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ALPHA
ELEVATOR CONTROL

TEST PROCEDURES

LOBOS TRACTION CONTROLLER

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GENERAL INFORMATION



This testing document is written to allow the testing listed in this document to be done in any sequence. It is required to do this testing prior to inspection.

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Inspection Overspeed Test

Objective: This test will simulate that the elevator speed on inspection is limited to a maximum of 150 FPM.

This test will also simulate that if the elevator is traveling at a speed faster than 150 FPM on inspection, the controller will remove power from the driving-machine motor and brake.

Procedure:

1. Put the elevator on MR inspection.
2. Go to **MAIN MENU → SETUP → GENERAL SETUP → CAR SPEEDS → INSPECTION SPEED** and record the value down.
3. Set the value of inspection speed to 151 FPM and click save.
4. The controller will fault out with a “F137 Invalid Param” fault.
5. Set the value of inspection speed back to the recorded value in step #2.

Contract Overspeed Test

Objective: This test will simulate that if the elevator is traveling faster than the contract speed, then the controller will remove power from the driving-machine motor and brake.

Procedure:

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1. Set the A1 Overspeed Multiplier in the drive to 115-125% depending on rated electrical governor switch.
2. Put the elevator on normal operation. Press a car call to move the elevator to the bottom floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the bottom floor and press the enter button.
3. Go to U4 menu “Overspeed Test” inside the Magnetek drive and set it to Yes.
4. Press a car call to move the elevator to the top terminal floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the top terminal floor and press the enter button.
5. The elevator will move up and fault out with the “F139 Overspeed” fault.
6. Press the clear fault button on the inspection board.

KEB

1. Put the elevator on normal operation. Press a car call to move the elevator to the bottom floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the bottom floor and press the enter button.

2. Multiply the contract speed of the elevator by 1.25 and set LL16 inside the KEB drive to that value.
3. Go to LL15 inside the KEB drive and set it to a numerical value of #1.
4. Press a car call to move the elevator to the top terminal floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the top terminal floor and press the enter button.
5. The elevator will move up and fault out with the “F139 Overspeed” fault.
6. Press the clear fault button on the inspection board.

Electrical Governor Test

Objective: This test will simulate that if the elevator is traveling faster than the contract speed, the controller will do an emergency stop when the electrical governor switch trips.

Procedure:

Magnetek

1. Set the A1 Overspeed Multiplier in the drive to 115-125% depending on rated electrical governor switch.
2. Put the elevator on normal operation. Press a car call to move the elevator to the bottom floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the bottom floor and press the enter button.
3. Turn on DIP SWITCH #3 on the MR UI Board and put the elevator on MR Inspection. Switch the TED switch to LIMITED position. Take the elevator off MR Inspection. The top line of the LCD home screen will alternate between the message “Test Mode” and “+Acceptance”.
4. Go to **MAIN MENU → TEST AND TROUBLESHOOT → ACCEPTANCE TEST → DISABLE OVERSPEED**, set it to TRUE, and then click save.
5. Go to U4 menu “Overspeed Test” inside the Magnetek drive and set it to Yes.
6. Press a car call to move the elevator to the top terminal floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the top terminal floor and press the enter button.
7. The elevator will move up until the electrical governor switch trips and the controller will fault out with an “A236 Governor” alarm, a “F143 E-Brake” fault, and a “F139 Overspeed” fault.
8. Put the elevator on MR inspection, reset the electrical governor, and then press the clear fault button on the inspection board.
9. Turn off DIP SWITCH #3 and switch the TED back to OFF position.

