ABB

ROBOTICS

Product manual, spare parts

IRB 1410

Product manual, spare parts

IRB 1410

IRC5

Document ID: 3HAC049103-001

Revision: H

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Original instructions.

Table of contents

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Overview of this manual

About this manual

This manual contains spare parts for:

- IRB 1410 and all its variants.

Usage

This manual shall be used as a complement to the product manual for IRB 1410 during:

- maintenance work
- repair work.

Who should read this manual?

This manual is intended for:

- maintenance personnel
- repair personnel.

Prerequisites

Maintenance/repair/installation personnel working with an ABB Robot must:

- be trained by ABB and have the required knowledge of mechanical and electrical installation/repair/maintenance work.

Organization of chapters

The manual is organized in the following chapters:

Chapter	Contents
1 Rebuilding robot	Information of rebuilding parts, required when rebuilding the robot to another version.
2 Spare parts and exploded view	Complete spare part list and complete list of robot components shown in exploded views.

References

Reference	Document ID
Product manual - IRB 1410	*3HAC026320-001*
Circuit diagram - IRB 1410	*3HAC2800-3*

Revisions

Revision	Description
-	First edition
A	This edition contains the following changes: • Spare parts with color Graphite White are added to the spare part lists. • New spare parts are added to the spare parts lists.
B	Removed the part "gear axis 1-3" whose article number is 3HAB9750-1.

Overview of this manual

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Revision	Description
C	Published in release R17.1. The following updates are done in this revision: • Locations of spare parts in foldouts are specified and the quantity of each spare part is added.
D	Published in release R17.2. The following updates are done in this revision: • Updated numbers Cable unit axis 1-3 • Updated numbers Cable unit with customer connection axis 4-6
E	Published in release R18.1. The following updates are done in this revision: • Removed spare part Drive unit, axes 5-6 with color Graphite White (3HAC050097-001).
F	Published in release 22A. The following updates are done in this revision: • New spare parts included.
G	Published in release 22C. The following updates are done in this revision: • New spare parts included.
H	Published in release 23A. The following updates are done in this revision: • Push button added to spare parts list.

Product documentation

Categories for user documentation from ABB Robotics

The user documentation from ABB Robotics is divided into a number of categories. This listing is based on the type of information in the documents, regardless of whether the products are standard or optional.

> 💡 **Tip**
>
> All documents can be found via myABB Business Portal, *www.abb.com/myABB*.

Product manuals

Manipulators, controllers, DressPack/SpotPack, and most other hardware is delivered with a **Product manual** that generally contains:

- Safety information.
- Installation and commissioning (descriptions of mechanical installation or electrical connections).
- Maintenance (descriptions of all required preventive maintenance procedures including intervals and expected life time of parts).
- Repair (descriptions of all recommended repair procedures including spare parts).
- Calibration.
- Troubleshooting.
- Decommissioning.
- Reference information (safety standards, unit conversions, screw joints, lists of tools).
- Spare parts list with corresponding figures (or references to separate spare parts lists).
- References to circuit diagrams.

Technical reference manuals

The technical reference manuals describe reference information for robotics products, for example lubrication, the RAPID language, and system parameters.

Application manuals

Specific applications (for example software or hardware options) are described in **Application manuals**. An application manual can describe one or several applications.

An application manual generally contains information about:

- The purpose of the application (what it does and when it is useful).
- What is included (for example cables, I/O boards, RAPID instructions, system parameters, software).
- How to install included or required hardware.
- How to use the application.

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    •   Examples of how to use the application.

Operating manuals

The operating manuals describe hands-on handling of the products. The manuals are aimed at those having first-hand operational contact with the product, that is production cell operators, programmers, and troubleshooters.

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1 Spare parts list

General

The following table is showing the recommended spare parts delivered from ABB. There may be other spare parts, contact ABB Robotics/After sales for information.

