



- FOR FREIGHT ELEVATOR DOORS
(GOODS LIFT DOORS)

INCLUDES DOOR EQUIPMENT CLEANING AND DISINFECTING RECOMMENDATIONS



THE PEELLE COMPANY

FREIGHT DOORS | CAR GATES | CAR ENCLOSURES TECHNICAL SUPPORT 1-800-787-5020 ext 275

Guide No. 204-EN

MAINTENANCE GUIDE FOR FREIGHT ELEVATOR DOORS (GOODS LIFT DOORS)

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GENERAL

Include and follow these maintenance instructions in the elevator Maintenance Control Program (MCP). See Section Maintenance schedule, on page 10

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More frequent maintenance may be necessary where doors are subject to high wear or environmental effects of dust, lint, abrasives, moisture, grease, chemicals, abnormal temperatures or other conditions.

REPLACEMENT PARTS

USE GENUINE PEELLE PARTS - CONTACT OUR PARTS DEPARTMENT 1-905-846-4545 X 218

Locate the 6 or 7 digit Peelle job number, on your door controller, door guide rails and shoebars, so that Peelle may confirm replacement parts with the original job.



MAINTENANCE DEFINITION

A process of routine examination, lubrication, cleaning, adjustment, and replacement of parts. Maintenance serves the purpose of ensuring performance in accordance with the applicable Code requirements. Where any alteration, replacement of parts, repair or maintenance is made, it should not diminish the level of safety which existed prior to the change. Check with local enforcing authorities. To update equipment as near as possible to the latest code, refer to Peelle Modernization Manual 205 and Modernization Guide 312.

The maintenance plan for each and every unit should be adjusted for hours of operation, environmental conditions and age of equipment.

Maintenance for elevators is expected once a month and shall include the doors. Periodic Inspect should be done at least every 6 months per (see ASME A17.1/CSA B44 sec 8.11.2.1).

Maintenance should be performed by persons with elevator and elevator door training. Doors over 3000mm / 10ft. wide may require two or more elevator maintenance persons.

SAFE OPERATING PROCEDURES (SOP)



WARNINGS

- ➤ Ensure all elevator safety protocol is followed before accessing the hoistway
- ➤ Ensure personal protective equipment is worn
- ➤ This instruction is for authorized service personnel only
- ➤ The doors should be manually unlocked and opened only for maintenance and emergency situations



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ACCESSING DOORS FROM THE LANDING

FOR DOORS WHERE ACCESS OPERATION IS NOT PROVIDED

STANDARD DOORS WITH SINGLE LOCK

OPEN DOORS

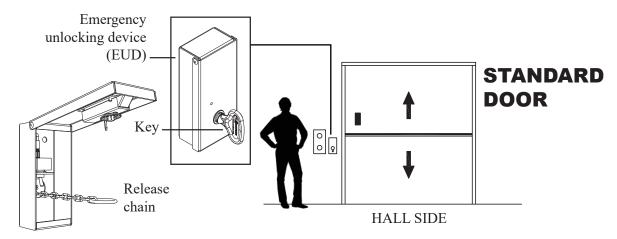
- 1) Open unlocking device using key
- 2) Pull release chain to unlock door
- 3) Hold release chain and push downward on lower panel (for slide-up doors push upward)
- 4) Once door is open approx 3" [75mm] release chain and proceed to open doors

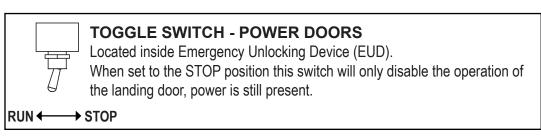


BEFORE LEAVING HOISTWAY, CLOSE THE DOORS SLIGHTLY, THIS WILL ALLOW YOU TO CLOSE TO DOORS EASILY WHEN SERVICE IS COMPLETE.

CLOSE DOORS

- 1) Push doors close
- 2) If provided, set the unlocking device switch to the "RUN" position
- 3) Close the unlocking device cover







LARGE DOORS WITH TWO LOCKS



ENSURE TWO SERVICE PERSONNEL ARE AVAILABLE, LARGE DOORS WILL HAVE LOCKS ON BOTH SIDES.

OPEN DOORS

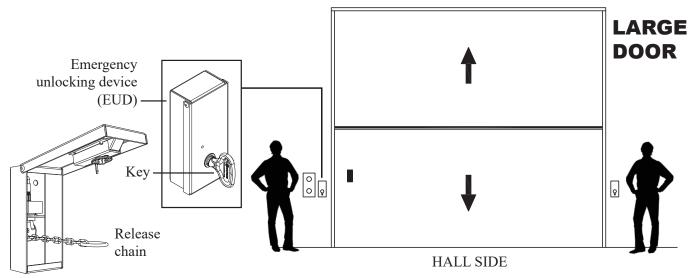
- 1) Move car between landings, car can not be in a landing zone
- 2) Open unlocking devices using key
- 3) Set the unlocking device toggle switch to the "ON" position
- 4) Pull both release chains to unlock door
- 5) Hold release chains and press the door open button
- 6) Once door is fully open set unlocking device toggle switch to the "STOP" position.
 - ➤ This will disable landing door operation only. Power to the landing door is still present.



CAR CAN NOT BE AT ANOTHER FLOOR ZONE (MULTIZONE) FOR OPERATION. MAKE SURE CAR IS AWAY FROM ANY LANDING.

CLOSE DOORS

- 1) Reset the unlocking device toggle switch to the "RUN" position
- 2) Pull both release chains to unlock door
- 3) Hold release chains and press the door close button
- 4) Once doors are fully closed, close the unlocking device covers





TOGGLE SWITCH - INTERLOCK SIDE ONLY

Located inside Emergency Unlocking Device (EUD).

When set to the STOP position this switch will only disable

When set to the STOP position this switch will only disable the operation of the landing door, power is still present.

 $RUN \longleftrightarrow STOP$



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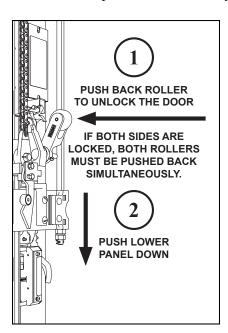
OPENING THE DOOR FROM THE CAR TOP



ENSURE THAT TWO SERVICE PERSONNEL ARE AVAILABLE IF THE DOOR HAS LOCKS ON BOTH SIDES OF THE OPENING.

Stop the car in a position that allows service personnel to reach the door lock/s (roller) and also reach the top of the lower door panel. The locks are located on the sides of the opening and at approximately the center of the opening height.

- 1) Press and hold the roller attached to the door lock towards the hoistway wall.
- 2) Press down on the lower door panel. Once the door opens approx. 2", you can release the roller and proceed to manually open the door. (For slide up doors push the upper panel up).





OPENING THE DOOR FROM THE WITHIN PIT

DOORS WITH SINGLE SIDE LOCK



PRIOR TO ENTERING THE PIT, ENSURE THAT A PIT LADDER IS PRESENT, AND THAT YOU CAN REACH THE DOOR LOCK (ROLLER) WHILE ON THE PIT LADDER.

- 1) To open the door, climb the pit ladder, press and hold the roller attached to the door lock towards the hoistway wall.
- 2) Press down on the lower door panel. Once the door opens approx. 2", you can release the roller, and proceed to manually open the door. (For slide up doors push the upper panel up).

WIDE DOORS WITH LOCKS EACH SIDE (DOUBLE LOCKS)



ENSURE THAT TWO SERVICE PERSONNEL ARE AVAILABLE IF THE DOOR HAS LOCKS ON BOTH SIDES OF THE OPENING. ONE SERVICE PERSON SHALL REMAIN ON THE LANDING SIDE OF THE OPENING AT ALL TIMES IF ANY SERVICE PERSONNEL ARE ENTERING THE PIT.



PRIOR TO ENTERING THE PIT, ENSURE THAT A PIT LADDER IS PRESENT, AND THAT YOU CAN REACH THE DOOR LOCK (ROLLER) WHILE ON THE PIT LADDER.

- 1) Mechanic in the shaft will climb the pit ladder
- 2) Press and hold the roller towards the hoistway wall
- 3) Mechanic at the landing (hall side) will press down on the lower door panel (or lift up for slide up doors)
- 4) Once the door opens approx. 2", You can release the roller
- 5) Repeat these steps to unlock the opposite side of the door
- 6) Mechanic at the landing will proceed to manually open the door



ZONING SWITCH INSIDE THE UNLOCKING DEVICE (WHERE FURNISHED) WILL NEED TO BE SET TO "RUN" ONCE SERVICE IS COMPLETED AT THE DOOR BEING OPENED.



MAINTENANCE SCHEDULE

EVERY 3 MONTHS Inspect and repair or replace as needed						
 REOPENING DEVICES (SEC 1) INTERLOCK & ELECTRIC CONTACTS (SEC 2) PULL STRAPS (WHERE PROVIDED) (SEC 3) 	Date □ □	Date □ □	Date □ □	Date □ □	Date □ □	Date □ □
EVERY 6 MONTHS Inspect and repair or replace as needed						
 CHAIN INSPECTION & MAINTENANCE (SEC 4) GUIDE SHOES (SEC 5) GUIDE RAILS (SEC 6) RETIRING CAM (SEC 7) RUBBER BUMPERS (SEC 8) RESILIENT ASTRAGAL (CUSHION STRIP) (SEC 9) 		Date	Date	Date	Date	
EVERY 12 MONTHS Inspect and repair or replace as needed						
10. OPERATORS / MOTORS (SEC 10) 11. VISION PANELS (SEC 11) 12. FIRE LINTEL (PASS-TYPE DOORS) (SEC 12) 13. SIDE TENSION LATCHES (SEC 13) 14. SILL STOPS (SEC 14) 15. SILL CLIPS (BI-PARTING DOORS) (WHERE PROVIDED) (SI 16. COUNTERWEIGHT(S) (SEC 16) 17. LIMITS / SEQUENCE OPERATION (SEC 17)	EC 15)	Date	Date			
18. PANELS (SEC 18) 19. ENTRANCE FRAME SILLS (SEC 19) 20. CAR ENCLOSURES (SEC 20) 21. INTERLOCK CIRCUIT (SEC 21) 22. CAR DOOR (GATE) CONTACT (SEC 22) 23. CONTROLLERS (SEC 23) 24. PUSHBUTTONS (LANDING DOOR) (SEC 24) 25. SAFETY OPERATION LABELS (SEC 25)		Date	Date			



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1. REOPENING DEVICES

1.1. LIGHT CURTAIN

INSPECTION

- ➤ Damage or malfunctioning light curtain
- ➤ Dirt and debris on lenses

MAINTENANCE

- ➤ Replace reopening device if damaged or if not fully operative!
- ➤ The system will be maintained in optimum working condition if the plastic lens filters on the leading edge of the units are periodically cleaned. Extreme build-up of dirt and dust can cause beam obstruction and subsequent false triggering.

