



ROBOTICS

Product manual, spare parts

IRB 6650S



Trace back information:
Workspace 24C version a5
Checked in 2024-09-17
Skribenta version 5.5.019

Product manual, spare parts

IRB 6650S - 200/3.0

IRB 6650S - 190/3.0 LID

IRB 6650S - 125/3.5

IRB 6650S - 100/3.5 LID

IRB 6650S - 90/3.9

IRC5, OmniCore

Document ID: 3HAC049111-001

Revision: M

The information in this manual is subject to change without notice and should not be construed as a commitment by ABB. ABB assumes no responsibility for any errors that may appear in this manual.

Except as may be expressly stated anywhere in this manual, nothing herein shall be construed as any kind of guarantee or warranty by ABB for losses, damage to persons or property, fitness for a specific purpose or the like.

In no event shall ABB be liable for incidental or consequential damages arising from use of this manual and products described herein.

This manual and parts thereof must not be reproduced or copied without ABB's written permission.

Keep for future reference.

Additional copies of this manual may be obtained from ABB.

Original instructions.

Table of contents

Overview of this manual	7
Product documentation	10
1 Spare parts	13
1.1 Spare parts - Electrical parts	13
1.2 Spare parts - Axis 3-4	17
1.3 Spare parts - Arm extender	19
1.4 Spare parts - Wrist	20
1.5 Spare parts - Lower arm	23
1.6 Spare parts - Balancing device	25
1.7 Spare parts - Frame and base	27
1.8 Spare parts - Motors	29
1.8.1 Motor axis 1	29
1.8.2 Motor axis 2	31
1.8.3 Motor axis 3	33
1.8.4 Motor axis 4	35
1.8.5 Motor axis 5	37
1.8.6 Motor axis 6	38
1.9 Spare parts - Gearboxes	40
1.9.1 Gearbox axis 1	40
1.9.2 Gearbox axis 2	42
1.9.3 Gearbox axis 3	44
1.9.4 Gearbox axis 6	46
1.10 Spare parts - Calibration items	47
1.11 Spare parts - Options	48
2 Robot description	49
2.1 Type A vs type B motors	49
Index	51

This page is intentionally left blank

Overview of this manual

About this manual

This manual contains spare parts for:

- IRB 6650S and all its variants.

Usage

This manual shall be used as a complement to the product manual for IRB 6650S 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 Spare parts and exploded views	Complete spare part lists and spare parts shown in exploded views.

References

Reference	Document ID
<i>Product manual - IRB 6650S</i>	<i>3HAC020993-001</i>
<i>Circuit diagram - IRB 6650S</i>	<i>3HAC13347-1</i> <i>3HAC025744-001</i>

Revisions

Revision	Description
-	First edition
A	This revision includes following corrected, added or deleted spare part numbers: <ul style="list-style-type: none">• Spare parts with color Graphite White are added to the spare part lists.

Continues on next page

Revision	Description
B	<p>This revision includes following corrected, added or deleted spare part numbers:</p> <ul style="list-style-type: none"> • The complete manual has been restructured. All article numbers not considered spare parts are removed from the manual. • Spare parts for Axis Calibration added to the spare part lists. • Following spare part numbers are updated: <ul style="list-style-type: none"> - axis 3-4 - axis-2 gearbox - axis-4 motor - serial measurement unit - battery box cover - axis-6 motor - axis-6 motor gasket - axis-6 gearbox - turning disc
C	<p>This revision includes following corrected, added or deleted spare part numbers:</p> <ul style="list-style-type: none"> • Retaining ring, shaft and protection washer (lower arm shaft) deleted.
D	<p>Published in release R16.2. The following updates are done in this revision:</p> <ul style="list-style-type: none"> • Added painted base as spare part. • Added spare part number for protection cover and plug set (Axis Calibration). • Updated spare parts due to sealing upgrade in the motors: <ul style="list-style-type: none"> - Motors - Axis 3-4 - Wrist
E	<p>Published in release R17.2. The following updates are done in this revision:</p> <ul style="list-style-type: none"> • Added article numbers for screw and washer for wrist cover. • Spare part numbers for wrists that belong to robots calibrated with Pendulum Calibration are added. • Spare part number for graphite white gearboxes axis 2 and axis 6 added. • Updated Spare part list - wrist other parts
F	<p>Published in release R18.1. The following updates are done in this revision:</p> <ul style="list-style-type: none"> • Updated the article number for wedge in axis 3-4. • Updated the article numbers for Axis-4 cover with sealing. • Updated spare part number brake release board (was DSQC563).
G	<p>Published in release R18.1. The following updates are done in this revision:</p> <ul style="list-style-type: none"> • Type B motors are introduced throughout the manual. <p>Spare part numbers for following spare parts has been updated:</p> <ul style="list-style-type: none"> - Axis 3-4 - Wrist - Motors
H	<p>Published in release R20B. The following updates are done in this revision:</p> <ul style="list-style-type: none"> • Spare part numbers for following spare parts has been updated: <ul style="list-style-type: none"> - Manipulator harness axes 1-6
J	<p>Published in release R21A. The following updates are done in this revision:</p> <ul style="list-style-type: none"> • Information about the linear guide added to the manipulator harness section.
K	<p>Published in release R21D. The following updates are done in this revision:</p> <ul style="list-style-type: none"> • Spare part numbers changed, see Spare part list - wrist.

Continues on next page

Revision	Description
L	Published in release 22C. The following updates are done in this revision: <ul style="list-style-type: none"> • Added information for the OmniCore robot controller, including additional robot variant designations for LID-prepared manipulators. • Removed information for M2000 and M2000A.
M	Published in release 24C. The following updates are done in this revision: <ul style="list-style-type: none"> • Added grease to balancing device spare part 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, 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.

Continues on next page

- 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.

This page is intentionally left blank

1 Spare parts

1.1 Spare parts - Electrical parts

Manipulator harness

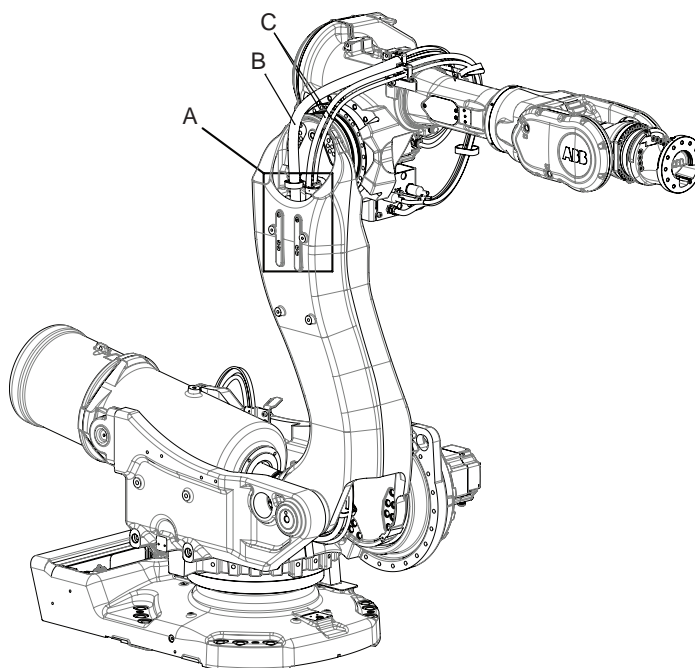
Spare part list - manipulator harness

Spare part number	Description	200/3.0	125/3.5	90/3.9
3HAC033389-001	Manipulator harness axes 1-4	X	X	X
3HAC14139-1	Manipulator harness axis 5	X	X	X
3HAC14140-1	Manipulator harness axes 5-6	X	X	-
3HAC075000-001 ⁱ	Manipulator harness axes 1-6	X	X	X

ⁱ Robot must be equipped with linear guide 3HAC077402-001. See [Linear guide on page 13](#).

Linear guide

A linear guide is installed at the lower arm to make the cable harness run smoothly. When fitting cable harness 3HAC075000-001 to the robot, the linear guide 3HAC077402-001 must be installed.

