



Service instruction: SM007E  
Revision: 1  
Date: 29-07-2010  
Page no.: 1

**Title: Replacing the shaft for the bearing housing cartridge.**

**1. Purpose:**

This work instruction describes how to replace a shaft in the bearing housing cartridge in the field.

Revision no.	Date:		
1	29-07-2010	Description of the change:	First release
		Name & function:	Pedro Stam Service Engineer

**Title: Replacing the shaft for the bearing housing cartridge.**

**2. References:**

- 2.1. ISO 9001 (2008) §7.5.1 Control of production and service provision

**3. Definitions:**

- 3.1. None

**4. Forms:**

- 4.1. None

**5. Scope:**

- 5.1. This work instruction can be applied on all PSP bearing housing cartridges in the field.

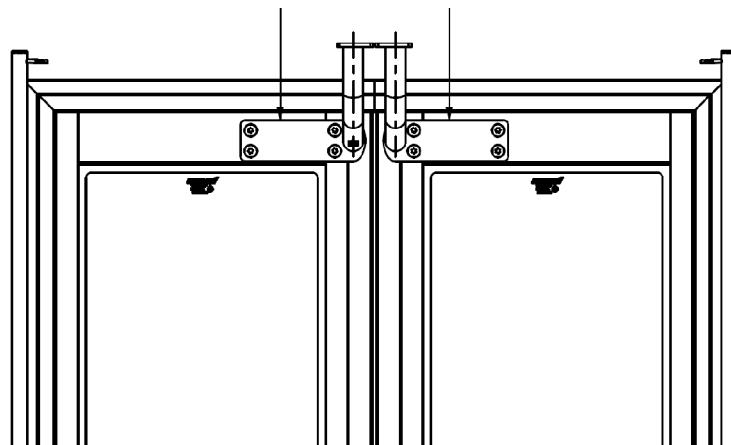
**6. Tools:**

- 6.1. Wrenches

**7. Execution:**

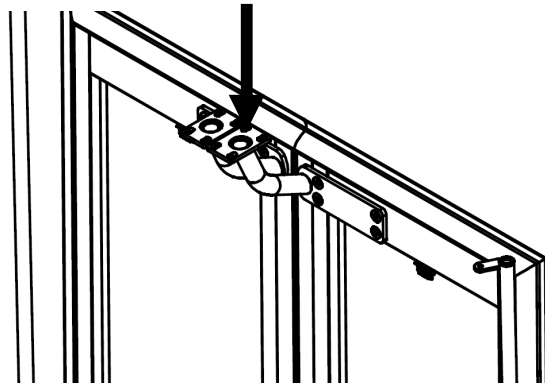
7.1. Removing the Bearing housing cartridge

- Depressurize the system.
- Make sure the door can't be operated from anywhere.
- If necessary shut off the battery.
- Remove the doors.
- Do this by removing the bolts that hold the door one by one, it is best to do this with two people.

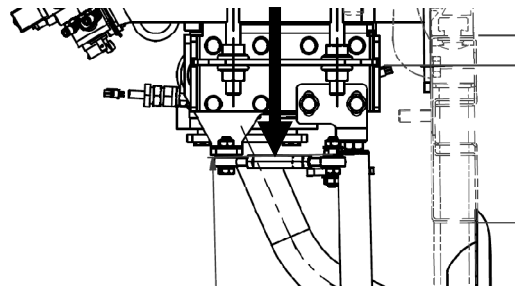


- Don't forget to disconnect the connectors.
- Remove the door arms from the mechanism.

