



Product manual, spare parts

IRB 2600

Trace back information:

Workspace R17-1 version a7

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Skribenta version 5.1.011

Product manual, spare parts

**IRB 2600 - 20/1.65
IRB 2600 - 12/1.65
IRB 2600 - 12/1.85
IRB 2600ID - 15/1.85
IRB 2600ID - 8/2.0**

IRC5

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Revision: E

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Original instructions.

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Overview of this manual

About this manual

This manual contains spare parts for:

- IRB 2600 and all its variants.

Usage

This manual shall be used as a complement to the product manual for IRB 2600 during:

- maintenance work
- repair work.

Who should read this manual?

This manual is intended for:

- maintenance personnel
- repair personnel.

Prerequisites

A maintenance/repair/installation craftsman 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
<i>Product manual - IRB 2600</i>	3HAC035504-001
<i>Circuit diagram - IRB 2600</i>	3HAC029570-007

Revisions

Revision	Description
-	First edition

Continues on next page

Overview of this manual

Continued

Revision	Description
A	The following updates have been made in this revision: <ul style="list-style-type: none">• Option number changed for spare part number 3HAC16667-1, and option number added for spare part number 3HAC033181-001, see Options on page 37• Spare parts with color Graphite White are added to the spare part lists.• Spare parts motors of Type B (IRB 2600) and Type A (IRB 2600ID) added to the spare parts list.• Motors for all axes are now presented in one place separated from other spare parts, in a new section.• All gearboxes are now presented in one place separated from other spare parts, in a new section.
B	The following updates have been made in this revision: <ul style="list-style-type: none">• Spare parts "Lower arm, Process (IRB 2600ID)" with number 3HAC037957-004, 007, 005 and 006 changed to "Upper arm Process (IRB 2600ID)" with same numbers. See Upper arm (IRB 2600ID) on page 23.
C	The following updates have been made in this revision: <ul style="list-style-type: none">• New Spare part numbers for "Connection boxes FS130/FS180". See Other parts on page 33.• Spare part number, <i>Cable harness Upper arm (ID)</i> added. See Spare parts list, electrical connections on page 33.• Generally modified due to update of BOL.• Number for cable harness IRB 2600 ID changed.• Table split and new is created for IRB 2600 for base cover assembly.• Type designations changed on motor sections.• Type designations corrected on upper arm.
D	Published in release R16.2. The following updates are done in this revision: <ul style="list-style-type: none">• Corrections due to updates in SAP terminology.• Updated spare parts due to new standard calibration method (Axis Calibration).<ul style="list-style-type: none">- Base- Frame- Lower arm- Arm housing- Tubular shaft unit- Upper arm- Wrist unit- Process wrist unit
E	Published in release R17.1. The following updates are made in this revision: <ul style="list-style-type: none">• Added spare part number for protective items for calibration bushings and holes (Axis Calibration)

Product documentation, IRC5

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.

All documents listed can be ordered from ABB on a DVD. The documents listed are valid for IRC5 robot systems.

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.
- Decommissioning.
- Reference information (safety standards, unit conversions, screw joints, lists of tools).
- Spare parts list with exploded views (or references to separate spare parts lists).
- Circuit diagrams (or references to circuit diagrams).

Technical reference manuals

The technical reference manuals describe reference information for robotics products.

- *Technical reference manual - Lubrication in gearboxes*: Description of types and volumes of lubrication for the manipulator gearboxes.
- *Technical reference manual - RAPID overview*: An overview of the RAPID programming language.
- *Technical reference manual - RAPID Instructions, Functions and Data types*: Description and syntax for all RAPID instructions, functions, and data types.
- *Technical reference manual - RAPID kernel*: A formal description of the RAPID programming language.
- *Technical reference manual - System parameters*: Description of system parameters and configuration workflows.

Continues on next page

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, DVD with PC software).
- How to install included or required hardware.
- How to use the application.
- 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 trouble shooters.