Parts

Item	Qty	Equipment	Description	Color	Note
1	1	3HAC050072-001	Foot	ABB Orange	See foldout 1.
	1	3HAC050073-001	Foot	Graphite White	See foldout 1.
3	1	2213253-12	Ball bearing	-	See foldout 8.
28	1	3HAB3254-1	Cushion axis 3	-	See foldout 1.
106	1	3HAC062423-001	Cable unit axis 1-3	ABB Orange	See foldout 4.
	1	3HAC062424-001	Cable unit axis 1-3	Graphite White	See foldout 4.
107	1	3HAC1855-1	Cable unit axis 4-6 without customer connection		See foldout 4.
	1	3HAC062425-001	Cable unit axis 4-6 with customer connection	ABB Orange	
	1	3HAC062426-001	Cable unit axis 4-6 with customer connection	Graphite White	
	1	3HAC2072-1	Cable unit axis 4-6 with customer connection SE-FAW	-	
122	1	3HAC2743-1	Safety lamp	-	See foldout 3.
	1	3HAC4350-1	Cover	-	
127	1	3HAC4405-1	Cover	-	See foldout 3.
2	1	3HAC050074-001	Gear, axis 1-3	ABB Orange	STEPHAN WERKE See foldout 1.
	1	3HAC050075-001	Gear, axis 1-3	Graphite White	
9	1	3HAC050100-001	Motor with pinion, Axis 1-3	ABB Orange	See foldout 1.
	1	3HAC050101-001	Motor with pinion, Axis 1-3	Graphite White	
1	1	3HAB3270-1	Tubular shaft	-	See foldout 8.
2	1	3HAB6354-1	Back-up ring	-	See foldout 8.
22	1	3HAC021740-001	Motor with pinion, Axis 4	ABB Orange	See foldout 8.
	1	3HAC059913-001	Motor with pinion, Axis 4	Graphite White	

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Item	Qty	Equipment	Description	Color	Note
4	1	3HAC050088-001	Axis-4 housing	ABB Orange	See foldout 8.
	1	3HAC050089-001	Axis-4 housing	Graphite White	
2	2	3HAC021741-001	Motor with pinion, Axis 5-6	ABB Orange	See foldout 9.
	2	3HAC059915-001	Motor with pinion, Axis 5-6	Graphite White	
52	1	3HAC050082-001	Wrist unit	ABB Orange	See foldout 1.
	1	3HAC050083-001	Wrist unit	Graphite White	
50	1	3HAB3747-1	Synchronization mark, axis 3	-	See foldout 2.
57	2	3HAC050106-001	Tension spring	ABB Orange	See foldout 2.
	2	3HAC050107-001	Tension spring	Graphite White	
117	1	3HAC050086-001	Cover	ABB Orange	See foldout 7.
	1	3HAC050087-001	Cover	Graphite White	
58	4	3HAA2301-12	Rod end bearing	-	KM10 See foldout 2.
27	1	3HAB3258-1	Stop pin	-	See foldout 1.
7	2	3HAA2393-1	Belt	-	See foldout 9.
-	1	3HAC17396-1	Serial measurement unit	-	Contains SMB board 3HAC031851-001 See foldout 10.
5	1	3HAC031851-001	Serial measurement board DSQC633A	-	Use only with battery pack (2-pole battery contact) 3HAC16831-1 See foldout 10.
3	1	3HAC16831-1	Battery pack (2-pole battery contact) Lithium 34x102x63	-	Use only with SMB board 3HAC031851-001 See foldout 10.
-	1	3HAC046277-001	Serial measurement unit	-	Contains SMB board 3HAC044168-001 See foldout 10.
5	1	3HAC044168-001	Serial measurement board RMU 101	-	Use only with battery pack (3-pole battery contact) 3HAC044075-001 See foldout 10.