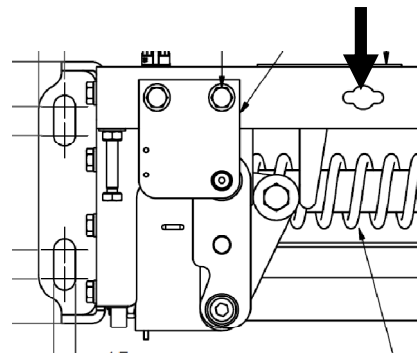
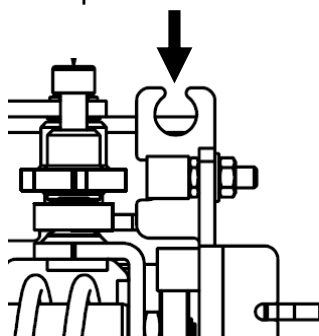
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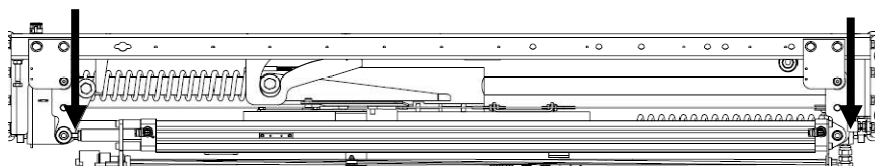
- Remove the connection rods



- \*The following information is for systems with a control unit.
- \*Locate the connectors for the sensitive edge and disconnect them
- \*Cut them free.
- \*If the control unit is in front of the system then remove it by loosening the bolts and disconnecting it from cylinder and other cables.
- Follow the sensitive edge cable and loosen the nuts that are holding them in place on the frames.

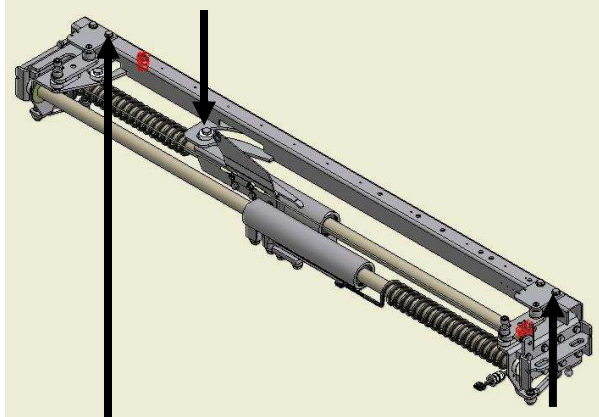


- Make sure the cables are completely free.
- Loosen the cylinder from one side, if necessary remove cylinder completely.

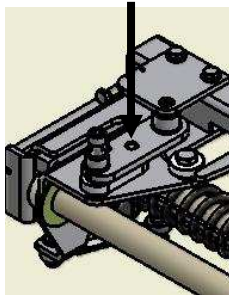


**Title: Replacing the shaft for the bearing housing cartridge.**

- Remove the guide roller on top of the bearing housing cartridge.



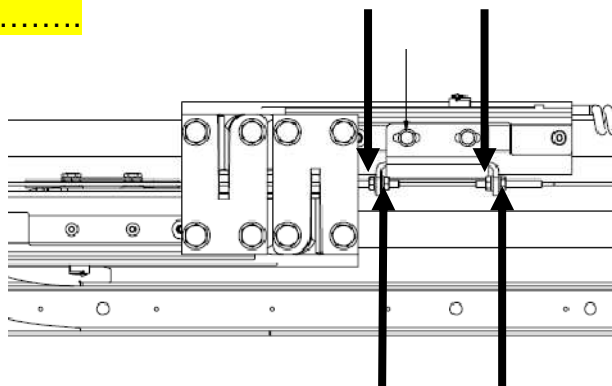
- Remove the suspension plates on both sides by loosening the bolts.
- Once these have been removed you can pull the hinge out of the frame.



- The bearing housing cartridge is now loose and can be removed, pull it forward slowly until you can lift it out.
- Do this with two people.

**7.2. Disassembling the Bearing housing cartridge.**

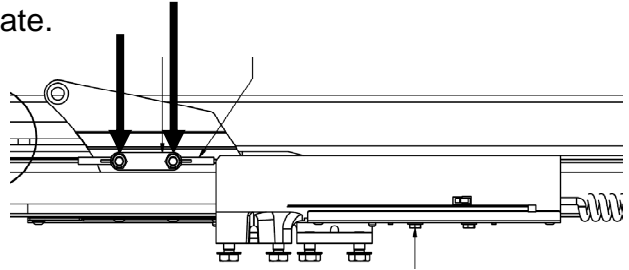
- Place the bearing housing cartridge on a level surface, preferably on