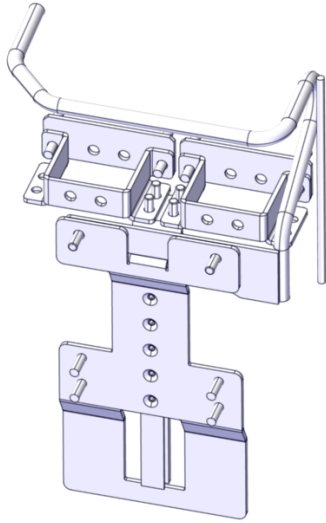
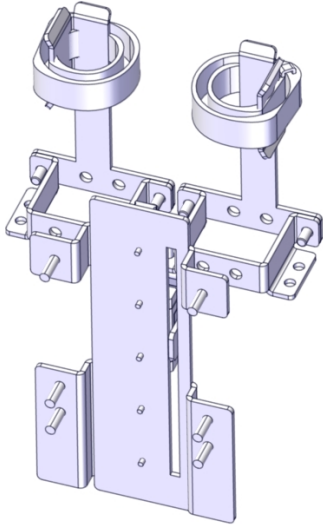


xx2100000302

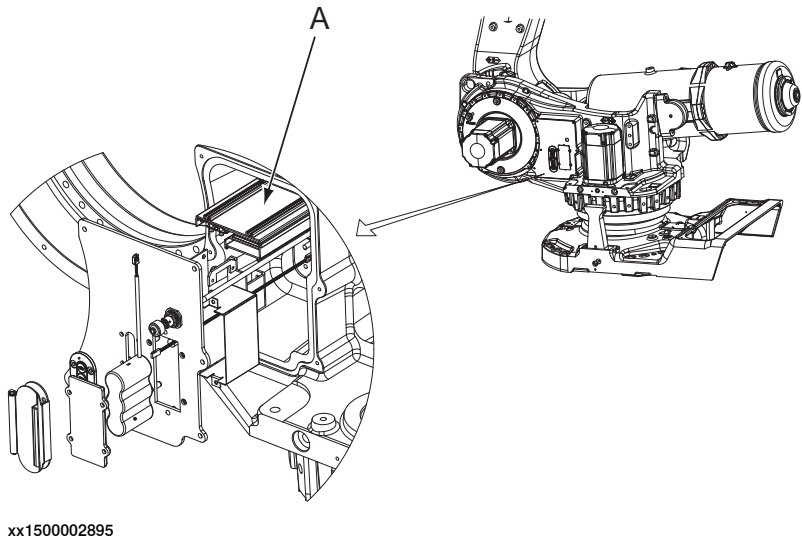
Continues on next page

1 Spare parts

1.1 Spare parts - Electrical parts
Continued

A	Linear guide (inside lower arm)	
	<div>Old version of linear guide</div>  <div>xx2100000305</div>	<div>New version of linear guide (kit article number: 3HAC077402-001)</div>  <div>xx2100000306</div>
B	Manipulator harness	
C	DressPack cable harness	

SMB unit

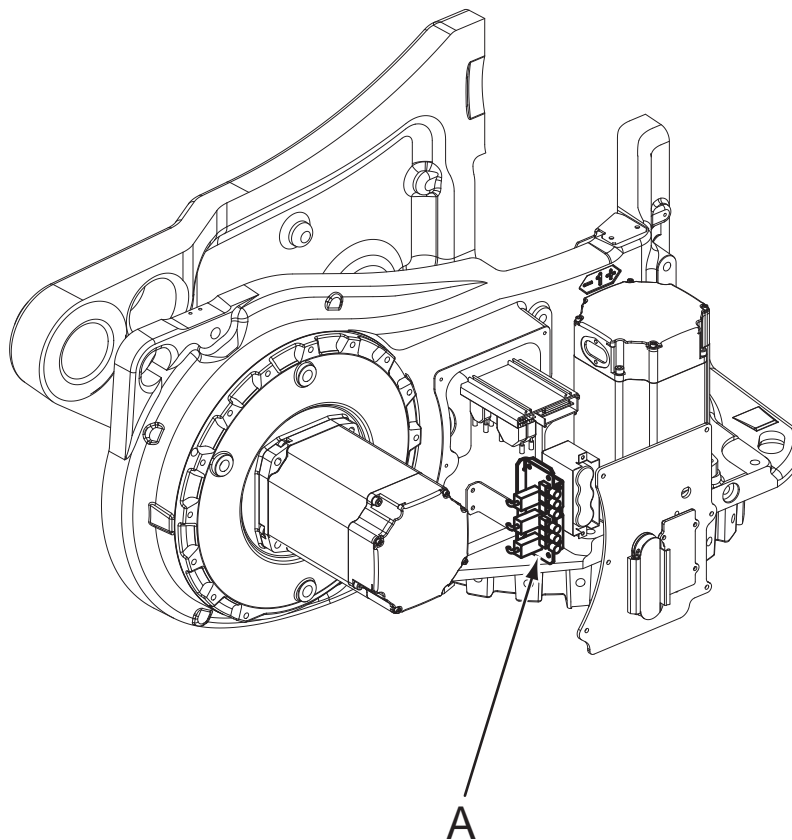


Spare part list - SMB

	Spare part number	Description
N	3HAC046277-001	Serial measurement unit Contains serial measurement board 3HAC044168-001 and battery pack 3HAC044075-001.

Continues on next page

Brake release unit



xx1500002896

Spare part list - brake release unit

	Spare part number	Description
A	3HAC065020-001	Brake release unit with buttons DSQC1050

Other parts

Spare part list - other parts manipulator harness

	Description	Spare part number	Color
-	Cable guide axis 3	3HAC061539-001	-
-	Protection cover for connector R1.MP	3HAC13416-1	-
-	Push button guard	3HAC6499-1	-
-	Cover battery box	3HAC14791-4	-
-	Cover SMB and BRU	3HAC021228-005	ABB Orange
		3HAC021228-006	Graphite White
-	Battery pack (2-pole battery contact) Can only be used with SMB unit 3HAC16014-1.	3HAC16831-1	

Continues on next page

1 Spare parts

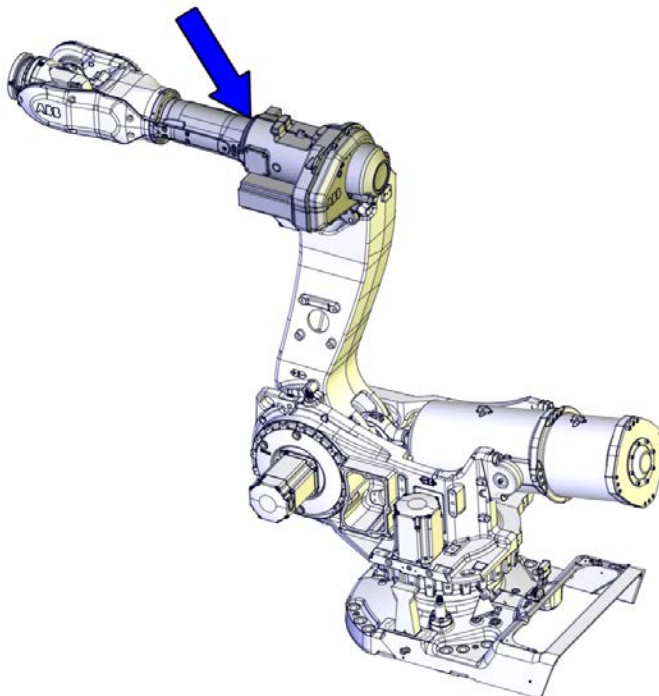
1.1 Spare parts - Electrical parts

Continued

	Description	Spare part number	Color
-	Battery pack (3-pole battery contact) Can only be used with SMB unit 3HAC022286-001.	3HAC044075-001	-
-	Battery holder Required for installation of battery pack 3HAC044075-001.	3HAC046520-001	-
-	Battery holder	3HAC020105-001	-
-	Cable battery/SMB Used with battery pack 3HAC16831-1.	3HAC13151-1	
-	Cable battery/SMB Used with battery pack RMU 3HAC044075-001.	3HAC046287-001	-

1.2 Spare parts - Axis 3-4

Axis 3-4



xx1500002902

Spare part list - axis 3-4

Description	Spare part number	Protection type	Color
Axis 3-4	3HAC063648-003	Standard/Foundry	ABB Orange
	3HAC063648-002	Standard/Foundry	Graphite White
Axis 3-4 LeanID	3HAC063647-003	Standard/Foundry	ABB Orange
	3HAC063647-002	Standard/Foundry	Graphite White

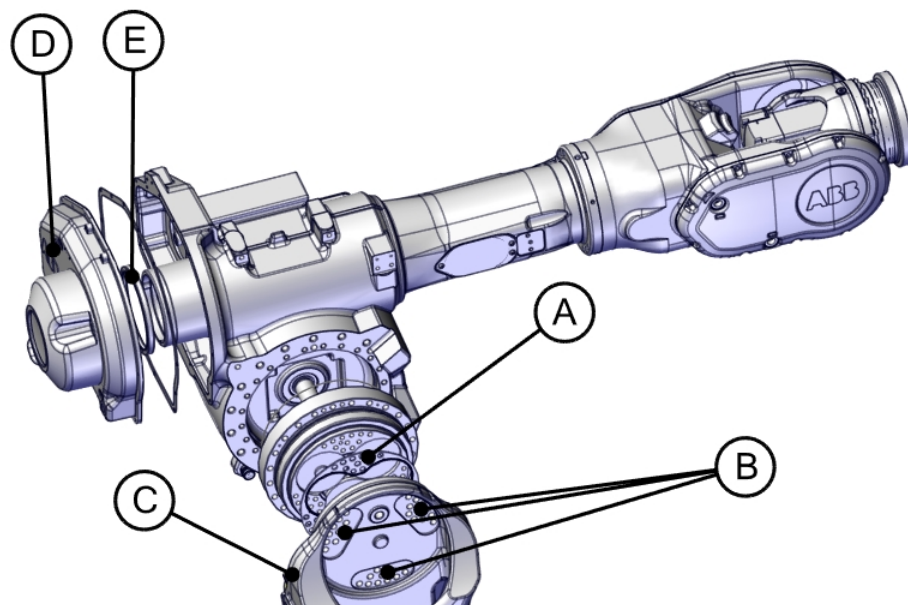
Continues on next page

1 Spare parts

1.2 Spare parts - Axis 3-4

Continued

Other parts



xx1700002039

Spare part list - axis 3-4 other parts

	Description	Spare part number	Color	Note
A	Sealing, axis 2/3	3HAC17212-1		
B	Washer, axis 3	3HAC038648-002	ABB Orange	3 pcs
		3HAC038648-003	Graphite White	3 pcs
C	Mechanical stop axis 3	3HAC12708-1		
D	Axis-4 cover (including gasket and sealing ring)	3HAC049789-001	ABB Orange	
		3HAC049789-002	Graphite White	
E	Sealing	3HAA1001-628		
-	Axis-4 wheel unit	3HAC037677-001		
-	Wedge	3HAC029403-001		
-	Axis-4 damper	3HAC13564-1		
-	Magnetic plug, axis-4 gearbox	3HAC16721-1		

