Title: Retrofit of a sensitive edge on a IG4 door system.

1. Purpose:
The purpose of this service instruction is to describe how to retrofit a sensitive edge on an IG4 door system.

2. References:
2.1. IATF 16949:2016 §8.5.1 Control of production and service provision

3. Definitions:
3.1. None

4. Scope:
4.1. Applicable for all pneumatic IG4 door mechanisms.

5. Tools:
5.1. Wire cutter
5.2. Knife
5.3. Wrench 13
5.4. Screwdriver PH2
5.5. Drill 10mm
5.6. Kit
5.7. Allan key 5
5.8. Steps

6. Needed parts:
6.1. Sensitive edge
6.2. Glue (Loctite 406)
6.3. Sealant (Simson ISR 70-05 AP)

7. Time needed:
7.1. 1½ hour

Revision no.	Date:		
2	03-07-2018	Description of the change:	Reference updated to IATF 16949:2016
		Name & function:	Gerard Sprietsma Process Engineer
1	05-11-2013	Description of the change:	Initial release
		Name & function:	Martin Rewti Service Engineer

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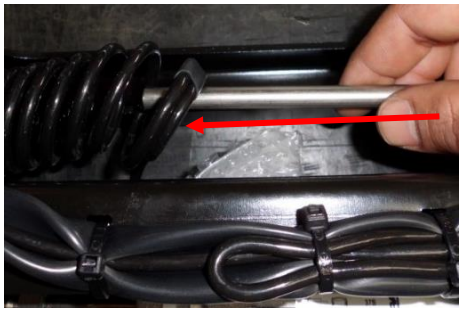
8. Execution:

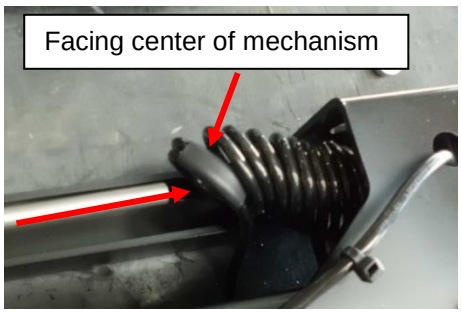
8.1. Important: Before commencing work, be sure to release all air pressure from the system!

8.2. <u>Mounting the cable rod and spiral cables</u>

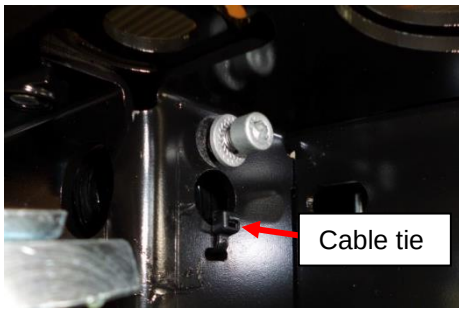
8.2.1. Slide the rod into the mechanism and through the spiral cable. Make sure the connected loops are facing towards the center of the mechanism.

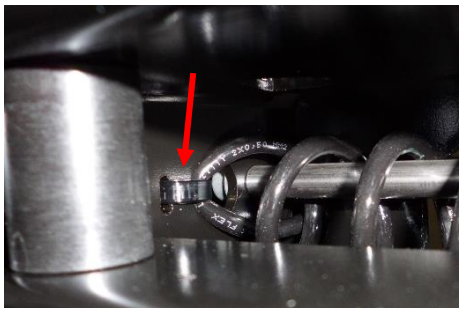


8.2.2. The rod goes through the hole on the side of the frame, so you can mount the cable on the other side.

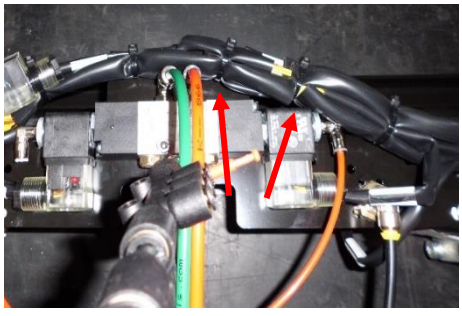


8.2.3. Tighten the bolts with a lock disc on both sides and fix the cable with a cable tie.





8.2.4. Cut the cable ties so you can release the leads for the sensitive edge, labeled I827-10 and I827-11. Re-apply cable ties for the ones cut.



