



Hänel Installation Instructions Limit switch S1 upper limit stop

Lean-Lift Multi-Space

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1. General instructions

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Caution

These Installation Instructions are intended for specially trained and authorised technicians employed by the Hänel factory or by Hänel representatives.

All safety instructions and general instructions provided in the corresponding Operating Manual "MANL-LL" or "MANL-MS" and in the corresponding Installation Instructions "INST-LL-S" or "INST-LW" or "INST-MS" for the Lean-Lift or Multi-Space must be followed at all times.

In addition, the "Safety Rules & Requirements" provided in the Memorandum for Technical Field Service "SICHA" and the "Safety Rules" from the Training of Auxiliary Personnel for Technical Field Service "SICHHK" must be observed!



Intended use

The limit switch S1 serves as an emergency shutdown device in case the top carrier of the Lean-Lift or Multi-Space is overshot.

Any other use shall be considered non-compliant use.



2. Installation Requirements

1. Before starting the installation, secure the extractor, or cross-member with extractor, against descending or falling.



DANGER

The extractor or cross-member with extractor is a suspended load that can fall.

Therefore, whenever working inside the lift, you have to lower it to ground level.

If this is not possible, you have to secure them using the locking device. (See operating manual "MANL-LL", Work inside the lift by authorised personnel - Securing the extractor or operating manual "MANL-MS", Work inside the lift by authorised personnel - Securing the cross-member with extractor).

2. Switch off the main switch (Q2) and secure it from being switched on again using a padlock.



DANGER

Risk of electrocution!

SAFETY INSTRUCTIONS



The lift must be de-energised before work begins.

- Switch off main switch (Q2).
- Secure the main switch (Q2) from being switched on again.
- Verify that the lift has been de-energised.
- Cover or block off neighbouring live parts. (Switch off external voltage source for multi-unit network and lock it using tool WZ-67)

3. Before entering the inside of the lift, secure the actuator of the safety switch on the service door (S3) with a padlock.

SAFETY INSTRUCTIONS



Secure the actuator latch!

Before all work, secure the actuator latch of the service door from being switched on again using a padlock.

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Limit switch S1 upper limit stop

Lean-Lift Multi-Space

3. Installation instructions:

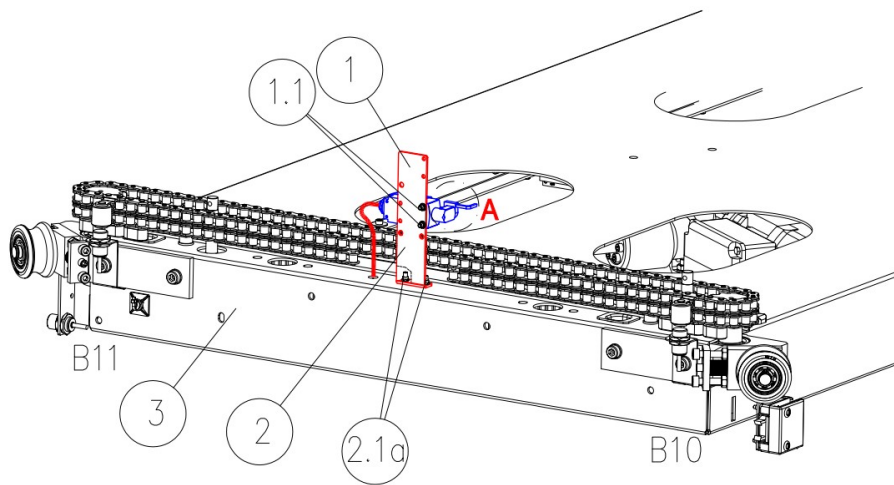


Fig. 1: Overview of limit switch S1 on extractor **Lean-Lift**, Type width ≤ 3260

Item	Description
1	Limit switch S1
1.1	Socket head cap screw DIN 912 /ISO 4762 - M4x35 (2x) + Washer DIN 125 /ISO 7089 - 4 (2x) + Prevailing torque type hexagon nut ISO 10511 - M4 galvanised (2x)
2	Mounting bracket (Type width ≤ 3260)
2.1a	Socket head cap screw DIN 912 /ISO4762 - M5x16 (2x) + Prevailing torque type hexagon nut ISO 10511 - M5 galvanised (2x)
3	Lean-Lift extractor