1.2. REVERSING EDGE

INSPECTION

- ➤ Reversing action to initiate by physical contact at all points along the edge.
- ➤ As a minimum, compress edge 25mm / 1 in. at points 130mm / 5 in. from each side of the car door (gate) opening, or from the car door (gate) jamb post, do this when car door (gate) is closing, but not near its fully closed position.
- ➤ Cable should not hang in the opening when the car door (gate) is open

MAINTENANCE

- ➤ Replace reopening device if damaged or if not fully operative
- ➤ Replace cable if frayed or damaged

1.3. SENSOR BEAM / PHOTO EYE (1994-2001)

Prior to 2002, infrared, non-contact initiation of reversal, Sensor Beams reopening devices (refer to 4696 Protector Light Curtain Upgrade Kit) were provided in addition to reversing edges or instead of reversing edges. If no reversing edge is present, an auxiliary controller is necessary. A complete car door (gate) replacement may be necessary or desired. If car door (gate) operates only at slow speed, check to make sure Sensor Beams are operational.

INSPECTION

➤ Proper operation, by holding an object 600mm / 24 in. above the car platform, first at 130mm / 5 in. from one side of the opening and then from the other; close car door (gate) and check the reversing action.

2. INTERLOCK & ELECTRIC CONTACTS



TURN POWER OFF BEFORE SERVICING

DOOR INTERLOCKS ARE EXTREMELY IMPORTANT, IF DOOR INTERLOCK IS NOT WORKING IN SAFE MANNER TAKE ELEVATOR OUT OF SERVICE IMMEDIATELY.

INSPECTION

➤ Roller Arm action, spring and gravity return, lock position



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- ➤ Missing or incorrect setting of Keeper Hook
- ➤ Worn or missing springs
- ➤ For each elevator make sure that in order for the car to operate the doors must be closed and locked at every opening

MAINTENANCE

- ➤ Replace keeper hook and return spring every time the shoes are replaced or when needed.
- ➤ Clean all contacts, using alcohol swabs, DO NOT USE SANDPAPER
- ➤ Lubricate pivot points with #10 oil or grease if grease fitting is provided.

2.1. OVERVIEW OF INTERLOCK SETTINGS

KEEPER HOOK, UPPER PANEL HOOK

- ➤ The keeper hook prevents door panels from being opened when the interlock roller is extended (locked).
- ➤ Set the interlock ratchet 8mm [5/16in] below the lower keeper hook with the doors closed.



DO NOT RE-ADJUST THE VERTICAL POSITION OF THE INTERLOCK PLATE

- ➤ Ensure the keeper hook has at least 8mm [5/16in] locking engagement with the top of the ratchet. *See (Figure 6) on page 42*. Ensure keeper hook clears the ratchet teeth while opening the door. Use shims to space the hook in or out to obtain clearance if necessary.
- ➤ Attach/adjust upper panel keeper hook to side-tension-latch on interlock side as shown in See (Figure 6) on page 42

DOOR CLOSE CAM AND KICK-OUT ARM

STEP 1

See (Figure 6) on page 42 step 1

- ➤ Set the door closed cam to open the DC contact when the door panels are more than 20mm [3/4 in] apart.
- ➤ When the keeper hook is in the "first" notch, the DC contact should be slightly open.
- ➤ Check that the contact is still made when the door is pushed toward the hoistway shaft from the room side approximately 3mm [1/8 in].

STEP 2

See (Figure 6) on page 42 step 2

- ➤ Set the keeper hook on top of the ratchet piece.
- Now set the cam position. The cam should have 2mm [1/16 in] horizontal free movement away from the hanger bar when the doors are closed.

STEP 3

See (Figure 6) on page 42 step 3

- ➤ Position the panels in the fully closed position.
- ➤ Ensure DC contact remains closed, white checking the door close cam and keeper hook settings and position.



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STEP 4

See (Figure 6) on page 42 step 4

➤ Adjust kick-out arm separately to positively open DC contact when the door panels move more than 20mm [3/4 in] apart, the DC contact should never make when the door keeper hook is in an unlocked position.

DOOR LOCK CONTACT

- ➤ Push in the roller fully by hand as if to unlock the door. The DI contact should open approx. 10mm [3/8 in]. Release the roller. The DI contact should close and the black plastic block should be 3mm [1/8 in] below the contact bar
- ➤ Reset the block to hold the dimension if necessary, *See (Figure 2) on page 40*. The 60mm [2-1/2 in] dimension in *See (Figure 1) on page 40* must be held. If the doors are less than 20mm [3/4 in] apart, DC contact will be closed. If DI is also closed, the elevator may run.

DOOR LOCK AND ZONE CONTACT FRO WIRELESS DOOR CONTROL

➤ For Peelle Wireless door controller installations, the zone contact switch assembly is located at the top of the door lock DI contact. The zone switch is a micro switch type of contact and is operated by the vertical movement of the contact shaft in the box. Set the normally open contact of this switch to close at the same time as the other normally closed DI contact opens. See (Figure 3) on page 40



FOR POWER DOORS, IF THE INTERLOCK CONTAINS A ZONE CONTACT ASSEMBLY, THE DI CONTACT IS THE ONLY NORMALLY CLOSED CONTACT AND IS TYPICALLY LOCATED AT THE END OF THE ZONE SWITCH ASSEMBLY. SEE (FIGURE 2) ON PAGE 40 & SEE (FIGURE 3) ON PAGE 40

ROLLER ARM

- ➤ Check roller arm adjustment for full 22mm [7/8in] locking arm throw by retiring cam action
- ➤ Make sure locking arm spring is in place and working.
- ➤ Ensure locking arm falls forward, easily and fully and rests on the mechanical stop. See (Figure 1) on page 40
- ➤ Stop block (located on the contact shaft, in the upper interlock box) should just touch the bottom fixed guide block, when the locking arm is fully dropped. See (Figure 2) on page 40.
- ➤ Contact shaft should drop enough to allow the locking arm to fall forwards fully and rest on the mechanical stop. Adjust the stop block and / or raise the upper interlock box to hold the factory 60mm [2-1/2 in] dimension.
- ➤ Stand on landing side and make sure the door panels cannot be shaken open when they are closed and locked (retiring cam held up or elevator away). Try again while you are pushing the lower panel toward the elevator (retiring cam held up or elevator away).

TAMPER RESISTANT PLUGGING DEVICE

See (Figure 4) on page 41 & See (Figure 5) on page 41



- ➤ The trigger portion of the device is actuated by the opening movement of the lower door panel, the trigger then pushes the rod into the DC contact (lower box).
- ➤ The rod movement keeps the DC contact open which prevents the DC contact from being closed until the lower panel is returned to the closed position.
- ➤ The rod should be set to lock the contact arm immediately after the contact arm moves to the full open position. The rod should hold "Door Closed" DC contact open as soon as the contact opens.

DOOR ZONE CONTACT ASSEMBLY SETTING (PLC DOOR CONTROLLER)

- ➤ Door zone 'Z' contacts, where provided, with PLC door controllers, are mounted in the door lock DI box and electrically connect the controller to the motors for the landing door where the elevator has stopped. The Z contacts are not part of the elevator safety circuit see See (Figure 2) on page 40.
- ➤ With the roller arm extended out, all zone contacts should be 6mm [1/4 in] open. See (Figure 1) on page 40 Reset all zone contact plastic blocks to this dimension if necessary.
- ➤ Push in the roller by hand to maximum travel and check that all zone contacts make simultaneously and the black plastic blocks allow 6mm [1/4 in] over-travel.
- ➤ Micro Switch: The additional switch is a micro switch type of contact and is operated by the vertical movement of the contact shaft in the box. Set the normally open contact of this switch to make at the same time as the other normally open zone contacts are made.

3. PULL STRAPS (WHERE PROVIDED)

INSPECTION

- ➤ Manually operated door panels require two pull straps. One on each side of panel.
- ➤ Power operated door provided with a pull strap should have strap held in a holder
- > Straps are not frayed or damaged
- ➤ Straps are free of knots or loops or any other added components
- ➤ Operation safety labels are in place
- ➤ If pull straps are to long cut and sear the edge of the straps, do not tie or loop.

MAINTENANCE

- ➤ Replace if damaged or missing
- ➤ Order safety operation labels

CRUSHING HAZARD! Do not reach through opening while doors are closing. USE PULL STRAP TO CLOSE DOORS CLEAR OPENING BEFORE CLOSING DOORS THE PEFILE GO.

4. CHAIN INSPECTION & MAINTENANCE

INSPECTION & MAINTENANCE CYCLE

At each maintenance cycle, the following items should be checked, the condition corrected, or the chain replaced as necessary.



NOTE: ELEVATOR ENVIRONMENTAL AND USAGE CONDITIONS VARY. IT MAY BE NECESSARY TO ADJUST THE MAINTENANCE CYCLE TO SUIT THE PARTICULAR APPLICATION.



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WARNING: CHAINS THAT HAVE BEEN DAMAGED UNDER EXCESSIVE LOADING DUE TO AN ACCIDENT, OR OTHERWISE, SHOULD BE COMPLETELY REPLACED BECAUSE THE CHAIN, AS WELL AS THE DAMAGED COMPONENT, MAY HAVE BEEN LOADED TO A DEGREE THAT WILL COMPROMISE THE SAFETY OF THE CHAIN.

INSPECTION ITEMS

- 1) Ensure the chain is free of dirt and debris.
 - ➤ For simple cleaning, de-greasing use WD-40® and a clean rag, spray the chain and wipe off excess.
 - ➤ Re-lubricate if necessary *See Section 4.5. Chain Lubrication, on page 19*Over Lubrication will prevent the traction sheave from functioning properly. Look for and remedy excessive oil on the chains and sheaves if you encounter any of these problems:
 - ➤ Oil is dripping from the chains.
 - ➤ The door or car door (gate) moves freely by hand but the operator/sheave slips and struggles to move the car door (gate).
 - ➤ Car door (gate) reversal distance is excessive. Upon initiation the car door (gate) should reverse in approximately 3 to 10 inches.
- 2) Ensure the chain can move freely around sheaves and sprockets. You should not hear any clicking or popping.
- 3) Inspect chain for rust and seized links.
 - ➤ If rust is present the chain needs to be replaced.
- 4) Check Chain Wear
 - ➤ Roller chains should be replaced promptly when worn. Chains worn on one side, elongated rivet holes and worn rivet heads require replacement of the entire chain. Never connect two pieces of new chain or splice a new section to a worn chain.
 - ➤ If there is noticeable wear on the outside surface of the chain roller link plates, the sheave may be misaligned. If there is noticeable wear on the inside surface of the chain roller link plates, a sprocket may be misaligned. Realign the sheaves and sprockets as necessary.
- 5) Check Chain Stretch
 - ➤ Door chain when new will measure 15" (381mm) for 24 links. Replace if 24 links are more than 15 3/16" (386mm)
 - ➤ Car door (gate) chain when new will measure 18" (457mm) for 36 links. Replace if 36 links are more than 18 1/4" (464mm)
- 6) Check for Failure
 - ➤ Inspect the chain for cracked, broken, or deformed parts. If any of these conditions are found, replace the entire chain.
- 7) Check Chain Studs, Chain Rods and Connecting Links
 - ➤ Check connection studs and rods for condition and wear. Any worn or missing



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- components (cotter pins, nuts, washers, links, tie-wraps, etc.) should be replaced immediately. Chain rod adjustment threads should be in good condition.
- ➤ Chain Connecting Link Tie-wrap: All chain connections should have a nylon tie-wrap around the master link. Add tie-wrap where not previously provided, worn, broken or missing.

