

MM

Plug Sliding Door System 2

Maintenance Manual

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Revision history

Revision	Date	By	Description
3.2	2024-02-12	Prepared: <i>O. Post</i> Verified: <i>M. Rewti</i> Approved: <i>O. Post</i>	General: - Minor changes and/or updates in spelling, grammar, lay-out. - A number of images were restyled. Chapter Introduction: - Updated 'References'. Chapter Maintenance: - Updated 'Emergency release' (added image). - Updated 'Micro switches'. - Updated 'Over center soft stopper'. Chapter Torque settings: - Removed position 5 the tension bracket, because it is preset. Appendix A: - Updated e-mail addresses
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0.6	2018-12-20	Prepared: <i>M.stoelinga</i>	Minor lay-out changes. Removed 10.000 cycle reference.
0.5	2018-12-04	Prepared: <i>M.Stoelinga</i>	Frequency changed. Moved "Clamping force test" from "Safety parts" to "Part inspections". Added the sentence: "Contact your local Agent for parts." Adjusted filter regulator check for electric systems with non-Ventura DCU.
0.4	2018-11-15	Prepared: <i>M.Stoelinga</i>	Rephrased safety checks. Added "Only applicable for electric systems" to spindle nut. Changed reference from appendix to installation manual. Adjusted contact information.
0.3	2018-11-13	Prepared: <i>M.Stoelinga</i>	Adjusted emergency release. Removed step 3. Added contact page. Added simple check, sensitive edge procedure. Small changes to introduction for safety parts and wear parts.



0.2	2018-11-02	Prepared: <i>M.Stoelinga</i>	Maintenance frequencies changed.
0.1	2018-10-10	Prepared: <i>M.Stoelinga</i> <i>M.Delorme</i>	Initial version.



Preface

The Quality System of Ventura Systems is accredited to IATF 16949:2016 and ISO 14001:2015.

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1 Introduction

1.1 Purpose

This maintenance manual describes maintenance and small adjustment procedures for the Ventura plug slide 2 door system. Together with the installation manual and the system drawings, it makes a complete set of maintenance documentation.

1.2 Scope

This manual is provided to guide trained service mechanics through the maintenance steps of the plug slide 2 door system.

1.3 Definitions

Definition	Description
Wear part	Wear is progressive damage to a part caused by relative motion with respect to another substance or part.
Safety part	A safety part is a part, which is important to the overall safety of a system.

Table 1: Definitions

1.4 Acronyms and Abbreviations

Abbreviation	Description
DCU	Door Control Unit
HQ	Headquarters
IATF	International Automotive Task Force
IM	Installation Manual
ISO	International Standardization Organization
PS	Plug Slide
PSI	Pound-force per Square Inch
REG	Regulation
QM	Quality Manual

Table 2: Acronyms and abbreviations

1.5 References

1.5.1 External documents

#	Reference	Description	Date
1	IATF 16949:2016	Automotive quality management system standard	2016-10-01
2	ISO 14001:2015	Environmental management systems – Requirements with guidance for use	2015-10-01
3	ISO 9001:2015	ISO Standard for Quality Management Systems – Requirements.	2015-10-01
4	REG 107 Rev 08	Uniform provisions concerning the approval of category M2 or M3 vehicles with regard to their general construction (Incorporating all valid text up to: Supplement 1 to 08 series of amendments)	2020-11-02
5	TS 160	Bus door safety systems	2021-12-01

Table 3: External documents

1.5.2 Ventura Systems documents

#	Reference	Type	Description	Revision	Date
1	PS2200002	IM	Plug Sliding Door System 2 : Installation Manual	5.0	2023-10-26
2	QM000001	DG	Documentation Guideline	5.0	2022-12-19

Table 4: Ventura Systems documents

1.6 Overview

The list below shows a brief overview of the contents of each chapter:

1. Gives an introduction, definitions and overview of this document.
2. Contains the general door system safety instructions, safety symbols and disclaimer.
3. Contains the maintenance instructions.
4. Contains the torque settings.
5. Contains operational checks before applying power.

2 Door installation safety

2.1 General

Safety of the operator and bystanders is one of the main concerns in designing and developing a new piece of equipment. Ventura's door systems have the proper safety features for common use of the system. An accident can often be avoided by recognizing potentially hazardous situations before an accident occurs. As you install, operate, or maintain the door system, you must be alert to potential hazards. Make sure you have the necessary training, skills and tools to perform any assembly, or maintenance procedures. Improper operation and maintenance of this door system may result in a dangerous situation that may cause injury or death.

Ventura Systems cannot anticipate every possible circumstance that may involve a potential hazard. The warnings in this document and on the product are not all-inclusive. If a method of installation or operation is used, which is not specifically recommended by Ventura Systems, you must satisfy yourself that it is safe for you and for others. You should also ensure that the door system will not be damaged or be made unsafe by the installation and/or operational methods you choose. The information, specifications and illustrations in this document are based on the information that was available at the time this document was written and can change at any time without notice.

2.2 Disclaimer

The information contained in this maintenance document is based upon reliable technical data at the time the document was published. These instructions are intended for use by persons having the technical knowledge to maintain this door system. The instructions are to be used at the maintenance mechanic's own discretion and risk. Ventura Systems assumes no responsibility for results obtained or damage incurred from the use of this material either in whole or in part by the installer. This document provides basic instructions for the maintenance of the door system in a step-by-step sequence that will work in most types of maintenances. While effort has been made to ensure the information in this document is correct and complete, we would appreciate it if you would contact us in case of errors.

2.3 Safety alert symbols

This document contains safety messages which alert you to potential personal injury hazards. Obey all safety messages in this document to avoid possible injury or death. The following keywords and layouts calls for your attention: DANGER, WARNING, CAUTION and NOTICE. Below are examples of these safety messages. The NOTE message is used for additional information but these are not threatening for the mechanic, bystanders, nor the door system.



DANGER!

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations.



WARNING!

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION!

Indicates a potentially hazardous situation which if not avoided, may result in minor or moderate injury.

NOTICE

Indicates that equipment or property damage can result if instructions are not followed.

NOTE

Additional information important but not threatening for people or to the system.

2.4 Safety instructions



WARNING!

This door system is designed for a specific application; **DO NOT modify or use this unit for any application other than for which it was designed.**

A door system operated improperly or by untrained personnel is dangerous. Lack of operation knowledge may cause high risk.

Do not install this door system if it is damaged. If you are in doubt if the door system has a defect, immediately stop the installation and contact Ventura Systems.

Do not connect the door system to air or electric supply during the maintenance process. If the manual states otherwise, follow the manual.

Do not attempt to install the door system under influence of drugs or alcohol.

NOTICE

Do not modify the door system or safety devices. Unauthorized modifications may impair its function and safety.

If equipment has been altered in any way from the original design, Ventura Systems does not accept any liability for injury or warranty.

If replacement of parts is necessary, genuine factory replacement parts must be used to restore the door system to its original specifications.

*always disconnect the air and/or electric power while replacing parts. Safety features may not be active while replacing parts.

Ventura Systems will not accept responsibility for damages as a result of the use of unapproved parts.

While working on the Ventura door systems wear appropriate personal protective equipment.

This list may include but is not limited to:

- Protective shoes with slip resistant soles
- Protective goggles, glasses or face shield
- A hard hat

Follow the regional and country laws and safety precautions.

3 Maintenance

Maintenance of a door system should only be performed when the vehicle is positioned on a flat surface to prevent distortion/twisting of the vehicle body, which can lead to inaccurate measurements of the portal.

It is important to follow all instructions. All instructions must be conducted without air/electric power unless mentioned otherwise. The instructions should be executed for the left and right door leaf when the system contains two door leaves. A well-adjusted door system is less vulnerable to failure. The right maintenance is crucial for the durability of the door system.

Whenever the amount of cycles is past, we advise to execute the applicable maintenance. At the table below, we address the chapter names.

Cycles assumption	Minimal maintenance	Applicable for
75.000	Every 3 months	Safety parts Operational checks
150.000	Every 6 months	Wear parts
300.000	Every 12 months	Parts inspections

Table 5: Maintenance frequencies

Execute at least the minimal maintenance intervals.

NOTICE

After maintenance has been completed, the settings must be applied as described in the commissioning manual. Be aware to use the commissioning manual that came with this product.

3.1 Safety parts

The checks in this chapter are safety critical. If these parts are not installed correctly, it can have great consequences for the safety of the system. When the system has two door leaves, the checks must be executed for both sides.

Ventura Systems recommend to execute all safety checks regularly and at least according to the maintenance intervals mentioned in the table [Maintenance frequencies](#).

