Good Gate Inc.

Installation Guide

Residential Sliding Carriage Gate

1 Warnings

ATTENTION!

This product should be installed and maintained by a qualified elevator technician.

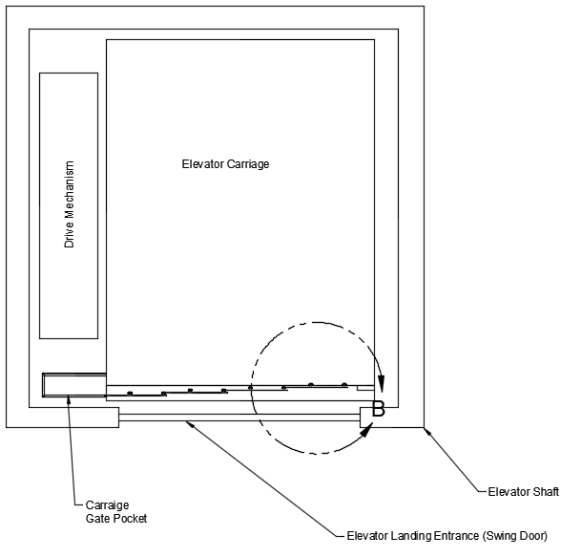
Failure to comply with all of the instructions and “WARNING”(s)in this manual as well as the design manual and the maintenance manual may cause a situation to be present where serious injury or death could occur.

If there is any doubt about the instructions in this or other manuals related to this product please contact Good Gate Inc. at info@goodgate.ca for clarification.

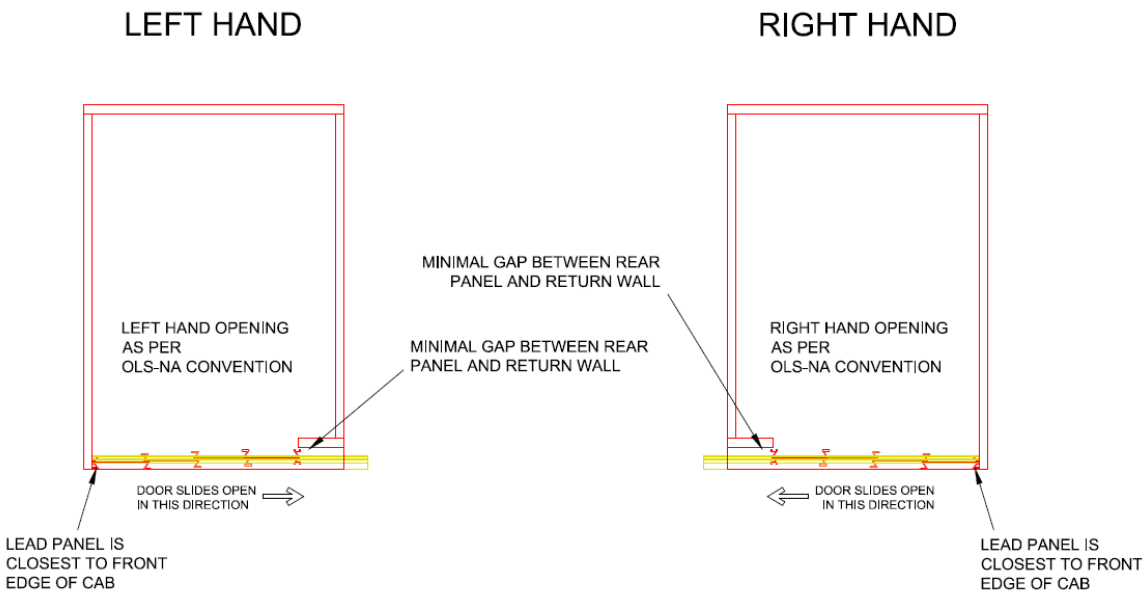
2 Determining Opening Direction and Pocket Location

Most other carriage gate products need to have the “handedness” for the gate known in advance. Good Gate products are designed such that the gate can be field configured for either left or right hand opening, when incorporated with a fully enclosed pocket. A picture below depicts a left hand opening arrangement (i.e. when viewing the gate from the landing it opens and then pockets on the left hand side of your body.)

This will be important to know and use the correct terminology during installation of panel stops.



To avoid the need for a fully enclosed pocket, gates can be ordered as left or right hand specific. A naming convention for left and right hand arrangements is shown below.