KEB

1. Put the elevator on normal operation. Press a car call to move the elevator to the bottom floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the bottom floor and press the enter button.
2. Turn on DIP SWITCH #3 on the MR UI Board and put the elevator on MR Inspection. Switch the TED switch to LIMITED position. Take the elevator off MR Inspection. The top line of the LCD home screen will alternate between the message “Test Mode” and “+Acceptance”.
3. Go to **MAIN MENU → TEST AND TROUBLESHOOT → ACCEPTANCE TEST → DISABLE OVERSPEED**, set it to TRUE, and then click save.
4. Multiply the contract speed of the elevator by 1.25 and set LL16 inside the KEB drive to that value.
5. Go to LL15 inside the KEB drive and set it to a numerical value of #1.
6. Press a car call to move the elevator to the top terminal floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the top terminal floor and press the enter button.
7. The elevator will move up until the electrical governor switch trips and the controller will fault out with an “A236 Governor” alarm, a “F143 E-Brake” fault, and a “F139 Overspeed” fault.
8. Put the elevator on MR inspection, reset the electrical governor, and then press the clear fault button on the inspection board.
9. Turn off DIP SWITCH #3 and switch the TED back to OFF position.

Mechanical Governor/Safeties Test

Objective: This test will simulate that if the elevator is traveling faster than the contract speed, the controller will do an emergency stop when the mechanical governor switch trips and safeties set.

Procedure:

Magnetek

1. Add full load to the elevator.
2. Put the elevator on normal operation. Press a car call to move the elevator to the top floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the top floor and press the enter button.
3. Turn off the power to the controller. Wire a jumper from 120P input of the safety board to GOV input of the safety board. Turn on the power to the controller.
4. Turn on DIP SWITCH #3 on the MR UI Board and put the elevator on MR Inspection. Switch the TED switch to LIMITED position. Take the elevator off MR Inspection. The top line of the LCD home screen will alternate between the message “Test Mode” and “+Acceptance”.
5. Go to **MAIN MENU → TEST AND TROUBLESHOOT → ACCEPTANCE TEST → DISABLE OVERSPEED**, set it to TRUE and then click save.
6. Go to A1 menu “Overspeed Multiplier” inside the Magnetek drive and set it to 150%.
7. Go to U4 menu “Overspeed Test” inside the Magnetek drive and set it to Yes.
8. Press a car call to move the elevator to the bottom terminal floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the bottom terminal floor and press the enter button.
9. The elevator will move down until the mechanical governor switch trips and the controller will fault out with a “F110 Safety String” fault.
10. Put the elevator on MR inspection. Reset the governor switch.
11. Put a wire jumper from SSC-O and SSC-R on the safety board. Run the elevator up on inspection until the safeties reset.
12. Turn off the power to the controller. Remove the jumper from 120P input of the safety board to GOV input of the safety board. Remove the jumper wire from SSC-O to SSC-R. Turn on the power to the controller.
13. Turn off DIP SWITCH #3 and switch the TED back to OFF position.

KEB

1. Add full load to the elevator.
2. Put the elevator on normal operation. Press a car call to move the elevator to the top floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the top floor and press the enter button.

3. Turn off the power to the controller. Wire a jumper from 120P input of the safety board to GOV input of the safety board. Turn on the power to the controller.
4. Turn on DIP SWITCH #3 on the MR UI Board and put the elevator on MR Inspection. Switch the TED switch to LIMITED position. Take the elevator off MR Inspection. The top line of the LCD home screen will alternate between the message “Test Mode” and “+Acceptance”.
5. Go to **MAIN MENU → TEST AND TROUBLESHOOT → ACCEPTANCE TEST → DISABLE OVERSPEED**, set it to TRUE and then click save.
6. Multiply the contract speed of the elevator by 1.5 and set LL16 inside the KEB drive to that value.
7. Go to LL15 inside the KEB drive and set it to a numerical value of #1.
8. Press a car call to move the elevator to the bottom terminal floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the bottom terminal floor and press the enter button.
9. The elevator will move down until the mechanical governor switch trips and the controller will fault out with a “F110 Safety String” fault.
10. Put the elevator on MR inspection. Reset the governor switch.
11. Put a wire jumper from SSC-O and SSC-R on the safety board. Run the elevator up on inspection until the safeties reset.
12. Turn off the power to the controller. Remove the jumper from 120P input of the safety board to GOV input of the safety board. Remove the jumper wire from SSC-O to SSC-R. Turn on the power to the controller.
13. Turn off DIP SWITCH #3 and switch the TED back to OFF position.

