
NIFTi maintenance instructions

Changing the laser scanner belt

History

Revision	Date	Author	Description of changes
0.1	10.05.12	Patrick Balmer	Initial version

Table of Contents

History	1
Table of Contents.....	2
Opening the body.....	Error! Bookmark not defined.
1.1 Preliminary notes.....	3
1.2 Procedure	3

Changing the belt

1.1 Preliminary notes

The body must not be opened without electrostatic protection.

Always use an antistatic carpet and an antistatic bracelet connected to the robot, to the operator body and to the earth.

IMPORTANT!

Opening the body without electrostatic protection can lead to damages on electronic components.

1.2 Procedure

- 1) Open the top cover, as described in "Opening the body".

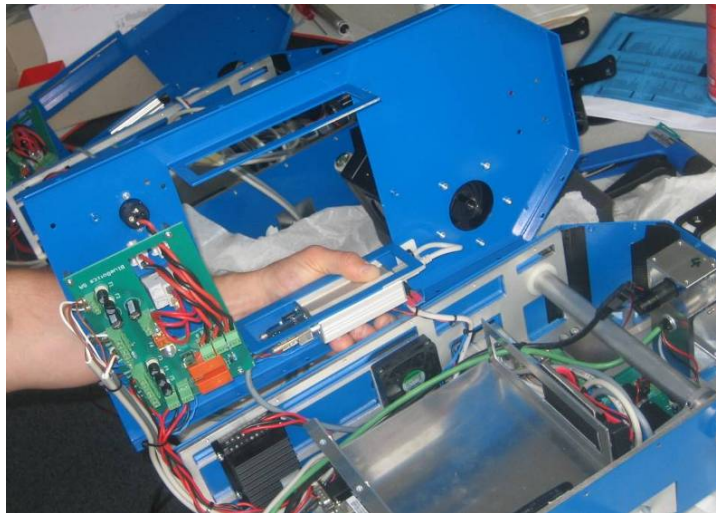


Figure 1. Deposit the cover

- 2) Unscrew the laser scanner.



Figure 2. Unscrew the laser scanner

- Remove the cable holder. 4 screws are fixing the laser scanner on its fixation.
- 3) Remove the laser scanner connector (top cover).



Figure 3. Remove laser scanner connector

- Put the laser scanner in a safe place.
- 4) Disconnect the laser scanner connector.

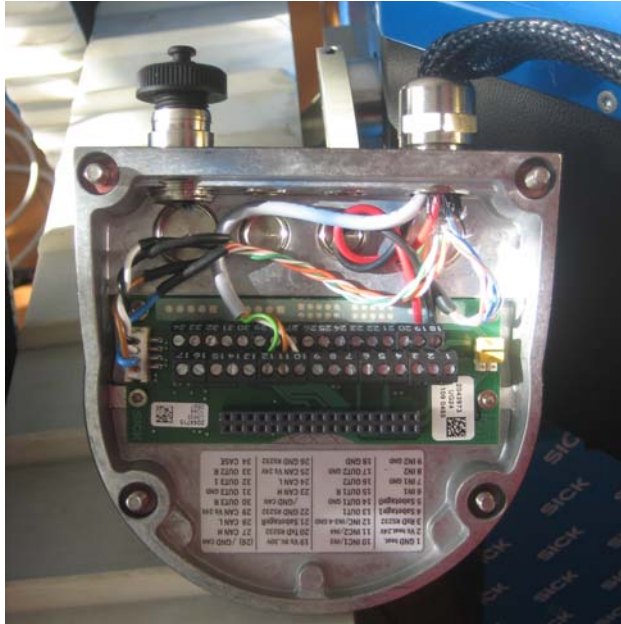


Figure 4. Disconnect the laser scanner connector

- Carefully disconnect each cable. Mind the connectors, they are fragile.
- 5) Open the cable pass through and pull the cables.