3 Checking dimensions

3.1 Ceiling to Flooring Height

Depending on the carriage gate height you are working with the following distance between the top of the carriage and support flooring where you mount the lower track/ sill should be observed. Shimming may be required if the carriage is not square or does not provide this spacing.

80in carriage Gate = 81.5 inches

84in Carriage Gate = 85.5 inches

96in Carriage Gate = 97.5 inches

Warning: Failure to observe these measurements may cause the gate to bottom out on the lower track or have a lack of support engagement on the lower edge of the panels. Improper support for the panel at the lower edge may result in injury or death.

3.2 Clearances

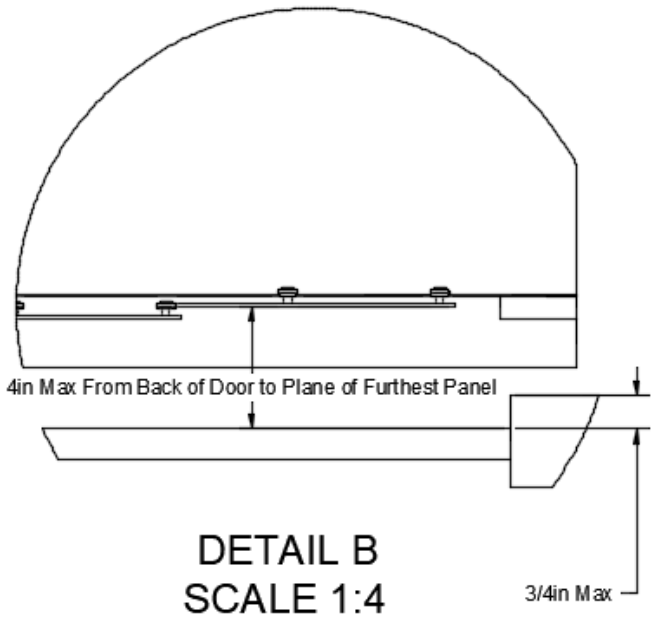
Typical clearance between the shaft and the elevator car opening should be 0.75 – 1 inches along the entire travel distance. This should be checked as part of elevator shaft construction and then prior to operation of the elevator so that the gate is not damaged during testing.

Warning: failure to ensure clearance could cause damage to the equipment or harm to the technician during installation.

3.3 ¾ x 4 x 4

ASME 17.1/ CSA B44 – 2016 Safety code for elevators requires that the 3/4in x 4in rules be followed for installation of carriage gates. The Good Gate product is designed to meet these code requirements, when properly installed.

The following installation drawing shows the ¾ x 4 measurements and the distance from the back of the door to the inside of the shaft wall should be checked prior to final installation of the gate.



Warning: failure to observe the ¾ x 4 measurements could results in injury or death during operation of the elevator.

3.4 Pocket Dimensions

The pocket dimensions for a gate that is capable of covering up to a 36in wide door opening is 12in and should then also have clearance from the shaft wall. The dimensional availability of sufficient pocketing space should be checked prior to installation in the shaft.

3.5 Track Fit inside Shaft

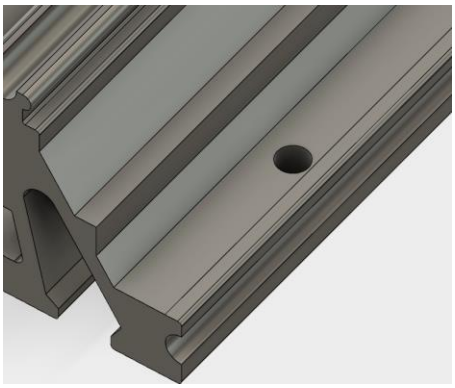
Good Gate provides a track that is capable of providing the maximum opening allowed for the product.

Should you find that your shaft does not accommodate this amount of track, and you have a smaller door opening, the track can be trimmed with an appropriate aluminum saw blade but you will likely need to drill new panel end stops. (See the section on custom panel stops)

Warning: if you are cutting aluminum tracks to a shorter length all appropriate safety precautions for holding the materials securely, eye/ face protection, and hand protection should be taken. Standard circular saw blades for wood are not typically suitable for cutting aluminum.