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Item	Qty	Equipment	Description	Color	Note
3	1	3HAC044075-001	Battery pack (3-pole battery contact) Lithium	-	Use only with SMB board 3HAC044168-001 See foldout 10.
3	1	4944026-4	Battery, NiCa (Six cells)	-	See foldout 10.
5	1	3HAB3380-1	Intermediate gear axis 4	-	See foldout 8.
17	1	3HAB3210-1	Gear axis 4, step 2	-	See foldout 6.
28	1	3HAC050096-001	Drive unit, axes 5-6	ABB Orange	See foldout 8.
	1	3HAC050098-001	Drive unit, axes 5-6	ABB Orange	YASKAWA See foldout 8.
	1	3HAC050099-001	Drive unit, axes 5-6	Graphite White	YASKAWA See foldout 8.
1	1	3HAC11305-1	Driving shaft, axes 5-6	-	See foldout 9.
3	1	3HAA2504-1	Motor plate	-	See foldout 9.
-	1	3HAB3773-11	V-ring, axis 4	-	
51	1	3HAC050084-001	Upper arm	ABB Orange	See foldout 1.
	1	3HAC050085-001	Upper arm	Graphite White	
14	2	2159167-61	Spacer	-	
15	4	2159167-62	Spacer	-	
16	1	2159167-63	Spacer	-	
32	2	2216264-14	Cover plug	-	
11	1	3HAC050076-001	Lower arm	ABB Orange	See foldout 1.
	1	3HAC050077-001	Lower arm	Graphite White	
15	1	3HAC050078-001	Parallel arm	ABB Orange	See foldout 1.
	1	3HAC050079-001	Parallel arm	Graphite White	
66	1	3HAC050080-001	Parallel bar	ABB Orange	See foldout 2.
	1	3HAC050081-001	Parallel bar	Graphite White	
26	2	3HAC050090-001	Synchronization mark, axes 1-2	ABB Orange	See foldout 1.
	2	3HAC050091-001	Synchronization mark, axes 1-2	Graphite White	
175	1	3HAC050092-001	Cover	ABB Orange	See foldout 5.
	1	3HAC050093-001	Cover	Graphite White	

1 Spare parts list

Item	Qty	Equipment	Description	Color	Note
196	1	3HAC050094-001	Cover plate	ABB Orange	See foldout 5.
	1	3HAC050095-001	Cover plate	Graphite White	
154	1	1SFA616920R8010	Protective cover	-	See foldout 4.
152	1	1SFA611100R1006	Push button	-	See foldout 4.

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2 Foldouts

Overview

This chapter includes foldouts with illustrations of the robot.

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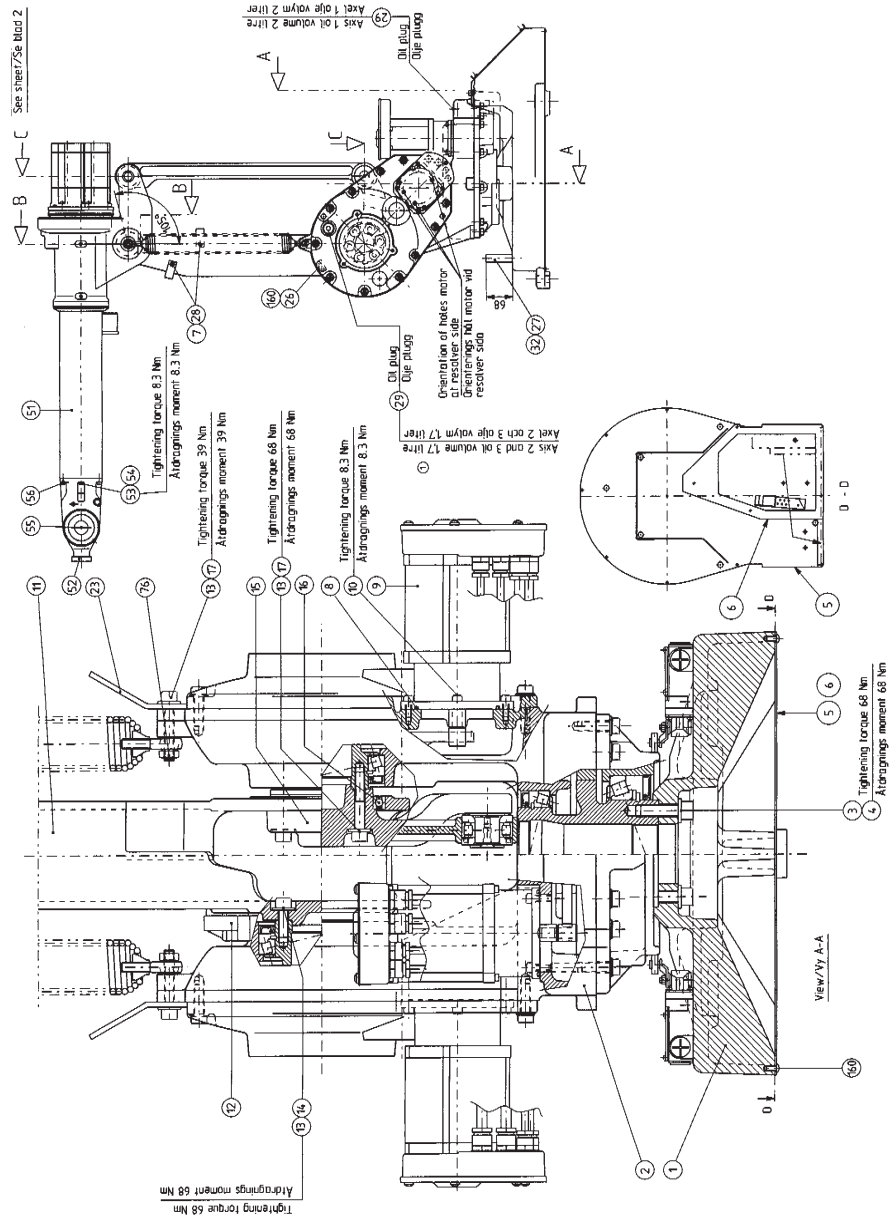
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**Foldout 2**