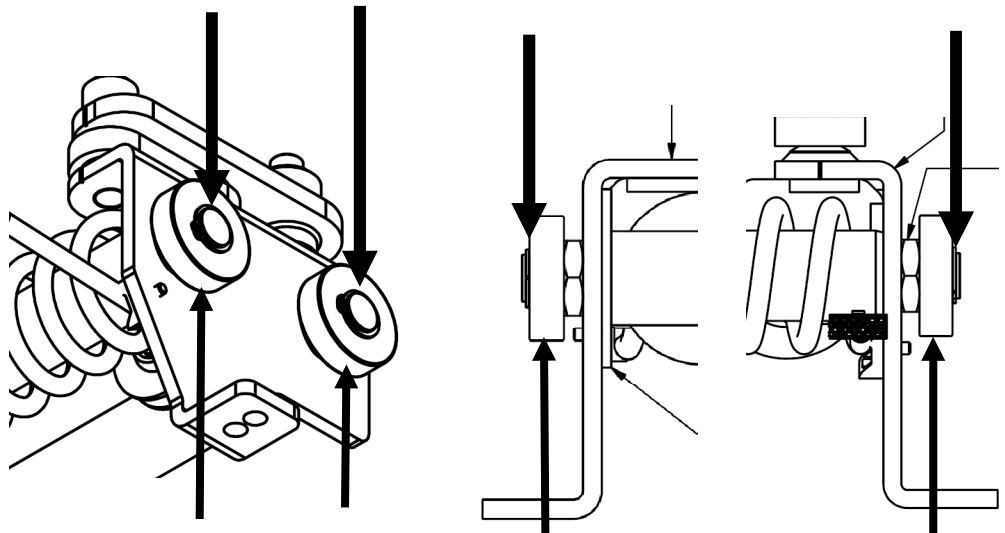
- First loosen the cable connecting the two bearings, using the tension nuts.

**Title: Replacing the shaft for the bearing housing cartridge.**

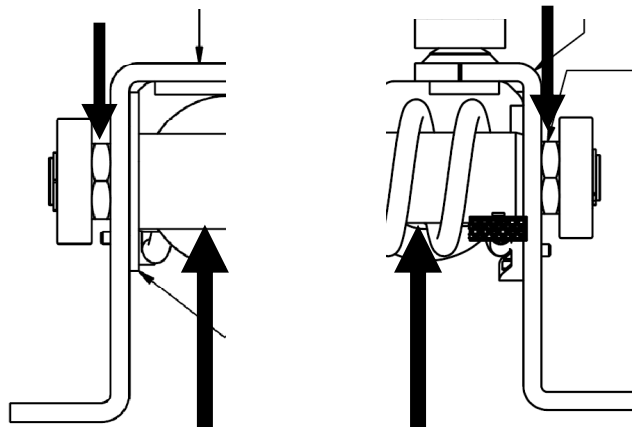
- Then remove the cable by loosening the bolts under the bearing and the nuts on the skate plate.



- Remove the retaining rings from the rollers on both sides of the bearing housing cartridge.
- Remove the rollers, this will not be easy, you might have to use a pulley.



- Once they are removed you can loosen the bolts / shaft.

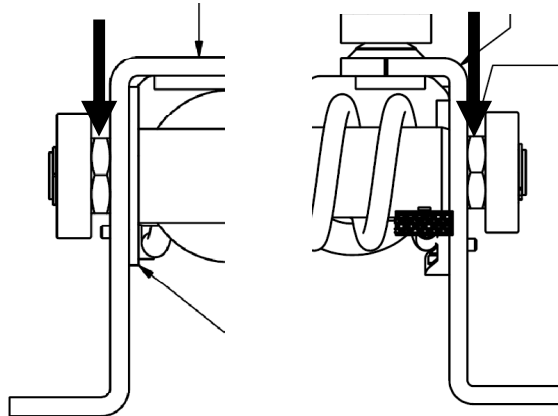


- After you have done this the bearing shafts will come off and you can remove the bearing from the shaft.

