machine room are in different states). Correct wiring mistake causing this issue.
Part Failure	If the inputs are both high check the status I/O menu. Verify that both the inputs have an [X] in the bracket. If one does and one doesn't and both leds are lit try moving the input to an unused input. If the input is fixed replace the board