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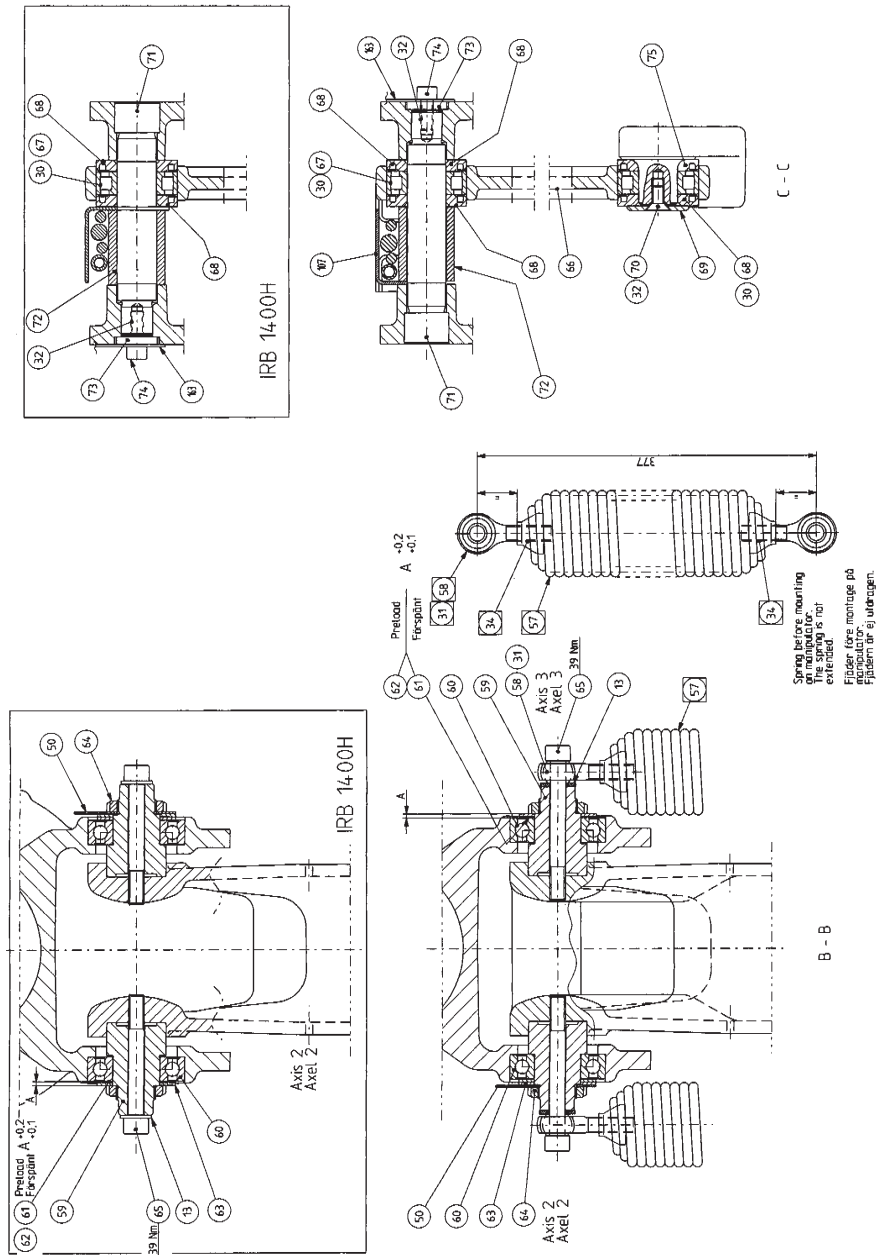
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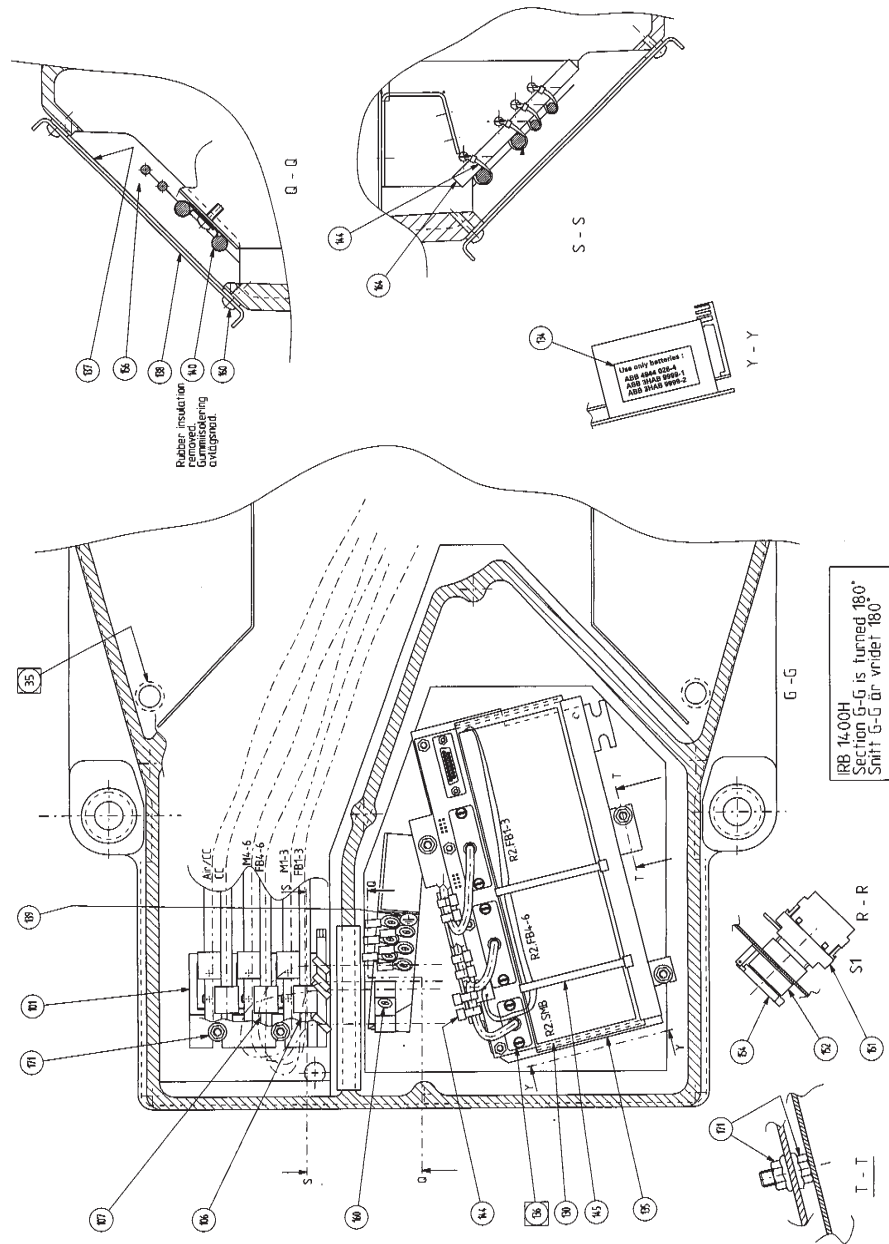