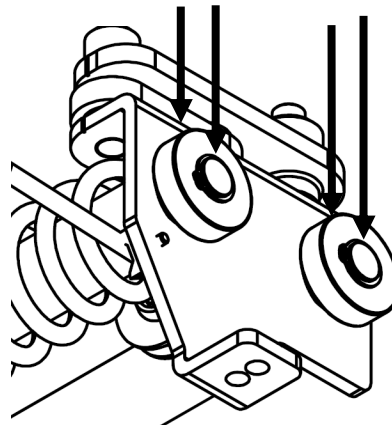
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7.3. Assembly of the Bearing housing cartridge.

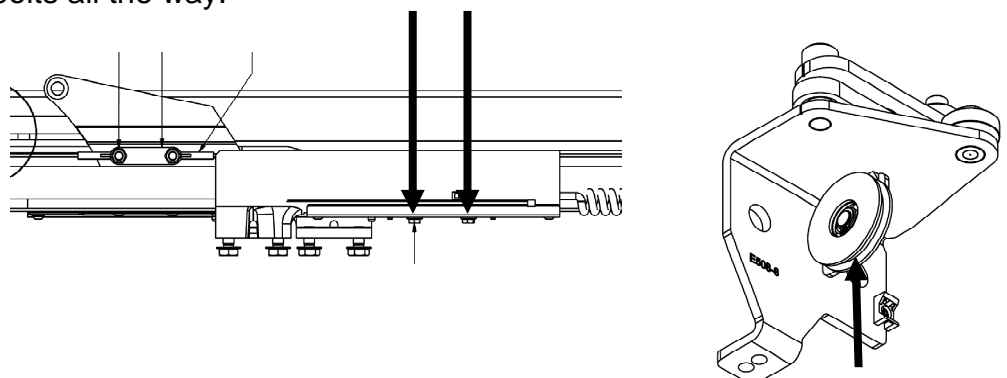
- After you have removed the bearing from the shaft place it on the new shaft.
- Make sure you put it on the shaft correctly.
- Place the shaft back between the two ends of the cartridge.
- Use the shaft bolts to seal it in place.



- It is very important that the shafts are 100% equal to each other and that the cartridge is not twisted.
- Place the rollers back on the cartridge and seal in place using the retaining rings.

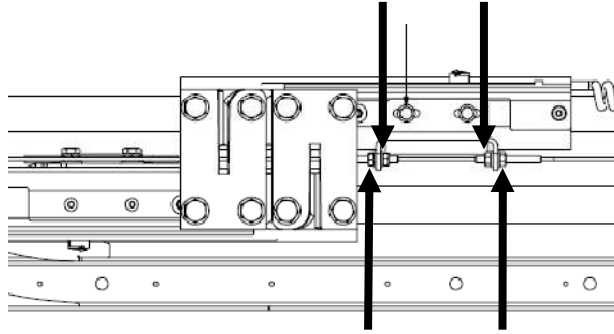


- Put the tension cable back on the bearing housing cartridge.
- Start by placing it on the bottom of the front bearing, don't tighten the bolts all the way.

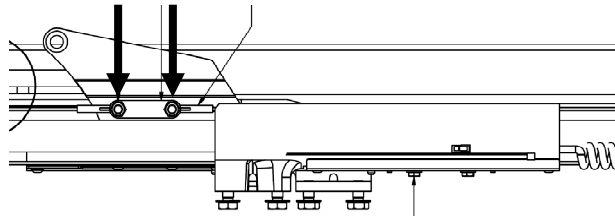


**Title: Replacing the shaft for the bearing housing cartridge.**

- Put the cable over the cable rollers and then to the back bearing.
- Now adjust the tension till it is between the 60 and 70 nm

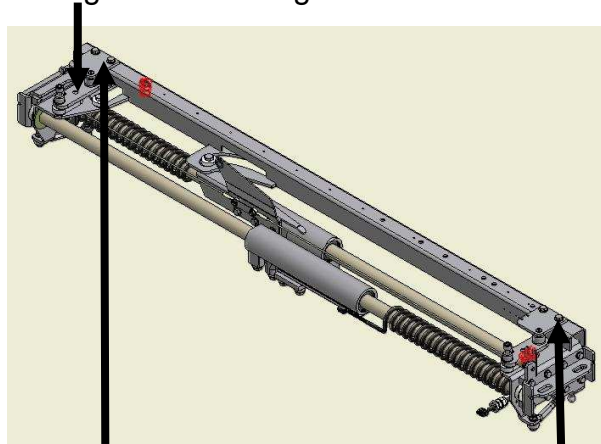


- When that is done make sure the tension nuts are sealed.
- Put the plate back on the cable on the back bearing and tighten.