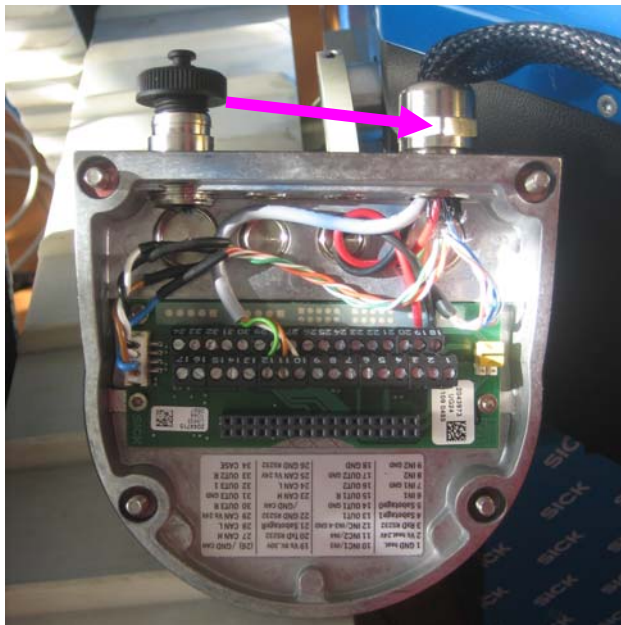


Figure 5. Remove cable from the cable pass through

- Mind the cables outer protection. Fix it with scotch tape.
- 6) Unscrew the laser scanner fixation and take it out of the cable.

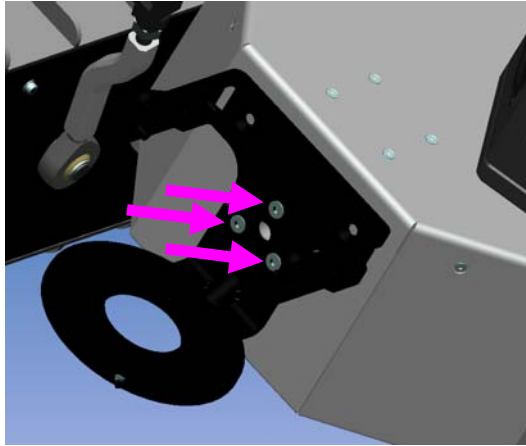


Figure 6. Remove 3 screws, laser scanner fixation

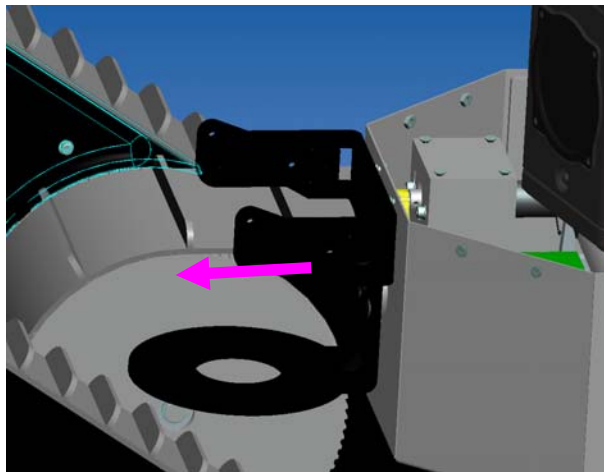


Figure 7. Remove laser scanner fixation

- 7) Remove the broken belt.
 - Cut it.
- 8) Unscrew the motor fixation.

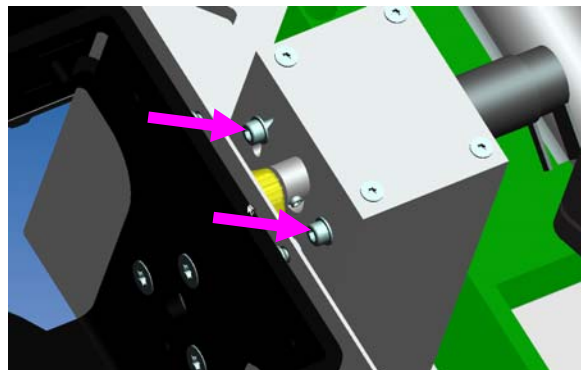


Figure 8. Unscrew motor fixation

- To be able to place the belt and tighten it afterwards.
- 9) Put the new belt in place.
- Pull the sheet metal out of the laser scanner axis. No need to remove the tape on the sheet metal.