The group of manuals includes (among others):

- *Operating manual - Emergency safety information*
- *Operating manual - General safety information*
- *Operating manual - Getting started, IRC5 and RobotStudio*
- *Operating manual - IRC5 Integrator's guide*
- *Operating manual - IRC5 with FlexPendant*
- *Operating manual - RobotStudio*
- *Operating manual - Trouble shooting IRC5*

1 Rebuilding parts

Lower arm

The table shows which *lower arm* can be used on which variant.

Variant	Lower arm 3HAC059433-001/3HAC059433-002	Lower arm 3HAC059434-001/3HAC059434-002
IRB 2600-20/1.65	X	
IRB 2600-12/1.65	X	
IRB 2600-12/1.85		X
IRB 2600ID - 15/1.85		X
IRB 2600ID - 8/2.0		X

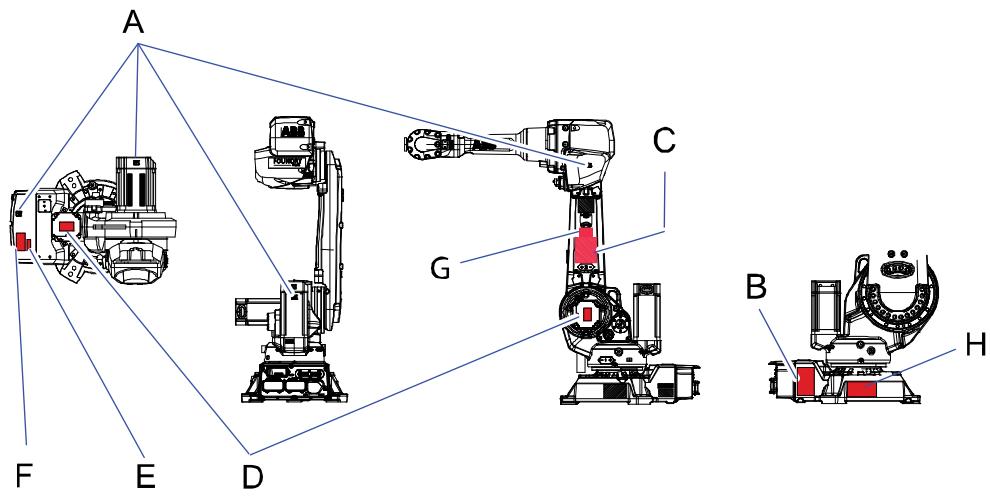
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2 Complete robot

Spare parts, complete robot

Position	Base cover parts	Spare part number
-	Labels and plate set, contains the labels shown in the figure.	3HAC035004-001

Illustration, labels and plate set



A	Warning - Symbol of flash (4 pcs)
B	Warning - Risk of tipping
C	Label - Lifting instruction
D	Warning - "High temperature"
E	Label - Max. air pressure
F	Warning - Brake release unit
G	Label - Calibration
H	Label - Suspended robot

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3 Base cover assembly

Spare parts, base cover assembly

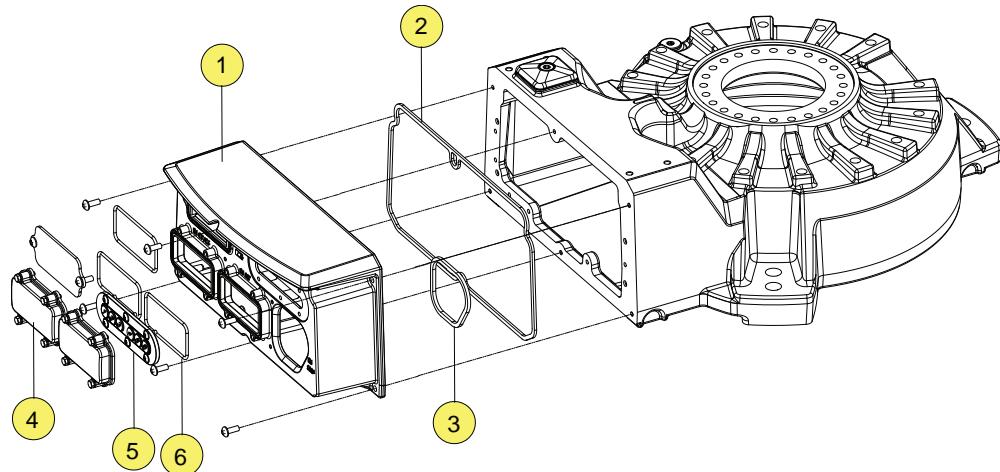
Link to [Illustration, base cover assembly on page 15](#)