Overspeed Test With Only Main Brake

Objective: This test will simulate that a car that is over speeding in the up can be stopped by only the main brake. The emergency brake will remain lifted.

Procedure:

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1. Set the A1 Overspeed Multiplier in the drive to 115-125% depending on rated electrical governor switch.
2. Put the elevator on normal operation. Press a car call to move the elevator to the bottom floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the bottom floor and press the enter button.
3. Turn on DIP SWITCH #3 on the MR UI Board and put the elevator on MR Inspection. Switch the TED switch to LIMITED position. Take the elevator off MR Inspection. The top line of the LCD home screen will alternate between the message “Test Mode” and “+Acceptance”.
4. Go to **MAIN MENU → TEST AND TROUBLESHOOT → ACCEPTANCE TEST → DISABLE OVERSPEED**, set it to TRUE, and then click save.

5. Go to **MAIN MENU → TEST AND TROUBLESHOOT → ACCEPTANCE TEST → USE ONLY ONE BRAKE → MAIN BRAKE ONLY**, select YES.
6. Go to U4 menu “Overspeed Test” inside the Magnetek drive and set it to Yes.
7. Press a car call to move the elevator to the top terminal floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the top terminal floor and press the enter button.
8. The elevator will move up until the electrical governor switch trips and the controller will fault out with an “A236 Governor” alarm, a “F143 E-Brake” fault, and a “F139 Overspeed” fault.
9. Put the elevator on MR inspection, reset the electrical governor, and then press the clear fault button on the inspection board.
10. Turn off DIP SWITCH #3 and switch the TED back to OFF position.

KEB

1. Put the elevator on normal operation. Press a car call to move the elevator to the bottom floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the bottom floor and press the enter button.
2. Turn on DIP SWITCH #3 on the MR UI Board and put the elevator on MR Inspection. Switch the TED switch to LIMITED position. Take the elevator off MR Inspection. The top line of the LCD home screen will alternate between the message “Test Mode” and “+Acceptance”.
3. Go to **MAIN MENU → TEST AND TROUBLESHOOT → ACCEPTANCE TEST → DISABLE OVERSPEED**, set it to TRUE, and then click save.
4. Go to **MAIN MENU → TEST AND TROUBLESHOOT → ACCEPTANCE TEST → USE ONLY ONE BRAKE → MAIN BRAKE ONLY**, select YES.
5. Multiply the contract speed of the elevator by 1.25 and set LL16 inside the KEB drive to that value.
6. Go to LL15 inside the KEB drive and set it to a numerical value of #1.
7. Press a car call to move the elevator to the top terminal floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the top terminal floor and press the enter button.
8. The elevator will move up until the electrical governor switch trips and the controller will fault out with an “A236 Governor” alarm, a “F143 E-Brake” fault, and a “F139 Overspeed” fault.
9. Put the elevator on MR inspection, reset the electrical governor, and then press the clear fault button on the inspection board.
10. Turn off DIP SWITCH #3 and switch the TED back to OFF position.

Overspeed Test With Only Emergency Brake

Objective: This test will simulate that a car that is over speeding in the up can be stopped by only the emergency brake. The main brake will remain lifted.

Procedure:

Magnetek

1. Set the A1 Overspeed Multiplier in the drive to 115-125% depending on rated electrical governor switch.
2. Put the elevator on normal operation. Press a car call to move the elevator to the bottom floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the bottom floor and press the enter button.
3. Turn on DIP SWITCH #3 on the MR UI Board and put the elevator on MR Inspection. Switch the TED switch to LIMITED position. Take the elevator off MR Inspection. The top line of the LCD home screen will alternate between the message “Test Mode” and “+Acceptance”.
4. Go to **MAIN MENU → TEST AND TROUBLESHOOT → ACCEPTANCE TEST → DISABLE OVERSPEED**, set it to TRUE, and then click save.
5. Go to **MAIN MENU → TEST AND TROUBLESHOOT → ACCEPTANCE TEST → USE ONLY ONE BRAKE → E-BRAKE ONLY**, select YES.
6. Go to U4 menu “Overspeed Test” inside the Magnetek drive and set it to Yes.
7. Press a car call to move the elevator to the top terminal floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the top terminal floor and press the enter button.
8. The elevator will move up until the electrical governor switch trips and the controller will fault out with an “A236 Governor” alarm, a “F143 E-Brake” fault, and a “F139 Overspeed” fault.
9. Put the elevator on MR inspection, reset the electrical governor, and then press the clear fault button on the inspection board.
10. Turn off DIP SWITCH #3 and switch the TED back to OFF position.