1.3 Spare parts - Arm extender

Arm extender**Spare part list - arm extender**

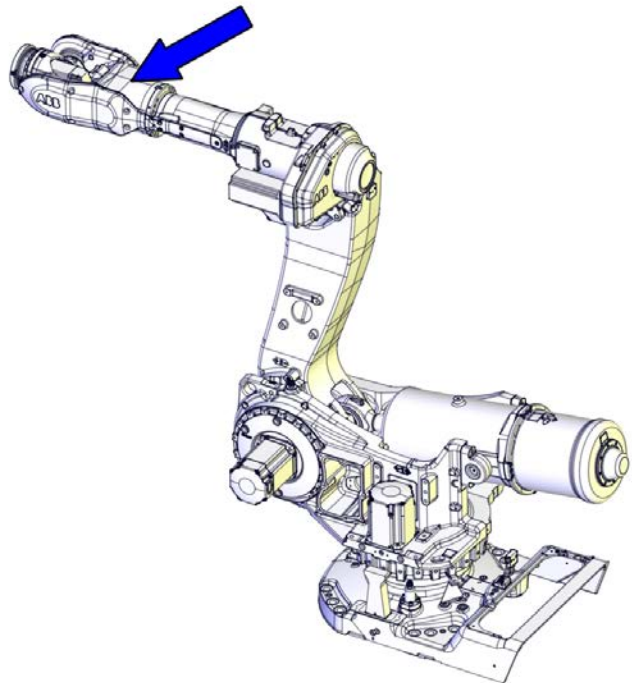
Description	Spare part number	Protection type	Color
Arm extender 450 mm	3HAC038666-003	Standard/Foundry	ABB Orange
	3HAC050495-001	Standard/Foundry	Graphite White

1 Spare parts

1.4 Spare parts - Wrist

1.4 Spare parts - Wrist

Wrist



xx1500002897

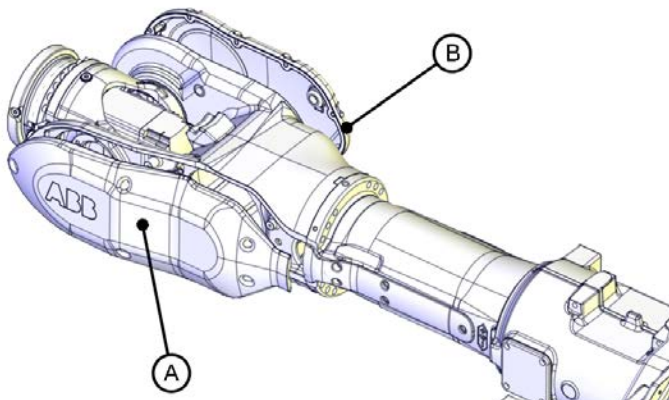
Spare part list - wrist

Description	Spare part number	Protection type	Color
Wrist, type 2 For robots with Axis Calibration. ⁱ	3HAC063644-003	Standard/Foundry	ABB Orange
	3HAC063644-002	Standard/Foundry	Graphite White
Wrist, type 2 For robots with Pendulum Calibration. ⁱ	3HAC058127-005	Standard/Foundry	ABB Orange
	3HAC058127-006	Standard/Foundry	Graphite White
Wrist, type 2, insulated	3HAC058947-004	Standard/Foundry	ABB Orange

ⁱ Information about valid calibration method is found on the calibration label or in the calibration menu on the FlexPendant.
If no data is found related to standard calibration, Calibration Pendulum is used as default.

Continues on next page

Other parts

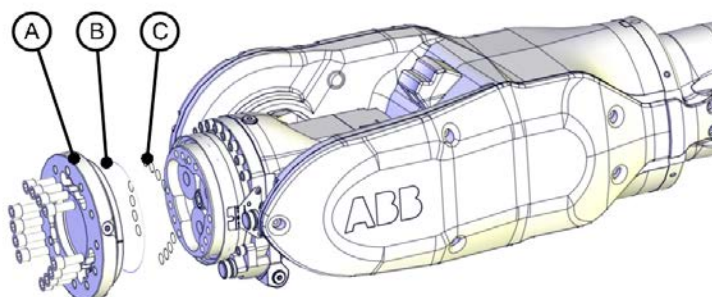


xx1500002957

Spare part list - wrist other parts

	Description	Spare part number	Protection type	Color
A	Cable cover	3HAC022172-003	Standard/Foundry Plus	ABB Orange
		3HAC022172-006	Standard/Foundry Plus	Graphite White
B	Cover with gasket	3HAC8081-10	Standard/Foundry Plus	ABB Orange
		3HAC049912-002	Standard/Foundry Plus	Graphite White
		3HAC8081-11	Clean Room	
		3HAC037426-003	Foundry Prime	
-	Screw	3HAB3409-25		
-	Washer	3HAC062379-001		
-	Magnetic plug, axis-5 gear-box	3HAC16721-1		

Turning disc



xx1500002898

Continues on next page

1 Spare parts

1.4 Spare parts - Wrist

Continued

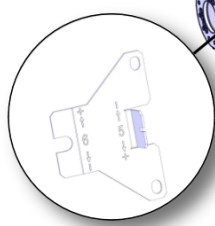
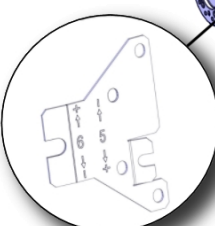
Spare part list - turning disc

	Description	Spare part number	
A	Turning disc, diameter 200	3HAC055229-002 ⁱ	
B	O-ring	3HAB3772-64	1 pc
C	O-ring	3HAB3772-61	12 pcs

ⁱ A set with an axis-6 synchronization mark plate is enclosed and replaces an incompatible plate, if currently installed.

The two versions of the synchronization mark plate are shown in [Axis-6 synchronization mark plate on page 22](#).

Axis-6 synchronization mark plate

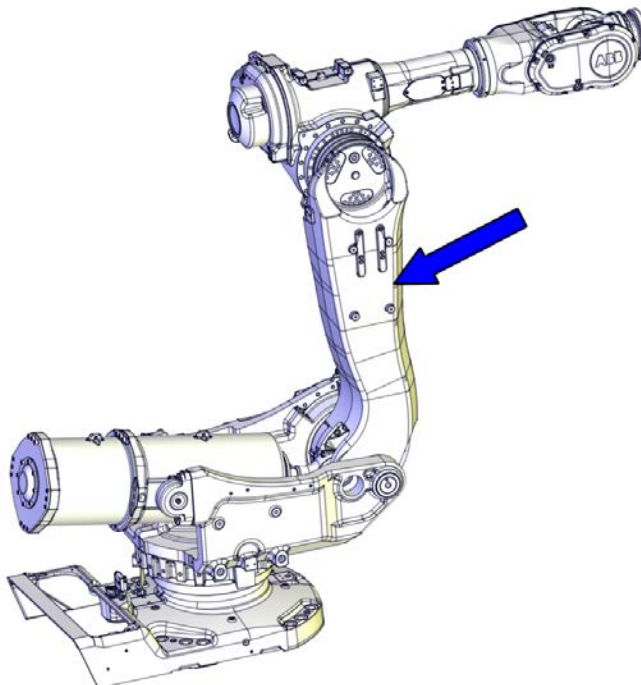
Description	Spare part number	Image
Synchronization mark plate axis-6 ⁱ	3HAC025581-001	 xx1500002960
Synchronization mark plate axis-6 ⁱⁱ	3HAC055074-001	 xx1500002959

ⁱ Compatible with turning disc 3HAC13572-1. (The spare part number is obsolete.)

ⁱⁱ Compatible with turning disc 3HAC055229-002.