8) Check Chain Twist

- ➤ Adjust the chain rod as needed to ensure chain drops straight from the sheave or sprocket to the chain rod.
- ➤ Aligning Sheaves and Sprockets: Sheaves should be parallel with chain direction and level or upright. Misalignment results in uneven loading across the width of the chain and may cause damage to sheaves and sprockets.
- ➤ Aligning Chain Rods: Chain rods should not allow the chain to twist. The chain should hang straight from the sprocket or sheave to the chain rod. For round section chain rods, if the chain rod tends to twist in the chain hanger, secure the top of the chain rod with an additional nut. For cross chains, look directly along the chain from one end to see the alignment of the sprocket or sheave at the other end. Repeat from the other side.
- 9) Check Drive Sheaves, Sprockets and Idlers
 - ➤ Check for interference between the drive and other parts of the equipment and correct it immediately. Check for and eliminate any buildup of debris or foreign material between the chain and sheaves or sprockets.

4.1. CHAIN SAFETY



IT IS POSSIBLE TO GREATLY REDUCE A CHAIN'S LIFE AND EVEN INDUCE FAILURE IF THE CHAIN IS ABUSED THROUGH IMPROPER INSTALLATION, OPERATION, OR MAINTENANCE PROCEDURES. IN CERTAIN APPLICATIONS, CHAIN FAILURE CAN LEAD TO PERSONAL INJURY OR PROPERTY DAMAGE.

WHEN INSTALLING OR CONNECTING / DISCONNECTING ROLLER CHAIN;

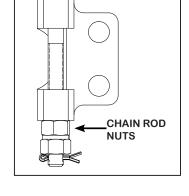
- ➤ Always lock out equipment power before removing or installing chains.
- ➤ Always wear safety glasses when working with chain.
- ➤ Wear protective clothing, gloves and safety shoes as appropriate.
- ➤ Support the doors and car door (gate) to prevent uncontrolled movement of chain and parts.
- ➤ Use of press-type chain breaker (Peelle Chain Pin Extractor Part #0608) is required to remove pins and links.
- ➤ Chains should only be shortened. Do not splice or extend chains.



DO NOT STRIKE / HIT CHAIN

The components of a chain are hardened parts. Striking these parts may cause metal chips to break off from the chain or the tools used resulting in personal injury. During all stages of chain disassembly and assembly, wear safety glasses to prevent metal parts or chips from entering your eyes and have personnel in the immediate area do likewise.





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SHUT OFF POWER PRIOR TO SERVICE

Serious injury may occur if attempting to install chain on equipment under power. Shut off power and secure and support doors and car doors (gates) before attempting installation.



ONLY USE PEELLE ROLLER CHAIN

Peelle chain has been designed specifically for the application of suspending and operating Peelle doors and car doors (gates).

4.2. CHAIN INSTALLATION

Always refer back to your specific product installation guide for specific chain arrangement.

WHEN INSTALLING A NEW CHAIN

The manufacturer's lubricant should *not* be removed.

CONDITION OF COMPONENTS

Shafts, sheaves, sprockets, bearings, and any other relevant component mounting should be examined. Any evidence of damage or wear should be repaired prior to chain installation.

CHAIN SHOULD ALWAYS BE REPLACED IN PAIRS OR SETS

Never replace only one chain as this result in difficulties adjusting length and panel alignment.

MEASURE AND CUT THE CHAIN (PIN REMOVAL)

- ➤ Measure and mark chain to desired length.
- ➤ Grind pin heads off so pin ends are flush with the link plate.
- ➤ Drive pins out of link plate using a Peelle Chain Pin Extractor Part #0608.

INSTALLING THE CONNECTING LINK

- ➤ Insert the "Master Link," the portion of the link that contains the pins, into the chain and chain stud.
- ➤ Slide cover plate onto master link pins.
- ➤ Install the spring clip and secure with a nylon tie-wrap, around the complete connecting link, tighten and snip the end.

CHAIN END CONNECTION

- ➤ Chain studs and tension latches are provided where appropriate for end-of-chain connection. Chain studs that go into the counterweight assemblies and tension latches are not adjustable. Follow the product installation instructions for chain studs and tension latches.
- ➤ Chain rods are connected to the door or car door (gate) panel hangers and are provided with adjustment. Ensure that the appropriate nuts and washers are used according to the product installation instructions. Make sure that a new cotter pin is used at the bottom of any chain rod to prevent the nut from coming out. Replace any damaged or missing cotter pins.

CHAIN ADJUSTMENT

➤ It should be expected that new chains will elongate slightly more during the first few days of service than in the months of subsequent operation. Some adjusted should be expected after the initial installation. Because of this, it is best to set the chain length so that the



chain stud has room for adjustment to shorten the chain (about 0.5" or 13mm). Panels should hang level and even to prevent binding in the guides. When closed and opened the stops on each side should engage together.

4.3. DOOR CHAINS & DOOR PANELS ADJUSTMENT

After the chains are connected, the door panels must be properly adjusted. Most of the adjustment, if necessary, is accomplished by moving the nuts up on the chain as rod. Some links of chain may have to be removed to achieve desired adjustment.

TO POSITION PANELS FOR FULL OPENING

With the lower door panel resting evenly on both stops and the trucking sill level from side to side and at the same height as the door frame sill low point. The upper panel should be fully open (including the astragal cushion strip). Adjust chains. Remove some chain links if necessary. No portion of the astragal should project below the head-of-frame when the doors are fully open. Do not judge chain adjustment solely by the door frame sill or head-of-frame. They might not be level (do not use a level on the astragal of upper panel). Stand on lower panel; the upper panel should be the same distance from the lower panel, measured at both ends of the opening width.

TO ELIMINATE GAP BETWEEN PANELS IN CLOSED POSITION

With the doors fully closed and with the side tension latch hooks loosened and positioned temporarily out of the way, adjust the nuts on the chain rods to eliminate the panel gap across the opening. Move nuts up on the rod of the side of the door that tends to stay apart. This provides a closed meeting between panels in the closed position. Doors properly sized for an opening must overlap the head-of-frame and the sill by 50mm [2 in].

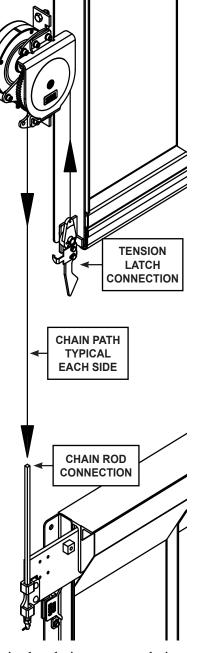
TO LOWER THE CENTER POINT (DAY LIGHT) OF THE PANELS

Keep the door panels in the same closed position (with no opening at the sill or at the head-of-frame). Move nuts on both rods downward the same distance each side. Make sure the nuts are almost touching the cotter pin near the bottom. This

allows for the easy future chain stretch adjustment. If there is slack in the chain, remove chain links to remove slack.

TO REMOVE CHAIN LINKS

Reset the lower panel on the sill stops. Use a chain fall to lift the upper panel to fully open. Make sure the nuts are almost touching the cotter pins near bottom of each chain rod. Clamp





the rods with vice grips positioned on top of the rod holders. Disconnect the chains at the latches. Remove links from both chains with a chain breaker.

RECONNECT THE CHAINS

Carefully remove the chain fall from the upper panel and remove the temporary clamps (vise grips) from the chain rods.

4.4. CAR DOOR (GATE) CHAINS & PANEL ADJUSTMENT

- 1) The CAR DOOR (GATE) must move smoothly in the guide rails during its entire travel. Adjust the shoes (inward-outward) only if the car door (gate) panel is not square in the guide rails or if there is no side-to-side play. With the car door (gate) raised 75mm [3"] off the platform, check to see if car door (gate) panel hangs level. Adjust the chains to level the car door (gate) panel. Finally adjust the chain studs with just slightly more tension (less slack) on the long chain to allow for greater long chain stretch.
- 2) The car door (gate) panel should balance the counterweight at half-travel position. With the car door (gate) at half-travel open, manually push it further open and from the same position push it closed. Weight differential can usually be detected by this method. Add or remove the counterweight flats to achieve balance of the counterweight and the car door (gate) panel.
- 3) The car door (gate) panel must be exactly balanced (at half-travel position) by the counterweight to prevent the car door (gate) drifting open when the elevator car is in motion or from drifting closed at an inappropriate time.

4.5. CHAIN LUBRICATION

Peelle chains require lubrication in order to resist wear of the pin-bushing joint. Lubricate contact surfaces to prevent rust and corrosion. Petroleum oil without additives is recommended.

The following table provides a guideline for selecting the proper lubricant viscosity at various ambient temperatures:

RECOMMENDED LUBRICANTS		
SAE ENGINE	OIL SAE GEAR O	IL ISO VG
20	80W	68
30	85W	100
40	90	150
	LUBRICANTS SAE ENGINE 20 30	LUBRICANTS SAE ENGINE OIL SAE GEAR O 20 80W 30 85W



DO NOT USE GREASE

APPLYING LUBRICANT

- 1) Create slack in chain or remove prior to lubrication. This allows the lubrication to penetrate into the critical pin/busing area
- 2) Apply lubricant to the upper edges of the link plates preferably by dripping onto the chain somewhere over the top of a sheave or sprocket.



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- 3) Lubrication flows to the pin/bushing area between the link plates.
- 4) Lubricate directly to each row of chain link plates.
- 5) Do not lubricate the rollers.
- 6) Avoid any over lubrication in order to ensure proper chain/sheave traction.