KEB

1. Put the elevator on normal operation. Press a car call to move the elevator to the bottom floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the bottom floor and press the enter button.
2. Turn on DIP SWITCH #3 on the MR UI Board and put the elevator on MR Inspection. Switch the TED switch to LIMITED position. Take the elevator off MR Inspection. The top line of the LCD home screen will alternate between the message “Test Mode” and “+Acceptance”.
3. Go to **MAIN MENU → TEST AND TROUBLESHOOT → ACCEPTANCE TEST → DISABLE OVERSPEED**, set it to TRUE, and then click save.

4. Go to **MAIN MENU → TEST AND TROUBLESHOOT → ACCEPTANCE TEST → USE ONLY ONE BRAKE → E-BRAKE ONLY**, select YES.
5. Multiply the contract speed of the elevator by 1.25 and set LL16 inside the KEB drive to that value.
6. Go to LL15 inside the KEB drive and set it to a numerical value of #1.
7. Press a car call to move the elevator to the top terminal floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the top terminal floor and press the enter button.
8. The elevator will move up until the electrical governor switch trips and the controller will fault out with an “A236 Governor” alarm, a “F143 E-Brake” fault, and a “F139 Overspeed” fault.
9. Put the elevator on MR inspection, reset the electrical governor, and then press the clear fault button on the inspection board.
10. Turn off DIP SWITCH #3 and switch the TED back to OFF position.

Final Terminal Stopping Device

Objective: This test will simulate that the elevator will stop at the final terminal stopping device.

Procedure:

1. Put the elevator on normal operation. Press a car call to move the elevator to the bottom floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the bottom floor and press the enter button.
2. Put the elevator on any mode of inspection.
3. Go to **MAIN MENU → SETUP → INSPECTION/ACCESS → BYPASS DIRECTIONALS**, set it to TRUE and click save.
4. Go to **MAIN MENU → SETUP → GENERAL SETUP → CAR SPEEDS → INSPECTION SPEED** and record the value down.
5. Set the value of inspection speed to 10 FPM and click save.
6. Run the elevator down on inspection and verify that the elevator stops or does not run down past the bottom final limit. The controller will display a “F110 Safety String” fault.
7. Put a jumper from SSH-O to SSC-R on the safety board and run the elevator back up on inspection into floor level and turn bypass directionals back to OFF.
8. With the jumper from SSH-O and SCC-R removed, put the elevator on normal operation. Press a car call to move the elevator to the top floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the top floor and press the enter button.
9. Put the elevator on any mode of inspection.
10. Go to **MAIN MENU → SETUP → INSPECTION/ACCESS → BYPASS DIRECTIONALS**, set it to TRUE and click save.
11. Run the elevator up on inspection and verify that the elevator stops or does not run down past the top final limit. The controller will display a “F110 Safety String” fault.

12. Put a jumper from SSH-O to SSC-R on the safety board and run the elevator back down on inspection into floor level and turn bypass directionals back to OFF. Remove the SSH-O and SCC-R jumper.
13. Go to **MAIN MENU → SETUP → INSPECTION/ACCESS → BYPASS DIRECTIONALS**, set it to TRUE and click save.
14. Go to **MAIN MENU → SETUP → GENERAL SETUP → CAR SPEEDS → INSPECTION SPEED**, put the value back that was recorded in step #4, and click save.