1.5 Spare parts - Lower arm

Lower arm

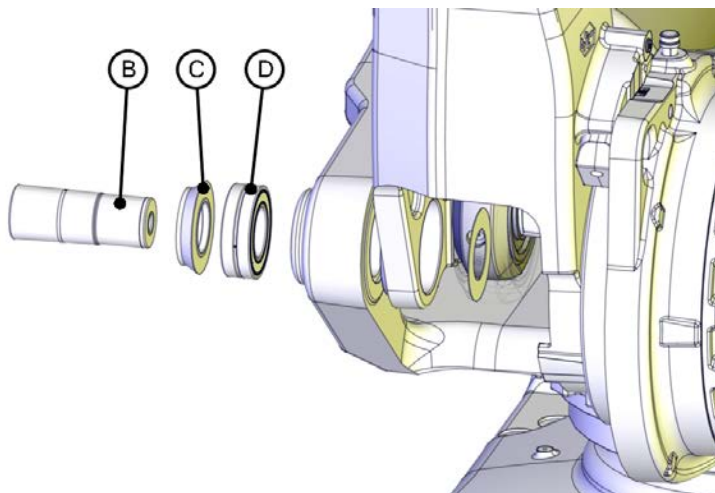


xx1500002903

Spare part list - lower arm

Description	Spare part number	Protection type	Color
Lower arm type A	3HAC051909-001	Standard/Foundry	ABB Orange
Lower arm type B	3HAC020505-007	Standard/Foundry	ABB Orange
	3HAC020505-008	Standard/Foundry	Graphite White

Lower arm - other parts (protection type Standard)



xx1500002904

Continues on next page

1 Spare parts

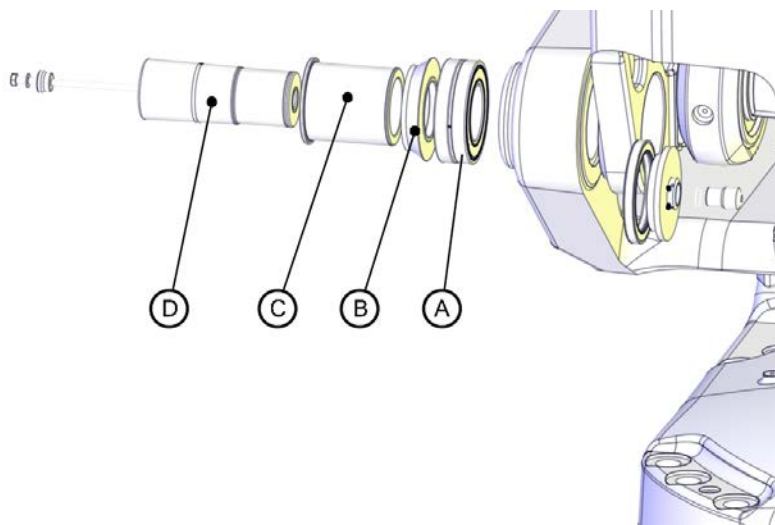
1.5 Spare parts - Lower arm

Continued

Spare part list - lower arm other parts

	Description	Spare part number	Protection type
-	Protection plug	3HAC4836-7	Standard
B	Lower arm shaft (axis-2 shaft)	3HAC12480-1	Standard
C	Thrust washer	3HAC12481-1	Standard
D	Spherical roller bearing	3HAC12441-2	Standard
-	Sealing, axis 2/3	3HAC020123-001	Standard

Lower arm - other parts (protection type Foundry Plus)

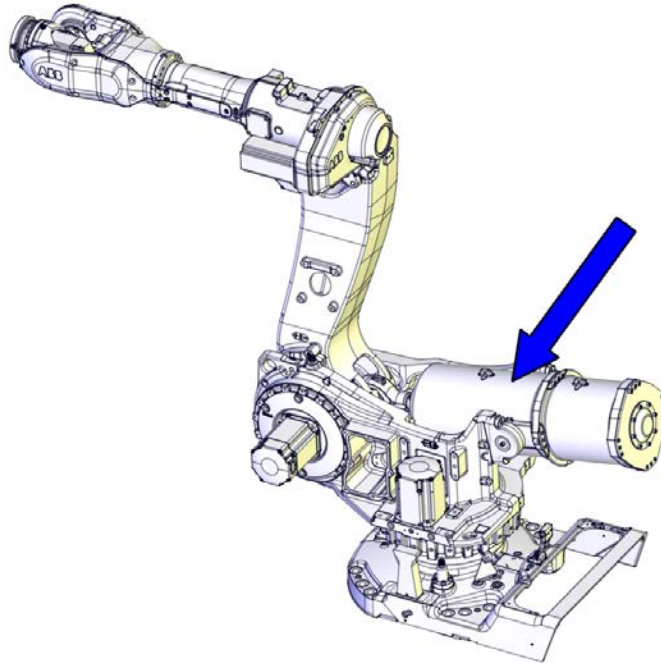


xx1500002958

	Description	Spare part number	Protection type
A	Spherical roller bearing	3HAC12441-2	
B	Thrust washer	3HAC12481-1	
C	Bushing	3HAC12627-1	Foundry Plus
D	Lower arm shaft (axis-2 shaft)	3HAC12480-1	

1.6 Spare parts - Balancing device

Balancing device



xx1500002899

Spare part list - balancing device

Description	Spare part number	Color	Note
Balancing device	3HAC021031-002	ABB Orange	
	3HAC021031-003	Graphite White	

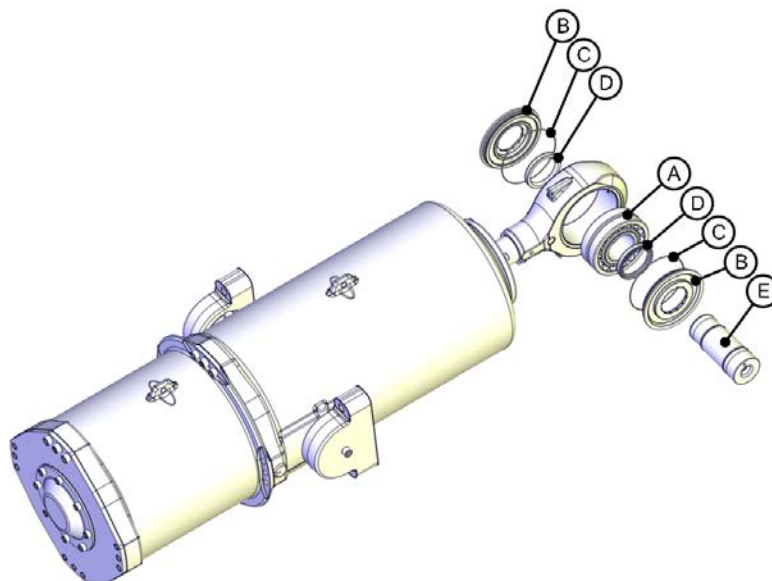
Continues on next page

1 Spare parts

1.6 Spare parts - Balancing device

Continued

Other parts



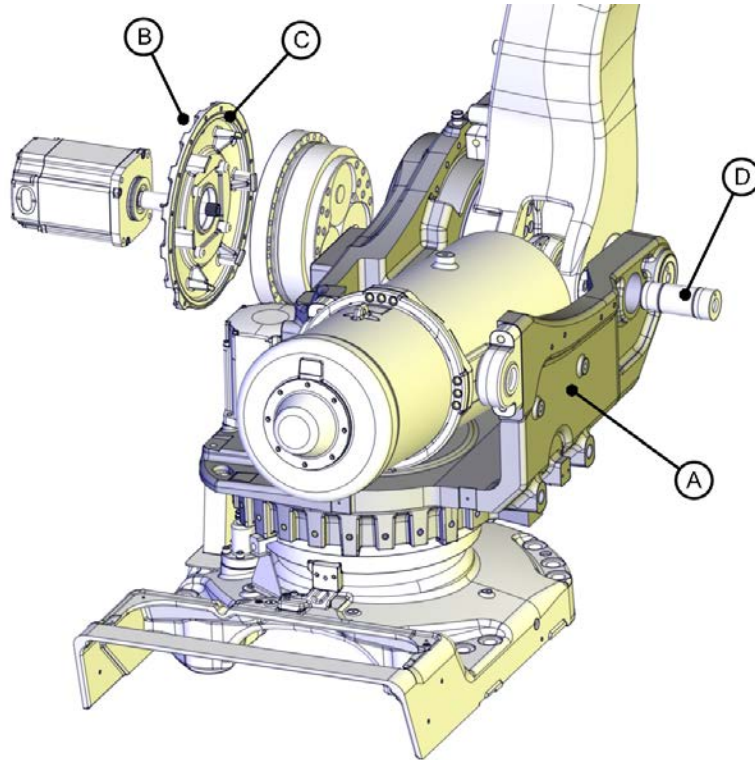
xx1500002900

Spare part list - balancing device other parts

	Description	Spare part number	Note
A	Spherical roller bearing	3HAA2167-17	At front ear of the balancing device.
B	Sealing spacer	3HAC12988-1	2 pcs. At front ear of the balancing device.
C	O-ring	3HAB3772-76	2 pcs. At front ear of the balancing device.
D	Sealing ring	3HAC11581-6	2 pcs. At front ear of the balancing device.
E	Shaft, balancing device	3HAC11427-1	
-	Grease	3HAA1001-294	98 g Tribol GR 100-0-PD The front ear bearing must always be lubricated after balancing device installation.

