



THE PEELLE COMPANY
FREIGHT DOORS | CAR GATES | CAR ENCLOSURES

GUIDE 223



TROUBLESHOOTING Freight Elevator Doors / Goods Lift Doors

VSD | VERTICALLY
SLIDING
DOORS

20/05/2009

Troubleshooting

- Operation
- Car Gate
- Landing Doors
- Retiring Cam
- Light Curtain



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Sequence of Operation

Open sequence

- a. Landing door starts opening in high speed
- b. When limit cam actuates DOL proximity sensor, landing door speed changes to slow speed
- c. At the same time landing door speed changes to slow speed, car gate starts opening in high speed
- d. 1" before landing door fully opens, DOFL micro switch is actuated
- e. Landing doors stall in full open position with motors spinning
- f. When gate limit cam actuates GOL proximity sensor, car gate speed changes to slow speed
- g. 1-2" before car gate fully opens, GOFL micro switch will be actuated
- h. Car gate stalls in open position with motor spinning
- i. Open relays are timed out by AOT timer (pot #0). All motors stop.



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Sequence of Operation

Close sequence (+24 to DC,HDC, or DCM)

- a. Car gate starts closing in high speed
- b. When gate limit cam actuates GCL proximity sensor, car gate speed changes to slow speed
- c. At the same time car gate speed changes to slow speed, landing door starts closing in high speed
- d. Car gate stalls in closed position
- e. When door limit cam actuates DCL proximity sensor, landing door speed changes to slow speed
- f. Landing door stalls in closed position
- g. Close relays are timed out by ACT timer (pot #1)



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Controller Fuses

Problem:

1. Fuses keep blowing

Solution:

1. Ensure power supply to controller is correct voltage. Check all wiring connections for any short circuits
2. Replace door or gate motor(s) if necessary



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Car Gate

Problem:

1. No Operation

Solution:

1. Make sure controller has power:
2. Replace any blown fuses
3. Ensure that Reverse Phase Motor (RPR) relay is energized. If not energized, switch two of H1, H2, & H3 wires with each other until Reverse Phase Relay is energized
4. Reset Time Protection Relay
5. Check stop button on car is not engaged
6. Check unlocking device micro switches are made up
7. Terminals 15, 4 and 23 are energized



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Car Gate

Problem:

1. Closes in slow speed only

Solution:

1. Check for obstruction blocking light curtain
2. Ensure that the light curtain is wired correctly
3. Check reversing edge to make sure it is not damaged, make sure it makes electrical continuity when squeezed
4. Check gate close terminals 2 and 4 to make sure they are normally made. If not, check gate proximity sensors (GCL) with meter to make sure they are not sensing something other than cam. GCL is normally on for high speed



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Car Gate

Problem:

1. Does not fully open
2. Does not fully close

Solution:

1. Pot #0 (PLC controller) not set with sufficient amount of time
2. Pot #1 (PLC controller) not set with sufficient amount of time



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Car Gate

Problem:

1. Travels in wrong direction and/or stuck between an open and close operation

Solution:

1. In Peelle controller, switch wires T6 & T7 for high speed, and T8 & T9 for low speed



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Car Gate

Problem:

1. For Front (Line A) and Rear (Line C) openings, Line C gate does not close

Solution:

1. Make sure terminals 15 and 26 cause SGA relay to energize. If not, check micro switch inside interlock to make sure it is making up (use meter)



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Hoistway Doors

Problem:

1. Will not mechanically lock

Solution:

1. Door must be in full closed position
2. Door should lock when the retiring cam is pulled back (elevator car is away from the landing), if not:
3. Adjust the interlock and the mechanical lock (opposite side of interlock, if required)
 1. *Do not change height of interlock, adjust chain length instead*



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Hoistway Doors

Problem:

1. Won't open easily by hand

2. Won't close easily by hand

Solution:

1. Tension latches may be too tight
 2. Guide shoes should have same amount of play on both sides
 3. Chains should be same length on both sides
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1. Wipe off any lubrication on chains
 2. Guide shoes should have same amount of play on both sides
 3. Chains should be same length on both sides
 4. Plug proof trigger may be hanging up on guide shoes



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Hoistway Doors

Problem:

1. Panels have become warped

Solution:

1. With door panel partially open, take guide shoes off side opposite interlock and slide panel out of rails.
2. Put side with shoes back into rail track, then clamp other end of panel to rail where it sticks out the furthest.
3. Pull on door to take out warp. Unclamp and check straightness. Repeat if necessary.