4.6. DOOR CHAIN SUSPENSION OVERVIEW

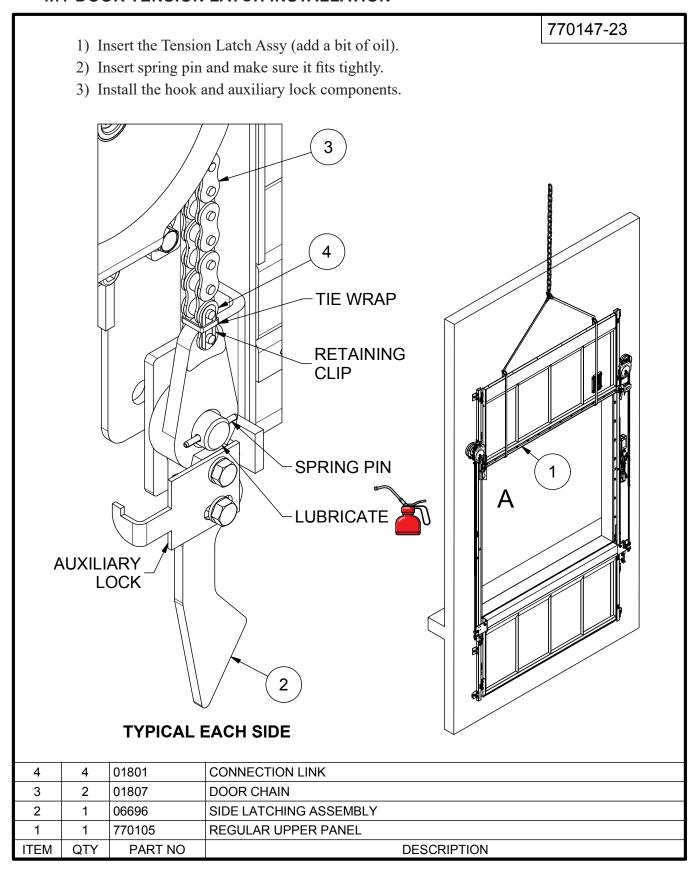
- ➤ Feed chain from outside the operator sheave through to the tension latch.
- ➤ Connect the chain link with the spring clip legs facing down.
- ➤ Use tie-wraps to securely hold the chain link assembly together.
- ➤ Double check connections and remove hoisting straps.
- ➤ Two chains required for Biparting doors



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4.7. DOOR TENSION LATCH INSTALLATION





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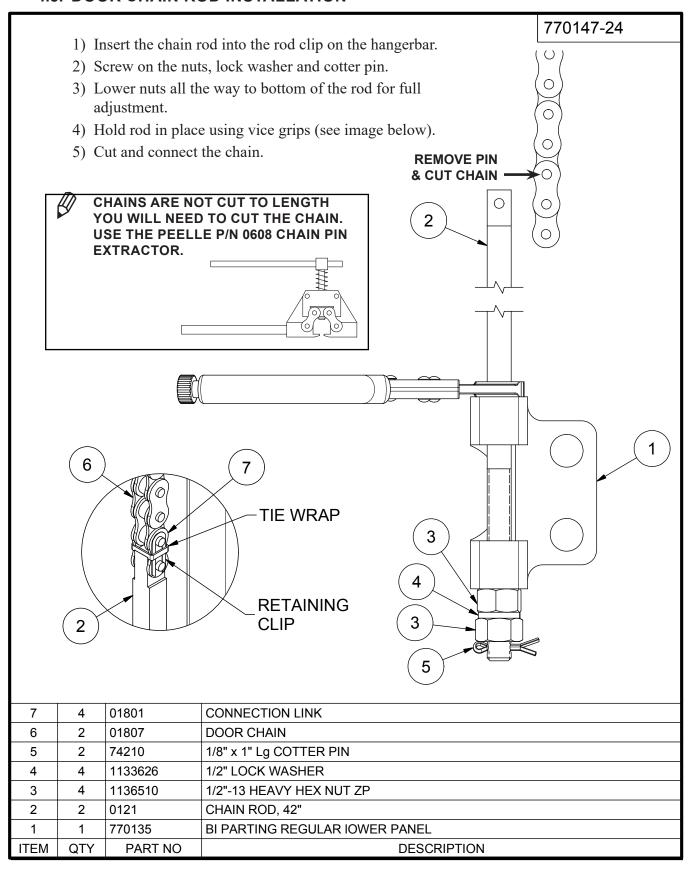
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4.8. DOOR CHAIN ROD INSTALLATION





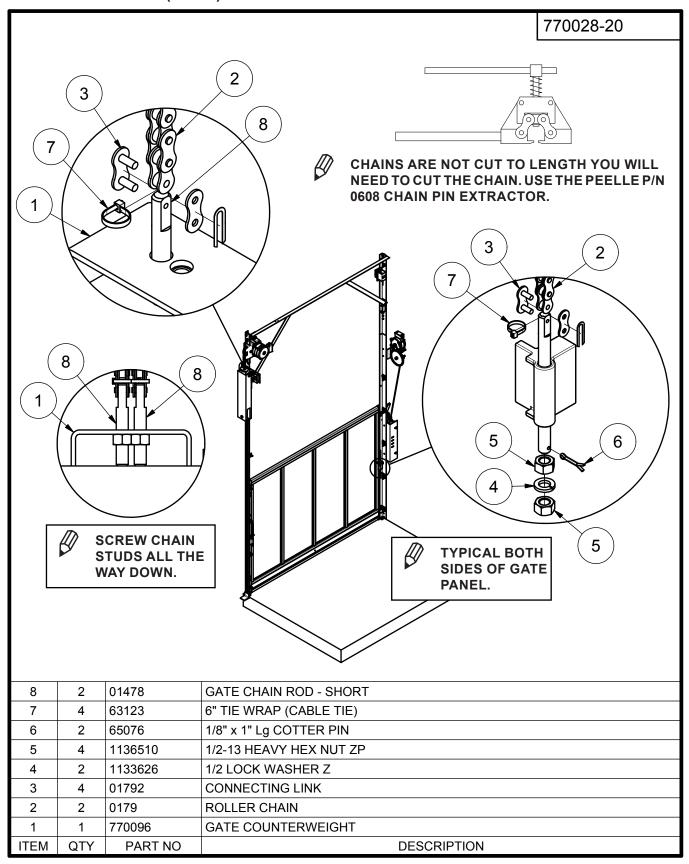
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4.9. CAR DOOR (GATE) CHAIN INSTALLATION



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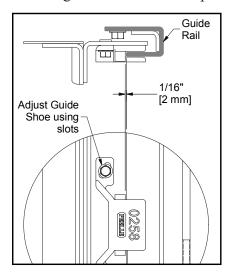
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5. GUIDE SHOES

INSPECTION

- ➤ Missing guide shoes (4 per panel)
- ➤ Shoes are not worn enough to permit the door panels to come out of the door rails at any position of their travel
- ➤ Excessive side to side play, panels should fit within the guild rails with 3mm [1/8 in] overall side to side play (left-right) both at the top shoes and at the bottom shoes of each panel
- ➤ Push panel all the way to the left, then measure side-play as panel is pushed all the way to the right. Shoes must be replaced if overall side-play is 8mm [5/16 in] or more



Side to Side Play

- ➤ For older shoes without angled slots, pry to adjust outward or hammer to adjust inward.
- ➤ Check for loose guide shoes. Thread locker on bolts is helpful. Secure with serrated washer-head bolts or lock washers and flat washers.



AFTER REMOVING RIVETED SHOES, DO NOT TAP AND BOLT THE SHOE BOLTS DIRECTLY INTO SHOE BAR WITHOUT ADDING PEELLE #065812 THREADED GROMMETS.

INSTALLING SHOE #065182 THREADED GROMMETS



OLDER DOORS MAY HAVE SHOES FASTENED WITH RIVETS INSTEAD OF BOLTS

- ➤ Take panel out of rails
- ➤ Clamp each shoe against shoe bar
- > Drill pilot hole centered in shoe slots
- ➤ Remove shoe
- ➤ Carefully drill 16mm [5/8 in] holes
- ➤ Hammer in grommet from side opposite shoe
- ➤ Tack-weld grommet to shoe bar
- ➤ Attach shoe with 5/16 in. x ³/₄ in. (8mm x 20mm) serrated washerhead bolt and thread locker.





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6. GUIDE RAILS

INSPECTION

- ➤ Door guide rails should be kept free of grease and dirt
- ➤ Rails with an accumulation of grease, oil and dirt should be scrubbed clean with a degreaser and putty knife
- ➤ Clean with de-greaser
- ➤ Inspect rails for damage / bent members
- ➤ Ensure rail bolts are tight

MAINTENANCE

- ➤ Lubricate rails lightly with elevator hydraulic oil, automotive #10 oil or lubricate rails with a dry lubricant in atmospheres containing dust. Avoid using grease and silicon based lubricants.
- ➤ Do not let lubricant get on chains or inside contacts.
- ➤ Replace rails if damaged or broken
- ➤ If counterweight guide track on car door (gate) rail is damaged, replace complete car door (gate) rail assembly as counterweight guide track is permanently welded to car door (gate) rail.

7. RETIRING CAM

INSPECTION

- ➤ Cam remains powered only while the elevator is running. With manual doors, the retiring cam is usually powered from the elevator controller instead of from the door controller
- ➤ Ensure the cam may be powered to lift only after the landing doors and car door (gate) are closed and an elevator run signal has been registered
- ➤ Pivot point wear
- ➤ Retiring cam dropping action
- ➤ V-belt for wear

MAINTENANCE

- ➤ Adjust V-belt for 13mm [1/2 in] deflection
- ➤ Motor crank must lift towards center of car
- ➤ Maximum lift of crank should be 3 or 9 o'clock (90 degrees from 6 o'clock position).
- ➤ Lubricate pivot points with #10 Oil
- ➤ Clean controller contacts for retiring cam relay
- ➤ For retiring cam adjustment See (7.1) on page 26

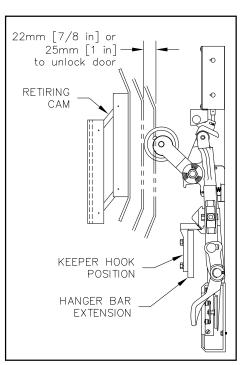


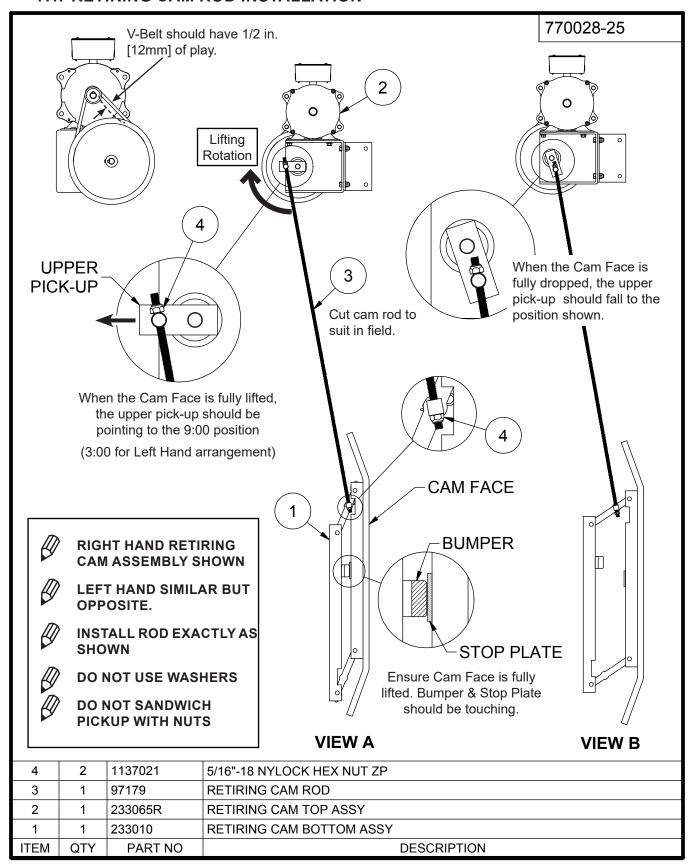
Figure 6 - Roller Arm Setting



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7.1. RETIRING CAM ROD INSTALLATION





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8. RUBBER BUMPERS

Bottom panel bumpers reduce noise while closing and top rail bumpers reduce noise while opening. The bottom bumper heights can be adjusted, if necessary, by adding flat washers as spacers. There is also a bumper to stop counterweight over-travel.