4 Installation of Top Track

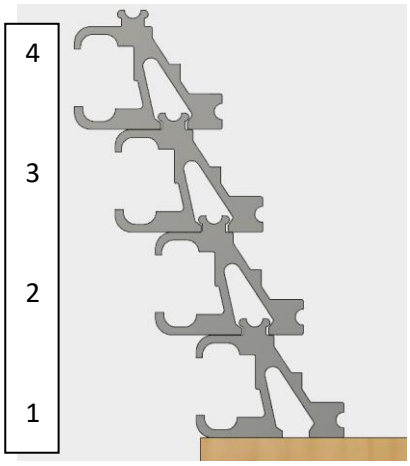
The upper track is secured to the top of the carriage with 4 x #10 wood screws with pre-drilled holes along the heel of the lowest track section.



The support method is designed for 3/4in plywood support or equivalent. If you are using other materials that could have tear out concerns (melamine/ MDF) you should consider adding additional screws by simply drilling additional holes in the lowest track.

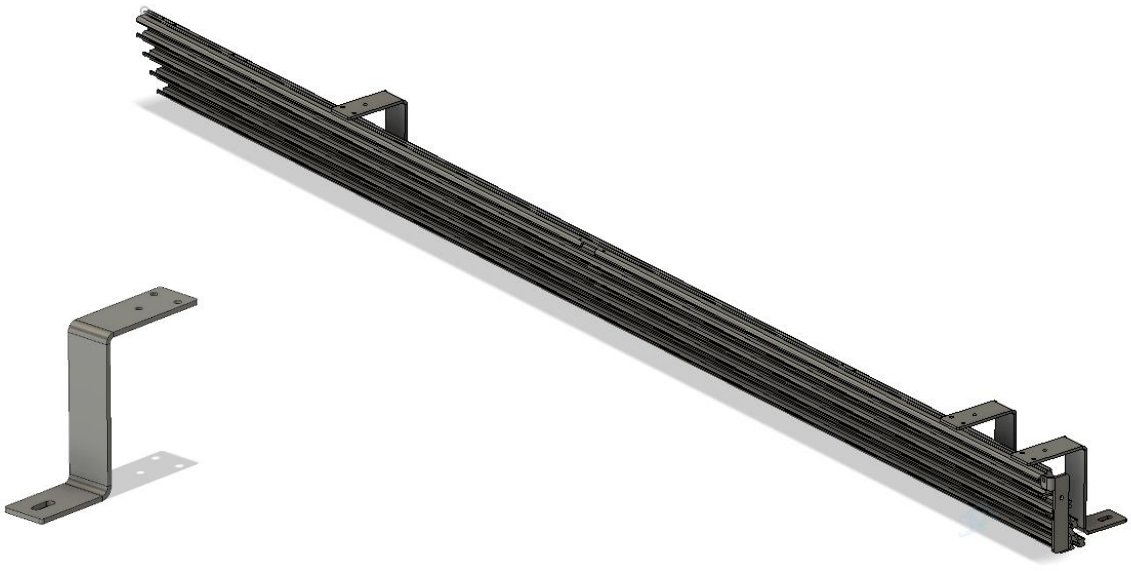
The front edge of the lowest track element should be proud of the front edge of the ceiling by roughly 1/8in to ensure that panel #1 does not rub.

The side of the upper track can be aligned with the daylight line for side to side positioning.



Once alignment along the front edge and side are achieved and the screws are in place the support brackets to fix the top edge of the upper track can be added. An image of the support brackets is shown below.

The part that attaches to the track is secured through the groove in the top with #6 self tapping screws that are supplied by Good Gate. There are three brackets and there will be several pre-drilled pilot holes in the top of the upper track. Hardware for securing into the cab ceiling is not supplied.