3.1.1 Lever block

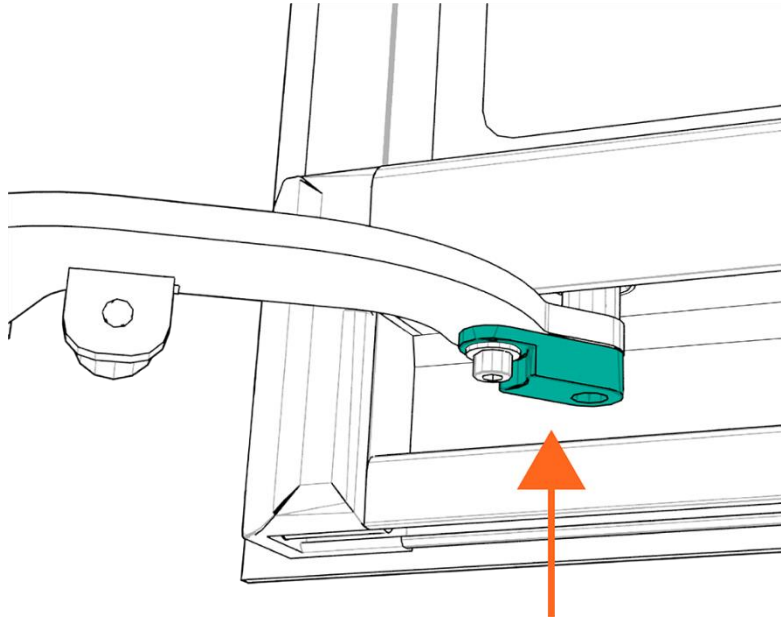


Figure 1: Lever block



WARNING!

When the lever block is not in place, the door leaf could get off the guiding roller when twisted, leading to situations with a high risk of injury to persons. It is very important the lever block is in place.

1. Check if the lever block is present at the bottom of the lever.
2. Check if the lever block is in the right position. It has to be inside the rail of the door leaf.
3. Check if the bolt is fastened with loctite and on torque.

3.1.2 Emergency release

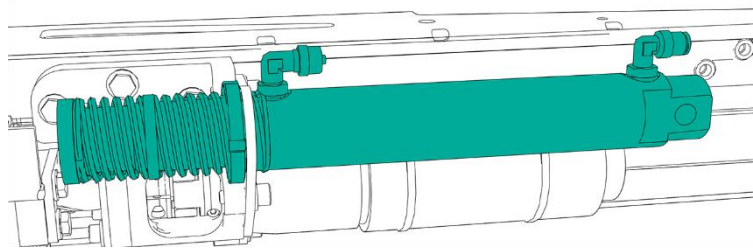


Figure 2: Emergency release

The emergency release is not always supplied by Ventura. In case the emergency release is supplied by Ventura, execute the following check.

Apply power and/or pressure to the system and put the door(s) in closed position.



CAUTION!

Be aware the system could move when applying power and/or pressure to it.

1. When the system is active, activate the emergency release.
The following events should occur.
2. The power/pressure is released from the system.
3. The door(s) can be opened manually.
 - Reset the emergency release.
 - Open and close the door(s) using the power source.

3.1.3 Sensitive edge

- Press against the right mid seal at a height of 1 meter or less. The doors go to open position.
- Press against the left mid seal at a height of 1 meter or less. The doors go to open position.

When the door leaves do not open when pressing the mid seals as described, perform the following checks or execute the repair instruction.



WARNING!

Remove the power and/or pressure from the system before you continue.

Disconnect the sensitive edge.

- Remove the bolts which connect the door leaf to the door arm.
- Disconnect the connector from the spiral cable.
The full door leaf could be removed to continue, in which case also the shaft bottom lever must be disconnected from the door leaf, by removing the lever block,
or a second engineer needs to hold the door, while the checks are executed.
- Connect a multimeter to the connector of the sensitive edge. Pins 1 and 7.

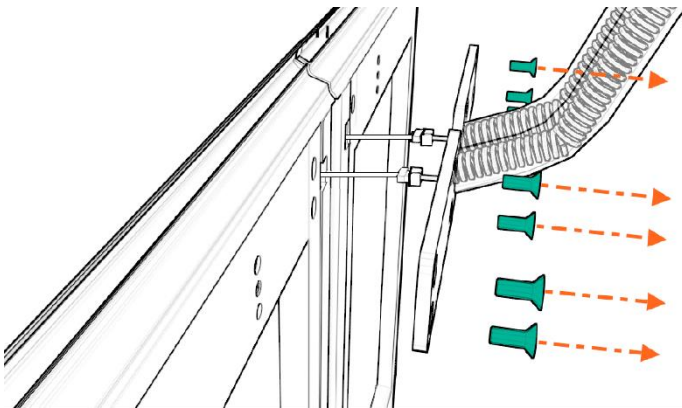


Figure 3: Dismount the door leaf

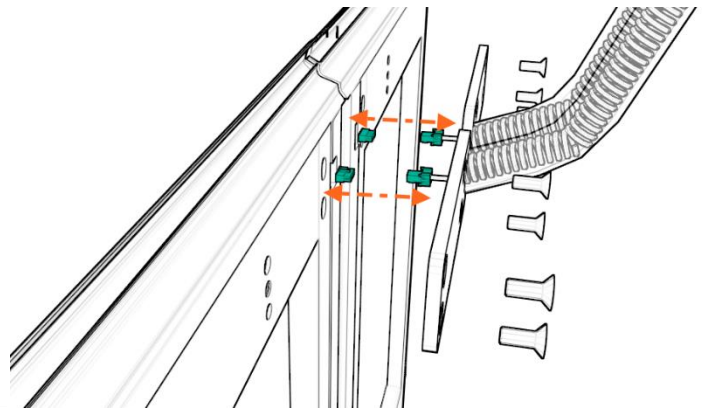


Figure 4: Disconnect the sensitive edge connectors

1. Be sure there is no force pressing the mid seal which can activate the sensitive edge. Resistance is 1200 or 8200 Ω depending on the resistor of the sensitive edge.
2. Apply force onto the mid seal of the door leaf. Resistance is approximately zero ($R \approx 0 \Omega$).



CAUTION!

The sensitive edge is malfunctioning when, if activated, the resistance is infinite ($R = \infty$).

In case all checks are approved, reinstall the door leaves following the instructions in the installation manual. Do place the lever block after mounting the door leaves, according to this installation instruction:



WARNING!

The lever block has to be placed back to lock the door leaf in place.

Put loctite 243 on the bolt.

- Place back the block to its position on the bottom of the lever and fasten it.
- If the block has a hole with a slit (see image), make sure the slit is shifted over the fastener.
- Tighten the fastener.

Apply torque = 8 ± 1 Nm.

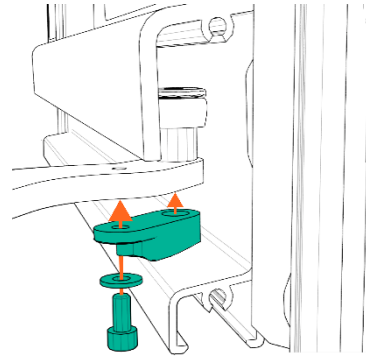


Figure 5: Mount lever block to lock guide roller in door rail (cross section)



Figure 6: Lever block with slit (if applicable)

Also execute the calibration of the doors, following the instructions in the installation manual.

3.1.4 Obstruction detection unit

Only applicable for pneumatic systems.

Apply power and/or pressure to the system and put the door(s) in closed position.



CAUTION!

Be aware the system could move when applying power and/or pressure to it.

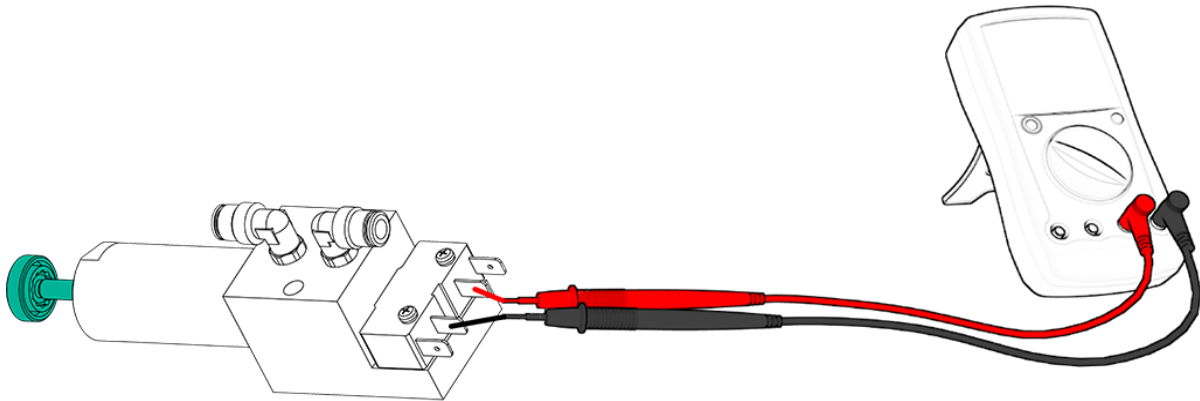


Figure 7: Connect multimeter to the obstruction detection unit

1. If a signal is measured, the obstruction detection unit works properly.



WARNING!