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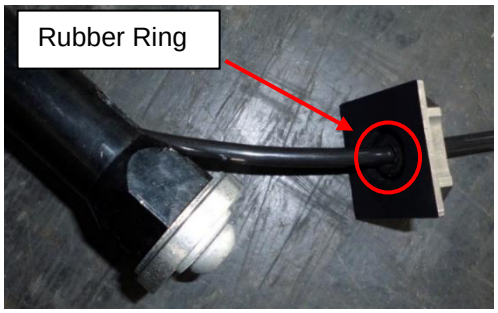
8.2.5. Mount the cable on the frame with cable ties. Make sure that there is not too much tension on the cable where it goes through the hole. Connect the connectors labeled I827-10 and I827-11 with the spiral cables. Tie the excess cable onto the mechanism. Apply grease on the shaft.

8.2.6. Remove the guiding shaft from the bracket (Topside of the door) and guide the cable on the bottom side of the mechanism through the shaft and the plastic cover. (Make sure the rubber ring is inserted in the cover!)



8.2.7. Insert the wires in the connector. Now the mechanism is ready to be connected with the door.

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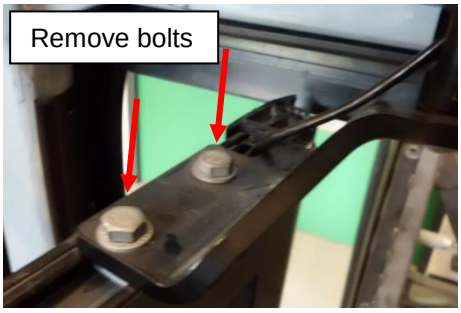
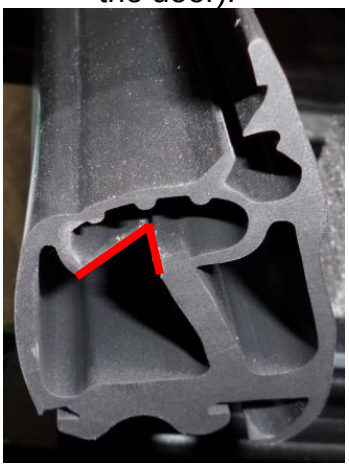
8.3. Fitting the sensitive edge

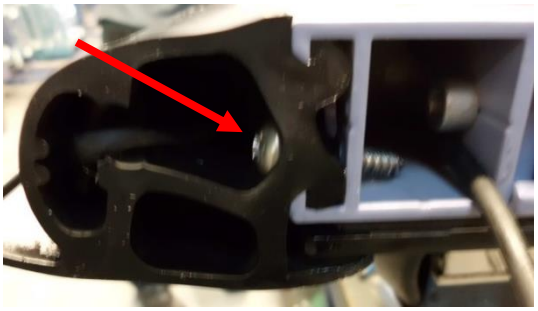
8.3.1. Remove the guiding brackets from the door, and slide the door outwards so the door is outside of the vehicle.