Traction Loss Test

Objective: This test is to simulate when the hoist motor breaks traction, then the controller will remove power from the driving-machine motor and brake

Procedure:

1. Put the elevator on normal operation. Press a car call to move the elevator to the bottom floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS**, scroll to the bottom floor, and press the enter button.
2. Put the elevator on any mode of inspection.
3. Go to **MAIN MENU → SETUP → INSPECTION/ACCESS → BYPASS DIRECTIONALS** set it to TRUE and click save.
4. Go to **MAIN MENU → SETUP → GENERAL SETUP → CAR SPEEDS → INSPECTION SPEED** and record the value down.
5. Set the value of inspection speed to 10 FPM and click save.
6. Wire a jumper from SSH-O to SSH-R on the safety board.
7. Run the elevator down on inspection until the elevator stops and faults out with a “F146 Traction Loss” fault. By default, the traction loss timer is set to 10 seconds. If needed to be set longer, go to **MAIN MENU → SETUP → TIMERS → TRACTION LOSS TIME**, set it to the desired value and redo the test.
8. Press the traction loss reset button to clear the fault.
9. Run the elevator back up on inspection until floor level. Remove the jumper from SSH-O to SSH-R on the safety board.
10. Go to **MAIN MENU → SETUP → INSPECTION/ACCESS → BYPASS DIRECTIONALS**, set it to FALSE, and click save.
11. Go to **MAIN MENU → SETUP → GENERAL SETUP → CAR SPEEDS → INSPECTION SPEED**, put the value back that was recorded in step #4, and click save.

Normal Terminal Stopping Device Test

Objective: This test is to simulate that the elevator traveling to any of the terminal landings will slow down when crossing the Normal Terminal Stopping Devices as the normal stopping means fails to cause the car to slow down at the terminal landings.

This test will also simulate that the elevator will stop at the terminal normal limits.

Procedure:

Test #1: Up Normal Terminal Slowdown:

1. Put the elevator on normal operation. Press a car call to move the elevator to the bottom terminal floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the bottom terminal floor and press the enter button.
2. Turn on DIP SWITCH #3 on the MR UI Board and put the elevator on MR Inspection. Switch the TED switch to LIMITED position. Take the elevator off MR Inspection. The top line of the LCD home screen will alternate between the message “Test Mode” and “+Acceptance”.
3. Go to **MAIN MENU → TEST AND TROUBLESHOOT → ACCEPTANCE TEST → OVERSHOOT**, press **YES**, and set value to **00400 (1ft 3.74in)** and click save.
4. Press a car call to move the elevator to the top terminal floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the top terminal floor and press the enter button.
5. The controller will assert an “A228 NTS” alarm as well as a “F151 NTS” fault and the elevator will slow down into NTS speed.
6. Turn off DIP SWITCH #3 and switch the TED back to OFF position.

Test #2: Down Normal Terminal Slowdown:

1. Put the elevator on normal operation. Press a car call to move the elevator to the top terminal floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the top terminal floor and press the enter button.
2. Turn on DIP SWITCH #3 on the MR UI Board and put the elevator on MR Inspection. Switch the TED switch to LIMITED position. Take the elevator off MR Inspection. The top line of the LCD home screen will alternate between the message “Test Mode” and “+Acceptance”.
3. Go to **MAIN MENU → TEST AND TROUBLESHOOT → ACCEPTANCE TEST → OVERSHOOT**, press **YES**, and set value to **00400 (1ft 3.74in)** and click save.
4. Press a car call to move the elevator to the bottom terminal floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the bottom terminal floor and press the enter button.
5. The controller will assert an “A228 NTS” alarm as well as a “F151 NTS” fault and the elevator will slow down into NTS speed.
6. Turn off DIP SWITCH #3 and switch the TED back to OFF position.

Directional Normal Limits Test

Objective: This test is to verify the proper functionality of the directional normal limits in the up and down direction.