Remove the power and/or pressure from the system after executing this step and before you continue.



3.1.5 Pneumatic potentiometer tension bracket

NOTICE

Execute the following step only if the system is pneumatic and has a potentiometer.



CAUTION!

This step is critical for the positioning of the door. When this part does not function fully, errors will occur.

- Check if the spring has no wear on it.
- Check if the spring has tension.

Check if the rollers are not worn, and clamp the shaft as shown in the image.

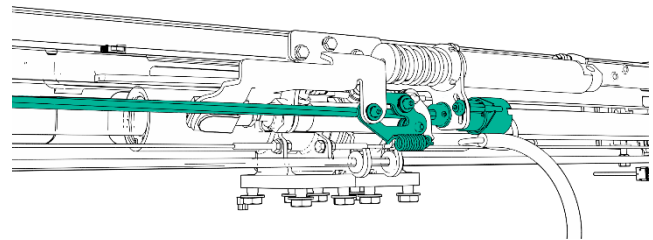


Figure 8: Potentiometer with tension bracket

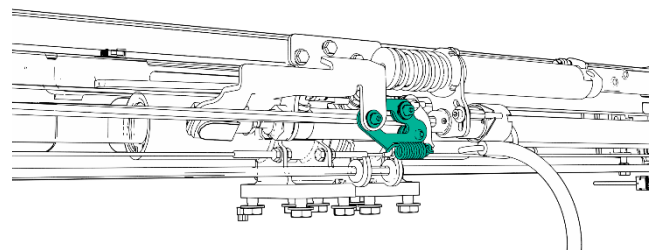


Figure 9: Tension bracket

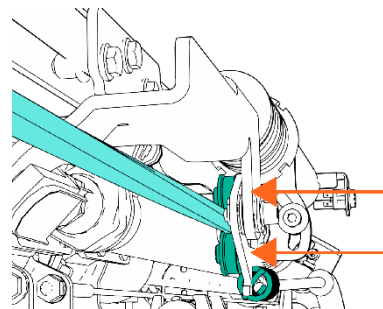


Figure 10: Rollers and spring

3.1.6 Microswitches (Switch & Cams)

The microswitches are optional. When the door system has one or more microswitches, do the following checks. When the door system has no microswitches, skip this step.

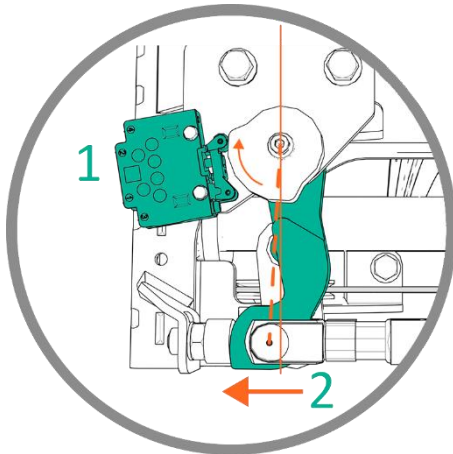


Figure 11: Microswitch and over center lever, top view

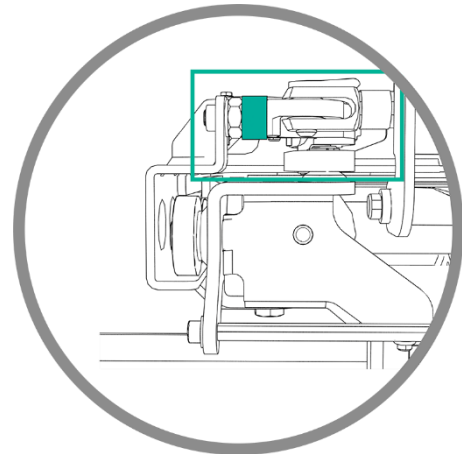


Figure 12: Over center soft stopper, side view

The microswitch closed position (1) is located in the left part of the door mechanism and is activated/released by the over center lever.

When the doors close, the rod (2) is pushing the lever over center, shown by the dashed orange line making an angle with the center line. In this process, the microswitch closed position is activated. When the doors open again, the switch is released. See left image.

The over center soft stopper is shown in the image to the right. It comes in three types, recognized by the number of units that determine its length, see below (magnification of the marked area in the above image):

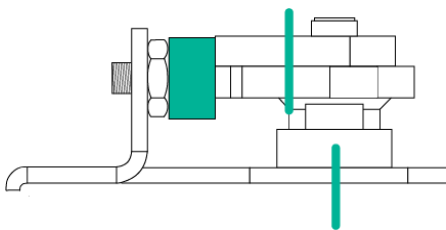


Figure 13: Over center electric with unlock cylinder

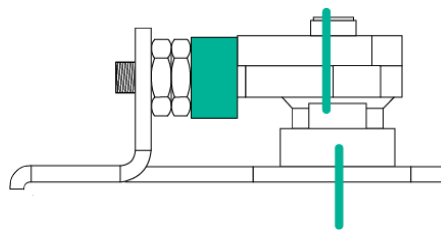


Figure 14: Over center pneumatic with unlock cylinder

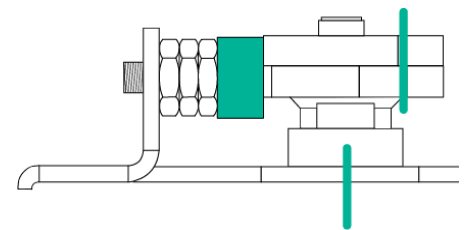


Figure 15: Pneumatic without over center function

The green marks in the images indicate the positions of the rotation centers of the lever, the upper in front (on the rod), the lower in the back (on the mechanism frame).

Door mechanisms that go over center need to be adjusted. This could be done using the Ventura adjustment tool 6 mm – 8 mm P/N VB8538.

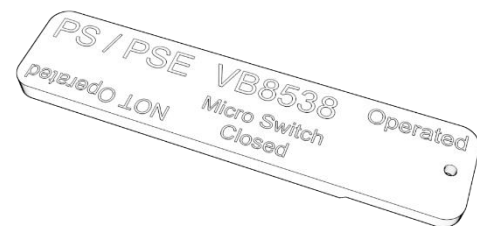


Figure 16: Adjustment tool VB8538

Door systems that go over center either have a type 1 or a type 2 soft stopper.

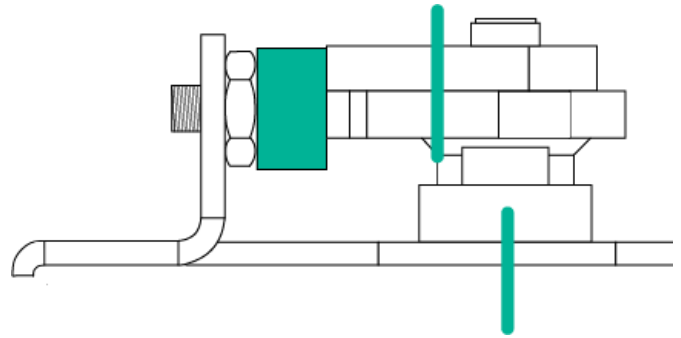


Figure 17: Over center position

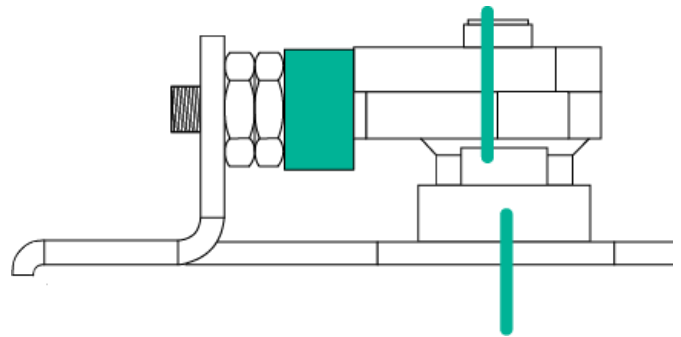


Figure 18: Over center position



WARNING!