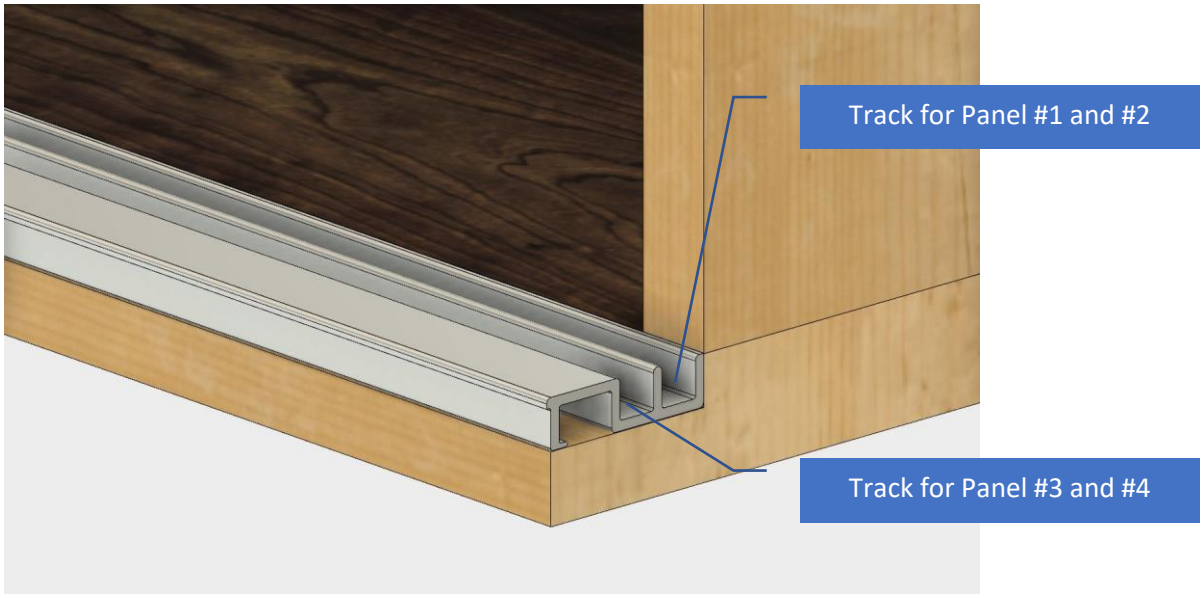
Which end the 3rd bracket is mounted to will depend on the position you need for your gate switch. (**See section 8**)

5 Installation of Lower Track/ Sill

Once the upper track is secure:

Insert panel #1 in appropriate channel of the upper track this should be done using the groove machined roughly at the mid point of the channel. (See section 6 for image)

Take lower sill and put underneath of panel #1 with the panel inserted in the appropriate groove. (Please note that it is intended that panel #1 and #2 share a groove and panel #3 and #4 share the other).



Push panel #1 to the back of the channel such that the lower aluminum cross piece is touching the surface of the track that is furthest from the landing side.

Using a level check to see the that the panel is vertically plumb

Shift the lower track until the panel is vertically plumb

Mark where the lower sill/ track should be located

Adjust the position of the track so that it the lower track/ sill travel matches the travel of the upper track and the end sits in the pocket area

Slide the panel out of the way of any screw holes for the lower track

Secure lower track/ sill with #10 taper head wood screws.

Ensure that the screws do not touch off on the bottom of the panel – if it does then you may need to torque the screws tighter or shim the upper track higher due to the overall dimensions of your car.

Test to make sure that the panel is plumb in several places along the full travel to ensure that the alignment is good for the lower track.

6 Installation of Panels

6.1 Panel Insertion

Each track has a machined slot for insertion of a single wheel of the appropriate panel in to the track. The process for doing this is as follows:

- Place the lower edge of the panel in to the appropriate groove of the lower track/ sill
- Move the panel in to position so that the wheel on the left side of the panel (looking at it from the landing side) is inserted first by simply pushing it in to the slot
- Move the panel to the left and then insert the other wheel
- Move the panel back to the right so that the full panel is now on the other side of the groove before proceeding with the next panel

Panels should be inserted in the order of #1, #2, #3, #4.

6.2 Installation of mid-panel slot catches

The panels are equipped with slots to secure each gate panel to the subsequent one. **For the sliding action to perform properly and deflection requirements to be maintained slot screws must be installed.**

Insert #8 pan head screws at mid-height of panels from the landing side through the slots. The screws are located in the small parts bag sent with your gate.

The screws should have a small blue film on them. This is a thread locker compound intended to harden once they are installed. If you remove them after a short time then new thread lock compound should be applied. We recommend the Blue Loctite compound as it does not require heating to remove the screws, at a later date.

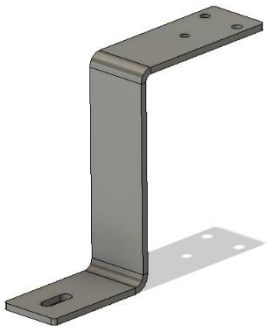
Tighten those screws such that the head does not touch the panel in which is slides and is also does not contact any other panel as it opens and closes such that binding is avoided. A plastic spacer is equipped on the screws to give you the appropriate spacing but do not over tighten the screws and you can back them off slightly to ensure smooth operation.