**7.4. Placing bearing housing cartridge.**

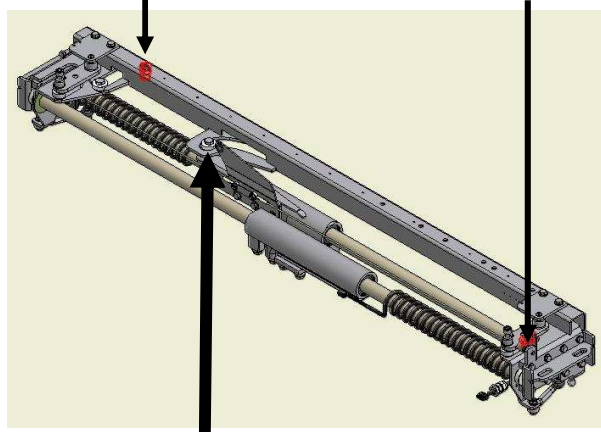
- Place the bearing housing cartridge back into the frame.
- Put the hinges back through their holes.



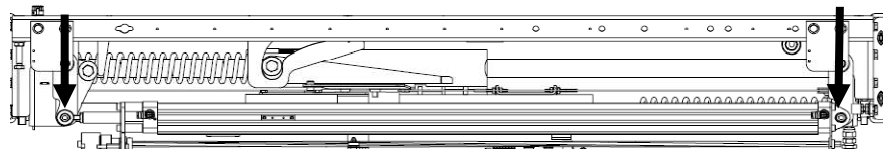
- Place the suspension plates back on the frame en tighten them make sure they are pulled back so the hinge is leveled.

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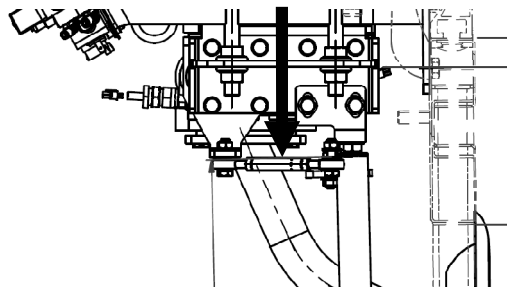
- Pull the cables for the Sensitive edge back thru there holes and tighten the nuts.



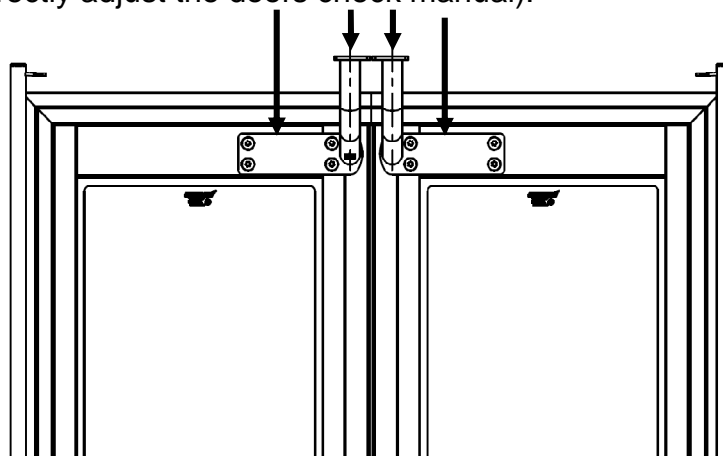
- Put the top guide roller back on the bearing housing cartridge.



- Place the cylinder back in the right position.
- \*replace the control unit and connect the tubes and cables.
- Reconnect the sensitive edge connectors en tie everything up with ty-raps.
- Replace the connection rods, remember the side on the mechanism goes below and on the door shaft on top.



- Replace the door arms, and the doors, don't forget the connectors (to correctly adjust the doors check manual).





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- Make sure the system has power and pressure.
- Test the door.
- When the door is in the open position push the front bearing of the bearing housing cartridge all the way to the end and tighten the bolts on the bottom.