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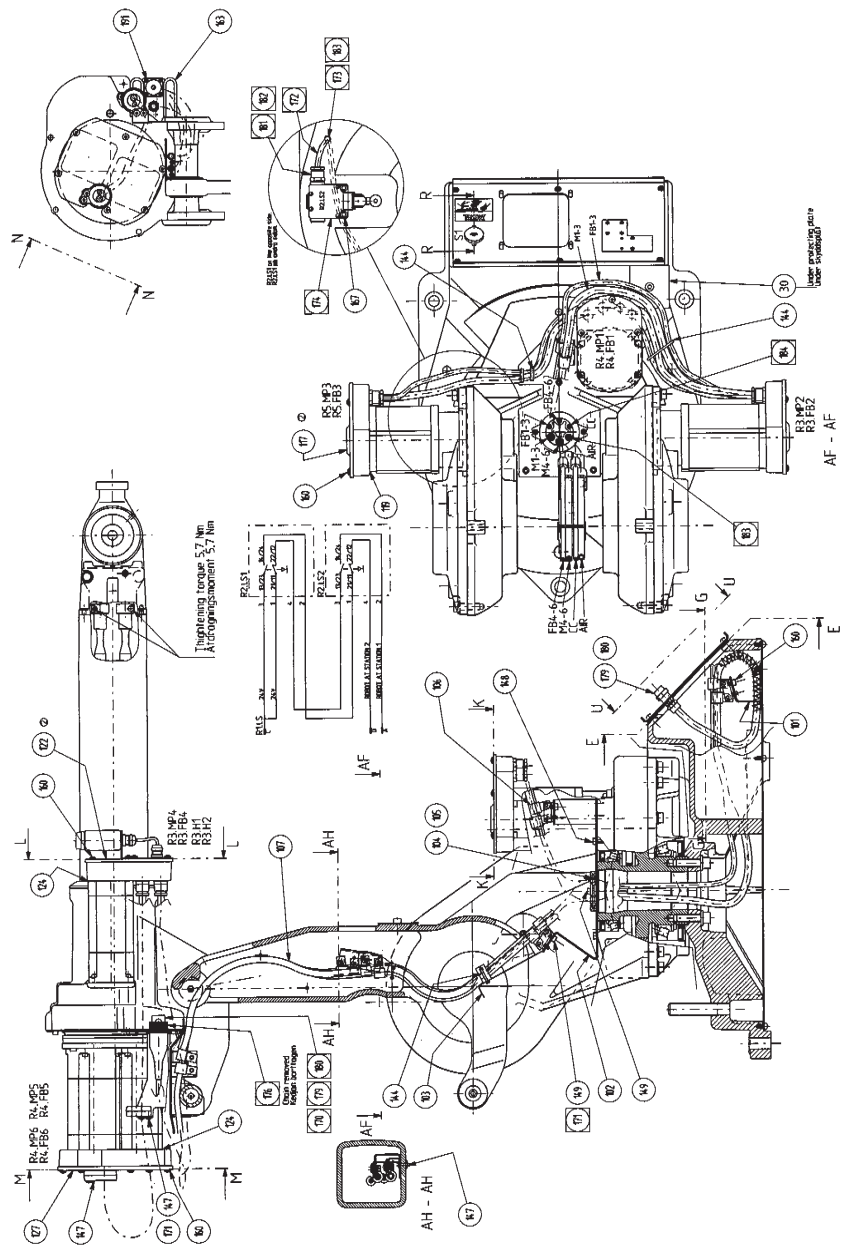
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Foldout 6