Warning: Failure to insert these screws or installing screws that do not have a thread locking compound on them could cause serious injury or death.

6.3 Checking for plumb and smooth operation

Once the panels are inserted and connected the operation should be checked for any binding, scraping or other problems.

Panels should also be checked for plumbness with a level at several positions.



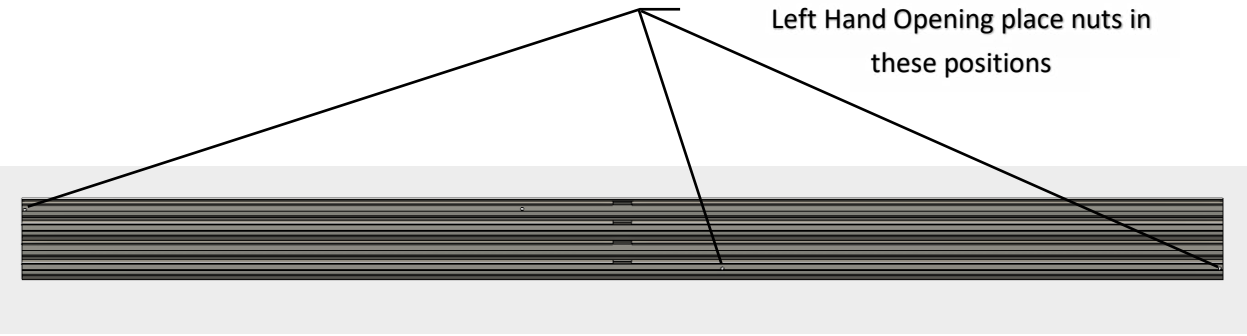
The most common issue with smooth operation is that the upper track is tilted and the bearings are rubbing on the upper part of the each track instead of just rolling on the bottom surface of the upper track. This can be remedied by simply adjusting the position of the Support bracket. An image of this support bracket and the slot allowing adjustment without drilling new holes in the cab ceiling is shown to the side

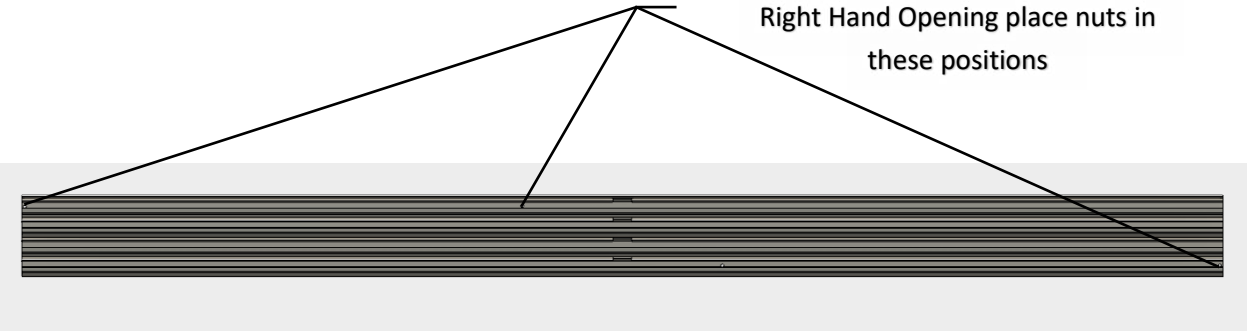
7 Setting Travel Stops

7.1 Standard

The gate upper track assembly comes with three square nut/ set screws installed in the top track to stop the panels from moving beyond points that would allow for openings that compromise the safety function is provides.

The position and track for the third nut/set screw will vary depending on the gate opening direction but they are easy to install and adjust with a simple hex key.