INSPECTION

➤ Worn or missing bumpers

MAINTENANCE

> Replace bumpers

9. RESILIENT ASTRAGAL (CUSHION STRIP)

INSPECTION

- ➤ Missing from upper panel
- ➤ Resilient astragal fills the gap between panels when closed.
- ➤ Wear and tear

MAINTENANCE

➤ Replace if any of the above criteria are present.

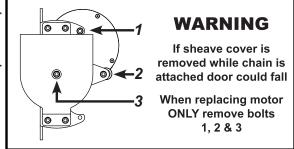
10. OPERATORS / MOTORS

INSPECTION

- ➤ Inspect pinions and gears for worn components
- ➤ Ensure both landing door motors are working and rotating in opposite directions
- ➤ Listen for excessive noise, squeaking or grinding sounds
- ➤ If sheave does not turn or turns erratically, check for a worn motor pinion (part of motor) or motor burnout.

MAINTENANCE

- ➤ Lubrication
 - ➤ Pinion and gears require a small amount of grease, do not apply grease to the sheave.
 - ➤ Motor bearings are permanently lubricated. No lubrication required.
 - ➤ Sheave bearings are permanently lubricated. No lubrication required.
 - ➤ Manual sheave bearings are permanently lubricated. No lubrication required.



- ➤ Lubrication for sheaves that are fitted with a grease fitting.
 - ➤ Previous models require lubrication by means of a grease fitting.
 - ➤ Grease the fitting moderately at six-month for heavy use or one year for normal use.
 - ➤ Do not over grease.



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- ➤ Replace the motor if burned out.
 - ➤ Door Operators allow motor replacement without removing the sheave or chain
 - ➤ On narrow-return Peelle #0587 door operators, loosen 3mm [1/8 in] but do not remove the bearing shaft bolt in order to remove motor for replacement

11. VISION PANELS

INSPECTION

- ➤ Missing from panel
- ➤ Broken glass
- ➤ Missing grill

MAINTENANCE

➤ Replace if any of the above criteria are present.

12. FIRE LINTEL (PASS-TYPE DOORS)

Fire Lintels are part of the upper panels when there are pass type conditions. They fill the gap between the upper panel and hoistway wall. They pivot when the lower panel above comes down in front of the upper panel.

INSPECTION

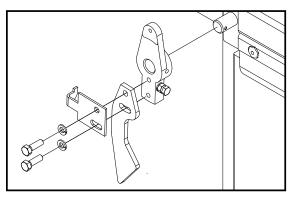
- ➤ Ensure fire lintel is present
- ➤ Check for damage
- ➤ Pivots freely when activated by the panel above
- ➤ Pivots back into the horizontal position when not activated
- ➤ Ensure lintel does not catch on the activating panel

MAINTENANCE

- ➤ Replace if damaged or missing
- ➤ Lubricate pivot points #10 oil

13. SIDE TENSION LATCHES

Tension latches are located on both sides of the upper panel.



Tension latch assembly

Vision Panel Grill

INSPECTION

- ➤ Missing from upper panel
- ➤ Occasionally lubricate the pivots
- ➤ Check stop bolt position
 - ➤ The pivot must hang vertically. To set the stop bolt, the long tension hook must be loosened and positioned temporarily out of the way. Set stop bolt. Then, reposition and adjust the tension hooks to keep door panels tightly closed.
 - ➤ If this cannot be accomplished, replace the door guide shoes.

MAINTENANCE

- ➤ Replace if missing or damaged
- ➤ Adjust tension to hold panels together but not too tight that panels cant be pushed open manually.

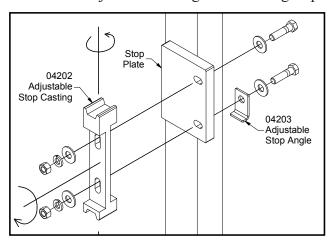
14. SILL STOPS

INSPECTION

- ➤ Missing or damaged, missing hardware
- ➤ Loose castings
- ➤ Lower panel is not level with landing sill when door is open

MAINTENANCE

- ➤ Clean debris from the door sill stops
- ➤ Replace missing hardware and tighten if hardware is loose.
- ➤ When resting on the sill stops, on both sides, the lower door panel trucking sill must be level with or be slightly lower than the building sill
- ➤ If chains are properly adjusted and one side lands first, lower that sill stop or raise the opposite side sill stops to make trucking sill level.
- ➤ There are 8 adjustable positions on each sill stop; there are 4 major adjustments and there are 4 minor adjustments using the small angle spacer provided.



Stop Casting Assembly



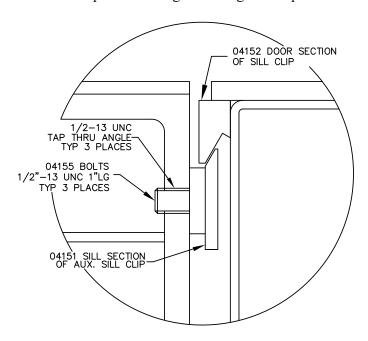
15. SILL CLIPS (BI-PARTING DOORS) (WHERE PROVIDED)

INSPECTION

- ➤ If sill clips were originally provided ensure they are still present
- ➤ Check sill clip engagement
- ➤ Check sill clips are tight and secure

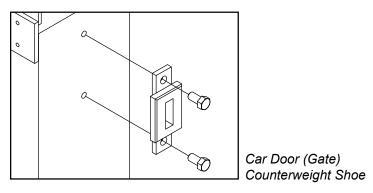
MAINTENANCE

➤ Fix or replace missing or damaged components



16. COUNTERWEIGHT(S)

CAR DOOR (GATE) & SLIDE UP DOORS



INSPECTION

- ➤ A floppy counterweight is not desirable
- ➤ Check for broken or missing counterweight shoes



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MAINTENANCE

- ➤ Replace or refasten counterweight guide shoes if necessary. If there are no holes in car door (gate) rail to reach bolt head, drill hole in rail at a location above the car top, file smooth then tighten shoe bolts. Use Peelle 02325 bolts with built in thread locker.
- ➤ If counterweight is bottomed out and if the chain adjustment at the chain connector studs on the car door (gate) panel is used up, the two car door (gate) chains must be shortened.

17. LIMITS / SEQUENCE OPERATION

This section covers the adjustments and settings of Proximity Sensors and Geared Limits



LIMITS ARE NOT ATTACHED TO MOTORS

INSPECTION

- ➤ Door motor action is improper
- ➤ Too much slow down, or not enough
- ➤ Slamming
- ➤ Insufficient door travel

MAINTENANCE

- ➤ Adjust limit cams. Usually the initial installation settings are satisfactory. Car door (gate) limit should provide 300mm/12 in of slow speed (at the end of car door (gate) panel travel). Door limits should provide 200mm/8 in of slow speed (each panel) (at the end of travel). See Section 17.1. BIPARTING DOORS SEQUENCE OPERATION, on page 32 & See Section 17.6. Car door (gate) GEARED LIMIT SETTINGS, on page 36
- ➤ For Door/Car door (gate) Limits provided prior to 2002; tighten cam screws carefully but firmly into plastic gear. If screws strip the tapped holes in the plastic gear: remove cam assemblies, pull the chain away from the sprocket, rotate gear and refasten cams. May use thread locker on screws. Put thread locker on nuts holding the limit micro switches.

SEQUENCE OPERATION

Sequence Close Operation is required when the landing doors / car door (gate) are closed by the activation of a momentary pressure switch / pushbutton (optional) or a timing device (Automatic Time Closing System optional). Sequence Operation is supplied on all new power operated doors. Sequence Operation (opening and closing) is required on Freight Elevators permitted to carry passengers (ASME A17.1/CSA B44 sec 2.16.4)

CLOSING:

The car door (gate) must close at least two-thirds of its travel before the adjacent hoistway landing door can start to close.

OPENING:

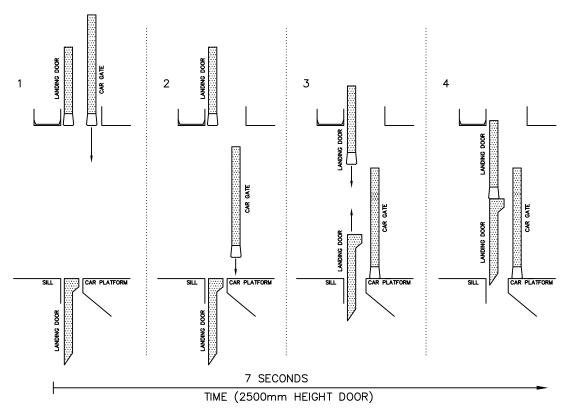
The hoistway landing door must open at least two-thirds of it travel before the adjacent car door (gate) can start to open.