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Foldout 7

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Foldout 8

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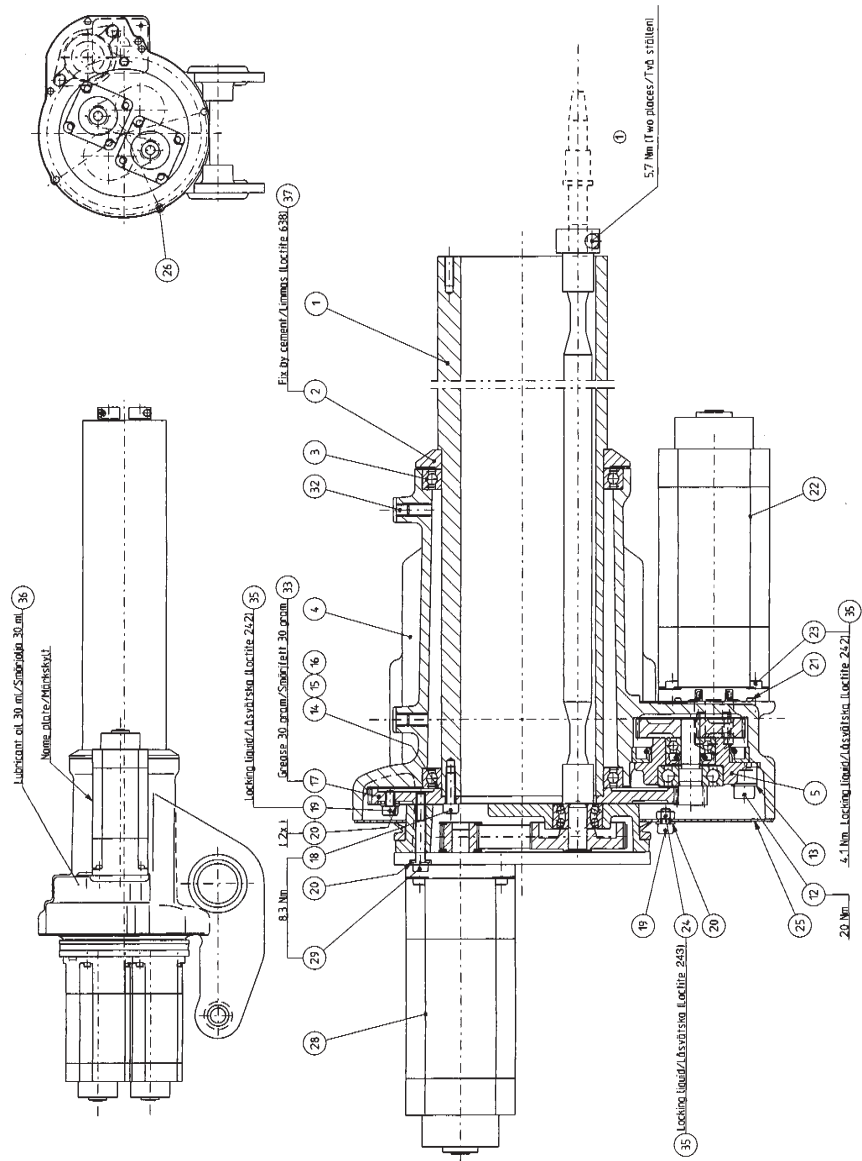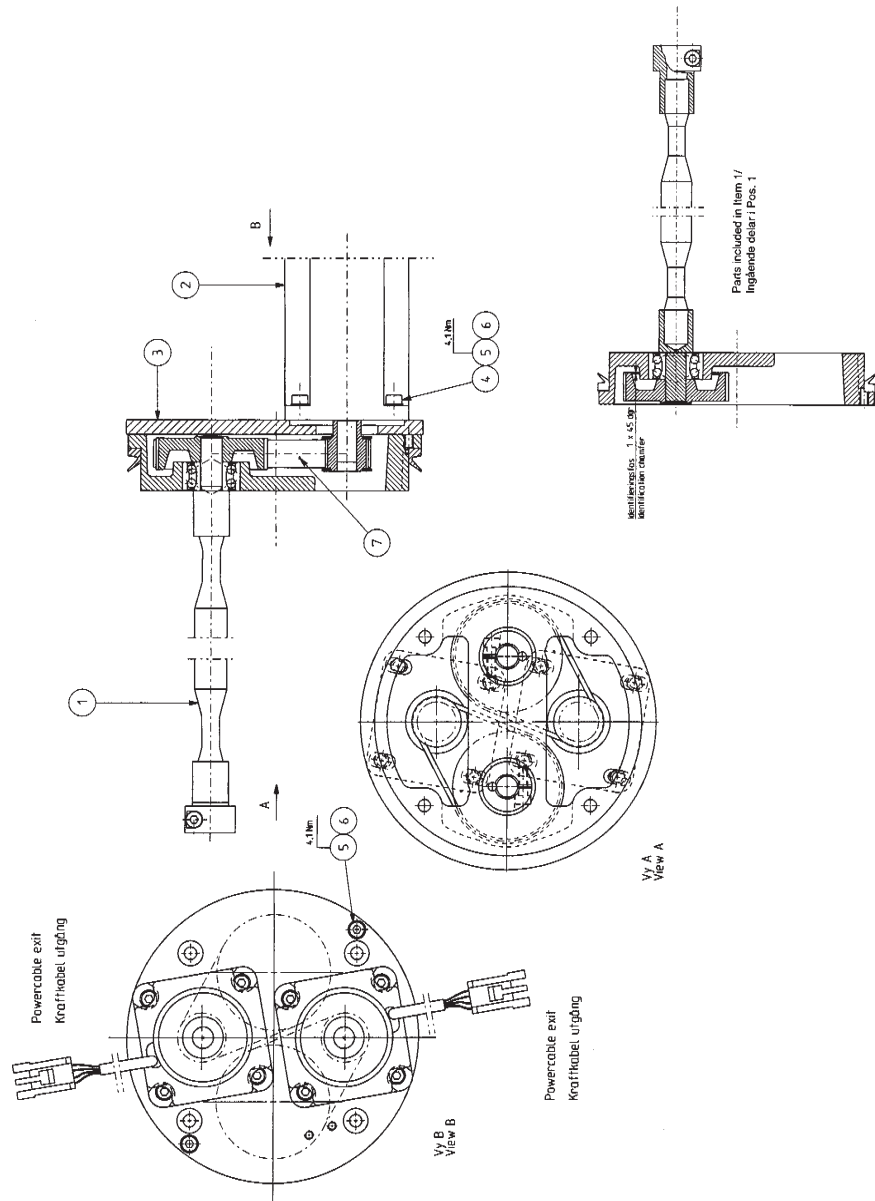
Foldout 9