Pinch-point hazard!

The following steps have to be performed while parts of the door system are moving.

When the doors are in open position, the micro switch open (1) is activated. This micro switch is not adjustable.

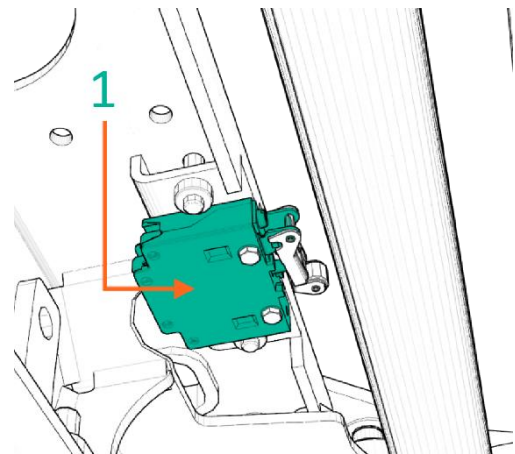


Figure 19: Micro switch open position

When the doors are in closed position, the microswitch closed position (2) has to be activated. If the microswitch closed position is not activated, follow the next steps to adjust it.

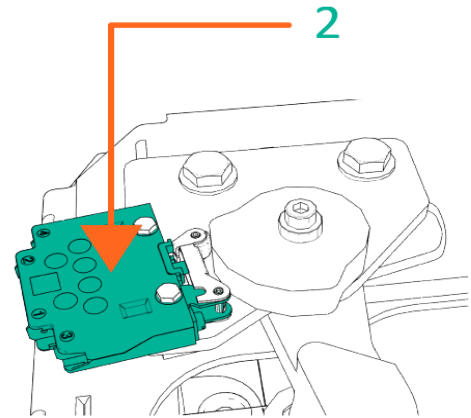


Figure 20: Micro switch closed position

- Place the door in an open position.
- Place the 6 mm side of the adjustment tool between the door mechanism and the end stopper (see image).
- Close the door and move on to the next steps.
Be aware of pinch point hazard.

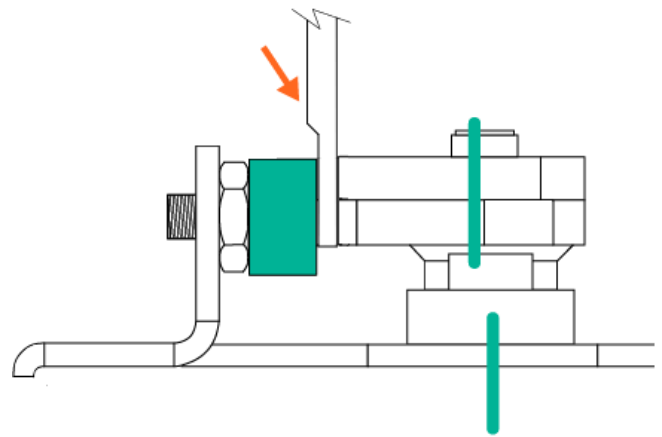


Figure 21: Position 6 mm adjustment tool

- Unscrew the cam with an Allen key.
- Turn the cam to a position where the microswitch activates (see image).
- Fasten the cam with an Allen key.
- Place the door in an open position and move on to the next steps.

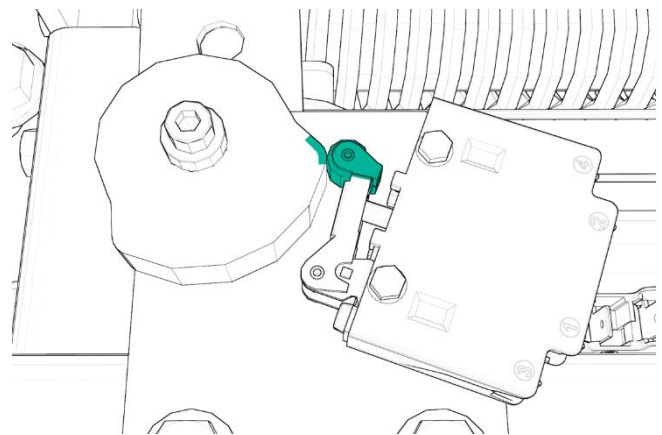


Figure 22: Adjusting micro switch closed position



- Place the 8 mm side of the adjustment tool between the door mechanism and the end stopper (see image). Be aware of pinch point hazard.
- Close the door.
- Check if the microswitch closed position activates. The microswitch should NOT be activated.
- If the microswitch activates, redo the previous steps.

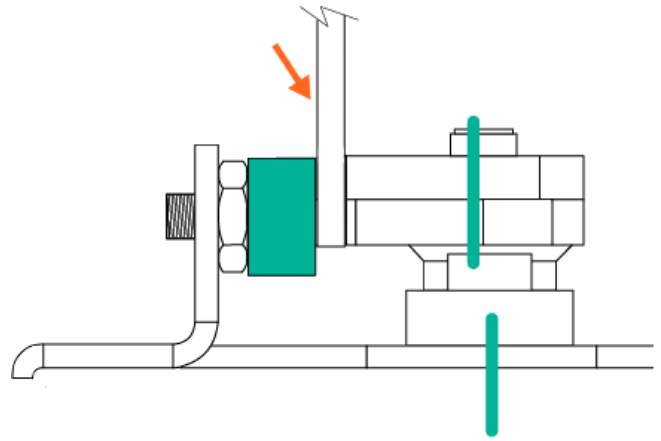


Figure 23: Position 8 mm adjustment tool



WARNING!

Remove the power and/or pressure from the system after executing these steps and before you continue.

3.2 Wear parts

These parts wear out and must be replaced when damaged, worn, after the prescribed cycles or after the prescribed time the parts are in usage. When a part has an amount of maximum cycles, it will be mentioned.

3.2.1 Spindle Nut

This step is only applicable for electric systems.

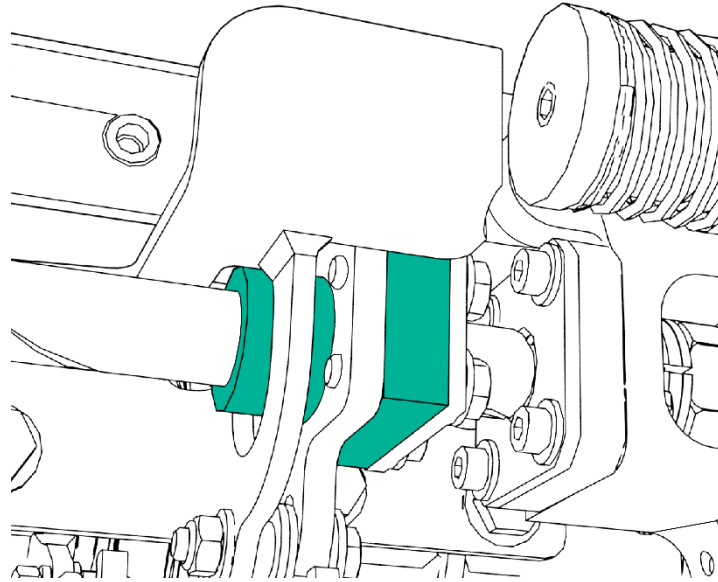


Figure 24: Spindle nut

1. There is no play between the spindle and spindle nut.
To test this, manually twist the spindle.
2. There is no grease or dirt on the spindle, nor on the spindle nut.

3.2.2 Over center soft stopper

The over center soft stopper is located in the left part of the door mechanism, see image.

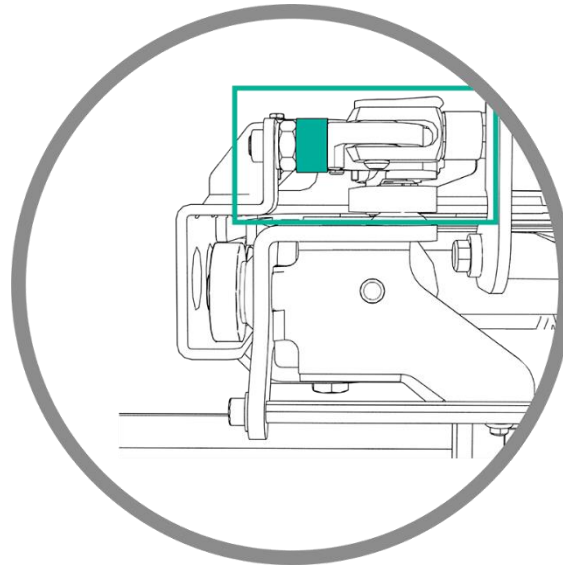


Figure 25: Over center soft stopper, side view

Apply power and/or pressure to the system and put the doors in closed position.