1.7 Spare parts - Frame and base

Frame



xx1500002905

Spare part list - frame

	Description	Spare part number	Color
A	Frame	3HAC055429-003	ABB Orange
		3HAC055429-004	Graphite White
B	O-ring, type A	3HAB3772-69	-
	O-ring, type B	3HAB3772-73	-
C	Axis-2 cover	3HAC022812-005	ABB Orange
		3HAC022812-006	Graphite White
D	Shaft, balancing device	3HAC11427-1	

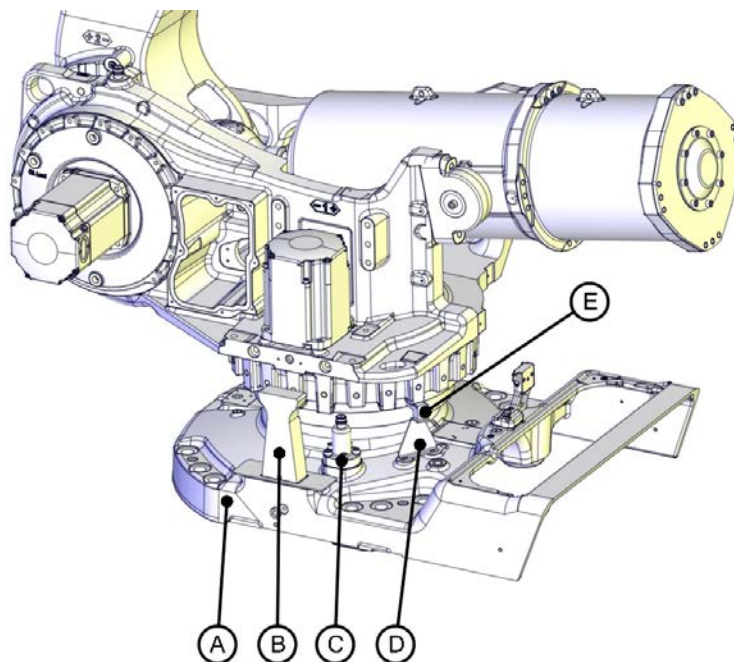
Continues on next page

1 Spare parts

1.7 Spare parts - Frame and base

Continued

Base



xx1500002952

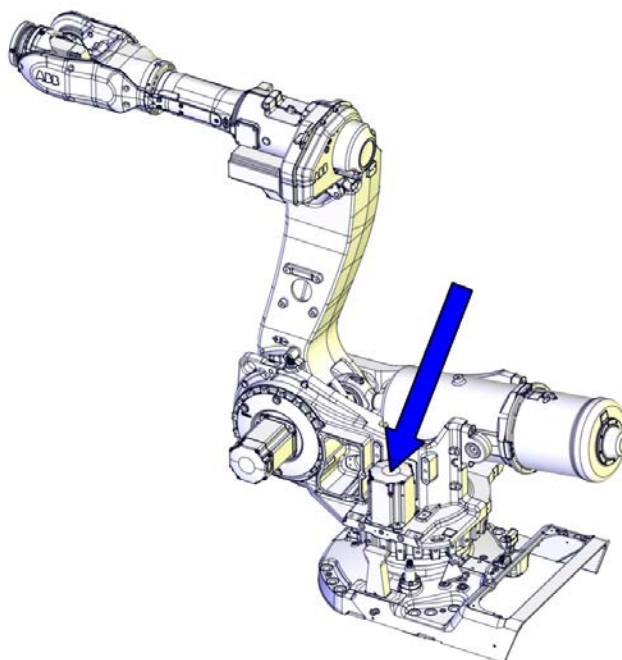
	Description	Spare part number	Color
A	Base	3HAC058104-001	Graphite White
		3HAC058104-002	ABB Orange
B	Mechanical stop, axis 1	3HAC12812-2	
C	Calibration stand	3HAC053515-002	Graphite White
		3HAC053515-003	ABB Orange
D	Synchronization plate	3HAC021287-001	
E	Block for calibration	3HAC053973-001	

1.8 Spare parts - Motors

1.8.1 Motor axis 1

Axis-1 motor (including pinion)

The spare part motor includes: pinion, connection box, cover and o-rings.



xx1500002885

Description	Spare part number	Protection type	Color
Motor axis 1 Type B ⁱ	3HAC062343-004	Foundry	ABB Orange
	3HAC062343-003	Foundry	Graphite White
Motor axis 1 Type A ⁱⁱ	3HAC057550-005	Foundry Prime	Grey

ⁱ Type A motor has been replaced by Type B. The motors are fully interchangeable. See [Type A vs type B motors on page 49](#).

The type B motor includes an oil seal that is inspected as a periodic maintenance activity. Make sure to add the activity to periodic maintenance, when replacing a type A motor with type B. See *Product manual - IRB 6650S*.

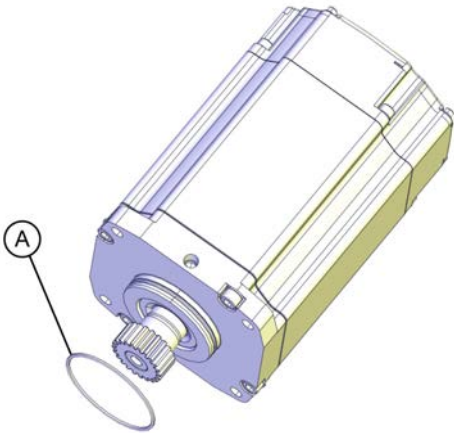
ⁱⁱ See [Type A vs type B motors on page 49](#).

Continues on next page

1 Spare parts

1.8.1 Motor axis 1
Continued

Axis-1 motor - other parts

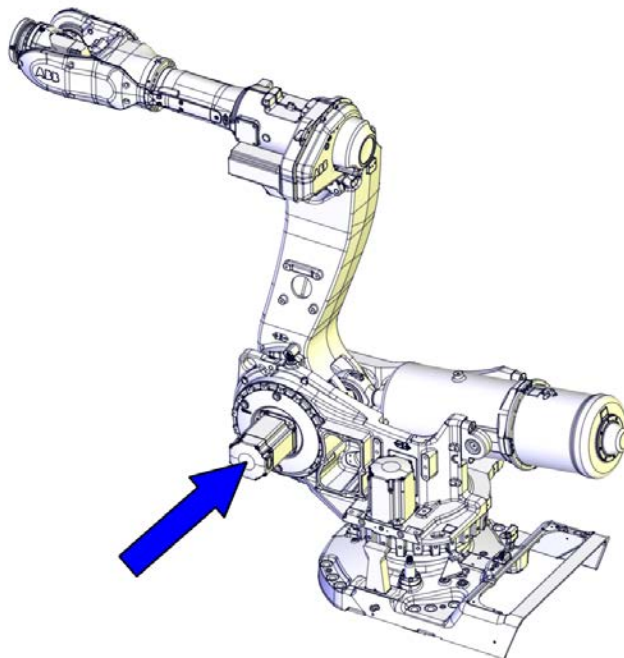


xx1800000133

	Description	Spare part number
A	O-ring	21522012-430

1.8.2 Motor axis 2

Axis-2 motor (including pinion)



xx1500002888

Spare part list - axis-2 motor

The spare part motor includes: pinion, connection box, cover and o-rings.

Description	Spare part number	Protection type	Color
Motor axis 2 Type B ⁱ	3HAC062344-004	Standard/Foundry	ABB Orange
	3HAC062344-003	Standard/Foundry	Graphite White
Motor axis 2 Type A ⁱⁱ	3HAC057551-005	Foundry Prime	Grey

ⁱ Type A motor has been replaced by Type B. The motors are fully interchangeable. See [Type A vs type B motors on page 49](#).

The type B motor includes an oil seal that is inspected as a periodic maintenance activity. Make sure to add the activity to periodic maintenance, when replacing a type A motor with type B. See *Product manual - IRB 6650S*.

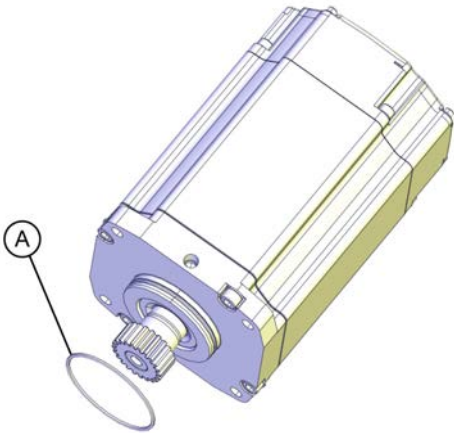
ⁱⁱ See [Type A vs type B motors on page 49](#).

Continues on next page

1 Spare parts

1.8.2 Motor axis 2
Continued

Axis-2 motor - other parts



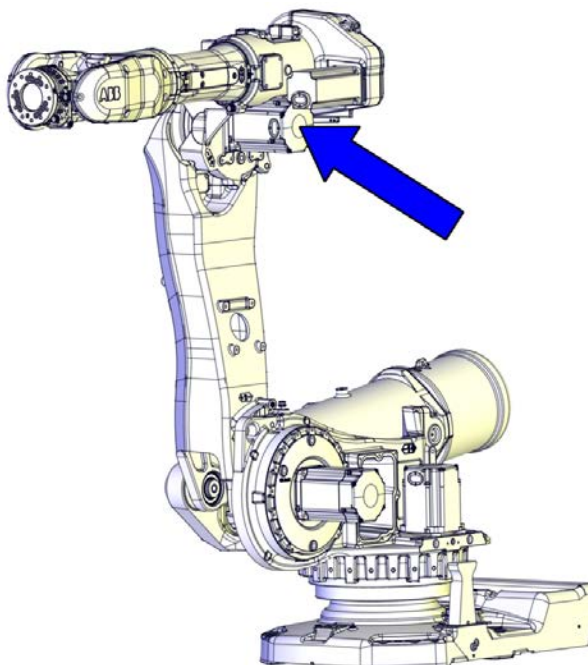
xx1800000133

Spare part list - other parts axis-2 motor

	Description	Spare part number
A	O-ring	21522012-430

1.8.3 Motor axis 3

Axis-3 motor (including pinion)



xx1500002894

Spare part list - axis-3 motor

The spare part motor includes: pinion, connection box, cover and o-rings.