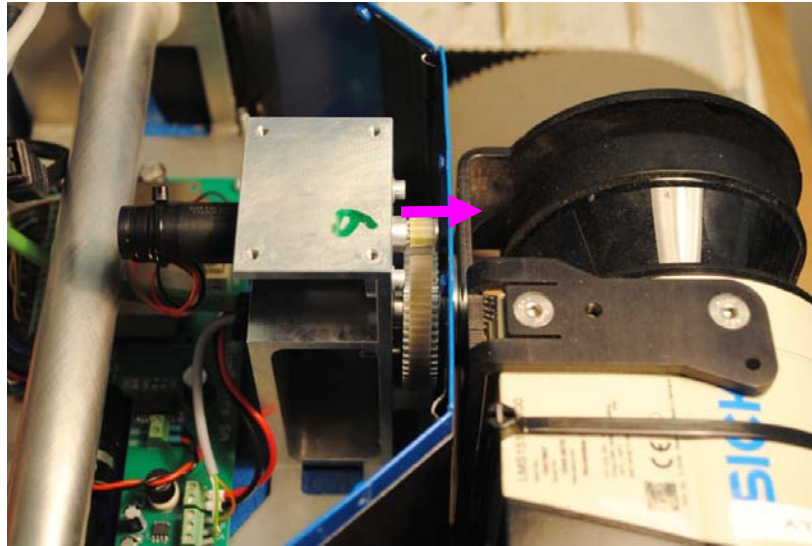


Figure 9. Pull the sheet metal out of the laser scanner rotation axis

- Put the belt through the cable.
- Make the belt enter the platform between the sheet metal and the laser scanner axis.

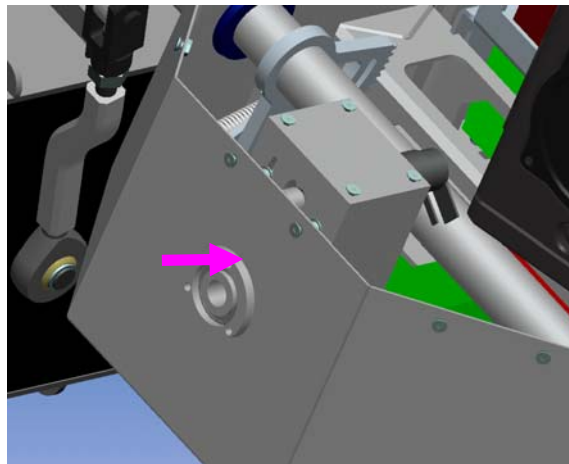


Figure 10. The belt enters here

- 10) Put the belt on the two teeth wheels.

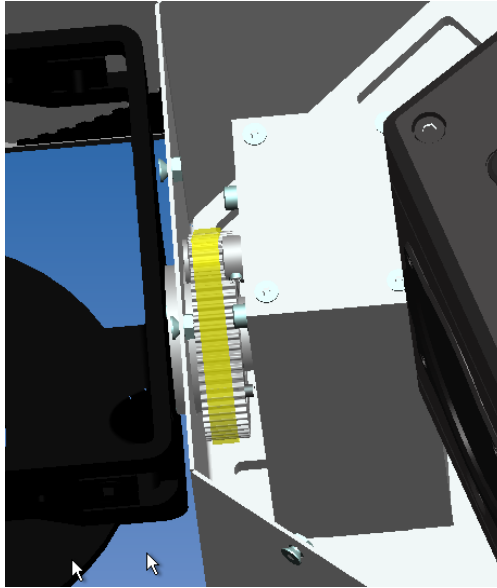


Figure 11. The belt on the teeth wheels

- 11) Tighten the belt and screw back the motor fixations.