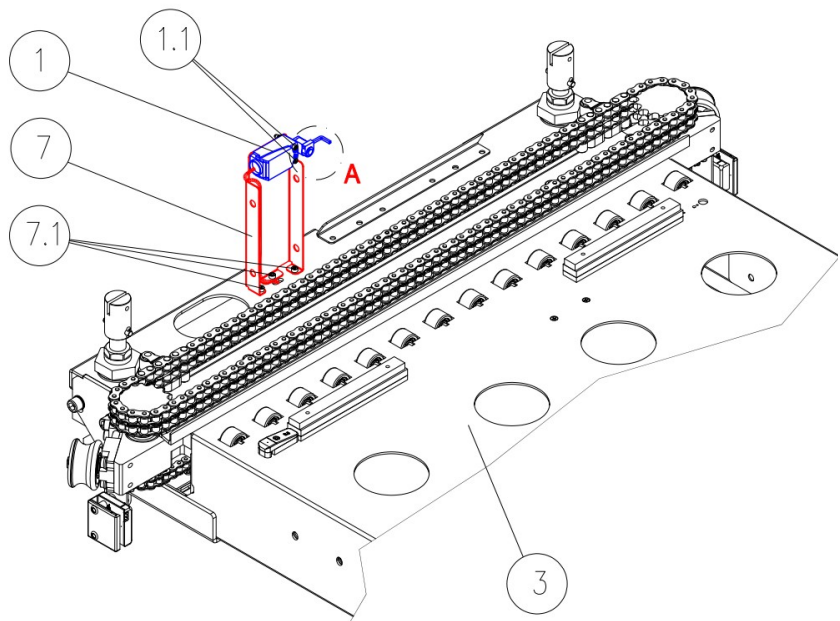


Fig. 2: Overview of limit switch S1 on extractor **Lean-Lift**, Type width > 3260

Item	Description
1	Limit switch S1
1.1	Socket head cap screw DIN 912 /ISO 4762 - M4x35 (2x) + Washer DIN 125 /ISO 7089 - 4 (2x) + Prevailing torque type hexagon nut ISO 10511 - M4 galvanised (2x)
1.2	Actuator
3	Lean-Lift extractor
7	Mounting bracket (Type width > 3260)
7.1	Thread-forming screw DIN 7500-1 EE-M5x10 galvanised (3x)

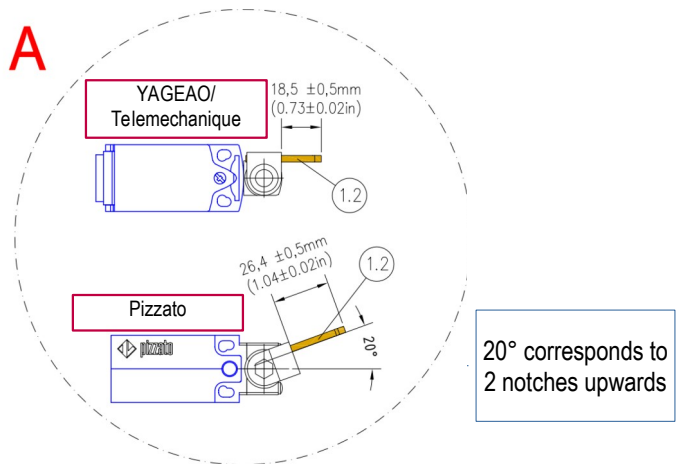


Fig. 3: Basic setting of the actuator for various manufacturers

Item	Description
1.2	Actuator

Manufacturer	Distance measurement
YAGEAO/ Telemechanique	18.5 ± 0.5 mm (0.73 ± 0.02 in)
PIZZATO	26.4 ± 0.5 mm (1.04 ± 0.02 in)