Procedure:

1. Put the elevator on normal operation. Press a car call to move the elevator to the bottom terminal floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS**, scroll to the bottom terminal floor, and press the enter button.
2. Put the elevator on any mode of inspection.
3. Run the elevator down on inspection and verify that the elevator stops or does not run down past the bottom normal limit. The controller will display an “A201 At Directional Limit” alarm.
4. Put the elevator on normal operation. Press a car call to move the elevator to the top terminal floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the top terminal floor and press the enter button.
5. Put the elevator on any mode of inspection.
6. Run the elevator up on inspection and verify that the elevator stops or does not run up past the top normal limit. The controller will display an “A201 At Directional Limit” alarm.

Emergency Terminal Stopping Test

Objective: This test is to simulate that the elevator while traveling to any of the terminal landings will remove power from the driving-machine motor and brake when crossing the Emergency Terminal Stopping device as the normal terminal stopping device fails to cause the car to slow down at the terminal landings.

Procedure:

Test #1: Up Emergency Terminal Stopping:

1. Put the elevator on normal operation. Press a car call to move the elevator to the bottom terminal floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the bottom terminal floor and press the enter button.
2. Turn on DIP SWITCH #3 on the MR UI Board and put the elevator on MR Inspection. Switch the TED switch to LIMITED position. Take the elevator off MR Inspection. The top line of the LCD home screen will alternate between the message “Test Mode” and “+Acceptance”.
3. Go to **MAIN MENU → TEST AND TROUBLESHOOT → ACCEPTANCE TEST → OVERSHOOT**, press **YES**, and set value to **00400 (1ft 3.74in)** and click save.

4. Wire a jumper from REF terminal to NTS terminal in the MR.
5. Press a car call to move the elevator to the top terminal floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the top terminal floor and press the enter button.
6. The controller will assert a “F141 ETS Overspeed” fault when crossing the UETS position and elevator will cut power to the machine/brakes and go out of service.
7. Put the elevator on inspection. Press the clear fault button on the inspection board.
8. Remove the jumper from the REF terminal to NTS terminal in the MR.
9. Turn off DIP SWITCH #3 and switch the TED back to OFF position.

Test #2: Down Emergency Terminal Stopping:

1. Put the elevator on normal operation. Press a car call to move the elevator to the top terminal floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the top terminal floor and press the enter button.
2. Turn on DIP SWITCH #3 on the MR UI Board and put the elevator on MR Inspection. Switch the TED switch to LIMITED position. Take the elevator off MR Inspection. The top line of the LCD home screen will alternate between the message “Test Mode” and “+Acceptance”.
3. Go to **MAIN MENU → TEST AND TROUBLESHOOT → ACCEPTANCE TEST → OVERSHOOT**, press YES, and set value to **00400 (1ft 3.74in)** and click save.
4. Wire a jumper from REF terminal to NTS terminal in the MR.
5. Press a car call to move the elevator to the bottom terminal floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to the bottom terminal floor and press the enter button.
6. The controller will assert a “F141 ETS Overspeed” fault when crossing the UETS position and elevator will cut power to the machine/brakes and go out of service.
7. Put the elevator on inspection. Press the clear fault button on the inspection board.
8. Remove the jumper from the REF terminal to NTS terminal in the MR.
9. Turn off DIP SWITCH #3 and switch the TED back to OFF position.

Unintended Movement Test

Objective: This test is to simulate that the elevator will drop the emergency brake and stop the elevator when moving away from floor level with both the hoistway and car doors open.

Procedure:

Test A: With Rope Gripper:

1. Put the elevator on normal operation. Press a car call to move the elevator to an intermediate floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to any intermediate floor and press the enter button.
2. Put the elevator on MR inspection.
3. Go to **MAIN MENU → SETUP → DOOR SETUP → COMMON → MANUALLY OPEN & CLOSE →** if the opening is a front, put the asterisk underneath the F for OPEN and press and hold until doors are fully open. If the opening is a rear, put the asterisk underneath the R for OPEN and press and hold the middle button until the doors are fully open.
4. Switch the TED switch to GENERAL position. The top line of the LCD home screen will alternate between the message “Inspect(MR)” and “+Acceptance”.
5. Go to **MAIN MENU → TEST AND TROUBLESHOOT → ACCEPTANCE TEST → LIFT MAIN BRAKE.**
6. Press and hold the B1 contactor. Press and hold the enable + up on the MR inspection board.
 - a. If job is a MRL controller, place jumper from B1CO to B1CR on the terminal block. Press and hold the enable + up on the MR inspection board.
7. The brake will lift and the elevator will move 3 inches and the rope gripper will activate and stop the elevator. The controller will assert a “F110 Safety String” fault and “F143 E-Brake” fault.
8. Release the B1 contactor and cycle power to the controller. Press the clear fault button on the inspection board after the controller has powered back on.
 - a. If job is a MRL controller, remove jumper from B1CO to B1CR on the terminal block. Press the clear fault button on the inspection board after the controller has powered back on.
9. Switch the TED switch to OFF position.