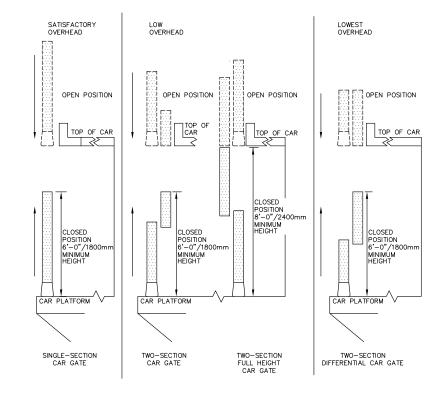
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17.1. BIPARTING DOORS - SEQUENCE OPERATION



17.2. SLIDE-UP DOORS - SEQUENCE OPERATION

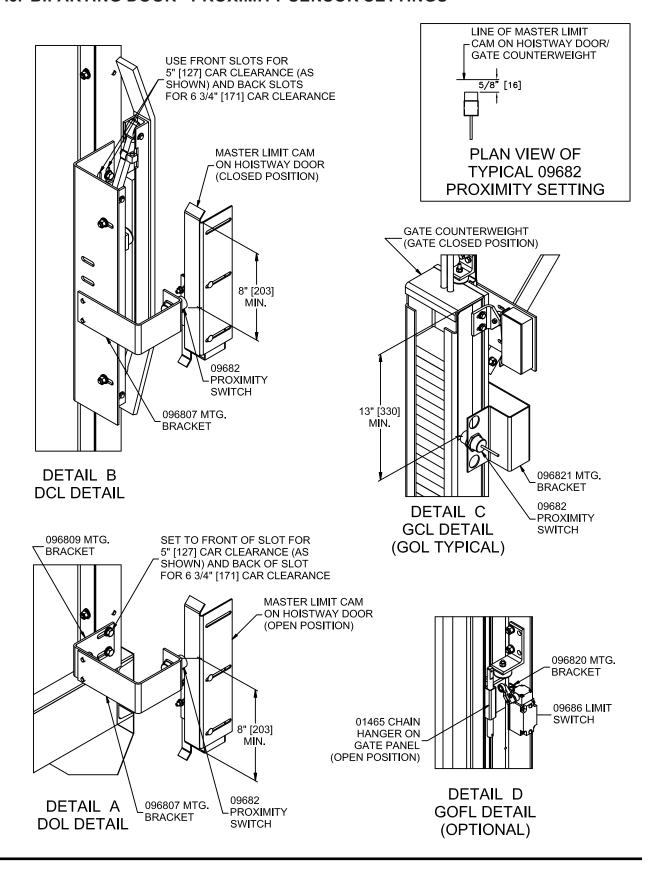




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17.3. BIPARTING DOOR - PROXIMITY SENSOR SETTINGS





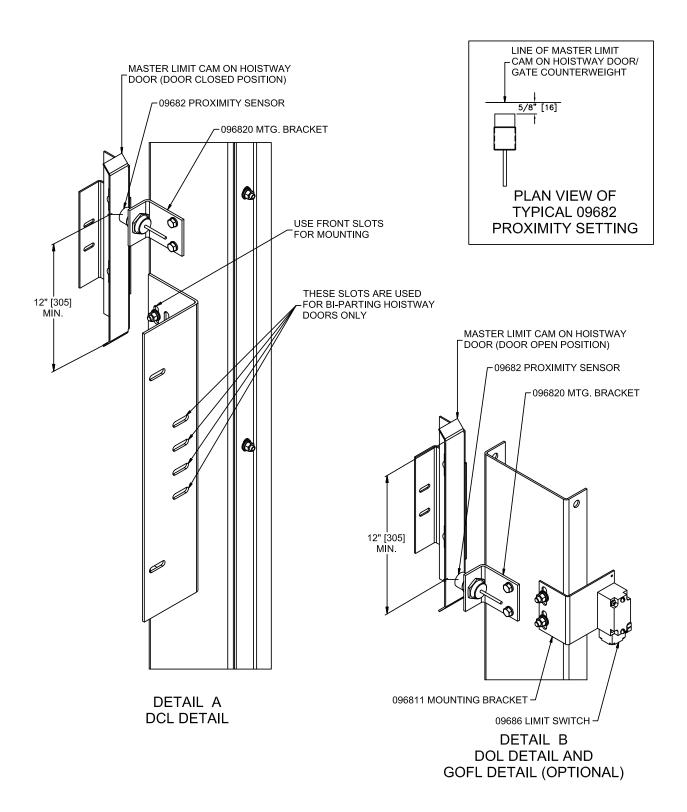
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17.4. SLIDE-UP DOOR - PROXIMITY SENSOR SETTINGS

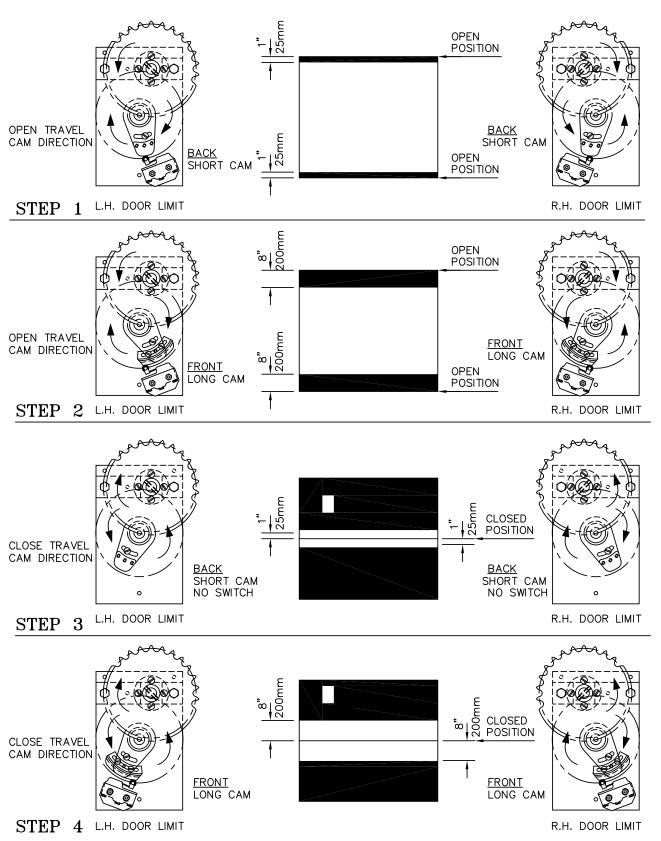




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17.5. BIPARTING DOOR - GEARED LIMIT SETTINGS





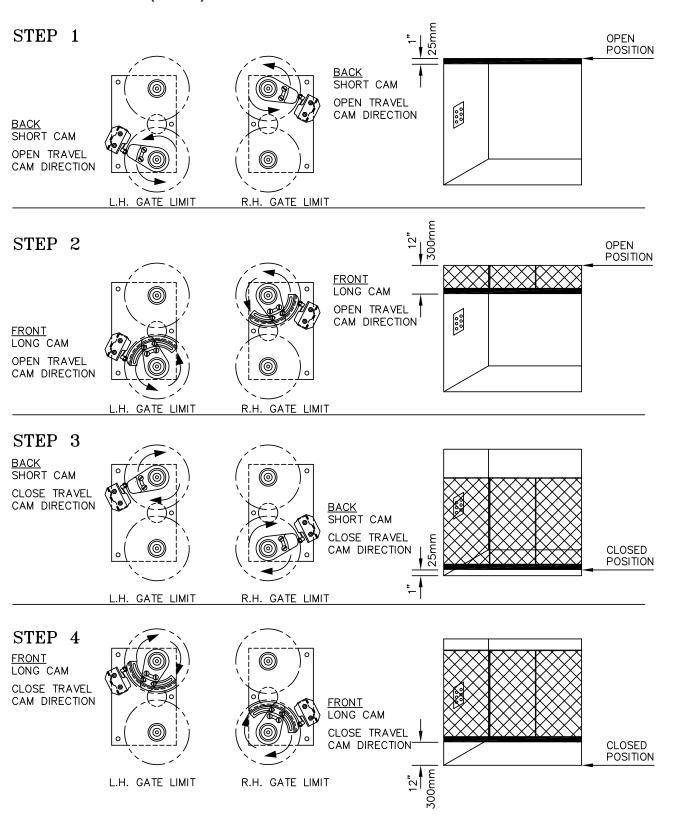
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17.6. CAR DOOR (GATE) - GEARED LIMIT SETTINGS





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18. PANELS

18.1. LANDING DOOR PANELS

INSPECTION

- ➤ Broken, bent or sprung members
- > Structural defects
- Missing or worn guide shoes
- Damaged or missing toe guards
- ➤ Missing fire lintels (pass type doors)
- ➤ Missing vision panel glass and grill
- Check door panels for damage and corrosion
- Binding or catching
- ➤ Doors moving by themselves (creeping apart)
 - ➤ The doors should not start to move open or closed by themselves. If so, check for missing panel parts (fire lintel, toe guard, balance weights).

MAINTENANCE

- ➤ Replace missing or damaged parts as needed
- ➤ Full panel replacements are recommended if panel is beyond repair, or if panel has been punctured.
- ➤ Doors prior to 1955 should be replaced with complete new doors.



THE CLEARANCE BETWEEN THE BI-PARTING DOOR TRUCKING SILL AND THE ELEVATOR CAR SHALL NOT BE MORE THAN 30MM [1.25 IN] ALONG THE ENTIRE ELEVATOR CAR, EVEN WITH A LOAD ON THE ELEVATOR CAR.

18.2. CAR DOOR (GATE) PANELS

Openings, if any, in the car door (gate) panel must reject a 50mm / 2in ball. Panel replacements are available.

INSPECTION

- ➤ Broken, bent or sprung members
- > Structural defects
- ➤ Missing or worn guide shoes
- ➤ Missing vision panel glass and grill
- Check for damage and corrosion
- Check for smooth operation
- ➤ Ensure panels open fully and close fully
- ➤ Ensure panels do not creep open

MAINTENANCE

- ➤ Replace damaged panels
- ➤ If panels creep open adjust car door (gate) counterweight



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19. ENTRANCE FRAME SILLS

INSPECTION

- ➤ Check for damage to sills as well as loose sills.
- > Sills should be substantially flush with the floor surface of the elevator landing

MAINTENANCE

- ➤ Clean building sills
- ➤ Replace and repair if necessary

20. CAR ENCLOSURES

INSPECTION

- ➤ Wear and tear on car walls
- ➤ Open COP panels and non functioning pushbuttons
- ➤ Emergency exit, operation and function
- ➤ Emergency exit switch
- ➤ Functioning lights

MAINTENANCE

➤ Fix or replace missing or damaged components

21. INTERLOCK CIRCUIT



TURN POWER OFF BEFORE SERVICING

REFER TO INTERLOCK INSTALLATION & SETTINGS GUIDE 252

INSPECTION

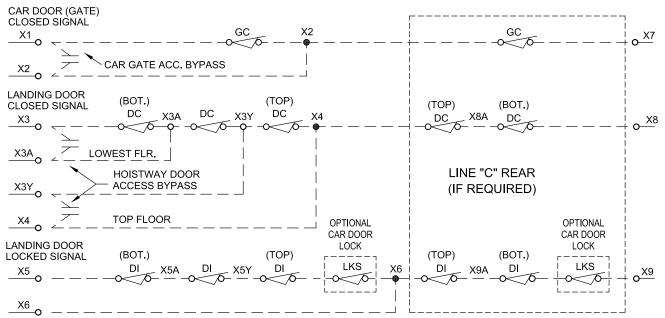
- ➤ Ensure all electrical contacts that make up the door circuit are functioning
- ➤ Check continuity of all contacts
- ➤ For each elevator make sure that in order for the car to operate the doors must be closed and locked at every opening



21.1. WIRING



NOTE: THE FOLLOWING INTERLOCK SAFETY CIRCUIT WIRING IS FOR REFERENCE ONLY



ALL DOOR SHOWN IN THE CLOSED AND LOCKED POSITION

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REFER TO THE ELEVATOR PRINTS FOR JOB SPECIFIC INTERLOCK WIRING.