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Lean-Lift Multi-Space

3. Installation instructions: (continued)

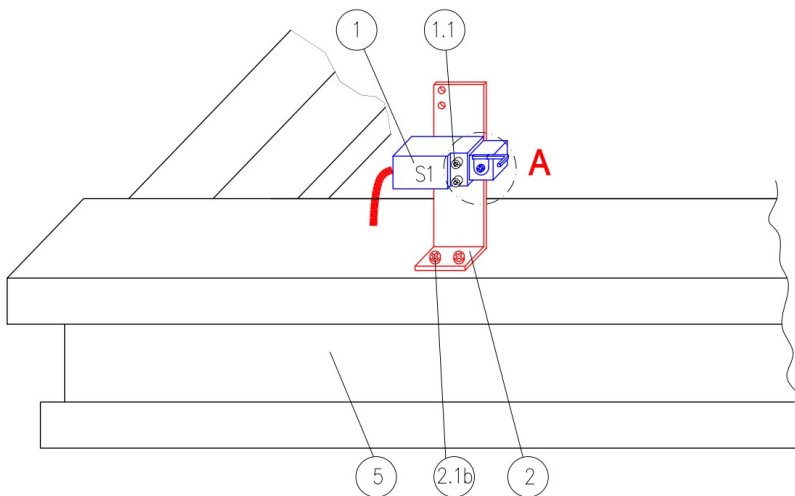


Fig. 4: Overview of limit switch S1 on **Multi-Space** cross-member

Item	Description
1	Limit switch S1
1.1	Socket head cap screw DIN 912 /ISO 4762 - M4x35 (2x) + Washer DIN 125 /ISO 7089 - 4 (2x) + Prevailing torque type hexagon nut ISO 10511 - M4 galvanised (2x)
1.2	Actuator
2	Mounting bracket (Type width ≤ 3260)
2.1b	Socket head cap screw DIN 912 /ISO4762 - M5x16 (2x) + Prevailing torque type hexagon nut ISO 10511 - M5 galvanised (2x)
5	Multi-Space cross-member