8.3.2. Cut a small “V” shaped piece out of the rubber (on the topside of the door).



8.3.3. Remove the screw from the rubber.



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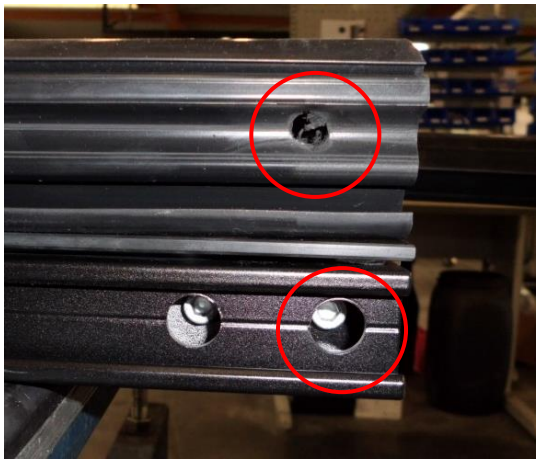
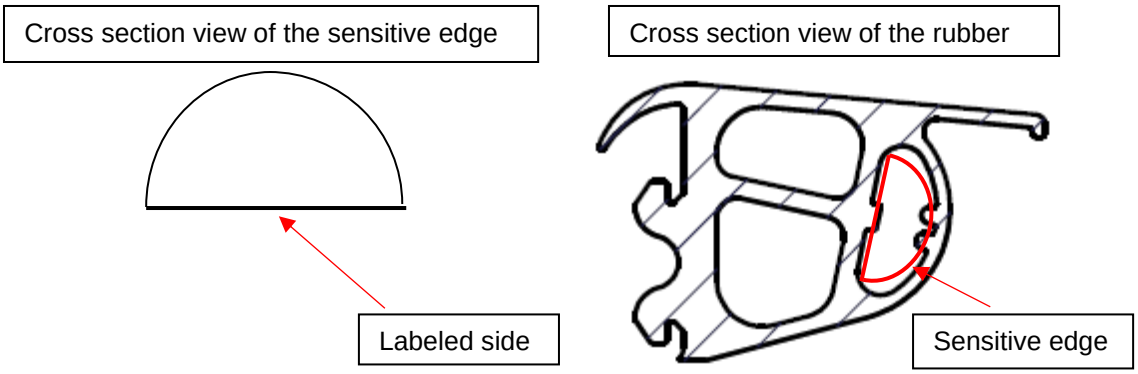
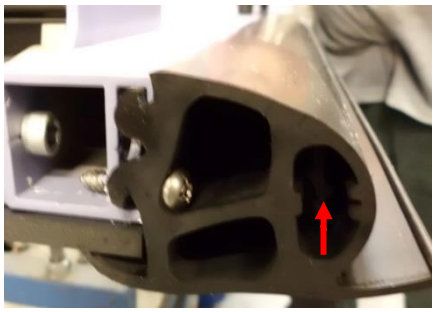
8.3.4. Drill a hole in the rubber (10mm) aligned with the hole in the frame. This should be possible without taking the rubber out. (By drilling diagonally)



8.3.5. The sensitive edge is rounded on one side, the other side is labeled with the article number.



8.3.6. Insert the sensitive edge with the labeled side facing the door. On the bottom side of the rubber should be a clearance of 10-15 mm until the sensitive edge.