Description	Spare part number	Protection type	Color
Motor axis 3 Type B ⁱ	3HAC062345-004	Standard/Foundry	ABB Orange
	3HAC062345-003	Standard/Foundry	Graphite White
Motor axis 3 Type A ⁱⁱ	3HAC058883-002	Foundry Prime	Grey

ⁱ Type A motor has been replaced by Type B. The motors are fully interchangeable. See [Type A vs type B motors on page 49](#).

The type B motor includes an oil seal that is inspected as a periodic maintenance activity. Make sure to add the activity to periodic maintenance, when replacing a type A motor with type B. See *Product manual - IRB 6650S*.

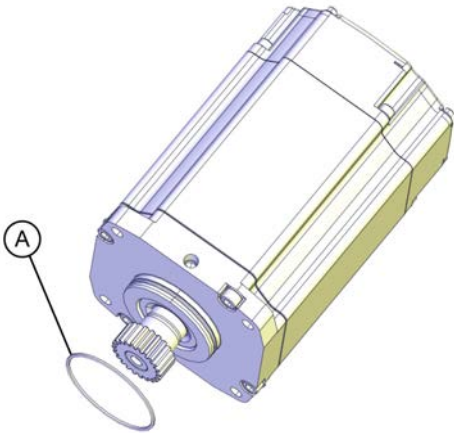
ⁱⁱ See [Type A vs type B motors on page 49](#).

Continues on next page

1 Spare parts

1.8.3 Motor axis 3
Continued

Axis-3 motor - other parts



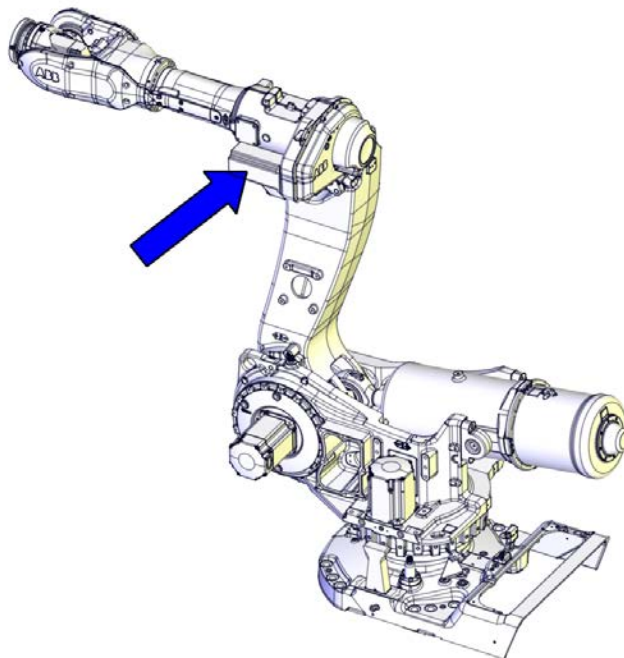
xx1800000133

Spare part list - other parts axis-3 motor

	Description	Spare part number
A	O-ring	21522012-430

1.8.4 Motor axis 4

Axis-4 motor (including pinion)



xx1500002891

Spare part list - axis-4 motor

The spare part motor includes: pinion, connection box, cover and o-rings.

Description	Spare part number	Protection type	Color
Motor axis 4 Type B ⁱ	3HAC062346-004	Standard	ABB Orange
	3HAC062346-003	Standard	Graphite White
Motor axis 4 Type A ⁱⁱ	3HAC058885-002	Foundry Prime	Grey

ⁱ Type A motor has been replaced by Type B. The motors are fully interchangeable. See [Type A vs type B motors on page 49](#).

The type B motor includes an oil seal that is inspected as a periodic maintenance activity. Make sure to add the activity to periodic maintenance, when replacing a type A motor with type B. See *Product manual - IRB 6650S*.

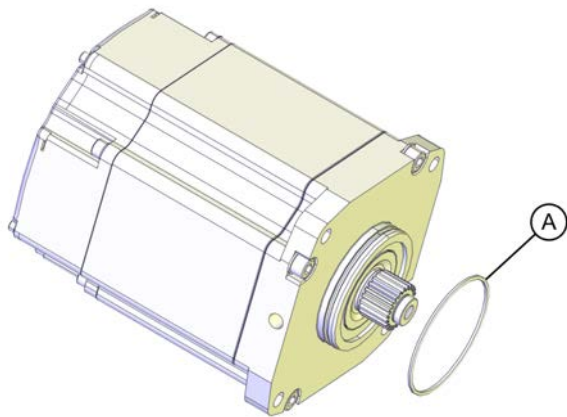
ⁱⁱ See [Type A vs type B motors on page 49](#).

Continues on next page

1 Spare parts

1.8.4 Motor axis 4
Continued

Axis-4 motor - other parts



xx1800000148

	Description	Spare part number
A	O-ring	21522012-430

1.8.5 Motor axis 5

Axis-5 motor (excluding pinion)

Spare part list - axis-5 motor

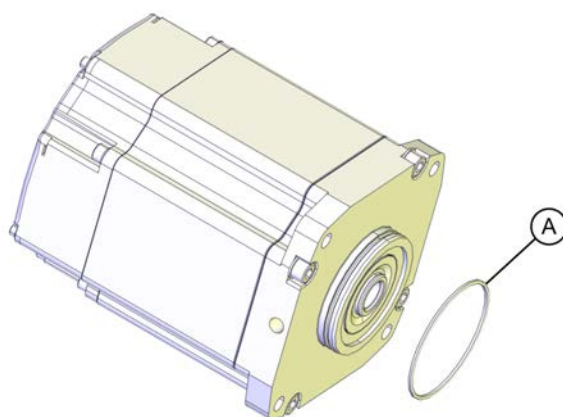
The spare part motor includes: connection box, cover and o-rings.

Description	Spare part number	Protection	Note
Motor axis 5 Type B ⁱ	3HAC062335-003	Standard/Foundry	The pinion in the axis-5 motor is matched with the bevel gear for axis 5. When replacing the motor the pinion must therefore be removed from the dismantled motor and fitted onto the new motor shaft as detailed in <i>Product manual - IRB 6650S</i> .
Motor axis 5 Type A ⁱⁱ	3HAC058886-002	Foundry Prime	

ⁱ Type A motor has been replaced by Type B. The motors are fully interchangeable. See [Type A vs type B motors on page 49](#).

ⁱⁱ See [Type A vs type B motors on page 49](#).

Axis-5 motor - other parts



xx1800000149

Spare part list - axis-5 motor other parts

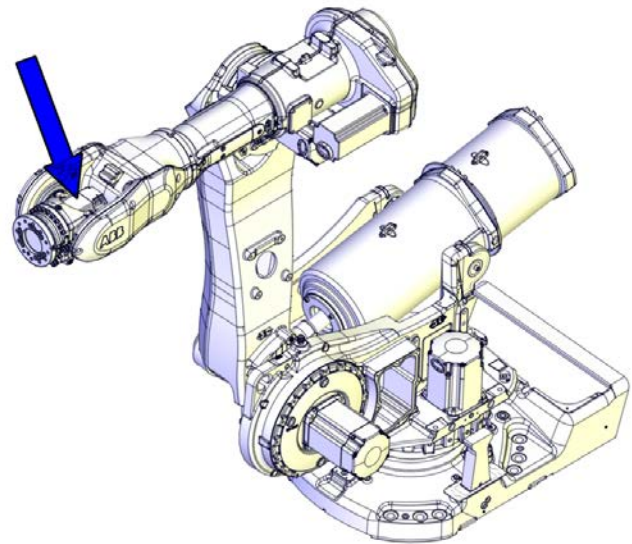
	Description	Spare part number
A	O-ring	21522012-430
-	Set of shim, motor	3HAC7941-28

1 Spare parts

1.8.6 Motor axis 6

1.8.6 Motor axis 6

Axis-6 motor (including pinion)



xx1500002953

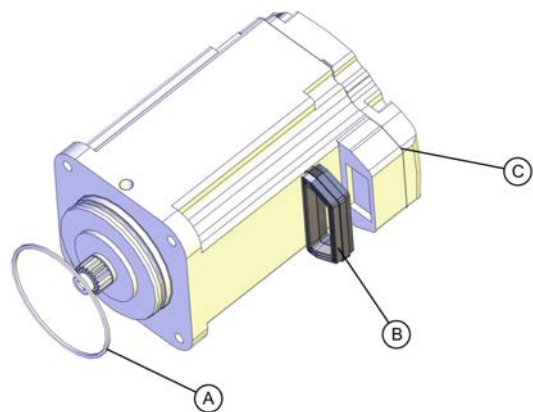
Spare part list - axis-6 motor

The spare part motor includes: pinion, connection box, cover and o-rings.