Step	Task	Notes / illustration												
1	Lean-Lift Type width ≤ 3260 or Multi-Space: Fasten the mounting bracket (<i>item 2</i>) to the predrilled holes in the extractor (<i>item 3</i>) or cross-member (<i>item 5</i>) using 2 screws and nuts (<i>item 2.1a</i> or <i>item 1b</i>). Lean-Lift Type width > 3260: Fasten the mounting bracket (<i>item 7</i>) to the predrilled holes in the extractor (<i>item 3</i>) using 3 screws (<i>item 7.1</i>).	See Fig. 1 or 4 Note Fasten the power cable to the holding bracket (<i>item 2</i>) using a cable tie so that the power cable is not damaged by the extractor chain. See Fig. 2 Note Fasten the power cable to the holding bracket (<i>item 2</i>) using a cable tie so that the power cable is not damaged by the extractor chain.												
2	Fasten limit switch S1 (<i>item 1</i>) to the mounting bracket (<i>item 2</i>) or (<i>item 7</i>) using 2 screws (<i>item 1.1</i>). (Pre-assembled in standard version)	See Fig. 1, 2 or 4												
	<table border="1"> <tr> <td>Lean-Lift, Type width ≤ 3260</td><td>Economy-speed version or Type depth 635 or 700-1000 kg (1543 lb 3.8 oz - 2204 lb 10 oz) (small chain wheels)</td><td>Install limit switch S1 (<i>item 1</i>) at the bottom of the mounting bracket (<i>item 2</i>) (see Fig. 5 and Table 1).</td></tr> <tr> <td></td><td>High-speed version and Type depth 825 - 1270 (large chain wheels)</td><td>Install limit switch S1 (<i>item 1</i>) at the top of the mounting bracket (<i>item 2</i>) (see Fig. 6 and Table 1).</td></tr> <tr> <td>Lean-Lift, Type width > 3260</td><td>High-speed version (large chain wheels)</td><td>Install limit switch S1 (<i>item 1</i>) on the mounting bracket (<i>item 7</i>) (see Fig. 3).</td></tr> <tr> <td>Multi-Space</td><td>All</td><td>Install limit switch S1 (<i>item 1</i>) at the bottom of the mounting bracket (<i>item 2</i>) Align based on Type depth and cable carrier installation (see Fig. 7, 8 and 9).</td></tr> </table>	Lean-Lift, Type width ≤ 3260	Economy-speed version or Type depth 635 or 700-1000 kg (1543 lb 3.8 oz - 2204 lb 10 oz) (small chain wheels)	Install limit switch S1 (<i>item 1</i>) at the bottom of the mounting bracket (<i>item 2</i>) (see Fig. 5 and Table 1).		High-speed version and Type depth 825 - 1270 (large chain wheels)	Install limit switch S1 (<i>item 1</i>) at the top of the mounting bracket (<i>item 2</i>) (see Fig. 6 and Table 1).	Lean-Lift, Type width > 3260	High-speed version (large chain wheels)	Install limit switch S1 (<i>item 1</i>) on the mounting bracket (<i>item 7</i>) (see Fig. 3).	Multi-Space	All	Install limit switch S1 (<i>item 1</i>) at the bottom of the mounting bracket (<i>item 2</i>) Align based on Type depth and cable carrier installation (see Fig. 7, 8 and 9).	Install limit switch S1 (<i>item 1</i>) at the bottom of the mounting bracket (<i>item 2</i>) (see Fig. 5 and Table 1). Install limit switch S1 (<i>item 1</i>) at the top of the mounting bracket (<i>item 2</i>) (see Fig. 6 and Table 1). Install limit switch S1 (<i>item 1</i>) on the mounting bracket (<i>item 7</i>) (see Fig. 3). Install limit switch S1 (<i>item 1</i>) at the bottom of the mounting bracket (<i>item 2</i>) Align based on Type depth and cable carrier installation (see Fig. 7, 8 and 9). Note Limit switch S1 (<i>item 1</i>) is installed on the side opposite the cable carrier.
Lean-Lift, Type width ≤ 3260	Economy-speed version or Type depth 635 or 700-1000 kg (1543 lb 3.8 oz - 2204 lb 10 oz) (small chain wheels)	Install limit switch S1 (<i>item 1</i>) at the bottom of the mounting bracket (<i>item 2</i>) (see Fig. 5 and Table 1).												
	High-speed version and Type depth 825 - 1270 (large chain wheels)	Install limit switch S1 (<i>item 1</i>) at the top of the mounting bracket (<i>item 2</i>) (see Fig. 6 and Table 1).												
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Multi-Space	All	Install limit switch S1 (<i>item 1</i>) at the bottom of the mounting bracket (<i>item 2</i>) Align based on Type depth and cable carrier installation (see Fig. 7, 8 and 9).												

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Limit switch S1 upper limit stop

Lean-Lift
Multi-Space

3. Installation instructions: (continued)

Lean-Lift (Type width ≤ 3260):

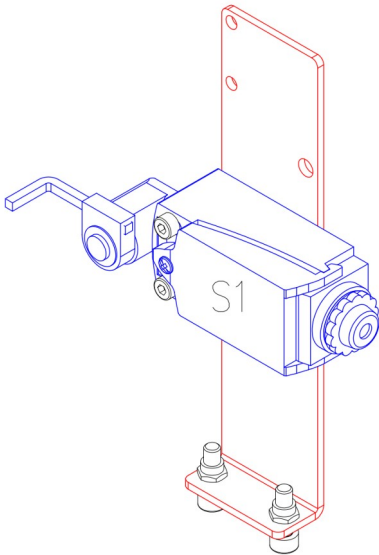


Fig. 5: Installation at the bottom at the mounting bracket

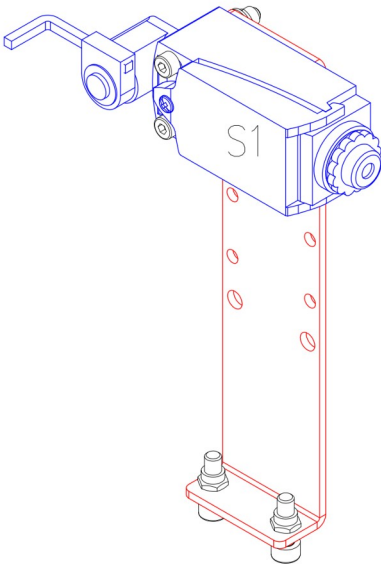


Fig. 6: Installation at the top at the holding bracket

Lift	Installation	
Version of chain wheels	Bottom (Fig. 5)	Top (Fig. 6)
Lean-Lift: small chain wheels (17 - 19 teeth)	X	
Lean-Lift: large chain wheels (33 - 39 teeth) Type width ≤ 3260		X