Position	Base cover parts	Spare part number
1	Cover	3HAC029250-002
2	Sealing	3HAC029188-001
3	Sealing	3HAC029187-001
4	Protection cover	3HAC049770-001
5	Push-button guard	3HAC6499-1
6	O-ring (3 pcs)	21522012-428

Illustration, base cover assembly

Link to [Spare parts, base cover assembly on page 15](#)

Protection type Standard



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4 Base and frame unit

Spare parts, base and frame unit

Position	Base and frame parts	Spare part	Color
1	Base	3HAC059431-001	ABB Orange
	Base	3HAC059431-002	Graphite White
2	Frame	3HAC044328-007	ABB Orange
	Frame	3HAC044328-006	Graphite White
3	Radial sealing	3HAB3701-29	-
-	Sealing washer, oil plug in gearbox (not shown in figure)	3HAC029646-001	-
9	Cover plate	3HAC030041-001	-
-	Sealing washer, oil plug in gearbox (not shown in figure)	3HAC029646-001	-
10	O-ring	3HAB3772-109	-
12	Flange sealing (Loctite 574)	3HAC042474-001	-
231	Cable protection (not shown in the figure)	3HAC027499-004	-
381	Expansion container, set	3HAC033862-005	-

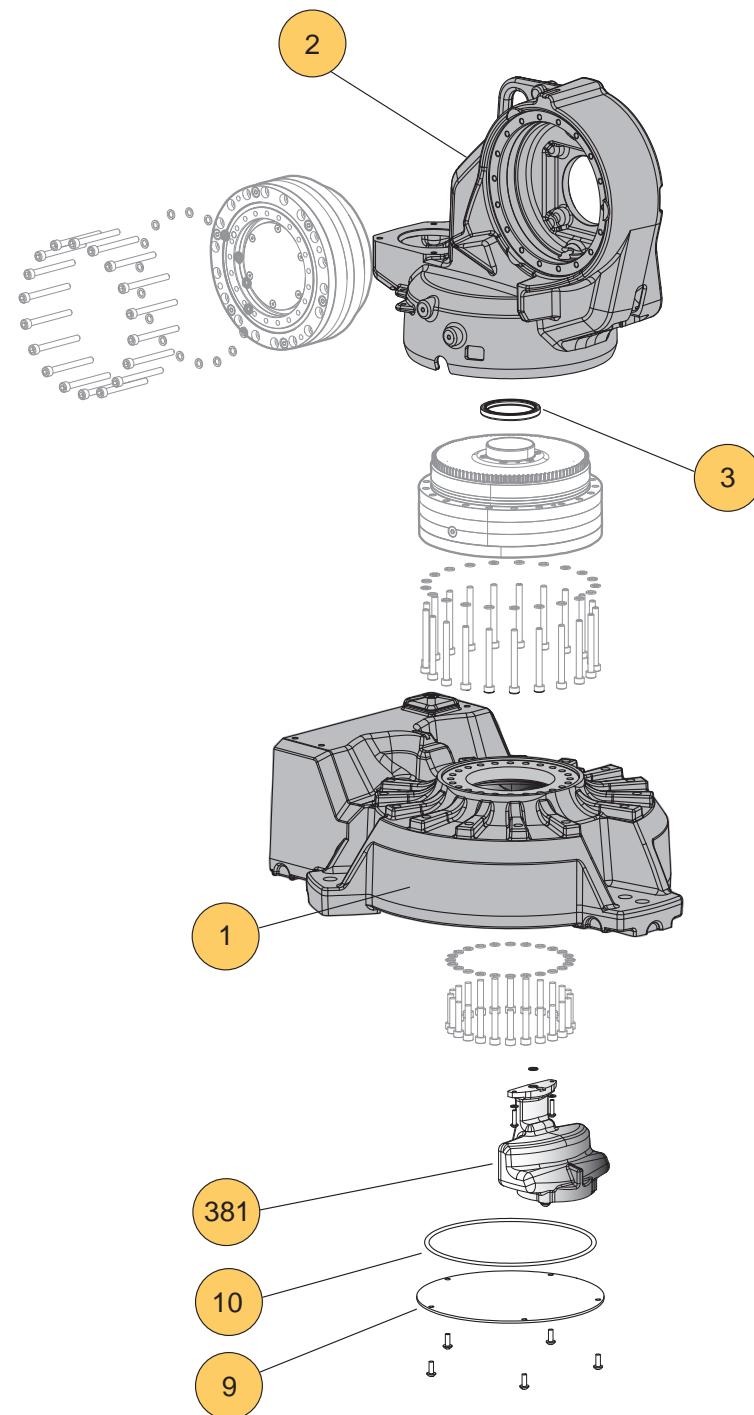
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4 Base and frame unit