Test B: With Secondary Sheave Brake:

1. Put the elevator on normal operation. Press a car call to move the elevator to an intermediate floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS** and scroll to any intermediate floor and press the enter button.
2. Put the elevator on MR inspection.
3. Go to **MAIN MENU → SETUP → DOOR SETUP → COMMON → MANUALLY OPEN & CLOSE →** if the opening is a front, put the asterisk underneath the F for OPEN and press and hold until doors are fully open. If the opening is a rear, put the

asterisk underneath the R for OPEN and press and hold the middle button until the doors are fully open.

4. Switch the TED switch to GENERAL position. The top line of the LCD home screen will alternate between the message “Inspect(MR)” and “+Acceptance”.
5. Go to **MAIN MENU → TEST AND TROUBLESHOOT → ACCEPTANCE TEST → LIFT E-BRAKE**, press YES.
6. Go to **MAIN MENU → TEST AND TROUBLESHOOT → ACCEPTANCE TEST → LIFT MAIN BRAKE**.
7. Press and hold the B1 contactor. Press and hold the enable + up on the MR inspection board.
 - a. If job is a MRL controller, place jumper from B1CO to B1CR on the terminal block. Remove the wire off of B1-M on the safety board. Press and hold the enable + up on the MR inspection board.
8. The brakes will lift and the elevator will move 3 inches and the secondary sheave brake will drop and stop the elevator. The controller will assert a “F110 Safety String” fault and “F143 E-Brake” fault.
9. Release the B1 contactor and cycle power to the controller. Press the clear fault button on the inspection board after the controller has powered back on.
 - b. If job is a MRL controller, remove jumper from B1CO to B1CR on the terminal block. Press the clear fault button on the inspection board after the controller has powered back on.
10. Switch the TED switch to OFF position

Car/Counterweight Buffer Test

Objective: This test is to simulate that the elevator striking the buffer at contract speed will cause the machine to break traction.



Car/Counterweight Buffer test not required if hoistway does not have a buffer

Procedure:

Test #1: Car Buffer Test:

1. Put the elevator on normal operation. Press a car call to move the elevator to the top floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS**, scroll to the top floor, and press the enter button.
2. Turn on DIP SWITCH #3 on the MR UI Board and put the elevator on MR Inspection. Switch the TED switch to LIMITED position. Take the elevator off MR Inspection. The top line of the LCD home screen will alternate between the message “Test Mode” and “+Acceptance”.
3. Go to **MAIN MENU → TEST AND TROUBLESHOOT → ACCEPTANCE TEST → OVERSHOOT**, press YES, and set value to **10 FT (03048)** and click save. Set **DISABLE ETS** to TRUE and click save.

4. Wire a jumper from REF terminal to NTS terminal in the MR.
5. Wire a jumper from SSH-O to SSC-R on the safety board.
6. Press a car call to move the elevator to the bottom terminal floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS**, scroll to the bottom terminal floor, and press the enter button.
7. The elevator will go contract speed into the buffer and compress the buffer.
8. Put the elevator on MR inspection and run the elevator back into floor level.
9. Remove the jumper from the REF terminal to NTS terminal in the MR and SSH-O to SSC-R. Turn off DIP SWITCH #3 and switch the TED back to OFF position.