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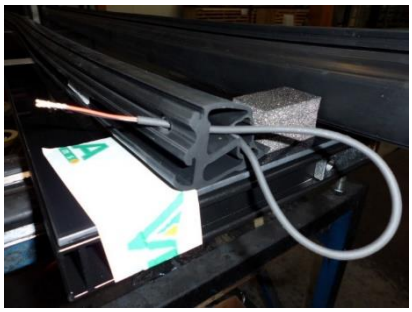
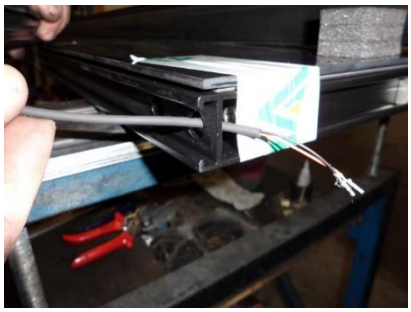
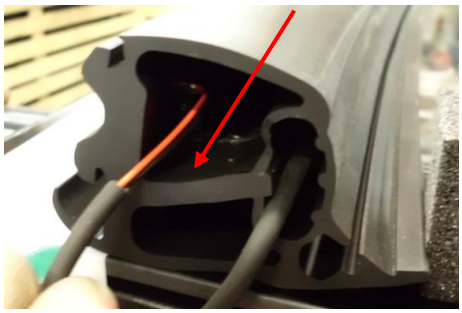
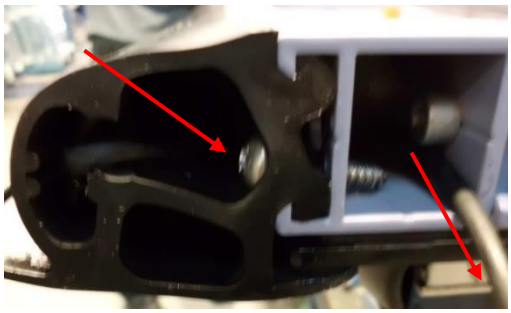
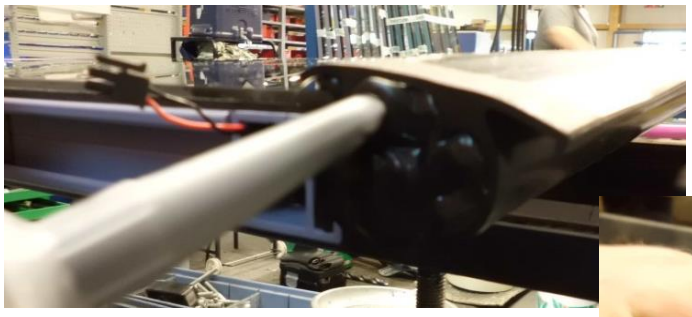
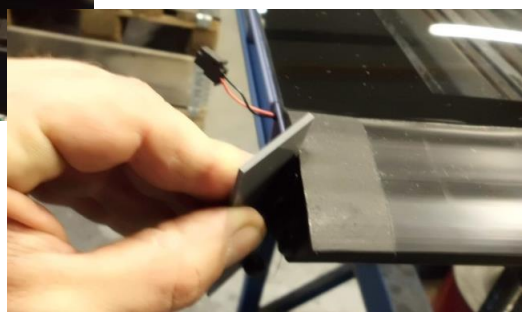
8.3.7. Put the cable through the hole in the rubber and the profile.

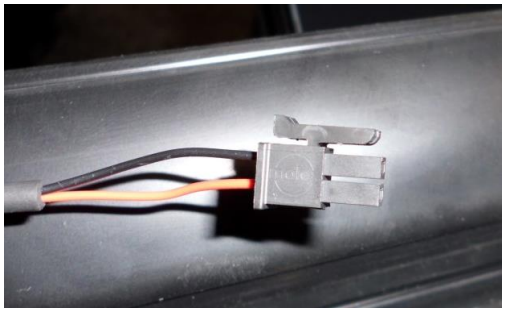
8.3.8. Glue the cable to this surface, then put the screw back in. The cable goes out through the profile.