21.2. INTERLOCK ROLLER ARM AND ZONE

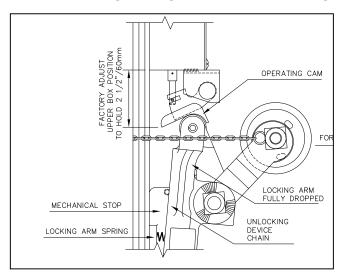
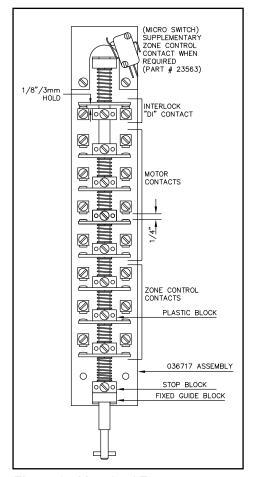


Figure 1 - Roller Arm Setting



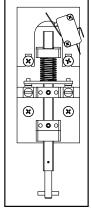


Figure 3 - Manual Zone Contact Switch Assembly. Used for manual installations or Wireless Door Controllers.

Figure 2 - Motorized Zone
Contact Switch Assembly. Used for installations with PLC Controllers.



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21.3. INTERLOCK PLUG ROD SETTINGS

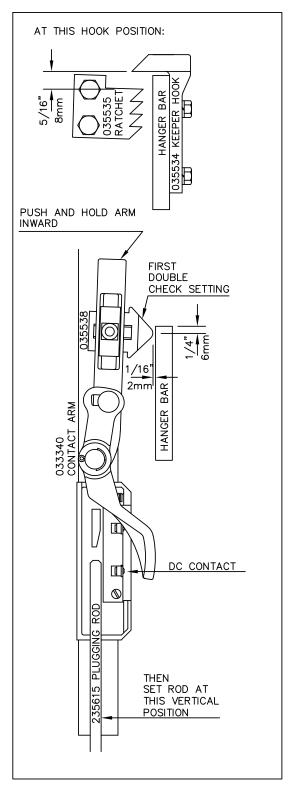


Figure 4 - Plug Rod Setting Closed

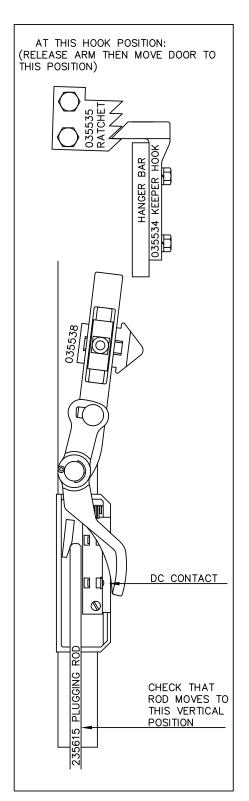


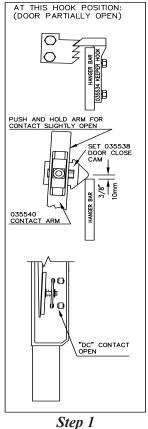
Figure 5 - Plug Rod Setting Open

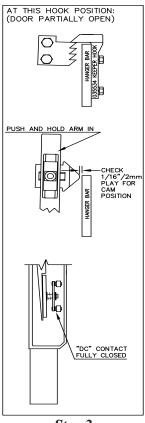


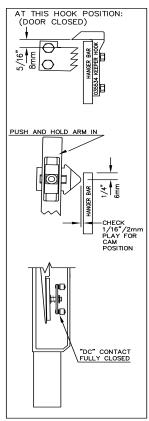
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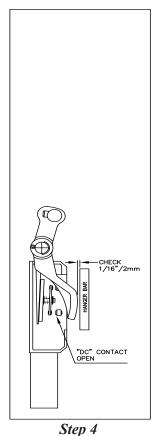
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21.4. INTERLOCK DC CAM AND LOCKING ARM









1 Step 2 Step 3

Figure 6 - DC Cam Settings

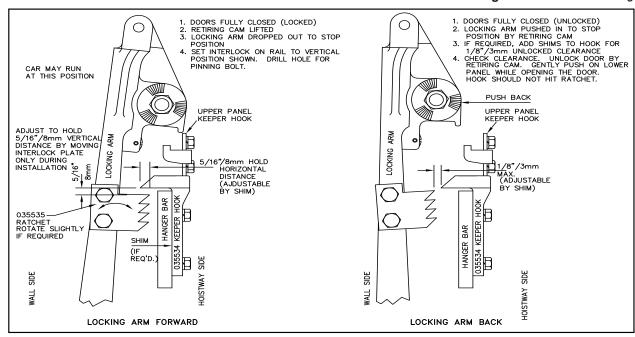


Figure 7 - Locking Arm



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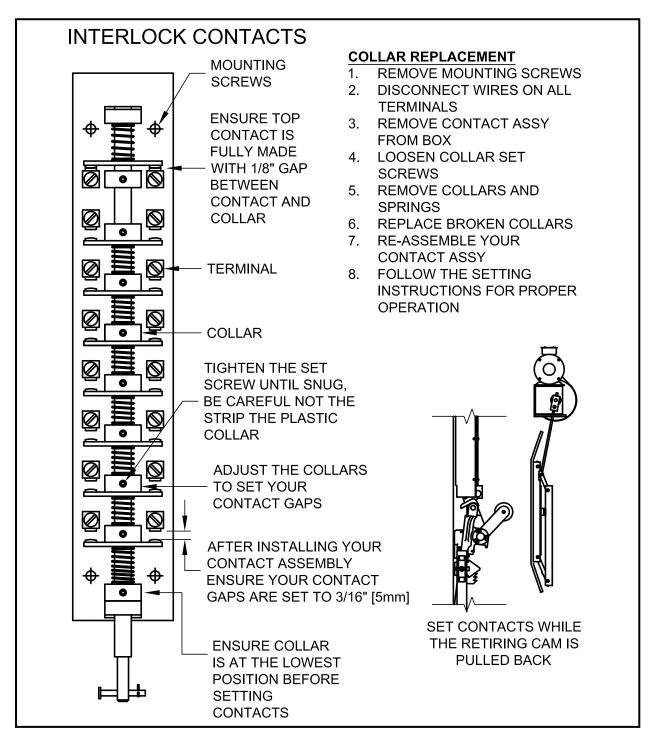
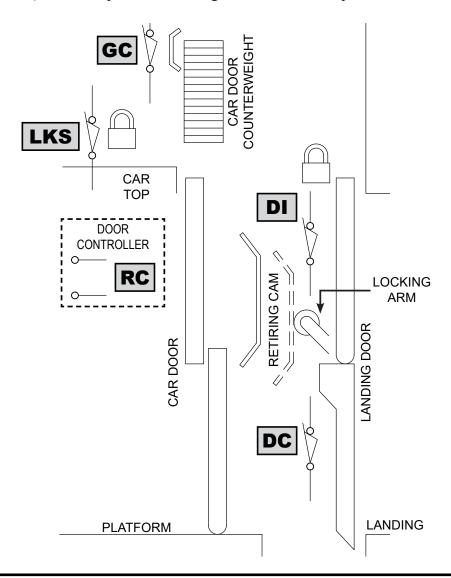


Figure 8 - Interlock Contact Settings

21.6. RETIRING CAM & INTERLOCK SEQUENCE

In order to move the elevator (lift), the following sequence must take place.

- 1) Car door and landing doors closed at all floors.
 - ➤ GC circuit closed.
 - > DC circuit closed.
- 2) Elevator (lift) controller initiates retiring cam (RC).
 - ➤ Retiring cam lifts away from roller.
 - ➤ Landing door locked.
 - > DI circuit closed.
- 3) Optional car door locking
 - ➤ Car door locked.
 - ➤ LKS circuit closed.
- 4) This completes the retiring cam and interlock portion of the safety circuit.





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22. CAR DOOR (GATE) CONTACT

INSPECTION

- ➤ Contact remains "made" when activated by counterweight cam
 - ➤ Move and shake counterweight and car door (gate) panel (in closed position) and use continuity tester.
 - ➤ Check that the car door (gate) contact opens (stops the running elevator) when the car door (gate) / car door panel is lifted up 50mm [2 in] from the car floor.
- ➤ Excessive play in the counterweight as the car door (gate) contact is activated by the counterweight.
- ➤ Missing covers

MAINTENANCE

- ➤ Adjust cam and contact to ensure the contact remains "made" while car door (gate) is closed.
- ➤ Replace counterweight guide shoes if counterweight is loose or floppy.
- ➤ Replace covers.
- ➤ Clean contacts using alcohol swabs.

23. CONTROLLERS

This section covers the following three controllers, Wireless, PLC and Relay Logic



JUMPERS (NOTRECOMMENDED) REMOVEALL DOOR LOCK JUMPERS BEFORE PUTTING THE ELEVATOR BACK IN NORMAL OPERATION



HOISTWAY DOOR AND CAR DOOR BYPASS SWITCHES ON THE ELEVATOR CONTROLLER MUST BE OPEN BEFORE PUTTING THE ELEVATOR BACK IN NORMAL OPERATION (ASME A17.1/CSA B44 SEC 2.26.1.5).

23.1. WIRELESS VVVF DOOR & CAR DOOR (GATE) CONTROLLERS

INSPECTION

- ➤ Missing controller covers
- ➤ Water or other debris on or in controllers
- ➤ Conduit entries especially where moisture resistant fittings are used
- ➤ Check for loose or frayed wires
- ➤ Missing electrical drawings
- ➤ Non terminated wires
- ➤ Motor wires not terminated
 - ➤ There are 2 motor windings on each door/car door (gate) operator: high speed motor winding and slow speed motor winding. The wireless door controllers only power the high speed motor winding. The low speed winding leads should be caped and taped off individually. Do not connect the leads together.



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MAINTENANCE

- ➤ Replace missing covers as necessary
- ➤ Tighten any loose terminals

23.2. PLC DOOR & CAR DOOR (GATE) CONTROLLERS

INSPECTION

- ➤ Missing covers that close and lock
- ➤ Water or other debris on or in controllers
- ➤ Conduit entries especially where moisture resistant fittings are used
- ➤ Check for loose or frayed wires
- ➤ Non terminated wires
- ➤ Missing electrical drawings

MAINTENANCE

➤ Carefully check fuse connectors in humid hot salty environments, Hoistway wires not covered in plastic or very old should be considered for replacement, especially inside pipes.