 **CAUTION!**

Be aware the system could move when applying power and/or pressure to it.

Three types are possible, dependent on the supplied door system:

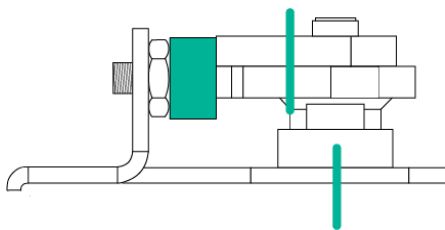


Figure 26: Over center electric with unlock cylinder

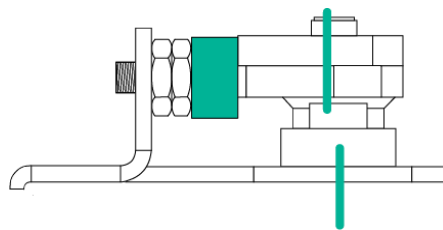


Figure 27: Over center pneumatic with unlock cylinder

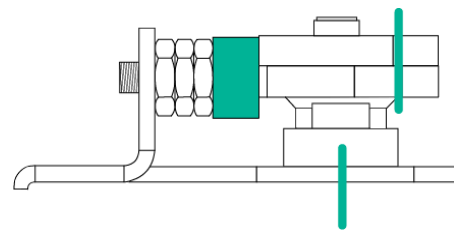


Figure 28: Pneumatic without over center function

Just like in the section on the Microswitches, in the images the green marks indicate the rotation centers of the over center lever, the upper mark the connection to the rod and the lower mark the connection to the mechanism frame.

1. The lever touches the soft stopper in closed position, with power/pressure.
2. The rubber bush of the soft stopper is not worn. Inner dimension according to system drawing.
If the bush is worn, the system closes with a lot of noise.

 **WARNING!**

Remove the power and/or pressure from the system after executing this step and before you continue.

3.2.3 Cushioning rubber bearing house

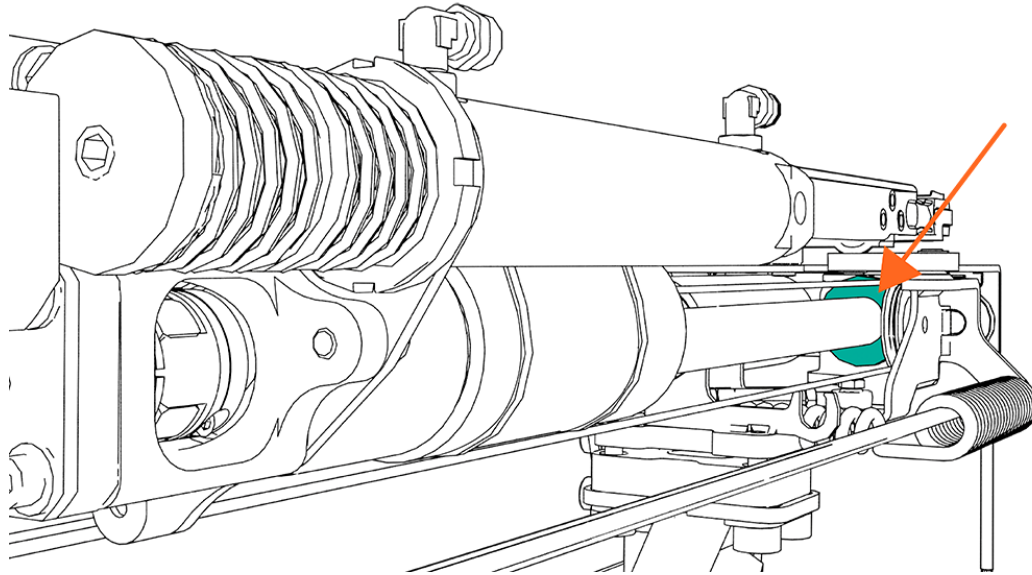


Figure 29: Rubber cushioning ring

1. The cushioning rubber is present at both sides of the mechanism.
2. There is no visible damage on the cushioning rubber.

3.2.4 Guide rollers

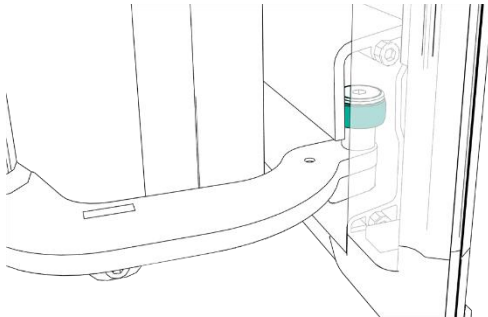


Figure 30: Bottom guide roller

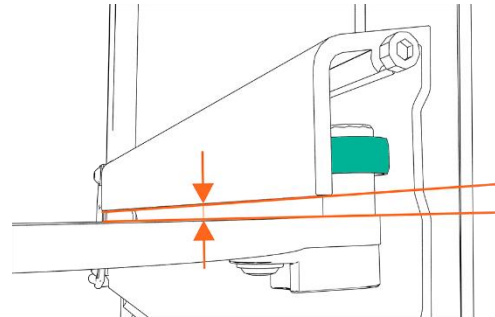


Figure 31: Distance between bottom lever and guiding rail

1. The guide rollers on the lever(s) are not worn or damaged in any way. Check for damage visually and feel if there are no worn places on the guide rollers.
The guide rollers are located at the bottom lever. See image above.
2. The clearance between the bottom lever and the guiding rail is 4-8 mm. over the full length of the door movement.
If it is not, adjust the height of the door shaft following the installation manual.

3.2.5 Catch block

Apply power and/or pressure to the system and put the door(s) in closed position.



CAUTION!

Be aware the system could move when applying power and/or pressure to it.

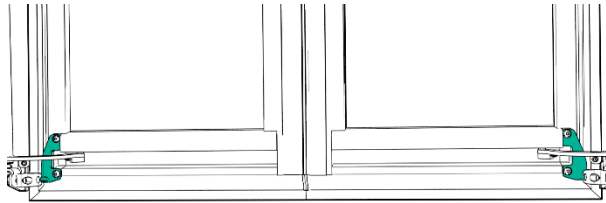


Figure 32: Catch wedge and catch block locations

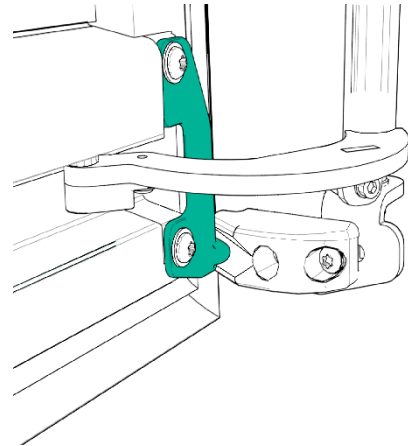


Figure 33: Check catch wedge

1. Check if the catch wedge is caught by the catch block when the door is closed.
2. The catch block or catch wedge is not worn or damaged.



WARNING!

Remove the power and/or pressure from the system after executing this step and before you continue.

3.2.6 Bottom stopper

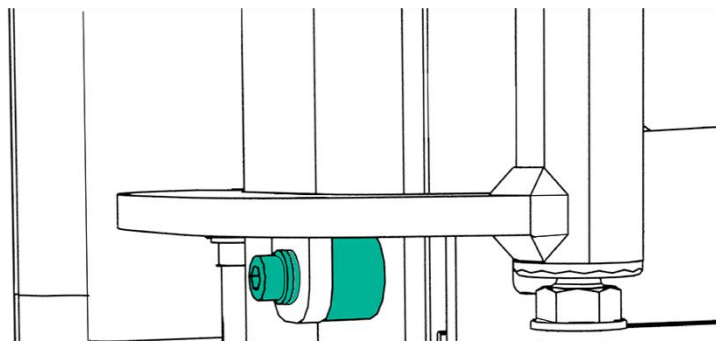


Figure 34: Bottom stopper

1. Check if the bottom stopper is present.
2. The bottom stopper is not worn or damaged.

3.3 Parts inspections

These parts can get affected by usage and must be re-adjusted or cleaned when needed. Check the distance settings of the door system in open and closed position following the installation manual. Check the torque settings of the door system following the installation manual.

3.3.1 Door shafts

- Check if the door shaft is free from vertical play (up and downward movement).

If the door shaft is free from vertical play, continue without executing this step. If there is play, execute the following checks.