Table 1: Chain wheels version (Lean-Lift with Type width ≤ 3260)

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Limit switch S1 upper limit stop

Lean-Lift Multi-Space

3. Installation instructions: (continued)

Multi-Space:

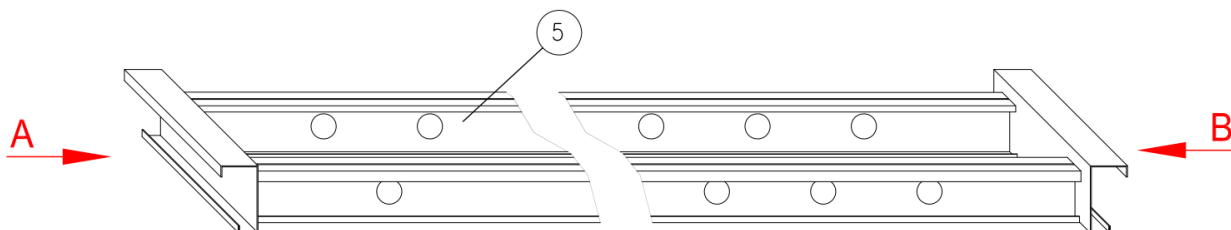


Fig. 7: MS cross-member

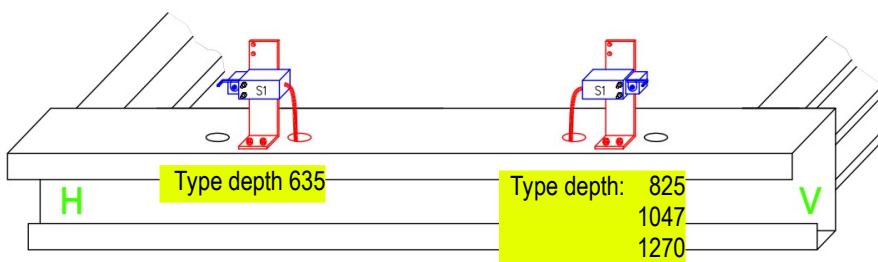


Fig. 8: View A from Fig. 5

Installation of limit switch S1 at the bottom of the mounting bracket on the **left** side of the lift

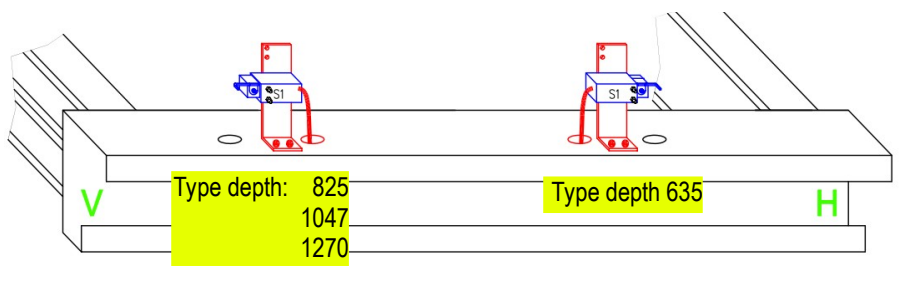


Fig. 9: View B from Fig. 5

Installation of limit switch S1 at the bottom of the mounting bracket on the **right** side of the lift

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Limit switch S1 upper limit stop