Continued

Illustration base and frame unit

Link to [Spare parts, base and frame unit on page 17](#)



xx1400001986

5 Lower arm and frame

Spare parts list, lower arm and frame

Link to [Illustration, lower arm and frame on page 20](#)

Position	Parts lower arm & frame	Spare part	Color
2	Lower arm (IRB 2600-20/1.65, -12/1.65)	3HAC059433-001	ABB Orange
	Lower arm (IRB 2600-20/1.65, -12/1.65)	3HAC059433-002	Graphite White
	Lower arm (IRB 2600-12/1.85, IRB 2600ID - 15/1.85, IRB 2600ID - 8/2.0)	3HAC059434-002	ABB Orange
	Lower arm (IRB 2600-12/1.85, IRB 2600ID - 15/1.85, IRB 2600ID - 8/2.0)	3HAC059434-001	Graphite White
14	Stop pin	3HAC027588-005	-
15	Bracket	3HAC027499-005	-
16	O-ring	3HAB3772-104	-
17	Cover	3HAC025310-002	-
18	V-ring	3HAB3732-23	-
19	O-ring	3HAB3772-35	-
20	Damper	3HAC030388-001	-
21	Damper	3HAC029243-001	-
22	Lubricating oil	See <i>Type of oil, gearboxes in Technical reference manual - Lubrication in gearboxes.</i>	-
23	Magnetic plug	3HAC16721-1	-
27	Plug IF3820 S06-EXT	3HAC045715-001	-
13	O-ring	3HAB3772-107	-
201	See Electrical connections on page 33.		-