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Foldout 10

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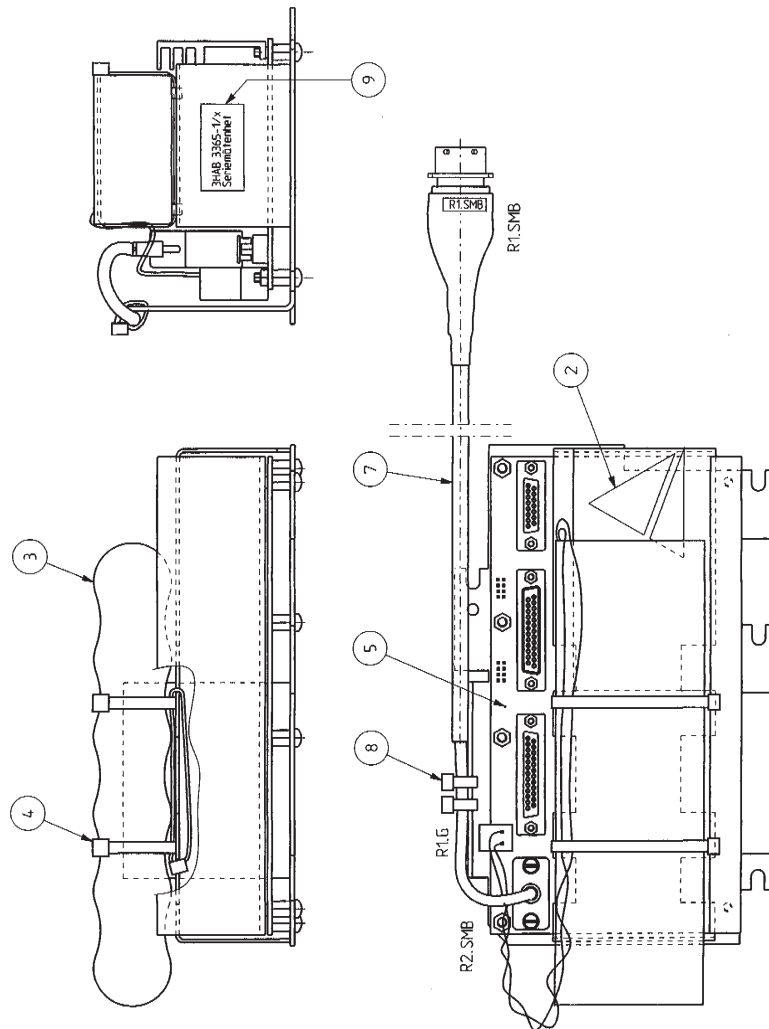
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