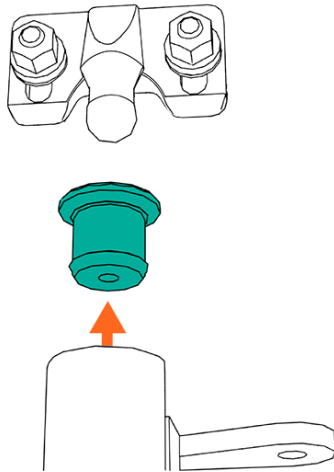


Figure 35: Top bearing door shaft

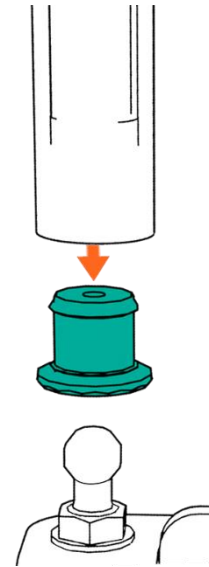


Figure 36: Bottom bearing door shaft

1. Check the settings following the installation manual.
2. The bearing bush and pivot point at the top of the door shaft are not worn or damaged.
3. The bearing bush and pivot point at the bottom of the door shaft are not worn or damaged.



3.3.2 Filter regulator

Check if the system is equipped with a regulator or a filter regulator. If there is no regulator or a filter regulator, skip this step.

1. Check if the pressure of the pneumatic system is 8* bar (116 PSI).
*in case of an electric system with a non-Ventura DCU,
check if the pressure of the pneumatic system is 6 bar (87 PSI).
2. The filter regulator is semi-automatic, meaning the filter will drain itself when the pneumatic pressure drops below 0.3 bar (4.3 PSI) and the drain is open.
3. Replace the filter when it is not clear white.

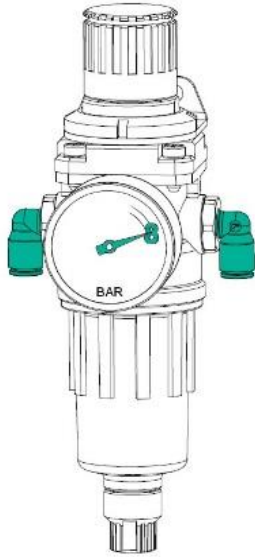


Figure 37: Filter regulator

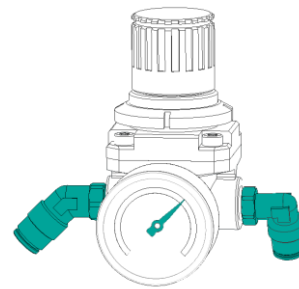


Figure 38: Regulator

Open drain by turning clockwise
Close drain by turning counter clockwise

NOTICE

Depending on the filter regulator's location, it is advised to keep the drain closed so it will not spill dirt over vital parts of the vehicle.

3.3.3 Tension steel cables

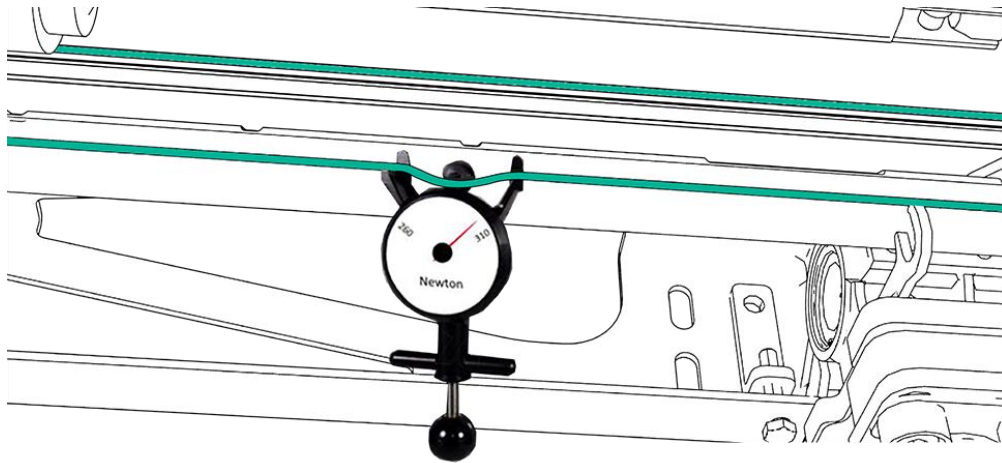


Figure 39: Tension meter

- Put the doors in appr. 70% open position.
- Apply the tension meter as described by the manufacturer.
 1. Check if the tension in the cable is 260-310 Newton.
 2. When using a sonic tension meter, the tension has to be 33-39 Hz (for 1350 systems).

3.3.4 Clamping force test

Be assured all safety features of the system are active. Execute the obstruction test following the applicable regulations for your company. Regulations met by Ventura are REG107, TS160.

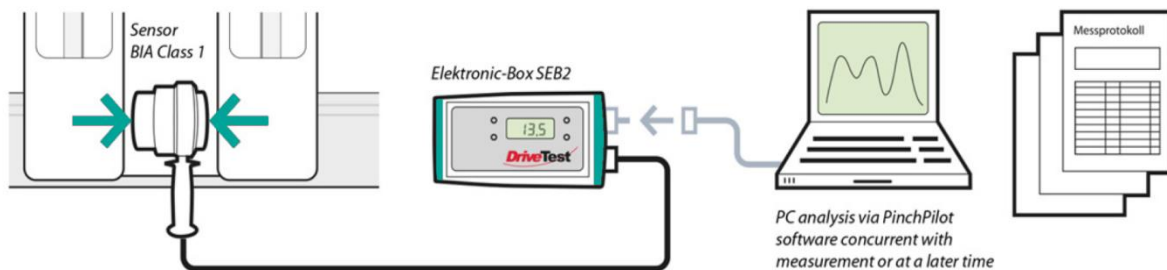


Figure 40: Obstruction test setup

1. Setup the measurement system following the user manual included with the measurement tool.
2. Apply power and/or pressure to the system.



CAUTION!

Be aware the system could move when applying power and/or pressure to it.

3. Put the doors in open position.
4. Execute the test according to the applicable regulations.

When the test is not successful;

- Check the safety parts of system.
- Check adjustments following the installation manual.



WARNING!

Remove the power and/or pressure from the system after executing this step and before you continue.

3.3.5 Grease bearing house

The bearing house is greased before delivery. In some cases the bearing house needs a refill. (Use "Arcanol MULTITOP" or a grease with similar specifications).

NOTICE

If a refill is needed with grease, do not use more as 20gr. When the bearing house has too much grease, the friction will hinder a smooth opening and closing of the door system.

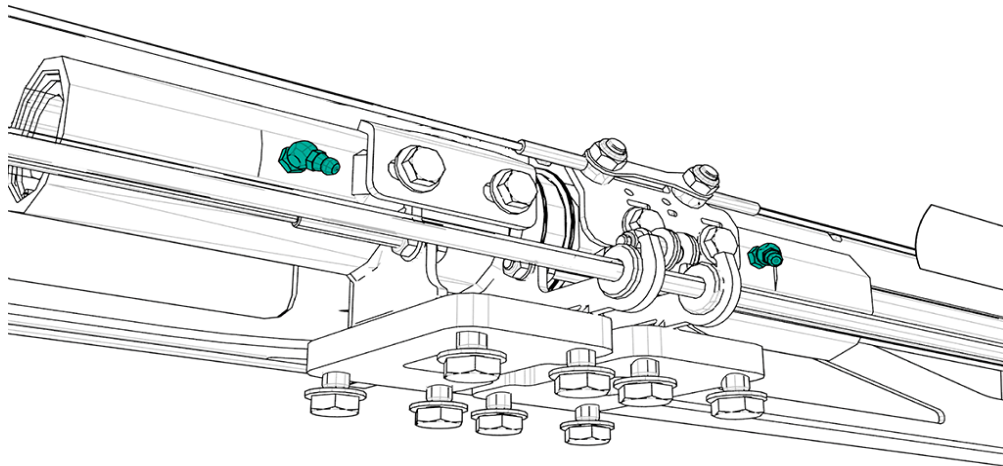


Figure 41: Grease bearing house

- Check if the bearing houses run silent and smoothly over the guiding shaft.
- Check if there is thin grease on the guiding shaft. The grease could be refilled.
- Insert 10 grams of grease in the bearing house when needed.
- Move the system from open to closed position a few times and reassess if the bearing houses need more grease.