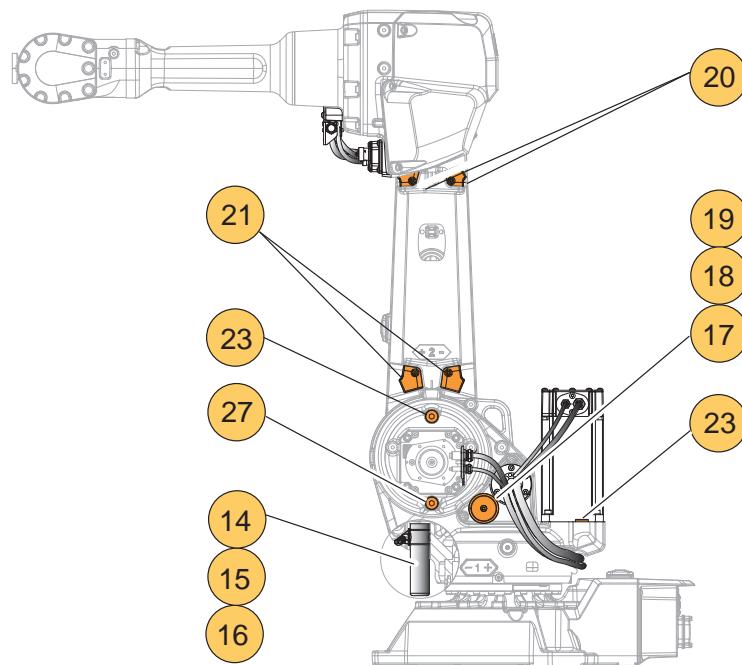
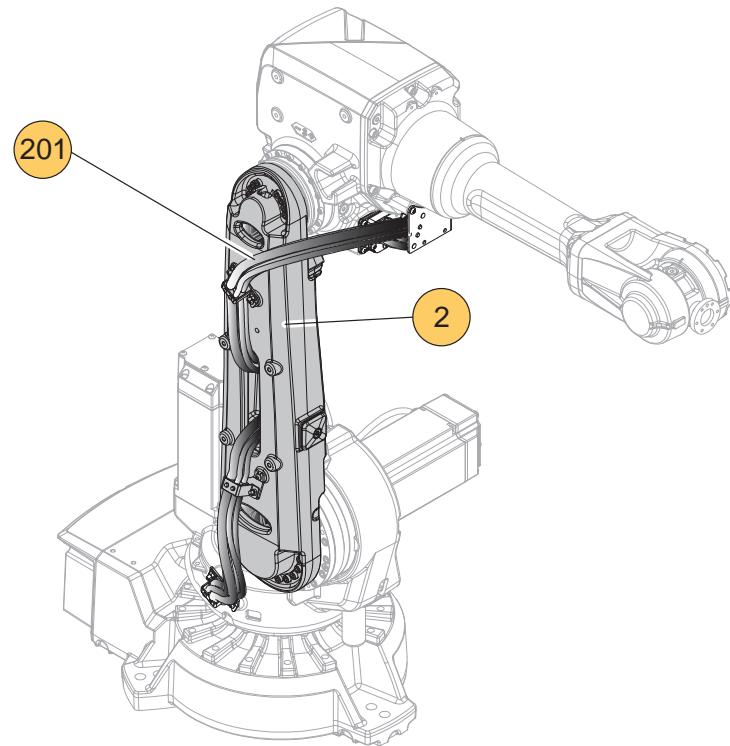
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5 Lower arm and frame

Continued

Illustration, lower arm and frame

Link to [Spare parts list, lower arm and frame on page 19](#)



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6 Upper arm IRB 2600 Standard

Spare parts, upper arm (gearbox oil in vessel)

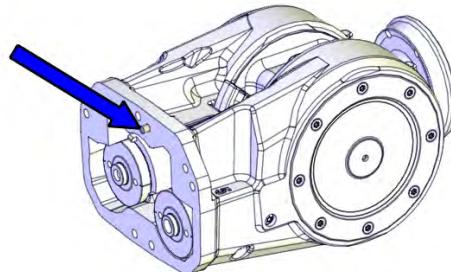
Type and amount of oil is detailed in a separate manual, *Technical reference manual - Lubrication in gearboxes*.

Spare parts, upper arm

Link to illustration [Illustration upper arm on page 22](#).

Pos.	Upper arm parts	Spare part	Color
1	Arm housing	3HAC059435-001	ABB Orange
	Arm housing	3HAC059435-002	Graphite White
2	Parallel pin, hardened	3HAC3785-2	
3	Tubular shaft unit	3HAC059488-001	ABB Orange
	Tubular shaft unit	3HAC059488-002	Graphite White
20	Lubricating oil	See <i>Type of oil, gearboxes in Technical reference manual - Lubrication in gearboxes</i> .	-
22	Lubricating oil	See <i>Type of oil, gearboxes in Technical reference manual - Lubrication in gearboxes</i> .	-
18	Magnetic plug	3HAC037925-001	-
24	Sealing washer	3HAC029646-001	-
21	Flange sealing (Loctite 575)	3HAC042581-001	-
6	O-ring	3HAB3772-12	-
7	Wrist complete (including o-ring pos 6) ⁱ	3HAC059445-001	ABB Orange
		3HAC059445-002	Graphite White
4	Cover, arm housing	3HAC030132-002	ABB Orange
	Cover, arm housing	3HAC030132-003	Graphite White
5	Gasket	3HAC030389-001	-

ⁱ A guide pin is enclosed separately with the wrist. It is to be installed in the new wrist spare part if there is a guide pin hole available in the upper arm tube.