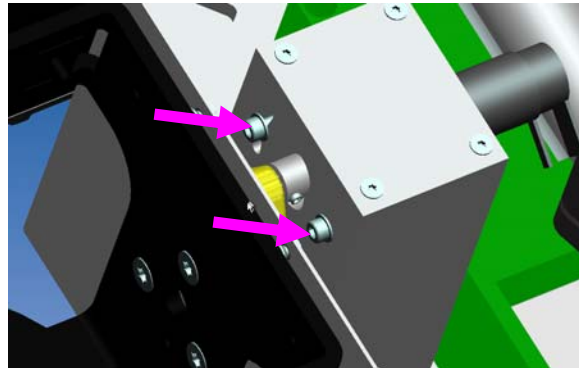


Figure 12. Tightening the belt

- Lift the motor with your finger. Fix it with the screws. The tightening should not be too high.

- 12) Put back the laser scanner fixation in place.

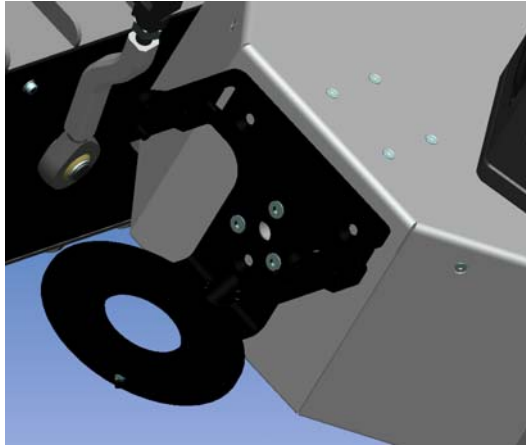


Figure 13. Laser fixation

- Mind the cable protection.
 - Screw the fixation in place. Mind the position of the teeth wheel.
- 13) Put the cable back in place in the laser scanner connector.

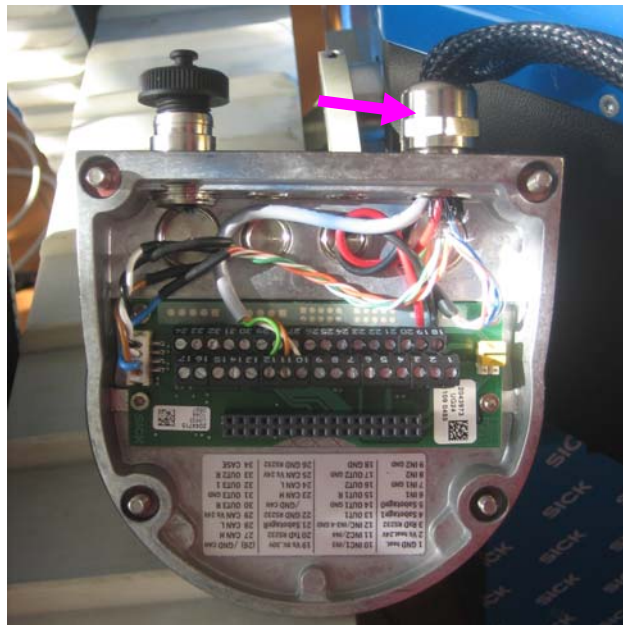


Figure 14. Cable pass through

- Mind the cable protection when going through the cable pass through.
- 14) Connect the wires in the laser scanner connector.
- Mind the connectors. They are fragile.
- 15) Assemble the connector on the laser scanner
- 16) Put the laser scanner back in place.

- 17) Fix the cable on the laser scanner fixation.



Figure 15. Cable fixation

Be careful of the position of the cable, when the laser scanner is moving.

- 18) Close the cover.