Description	Spare part number	Protection type	Color
Motor axis 6 Type B ⁱ	3HAC062348-004	Standard/Foundry	ABB Orange
	3HAC062348-003	Standard/Foundry	Graphite White
Motor axis 6 Type A ⁱⁱ	3HAC058887-002	Foundry Prime	Grey

- ⁱ Type A motor has been replaced by Type B. The motors are fully interchangeable. See [Type A vs type B motors on page 49](#).
- ⁱⁱ See [Type A vs type B motors on page 49](#).

Axis-6 motor - other parts



xx1800000137

Continues on next page

Spare part list - axis-6 motor other parts

	Description	Spare part number
A	O-ring	21522012-430
B	Gasket, type A motor ⁱ	3HAC048560-001
	Gasket, type B motor ⁱⁱ	3HAC063071-001
C	Gasket, cover	3HAC033489-001

- ⁱ Only fits type A motor.
See [Type A vs type B motors on page 49](#).
- ⁱⁱ Only fits type B motor.
See [Type A vs type B motors on page 49](#).

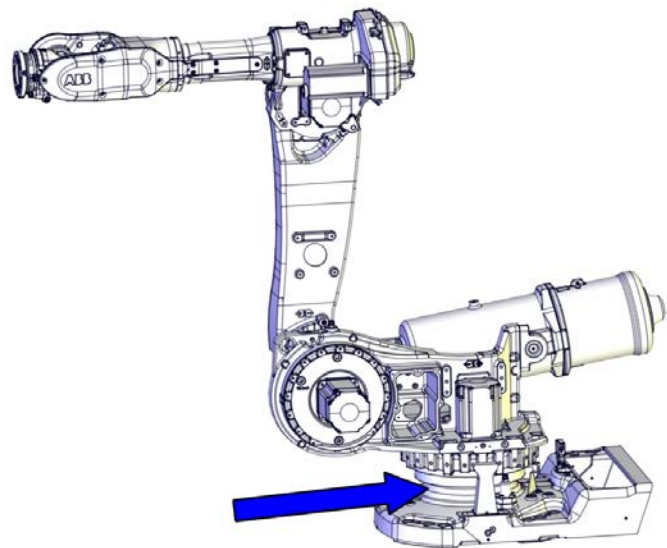
1 Spare parts

1.9.1 Gearbox axis 1

1.9 Spare parts - Gearboxes

1.9.1 Gearbox axis 1

Axis-1 gearbox

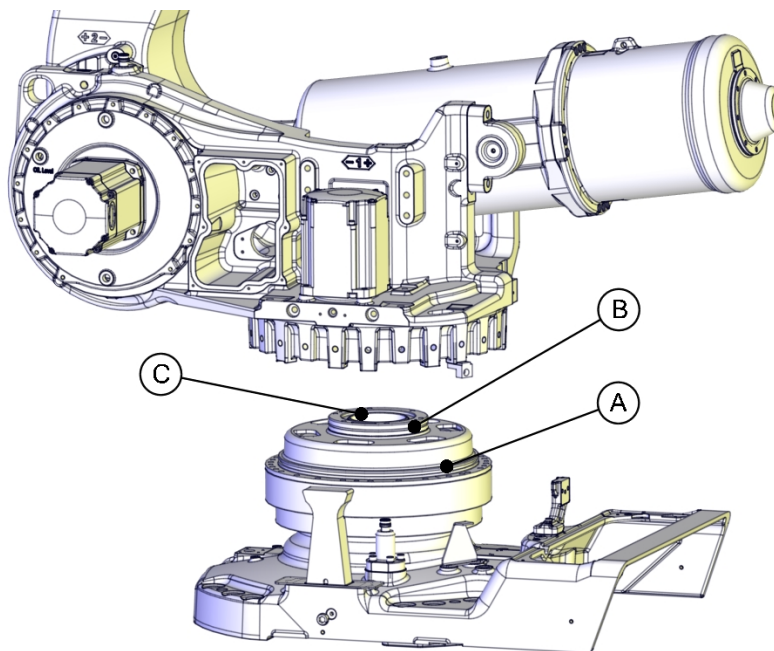


xx1500002886

Description	Spare part number	Protection type	Color
Gear axis 1	3HAC037638-002	Standard/Foundry	ABB Orange
	3HAC037638-005	Standard/Foundry	Graphite White

Continues on next page

Axis-1 gearbox - other parts



xx1500002887

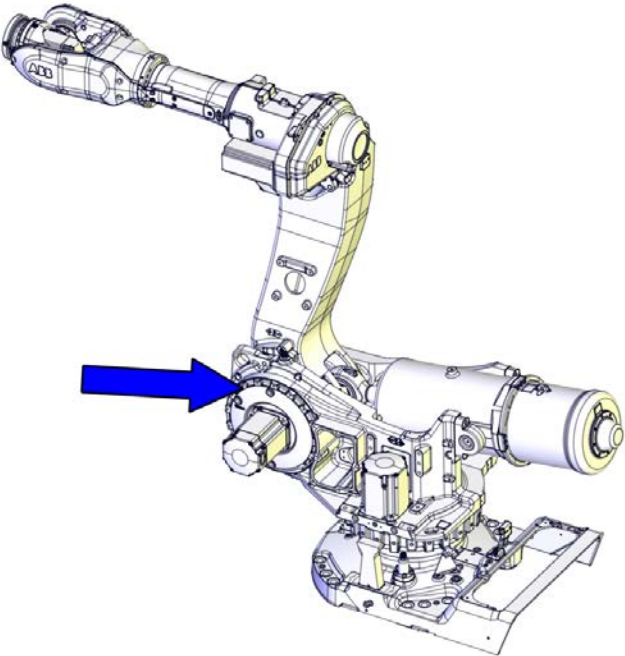
	Description	Spare part number
A	O-ring	3HAB3772-54
B	O-ring	3HAB3772-55
C	Sealing ring	3HAC11581-4

1 Spare parts

1.9.2 Gearbox axis 2

1.9.2 Gearbox axis 2

Axis-2 gearbox

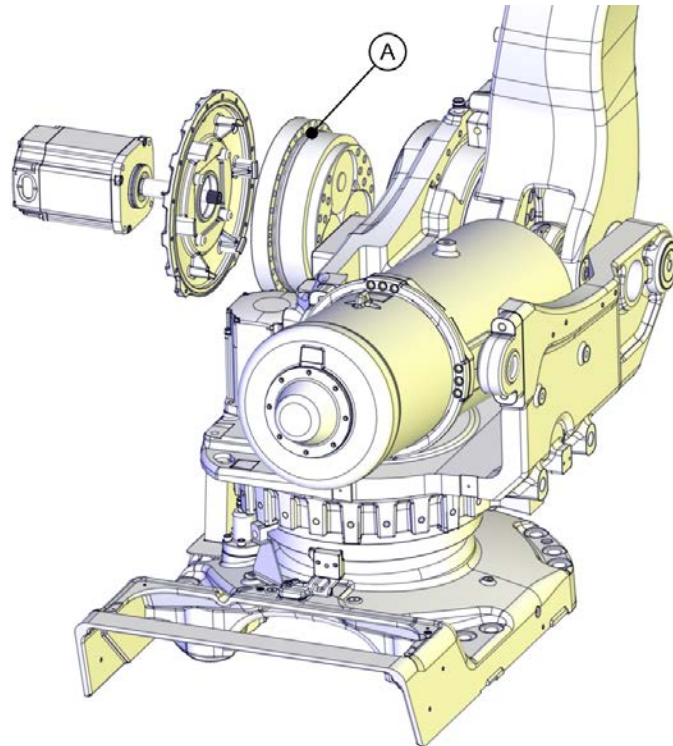


xx1500002889

Description	Spare part number	Protection type	Color
Gear axis 2	3HAC021541-002	Standard/Foundry	ABB Orange
	3HAC021541-004	Standard	Graphite White
	3HAC021541-003	Foundry Prime	Grey

Continues on next page

Axis-2 gearbox - other parts



xx1500002890

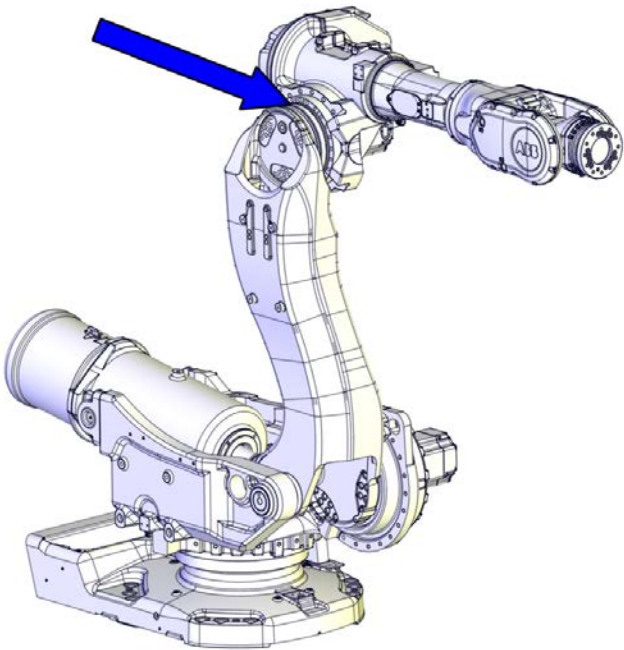
	Description	Spare part number
A	O-ring	3HAB3772-77
-	Magnetic plug, axis-2 gearbox	3HAC16721-1