3.3.6 Grease spiral cable guiding shaft

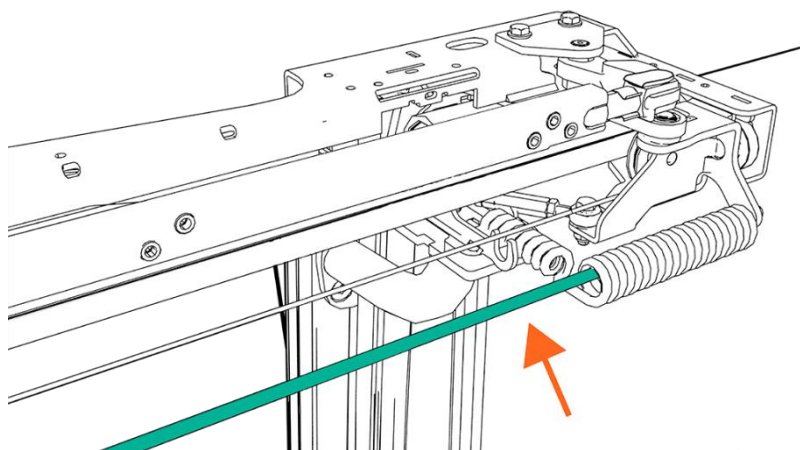


Figure 42: Spiral cable guiding shaft

Put the doors in open position.

1. The shaft is clean of dirt.
2. There is a layer of grease on the guiding shaft which helps the spiral cable run smoothly over the shaft.

Apply grease when needed. Use "Kroon Multi Purpose Lithep EP2" or a grease with similar specifications.

4 Torque Settings

All generic plug slide settings that require torque tightening are given in this chapter. Check all mentioned fasteners on the correct torque settings. In case of a double leaf system, check both sides. The torque settings of marked fasteners may be verified by checking if the marking is intact.

The fasteners which connect Ventura parts to the vehicle are, in most cases, non-Ventura parts. Therefore the torque of these fasteners is not defined by Ventura.

After setting a part to torque specification, mark the connection with a torque marker.



Figure 43: Mark the fasteners with a torque marker

The position numbers in the image below correspond to the detailed drawings following, in which the required torque values are given.

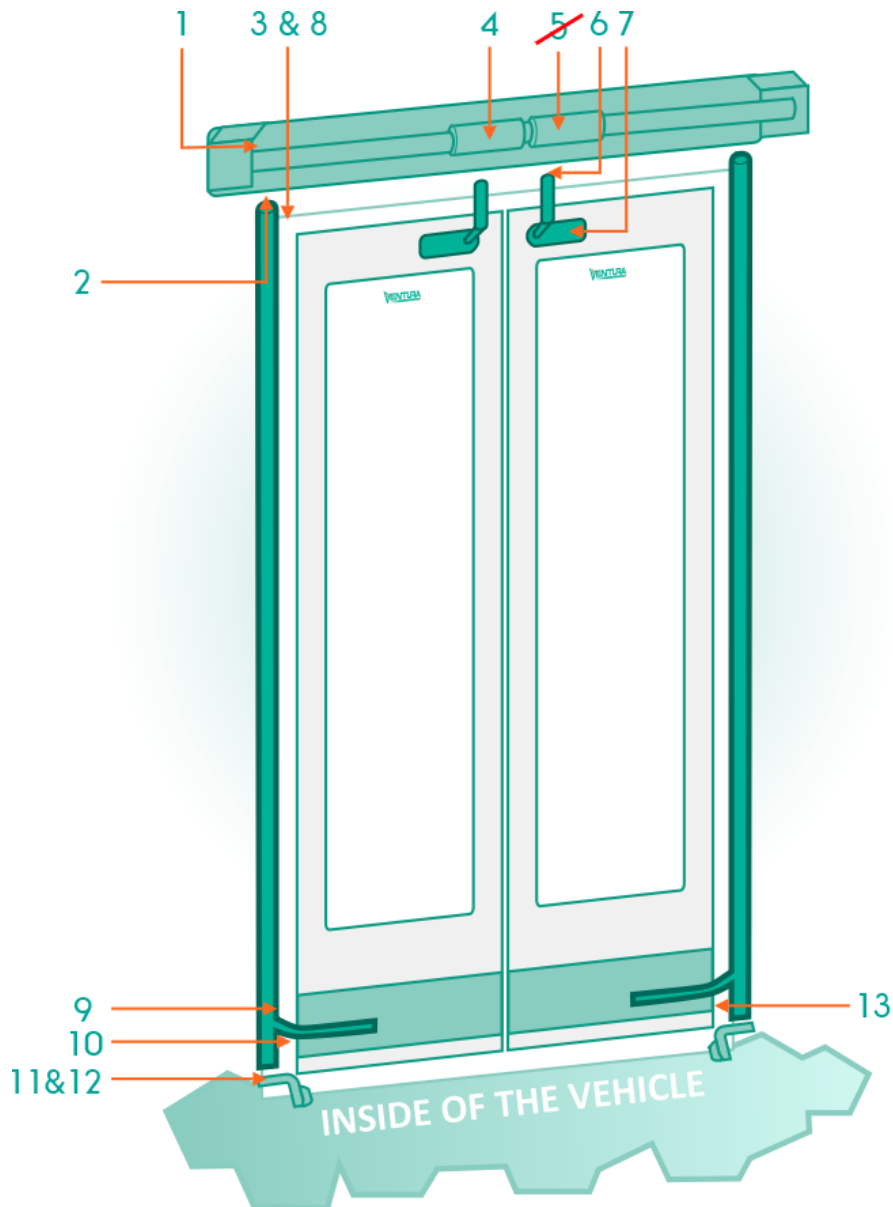
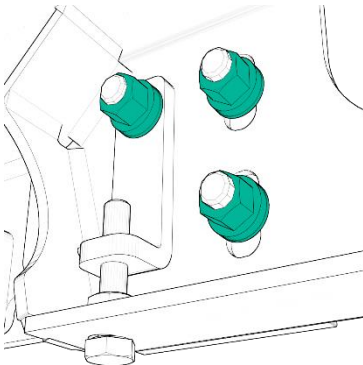