Lean-Lift Multi-Space

3. Installation instructions: (continued)

Step	Task	Notes / illustration						
3	Adjust the actuator (<i>item 1.2</i>).	See Fig. 3  Note Observe the different distance measurements for various manufacturers!						
4a	Lean-Lift: Drive extractor to top carrier and check minimum clearance X to the upper bearing shell.	See Fig. 10 or 12 Check upper protection zone if necessary <table><tr><th>Manufacturer</th><th>Minimum distance measurement X</th></tr><tr><td>YAGEAO/ Telemechanique</td><td>25 mm (0.98 in)</td></tr><tr><td>PIZZATO</td><td>17 mm (0.67 in)</td></tr></table>	Manufacturer	Minimum distance measurement X	YAGEAO/ Telemechanique	25 mm (0.98 in)	PIZZATO	17 mm (0.67 in)
Manufacturer	Minimum distance measurement X							
YAGEAO/ Telemechanique	25 mm (0.98 in)							
PIZZATO	17 mm (0.67 in)							
4b	Multi-Space: Drive extractor to top carrier and check minimum clearance Y to the actuator.	See Fig. 14 Check upper protection zone if necessary <table><tr><th>Manufacturer</th><th>Minimum distance measurement Y</th></tr><tr><td>YAGEAO/ Telemechanique</td><td>8.8 mm (0.35 in)</td></tr><tr><td>PIZZATO</td><td>0</td></tr></table>	Manufacturer	Minimum distance measurement Y	YAGEAO/ Telemechanique	8.8 mm (0.35 in)	PIZZATO	0
Manufacturer	Minimum distance measurement Y							
YAGEAO/ Telemechanique	8.8 mm (0.35 in)							
PIZZATO	0							
5	Check that the limit switch is not damaged by the upper bearing shell/actuator in case of overshooting.	See Fig. 11, 13 or 15						

3. Installation instructions: (continued)

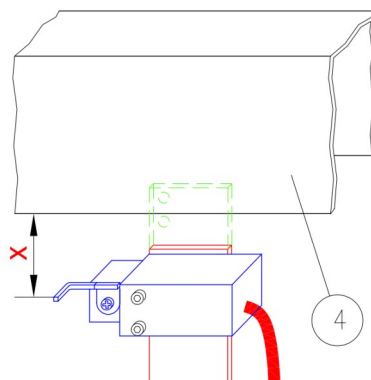


Fig. 10: Extractor on top carrier
Lean-Lift (Type width ≤ 3260)

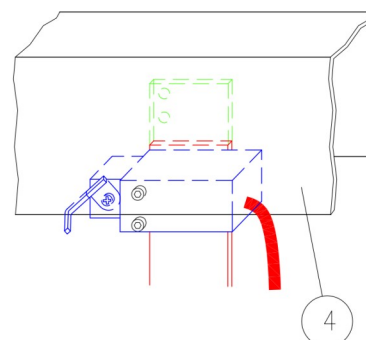


Fig. 11: Extractor when overshooting the top carrier
Lean-Lift (Type width ≤ 3260)

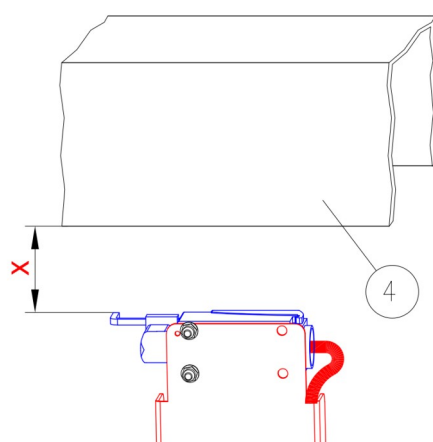


Fig. 12: Extractor on top carrier
Lean-Lift (Type width > 3260)

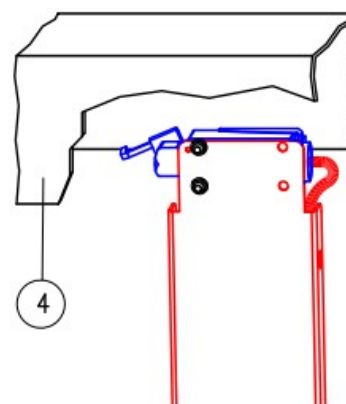


Fig. 13: Extractor when overshooting the top carrier
Lean-Lift (Type width > 3260)