Test #2: Counterweight Buffer Test:

1. Put the elevator on normal operation. Press a car call to move the elevator to the bottom floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS**, scroll to the bottom floor, and press the enter button.
2. Turn on DIP SWITCH #3 on the MR UI Board and put the elevator on MR Inspection. Switch the TED switch to LIMITED position. Take the elevator off MR Inspection. The top line of the LCD home screen will alternate between the message “Test Mode” and “+Acceptance”.
3. Go to **MAIN MENU → TEST AND TROUBLESHOOT → ACCEPTANCE TEST → OVERSHOOT**, press **YES**, and set value to **10 FT (03048)** and click save. Set **DISABLE ETS** to **TRUE** and click save.
4. Wire a jumper from REF terminal to NTS terminal in the MR.
5. Wire a jumper from SSH-O to SSC-R on the safety board.
6. Press a car call to move the elevator to the top terminal floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS**, scroll to the top terminal floor, and press the enter button.
7. The counterweight will go contract speed into the buffer and compress the buffer.
8. Put the elevator on MR inspection and run the elevator back into floor level.
9. Remove the jumper from the REF terminal to NTS terminal in the MR and SSH-O to SSC-R. Turn off DIP SWITCH #3 and switch the TED back to OFF position.

Manual Traction Rescue

Objective: This test is to verify that the manual traction rescue picks the brake(s).



Manual Traction Rescue Test not required if controller does not have a battery lowering unit.

Procedure:

1. Put the elevator on normal operation. Press a car call to move the elevator to the bottom floor. To do this, go to **MAIN MENU → TEST & TROUBLESHOOT → ENTER CALLS**, scroll to the bottom floor, and press the enter button.
2. Put the elevator on MR inspection. Move the elevator 3 feet away from floor level.
3. Turn off the main line disconnect. Wire a jumper on terminal A to D.
4. Turn on the battery lowering switch.
5. Verify the switch on the battery lowering unit itself is in the on position. If it is not turned on, switch it to the on position.
6. Turn on dip switch #1 and #2 on the MR UI Board.
7. Press the ENABLE + UP Button on the MR inspection board. The brake(s) will pick and the elevator should move.
8. Turn off dip switch #1 and #2 on the MR UI Board. Turn off the battery lowering switch.
9. Turn on the main line disconnect.

DLM Car Door Test

Objective: This test is to simulate if there is a jumper on a car door that the elevator will not move.

Procedure:

1. Put the elevator on normal operation. The elevator should be in at floor level at a landing.
2. Place a jumper on the safety board from GSWF to 120P.
3. Place a car call to a different landing.
4. The doors will open and fault out with a “A233 GSW Contact” alarm.
5. Remove the jumper and elevator should go back to normal.
6. If rear door is applicable, redo steps #1-steps #5, but in step #2, you will jump GSWR to 120P instead.

DLM Hall Door Test

Objective: This test is to simulate if there is a jumper on a hall door that the elevator will not move.

Procedure:

1. Put the elevator on the bottom landing on normal operation. The elevator should be in at floor level at a landing.
2. Place a jumper on the safety board from LOCKB to 120P.
3. Place a car call to a different landing.
4. The doors will open and fault out with a “A234 Lock Contact” alarm.
5. Remove the jumper and elevator should go back to normal.

Two Circuit Brake Test

Objective: This test is to simulate that power can be removed from the brakes from two different sources.

Procedure:

Test #1

1. Turn on dip switch 1 and 2 on the main brake board. Turn on dip switch 2 on the secondary brake board (if applicable).
2. Place a car call to a different landing.
3. The controller will be faulted out with a “F117 CN Network” fault and not be able to pick the brakes.
4. Turn off the dip switch 1 and 2 on the main brake board. Turn off dip switch 2 on the secondary brake board (if applicable).
5. Cycle power to the controller and elevator should be back to normal.

Test #2

1. Remove the wires off B1-C and B2-C outputs on the safety board.
2. Place a car call to a different landing.
3. The brakes will not pick and the controller will fault out with a “F134 B Contactor” fault.
4. Put elevator on MR inspection. Put the wires back into B1-C and B2-C outputs of the safety board.