8.3.9. Seal the topside of the rubber to prevent water ingress. Remove the excess sealant

8.3.10. Put the pins of the sensitive edge in the connector as shown below.



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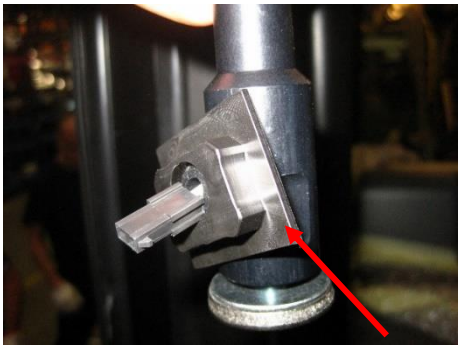
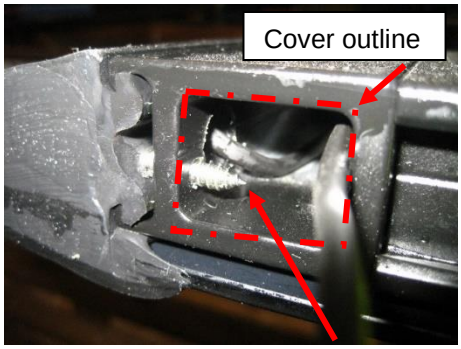
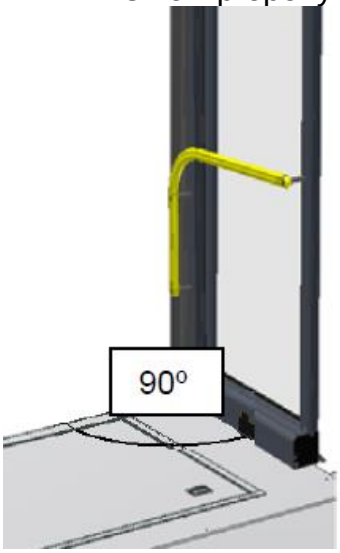
8.3.11. Mount the guiding shaft back on the bracket. And place the bracket back on the door. Slide the bracket back so you can reach the cable of the sensitive edge. (When sliding the door back into the vehicle be sure to avoid contact with the portal rubber and the sealant on the top part of the door rubber.)

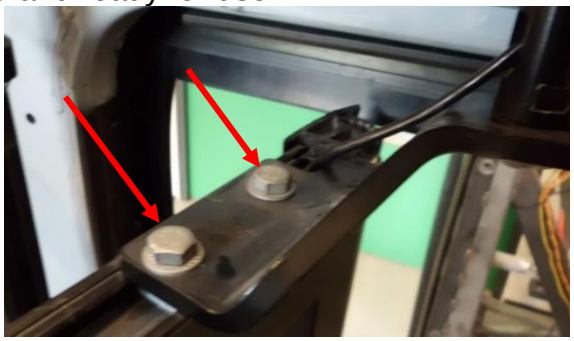
8.3.12. Connect the sensitive edge with the spiral cable and put the excess cable back in the profile. Be aware of the tip of the screw, as this can damage the cable or yourself! Put the plastic cover on the profile.





8.3.13. Slide the guiding bracket back, so that in open position the doors are perpendicular with the step edge. Tighten the bolts. The door is now properly adjusted and ready for use.





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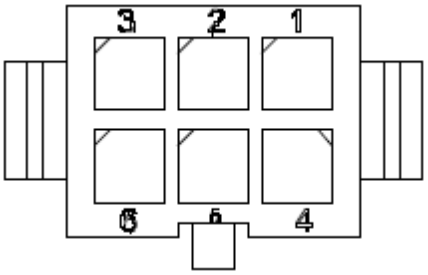
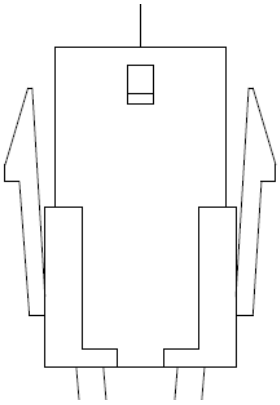
Sensitive edge wiring