1 Spare parts

1.9.3 Gearbox axis 3

1.9.3 Gearbox axis 3

Axis-3 gearbox



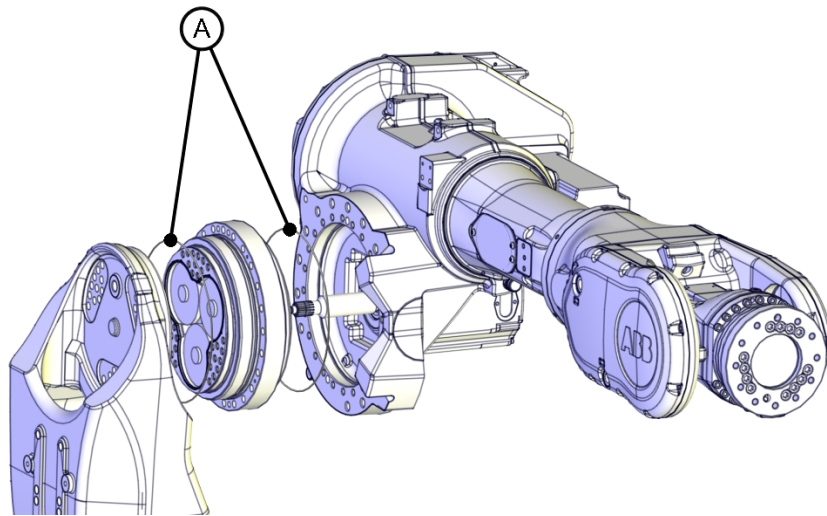
xx1500002892

Spare part list - axis-3 gearbox

Description	Spare part number	Protection type	Color
Gear axis 3	3HAC021127-004	Standard/Foundry	ABB Orange
	3HAC021127-010	Standard/Foundry	Graphite White
	3HAC021127-003	Foundry Prime	Grey

Continues on next page

Axis-3 gearbox - other parts



xx1500002893

Spare part list - other parts axis-3 gearbox

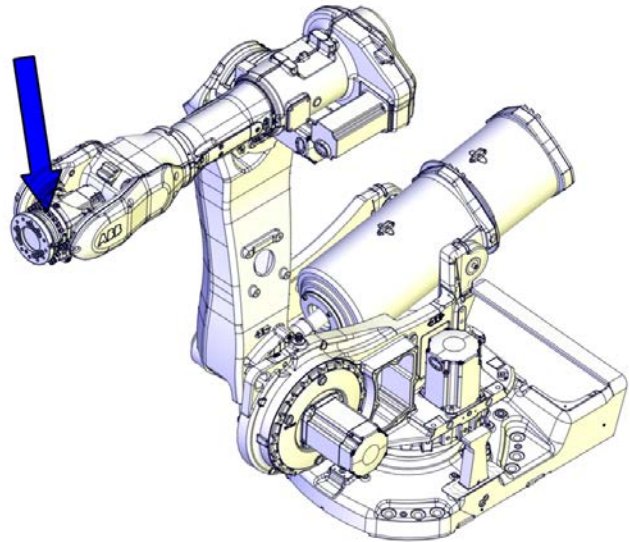
	Description	Spare part number
A	O-ring	3HAB3772-68
-	Magnetic plug, axis-3 gearbox	3HAC16721-1

1 Spare parts

1.9.4 Gearbox axis 6

1.9.4 Gearbox axis 6

Axis-6 gearbox

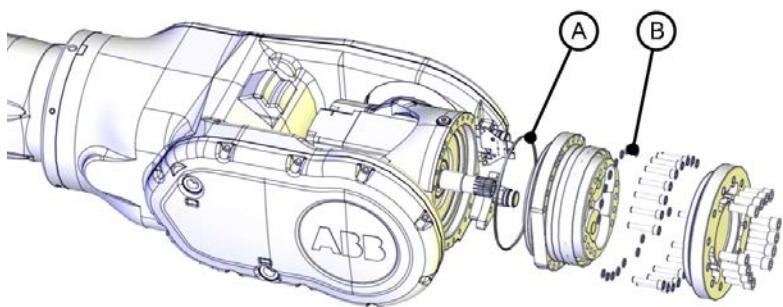


xx1500002955

Spare part list - axis-6 gearbox

Description	Spare part number	Protection type	
Gear axis 6	3HAC037635-002	Standard/Foundry	ABB Orange
	3HAC037635-005	Standard	Graphite White

Axis-6 gearbox - other parts



xx1500002956

Spare part list - axis-6 gearbox other parts

	Description	Spare part number	Note
A	O-ring	3HAB3772-57	
B	Washer	3HAA1001-172	18 pcs

1.10 Spare parts - Calibration items

Calibration items

Spare part number	Description	Note
3HAC056806-001	Protection cover and plug set	Contains replacement calibration pin covers and protective plugs for the bushing.

1 Spare parts

1.11 Spare parts - Options

1.11 Spare parts - Options

Options

Spare part number	Description
3HAC035933-001	Foundry Plus, Cable guard
3HAC045972-001	Upgrade kit Foundry Prime sealing
3HAC045972-002	Upgrade kit Foundry Prime sealing for arm extension

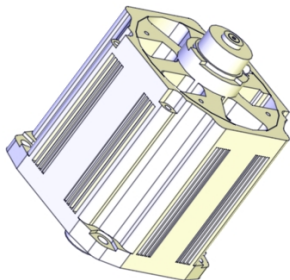
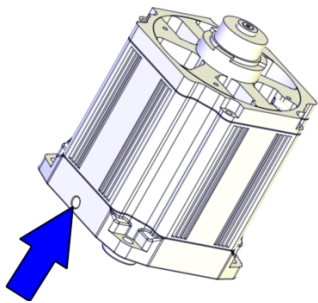
2 Robot description

2.1 Type A vs type B motors

Identifying the motor visually

Type B motors include evacuation on the motor flange to indicate failure of primary sealing between the gearbox and the motor. Robots with protection type Foundry Plus have a sight glass installed in the evacuation holes.

Use the images to identify which type of motor is installed on each robot axis.

Type A motor	Type B motor
 xx1500001058	 xx1500001057
No evacuation on type A motors.	The type B motor include evacuation on the motor flange.

Identifying the motor by article number

Use the table to identify which type of motor is installed on each robot axis by article number. The article numbers specified are found in WebConfig.

Contact ABB Service for further assistance regarding which motor type is installed on the robot, if needed.

The columns for reach refer to the robot variant designation.



Note

The article numbers in the table can not be used for ordering spare parts. The numbers are only used for identification of installed motors.

See *Product manual, spare parts - IRB 6650S* for spare part numbers.

Robot axis	Article number Type A motor	Article number Type B motor
1	3HAC057550-001	3HAC062343-001
2	3HAC057551-001	3HAC062344-001
3	3HAC057546-001	3HAC062345-001
	3HAC058883-001 (Foundry Prime)	N/A
4	3HAC057547-001	3HAC062346-001
	3HAC058885-001 (Foundry Prime)	N/A

Continues on next page

2 Robot description

2.1 Type A vs type B motors

Continued

Robot axis	Article number Type A motor	Article number Type B motor
5	3HAC057548-001	3HAC062335-001
	3HAC058886-001 (Foundry Prime)	N/A
6	3HAC057549-001	3HAC062348-001
	3HAC058887-001 (Foundry Prime)	N/A

Interchangeable parts

Use the table to see if type A and type B motors are interchangeable on each robot axis.

Robot axis	Motor replacement from type A to type B	Requirements/notes for replacing type A motor with type B motor
1	Fully interchangeable.	
2	Fully interchangeable.	
3	Fully interchangeable.	
4	Fully interchangeable.	
5	Fully interchangeable.	
6	Fully interchangeable.	

Index

I

insulated wrist unit, 20

T

type A motors, 49

type B motors, 49

W

wrist unit, insulated, 20

**ABB AB****Robotics & Discrete Automation**

S-721 68 VÄSTERÅS, Sweden

Telephone +46 10-732 50 00

ABB AS**Robotics & Discrete Automation**

Nordlysvegen 7, N-4340 BRYNE, Norway

Box 265, N-4349 BRYNE, Norway

Telephone: +47 22 87 2000

ABB Engineering (Shanghai) Ltd.

Robotics & Discrete Automation

No. 4528 Kangxin Highway

PuDong New District

SHANGHAI 201319, China

Telephone: +86 21 6105 6666

ABB Inc.**Robotics & Discrete Automation**

1250 Brown Road

Auburn Hills, MI 48326

USA

Telephone: +1 248 391 9000

abb.com/robotics