Figure 44: Torque setting overview

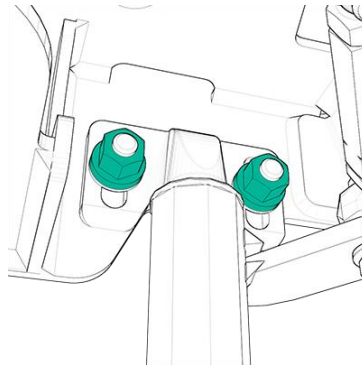


Position 1



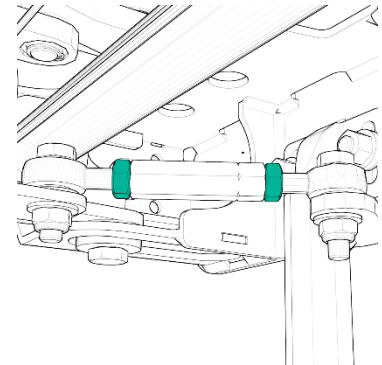
45±4 Nm, 3 per side

Position 2



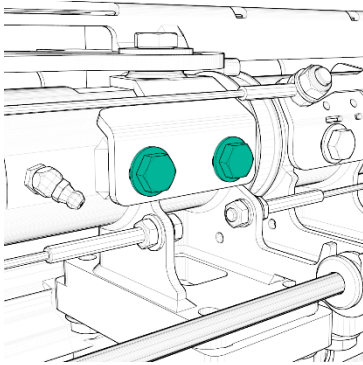
22±2 Nm, 2 per side

Position 3



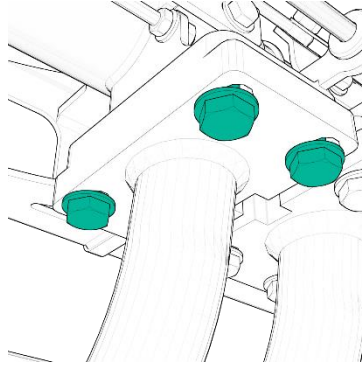
22±2 Nm, 2 per side

Position 4



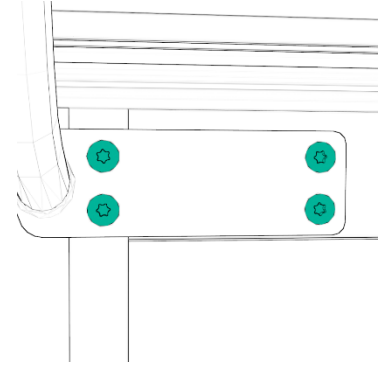
22±2 Nm, 2 pcs

Position 6



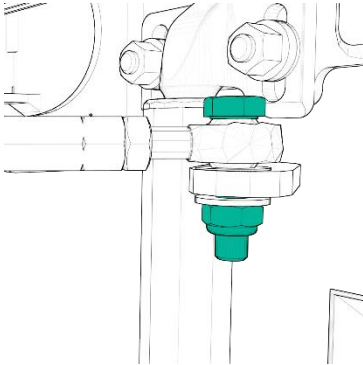
45±4 Nm, 4 per side

Position 7



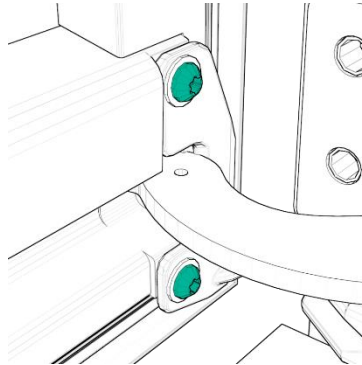
59±5 Nm, 4 per side

Position 8



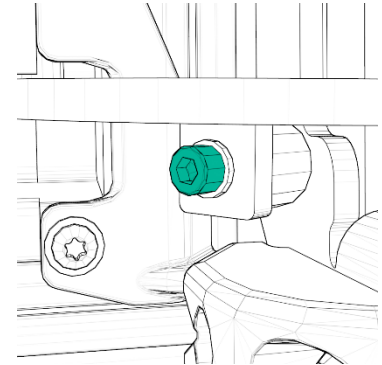
22±2 Nm, 2 per side

Position 9



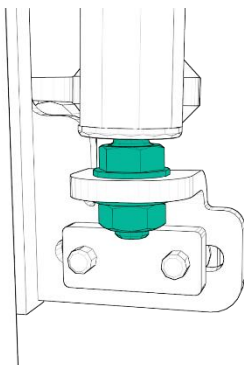
26±2 Nm, 2 per side

Position 10



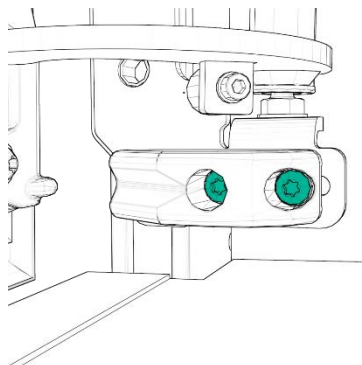
9±1 Nm, 1 per side

Position 11



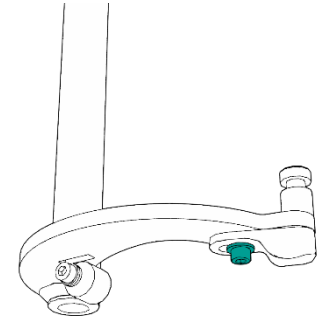
45±4 Nm, 1 per side

Position 12



20±2 Nm, 2 per side

Position 13



Loctite 243 on the bolt.
8±1 Nm, 1 per side

5 Operational checks

5.1 General checks before power

Execute these checks before applying power.



WARNING!

Applying power to an unchecked system may result in a hazardous situation causing death or serious injury.

No.	Check	Verified by	Approved
1.	Be assured all fasteners are on torque where required according to the installation manual.		
2.	Check if all cables/tubes on the system are connected.		
3.	Check if all parts are in place.		
4.	Manually check if the door leaf/leaves open and close without obstruction.		
5.	All safety parts are connected.		

After these checks, the power may be applied.

5.2 Operation and controls

These checks are all with power and/or pressure.

No.	Check	Verified by	Approved
1.	In case of pneumatic parts: there is no leakage in the pneumatic system. Also, no leakage while opening and closing the doors.		
2.	In case of electric parts: check if the electric parts and wires are not short circuited or damaged.		
3.	Check if all settings match the installation manual.		

5.3 Safety checks

These checks are all with power and/or pressure.

No.	Check	Verified by	Approved
1.	All emergency buttons are functioning.		
2.	Check pneumatic obstruction detections (if applicable).		
3.	Apply an obstruction while closing. Doors open again. Test left and right separately. *CAUTION!		
4.	Apply an obstruction while opening. Doors go to half open position. Test left and right separately (if applicable). *CAUTION!		
5.	Check if the mechanism goes over center in closed position (if applicable). The over center lever at the left in the mechanism must touch the end stop (see relevant chapter).		
6.	In case of a trolley door system, check if the insulations are not worn nor damaged.		



CAUTION!

Do not use body parts to apply an obstruction.

Appendix A - Contact

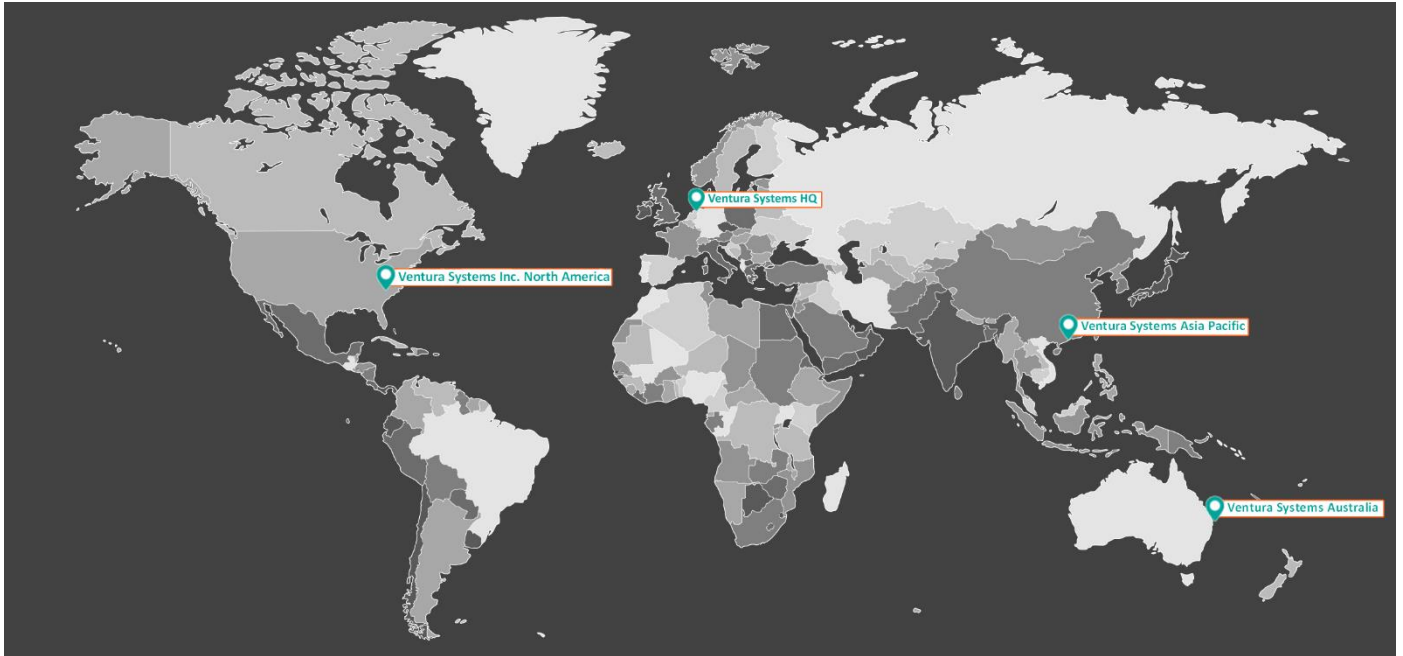


Figure 45: World map Ventura locations

Ventura Systems HQ		Ventura Systems Asia Pacific	
	De Marne 216 8701 MH Bolsward The Netherlands		Unit 10 on the 13/F Fotan Industrial Centre 26-28 Au Pui Wan Street Hong Kong
	+31 515 577750		+852 2712 6001
	support@venturasystems.com parts@venturasystems.com		support.ap@venturasystems.com
	www.venturasystems.com		www.venturasystems.com

Table 6: General contact and parts information HQ and Asia Pacific





Ventura Systems Australia		Ventura Systems Inc North America	
	PO Box 284 Sanctuary Cove QLD 4212 Australia		160 Gibson Ct NC 28034 Dallas
	+61 474 031074		+1 704-691-0311
	AUSSupport@venturasystems.com.au		support.inc@venturasystems.com
	www.venturasystems.com		www.venturasystems.com

Table 7: General contact and parts information Australia and North America

Contact your local agent for parts.