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Hoistway Doors

Problem:

1. No power operation

Solution:

1. Check SW #1 in Peelle controller is turned on.
2. Replace any blown fuses
3. Ensure that Reverse Phase Motor (RPR) relay is energized. If not, switch two of H1, H2, & H3 wires with each other until RPR is energized



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Hoistway Doors

Problem:

1. Door Motors rotate in the same direction as each other (Phase)

2. Will not close fully

Solution:

1. Switch the wires at the motor rotating incorrectly
 1. Red wires for high speed
 2. Black wires for low speed

2. Increase time on Pot #1 timer on PLC controller by 1 or 2 seconds so the door motors run 1-2 seconds after the doors close completely



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Hoistway Doors

Problem:

1. Door slams open (no slow speed at end of operation)

2. Door slams closed (no slow speed at end of operation)

Solution:

1. Check DOL terminal on PLC controller is not made up with that floor fully open. If they are made, check open micro switch to make sure it is set properly or not defective

2. Check DCL terminal on PLC controller is not made up with all doors fully closed. If they are made, check close micro switch to make sure it is set properly or not defective



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Hoistway Doors

Problem:

1. Doors don't open or close by power operation

Solution:

1. From Controller, use jumper to make sure O & C relays are making. If they are:
2. Check hall and car station buttons to make sure they are making
3. Make sure hall buttons are connected to interlock zone switches
4. Make sure interlock zone contacts are making up properly



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Hoistway Doors

Problem:

1. Only one door motor is working (door cocks or opens very slowly)

Solution:

1. Make sure interconnections between both motors at that floor are correct.
2. Check if motor is burnt out



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Hoistway Doors

Problem:

1. Automatic closing initiates too soon or is delayed more than desired

Solution:

1. Adjust closing time setting through PB #3 on controller (Refer to page 2 of manual #202)



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Hoistway Doors

Problem:

1. Travel in wrong direction and/or stuck between and open and close operation

Solution:

1. In Peelle controller, switch wires T2 & T3 for high speed and T4 & T5 for low speed



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Hoistway Doors

Problem:

1. Door opens in high speed but stalls/cocks in slow speed

Solution:

1. On Peelle controller, make sure DL energizes when you hit door open button. If DL energizes:
2. Clamp one side of upper panel to allow slack in chain. Press door open button, check to see if motor is spinning. Repeat for opposite side. Motor that doesn't spin needs to be replaced (slow speed windings burnt out)
3. If DL does NOT energize, check door limit of that floor for proper adjustment.
4. Make sure zone switch contacts make up properly



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Retiring Cam

Problem:

1. Retiring Cam does not lift

Solution:

1. Ensure the Retiring Cam is properly mounted according to INST or RC prints.
2. Clear any obstructions that may be blocking the Retiring Cam operation
3. Check V-belt has ½" of play
4. Check that the Y1, Y2, Y3 wires have electrical continuity from Peelle controller to Retiring Cam
5. Cam motor should lift cam face towards center of car, if not, reverse two of the Y1, Y2, & Y3 connections to the cam motor
6. Check if cam operates by connecting a jumper between terminals +24 & RC on Peelle controller. If cam operates, then check Retiring Cam Initiating Contact connections from the Elevator controller to the Peelle controller. If cam does not operate, check relay contacts 06 and C6 are made.



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Light Curtain

Problem:

1. If red LED (located on side of light curtain) is in normal "Off" condition (no light shown), but doors will not close, check:

Solution:

1. Check cables and 24v power supply
2. The signal output is disconnected from the door operator or controller
3. The door operator or controller is not responding to the signals. This can be checked by connecting the signal input to 24V, this should allow the doors to close. If doors do not close, the problem lies within the control system
4. Check for ZNS zone input to controller is on



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Light Curtain

Problem:

1. If red LED (located on side of light curtain) is “On” and doors will not close, check:

Solution:

1. The 24V power supply is not present on the unit (Tx)
2. The light curtain units are obstructed or dirty
3. The distance between the units is greater than the maximum specified.

Note: If none of the above resolve the problem, substitution of one or both of the units may be necessary



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Reversing Edge

Problem:

1. Reversing edge does not work

Solution:

1. Check for power on terminals 20 and 32 in top of car junction box. If no power, check GOFL is made. If GOFL is made, make sure reversing edge has continuity (use meter). If it does have continuity, check GRA relay energizes.



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