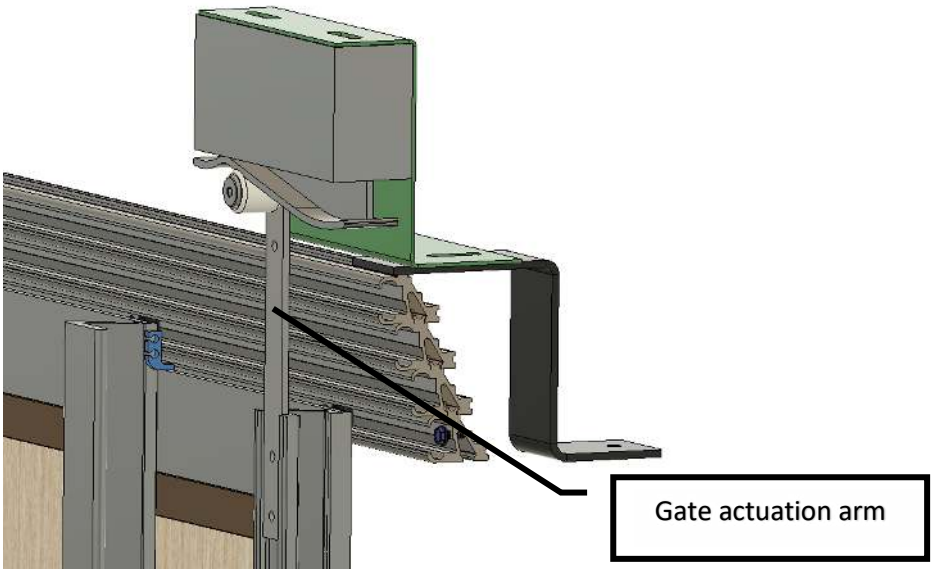


8 Closure Sensor and Armature

ASME A17.1/ CSA B44 safety code requires that a carriage gate closure switch be incorporated in to the controls so that, if the gate is not in the closed position, then the elevator will not be allowed to operate.

There are several switch suppliers but, should you have ordered a switch from Good Gate with the armature to actuate it, then the following instructions can be used to install it.

- Attach the armature to the appropriate side of the gate (depending on handedness). The arm from good gate can be used for both left and right hand gates but the direction the roller faces will be outward for a left hand gate and inward for a right hand gate. The left hand gate version is shown in the image below.
- Attachment will require drilling holes as the exact height of your switch may vary.
- Move the gate to the fully closed position
- Position the switch and mounting plate such that the switch is activated when the gate is in the closed position and breaks when the gate is not fully closed. This may require some testing if you are not sure when the switch activates.
- Once you have the correct position use the provided screws and nuts to secure the switch in place and connect it to the control system for the elevator



Warning: The Good Gate product is not intended to operate without a gate closure switch that is connected to elevator controls. Failure to install a code compliant gate closure switch could result in injury or death.

9 Testing Checklist

Testing Check	Yes/ No
Check that height of carriage is appropriate for gate height and shim if the carriage is not square/ level	
Check that back of door is less than 3/4in from inside of shaft	
Check that there is clearance between gate/ carriage and travel wall but not more than 1.25in	
Gate Panels move smoothly and do bind	
Gate panels are plumb through travel	
Top track support brackets are in place and secure	
Top safety catches are in place and secure	
Mid Slot Screws are in place and secure	
Gate closure switch is in place and activates/ deactivates correctly to avoid carriage movement if the gate is in the open position	
Gate pocket is blocked off and does not allow for users to put hands or tooling in to elevator shaft space	
All panels have clearance between the bottom edge and the lower track to avoid rubbing and unintended interference	

Revision History:

Rev	Date	Description of Changes
NC	22APR2018	Issued
1	26APR2018	- Added comments about thread lock compound in section 6.3 - Added checklist item about clearance of panels to bottom track
2	27JUN2018	- Remove section 8
3	8JAN2019	- Updated slot screws to note spacer being present and that there are 6 screws on a 96in gate - Changed the gate switch actuator arm to be the most recent version - Noted that the J-brackets are not installed for shipping and they can be installed before or after the panels are inserted
4	25MAR2019	- Added text to section 4 regarding a third upper track support bracket being supplied if a gate switch and mounting bracket are ordered from Good Gate to clarify installation. Also included a picture with the third bracket and reference to section 8 for the gate switch.
5	22SEP2019	- #10 holes/ screws for upper track mounting - #10 holes for lower track mounting - Square nuts/ set screws for stops to replace self tapping screws - Noted 5 panel arrangement
6	22MAR2020	- Remove section 6.2 - Add guidance on adjustment of Z-bracket adjustment if the gate panels are not moving smoothly in section 6.3