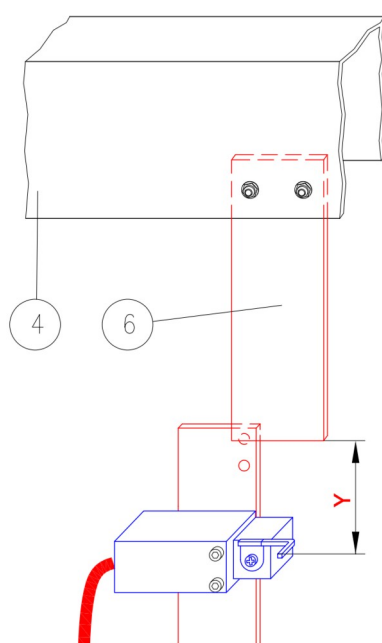


Fig. 14: Extractor at top carrier of **Multi-Space**

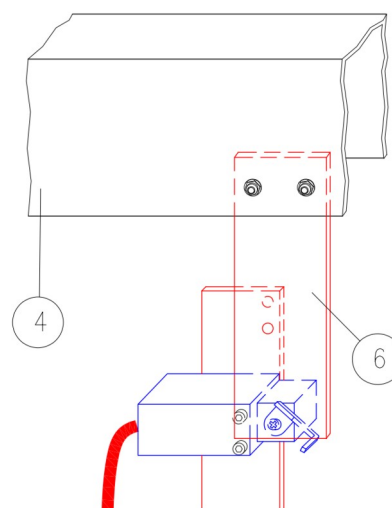


Fig. 15: Extractor when overshooting top carrier of **Multi-Space**

Item	Description
4	Upper bearing shell

Item	Description
6	Actuator

4. Removal

1. Before starting the removal, secure the extractor, or cross-member with extractor, against descending or falling.



! DANGER

The extractor or cross-member with extractor is a suspended load that can fall.

Therefore, whenever working inside the lift, you have to lower it to ground level.

If this is not possible, you have to secure them using the locking device. (See operating manual "MANL-LL", Work inside the lift by authorised personnel - Securing the extractor or operating manual "MANL-MS", Work inside the lift by authorised personnel - Securing the cross-member with extractor).

2. Switch off the main switch (Q2) and secure it from being switched on again using a padlock.



! DANGER

Risk of electrocution!

SAFETY INSTRUCTIONS



The lift must be de-energised before work begins.

- Switch off main switch (Q2).
- Secure the main switch (Q2) from being switched on again.
- Verify that the lift has been de-energised.
- Cover or block off neighbouring live parts. (Switch off external voltage source for multi-unit network and lock it using tool WZ-67)

3. Before entering the inside of the lift, secure the actuator of the safety switch on the service door (S3) with a padlock.

SAFETY INSTRUCTIONS



Secure the actuator latch!

Before all work, secure the actuator latch of the service door from being switched on again using a padlock.

4. To remove limit switch S1, correctly follow the reverse order of steps as described previously in Chapter 3.
5. After removal, dispose of the structural components in an environmentally responsible manner (see Installation Instructions "INST-LL-S" or "INST-LW" or "INST-MS", Disposal instructions).



5. Annex

Revision notes

Last issue dated:	2006-11-02
• Added intended use and disposal	2007-03-30
• Chapter 3: Note on longer mounting bracket	2007-08-27
• Chapter 3: Change of screws	2007-11-21
• Chapter 3: New mounting bracket	2009-09-09
• Chapter 3: MS mounting bracket with both sides installed	2012-03-14
• MS screws changed	2013-11-06
• Type width > 3260 added	2015-07-17
• Installation rotated for MS	2016-05-10
• MS: "V" and "H" note added	2018-01-23
• MS: S1 on the other side, reference dimension Page 9	2018-02-01
• Item 2.1b: Countersunk screw removed; nuts updated	2018-02-06
• Cable bushings added	2022-09-22
• Alternative manufacturer added, screws updated	2023-10-04
• Note on cable tie added	
•	2024-03-11
• Mounting bracket changed	

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