23.3. RELAY LOGIC DOOR & CAR DOOR (GATE) CONTROLLER (PRIOR TO 2002)

INSPECTION

- ➤ Missing covers that close and lock
- ➤ Water or other debris on or in controllers
- ➤ Conduit entries especially where moisture resistant fittings are used
- ➤ Check for loose or frayed wires
- ➤ Non terminated wires
- ➤ Missing electrical drawings

MAINTENANCE

- ➤ Carefully check fuse connectors in humid hot salty environments, hoistway wires not covered in plastic or over 25 years old should be considered for replacement, especially inside pipes.
- ➤ The TP 3 minute timer protects the retiring cam motor and also is a backup protection timer for the 30 second door/car door (gate) motor timers.
 - ➤ If the TP timer circuit needs to be "reset", check the interlock keeper hook position. The keeper hook might be "caught" "nose-to-nose" against the interlock ratchet, allowing the door operator motors to run for 3 minutes and trip the TP timer. The door/car door (gate) motors and the car will not operate. With the doors closed, the keeper hook should be reset 6mm [5/16 in] above the interlock ratchet by adjusting the chains/chain rod. Do not move the vertical position of the interlock.
- ➤ If a 10 ampere fuse is blown, another short circuit other than a door/car door (gate) motor is usually the cause. Any short must be corrected and fuse replaced to resume normal operation.



- ➤ Reversing starters (Peelle #07628 type power contactors) should be carefully examined with the power off. They are mechanically interlocked with moving nylon pivots that might wear out. Some nuts on the contactor micro switches might be loose. Check openings at top of each contactor for foreign material. Check the silver contacts. The retiring cam relay (Peelle #07623 type) also has silver contacts. If necessary to clean the contacts, turn power off and clean with contact cleaner and clean cloth. Do not file contacts. Okay to vacuum as no printed circuit boards. Check above at least once a month.
- ➤ A door controller manufactured before 1969 should be upgraded with a new, replacement controller to reduce motor burnouts. The cost of a new controller is less than several motor replacements.

24. PUSHBUTTONS (LANDING DOOR)

INSPECT

- ➤ Test: Position the elevator at a floor with the landing doors closed. Have someone else walk to another floor and push "Door Open", then push "Door Close" and then push "Door Open" and "Door Close" buttons at the same time and continuously hold for 7 seconds. Then return to the elevator landing location and open the landing doors. Again walk back to the other floor and repeat the door button test sequence.
- ➤ The only time the doors should operate is from the pushbutton station at the same landing as the location of the elevator. Repeat this test at each landing door pushbutton.



FOR DOORS MANUFACTURED PRIOR TO 1987, EACH BUTTON MUST HAVE ONE NORMALLY CLOSED CONTACT SEPARATELY IN ADDITION TO ONE NORMALLY OPEN CONTACT, IF BUTTONS WERE SUPPLIED BY PEELLE OR BY OTHERS.



LANDING DOOR OPERATING PUSHBUTTONS MUST BE WIRED ACCORDING TO JOB ELECTRICAL DRAWING. PUSHBUTTONS MUST BE WIRED SO THAT WITH THE ELEVATOR AT THE LANDING, THE LANDING DOORS CANNOT BE OPERATED BY DOOR PUSHBUTTONS LOCATED AT A DIFFERENT LANDING FROM THE ELEVATOR LOCATION.

25. SAFETY OPERATION LABELS





Examples of some of our safety labels

INSPECTION

➤ Look for Peelle safety operation labels

MAINTENANCE

➤ Call our Parts Department for your safety label package 1-905-846-4545 x 218



26. HOW TO CLEAN AND DISINFECT

GENERAL CLEANING MOST SURFACES

CLEAN

- ➤ Wear disposable gloves to clean and disinfect.
- Clean surfaces using soap and water, then use disinfectant.
- ➤ Cleaning with soap and water reduces number of germs, dirt and impurities on the surface. Disinfecting kills germs on surfaces.
- ➤ Practice routine cleaning of frequently touched surfaces.
 - ➤ More frequent cleaning and disinfection may be required based on level of use.
 - > Surfaces and objects in public places, such as shopping carts and point of sale keypads should be cleaned and disinfected before each use.

SAFETY

ALWAYS READ AND FOLLOW THE DIRECTIONS ON THE LABEL TO ENSURE SAFE AND EFFECTIVE USE.

- ➤ Wear skin protection and consider eye protection for potential splash hazards
- ➤ Ensure adequate ventilation
- ➤ Use no more than the amount recommended on the label
- ➤ Use water at room temperature for dilution (unless stated otherwise on the label)
- ➤ Avoid mixing chemical products
- ➤ Label diluted cleaning solutions
- ➤ Store and use chemicals out of the reach of children and pets
- ➤ You should never eat, drink, breathe or inject these products into your body or apply directly to your skin as they can cause serious harm. Do not wipe or bathe pets with these products or any other products that are not approved for animal use.

DISINFECTING PAINTED PANELS

- ➤ Recommend use of EPA-registered household disinfectant.
- ➤ Follow the instructions on the label to ensure safe and effective use of the product.
- ➤ Many products recommend:
 - ➤ Keeping surface wet for a period of time (see product label).
 - ➤ Precautions such as wearing gloves and making sure you have good ventilation during use of the product.

DISINFECTING STAINLESS STEEL PANELS

- ➤ Peelle recommends the use of isopropyl alcohol or any EPA-registered household disinfectant.
- ➤ Follow the instructions on the label to ensure safe and effective use of the product.
- ➤ Many products recommend:



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- ➤ Keeping surface wet for a period of time (see product label).
- ➤ Precautions such as wearing gloves and making sure you have good ventilation during use of the product.

DILUTED HOUSEHOLD BLEACH SOLUTIONS MAY ALSO BE USED IF APPROPRIATE FOR THE SURFACE.

- ➤ Check the label to see if your bleach is intended for disinfection and has a sodium hypochlorite concentration of 5%–6%. Ensure the product is not past its expiration date. Some bleaches, such as those designed for safe use on colored clothing or for whitening may not be suitable for disinfection.
- ➤ Unexpired household bleach will be effective against coronaviruses when properly diluted.
- ➤ Follow manufacturer's instructions for application and proper ventilation. Never mix household bleach with ammonia or any other cleanser.
- ➤ Leave solution on the surface for at least 1 minute.
- ➤ To make a bleach solution, mix:
 - ➤ 5 tablespoons (1/3rd cup) bleach per gallon of room temperature water
 - ➤ OR
 - ➤ 4 teaspoons bleach per quart of room temperature water
- ➤ Bleach solutions will be effective for disinfection up to 24 hours.
- ➤ Alcohol solutions with at least 70% alcohol may also be used.

FINISHING SHINE

➤ Use recommended stainless steel cleaning product "Sheila Sine", or equivalent. Please follow the manufactures instructions for best cleaning results. **sheilashineinc.com**

STAFF CONSIDERATIONS

WHEN CLEANING

- ➤ Regular cleaning staff can clean and disinfect community spaces.
 - ➤ Ensure they are trained on appropriate use of cleaning and disinfection chemicals.
- ➤ Wear disposable gloves and gowns for all tasks in the cleaning process, including handling trash.
 - ➤ Additional personal protective equipment (PPE) might be required based on the cleaning/disinfectant products being used and whether there is a risk of splash.
 - ➤ Gloves and gowns should be removed carefully to avoid contamination of the wearer and the surrounding area.
- ➤ Wash your hands often with soap and water for 20 seconds.
 - ➤ Always wash immediately after removing gloves and after contact with a person who is sick.
 - ➤ Hand sanitizer: If soap and water are not available and hands are not visibly dirty, an alcohol-based hand sanitizer that contains at least 60% alcohol may be used. However, if hands are visibly dirty, always wash hands with soap and water.



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EMPLOYER CONSIDERATIONS

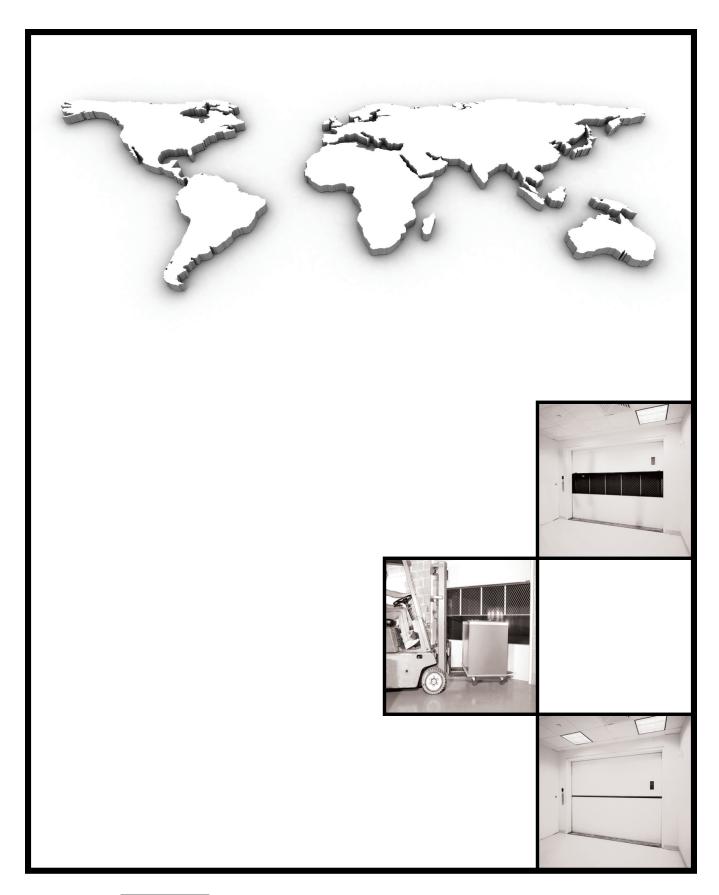
- ➤ Educate workers performing cleaning, laundry, and trash pick-up to recognize the symptoms of COVID-19.
- ➤ Provide instructions on what to do if they develop symptoms within 14 days after their last possible exposure to the virus.
- ➤ Develop policies for worker protection and provide training to all cleaning staff on site prior to providing cleaning tasks.
 - Training should include when to use PPE, what PPE is necessary, how to properly don (put on), use, and doff (take off) PPE, and how to properly dispose of PPE.
- ➤ Ensure workers are trained on the hazards of the cleaning chemicals used in the workplace in accordance with OSHA's Hazard Communication standard (29 CFR 1910.1200)

WORKS CITED

➤ "Centers for Disease Control and Prevention." Accessed June 2/2020, https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-facility.html

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