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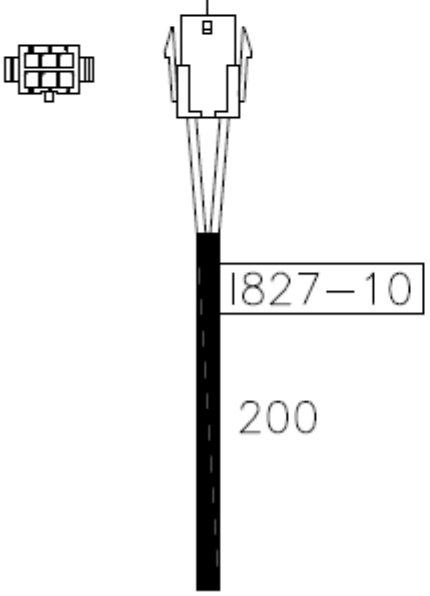
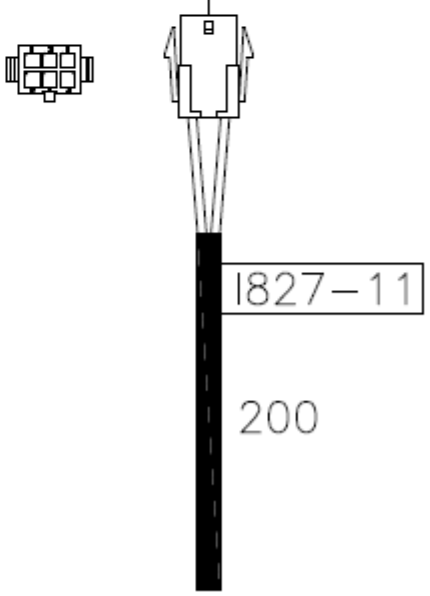
I827-10

SENSITIVE EDGE MOLEX 43020-0600 (6 WAY FEMALE CONN)					
COLOR	SIZE	TO	TERMINATION	WIRE	PIN
BROWN	0.50	conn.2	(M3)(C)	GND	1
					2
					3
YELLOW	0.50	1/7	(M3)(C)	7	4
					5
					6



I827-11

SENSITIVE EDGE MOLEX 43020-0600 (6 WAY FEMALE CONN)					
COLOR	SIZE	TO	TERMINATION	WIRE	PIN
BROWN	0.50	conn.2	(M3)(C)	GND	1
					2
					3
YELLOW	0.50	1/7	(M3)(C)	18	4
					5
					6



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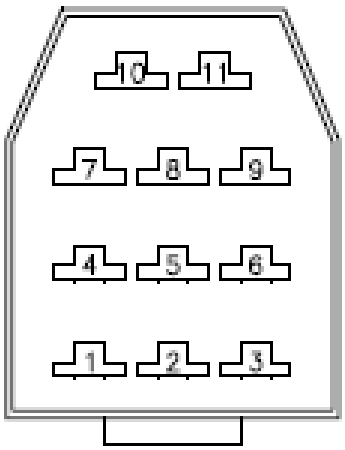
Input/output connector



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FRONT DOOR INPUT/OUTPUT CONNECTOR AMP 11-POLE AMP 151326-1 (11-WAY FEMALE CONN)						
COLOR	SIZE	TO	TERMINATION	WIRE	PIN	
RED	0.75	6/2+7/2	(M4)(C)	1+15	1	DOOR SUPPLY [+ve]
BROWN	0.75	conn.2	(M4)(C)	2	2	DOOR SUPPLY [GND]
YELLOW	0.75	3/1	(M4)(C)	3	3	DOOR OPEN SOLENOID VALVE [+ve]
YELLOW	0.75	2/1	(M4)(C)	4	4	DOOR CLOSE SOLENOID VALVE [+ve]
YELLOW	0.75	7/1	(M4)(C)	5	5	DOOR IS OPENED [+ve]
YELLOW	0.75	5/1	(M4)(C)	6	6	DOOR IS CLOSED [+ve]
YELLOW	0.50+0.50	10/4+11/4	(M4)(C)	7+18	7	SENSITIVE EDGE SIGNAL [GND]
YELLOW	0.75	8/1	(M4)(C)	8	8	DOOR PLATFORM LIGHTS [+ve]
YELLOW	0.75	8/2	(M4)(C)	9	9	DOOR PLATFORM LIGHTS [GND]
YELLOW	0.75	9/2	(M4)(C)	10	10	LOW AIR PRESSURE [GND]
YELLOW	0.75	4/1	(M4)(C)	11	11	5 KM/H SIGNAL [+ve]