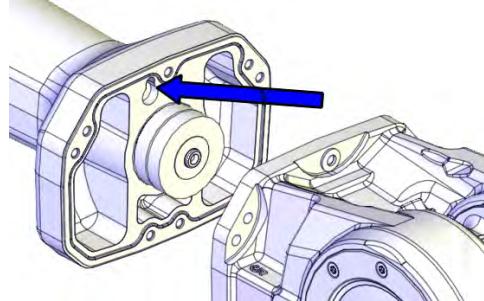
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6 Upper arm IRB 2600 Standard

Continued

The hole is available on robots introduced with Axis Calibration.

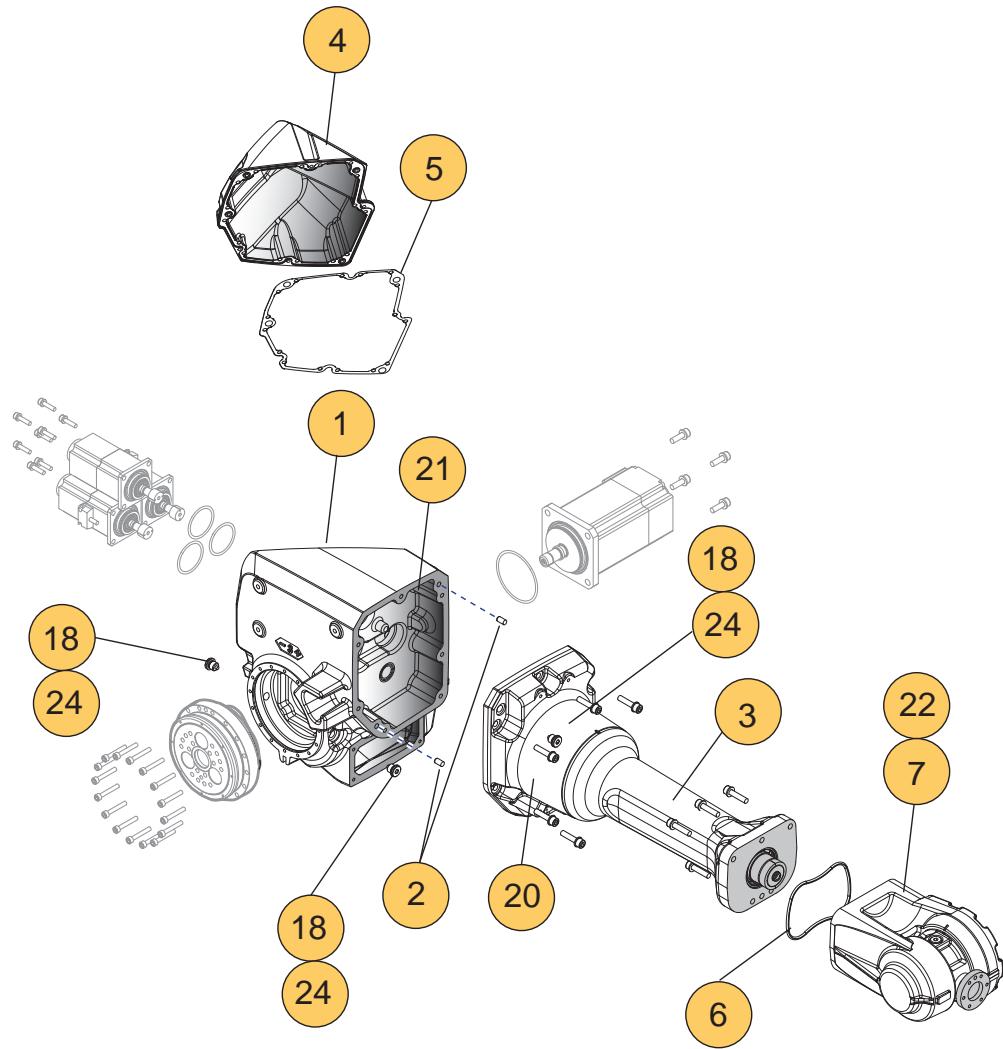


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If the guide pin is not installed on a robot calibrated with Axis Calibration, the calibration result will be affected negatively.

Illustration upper arm

Link to [Spare parts, upper arm on page 21](#).



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7 Upper arm (IRB 2600ID)

Spare parts, oil in upper arm gearboxes

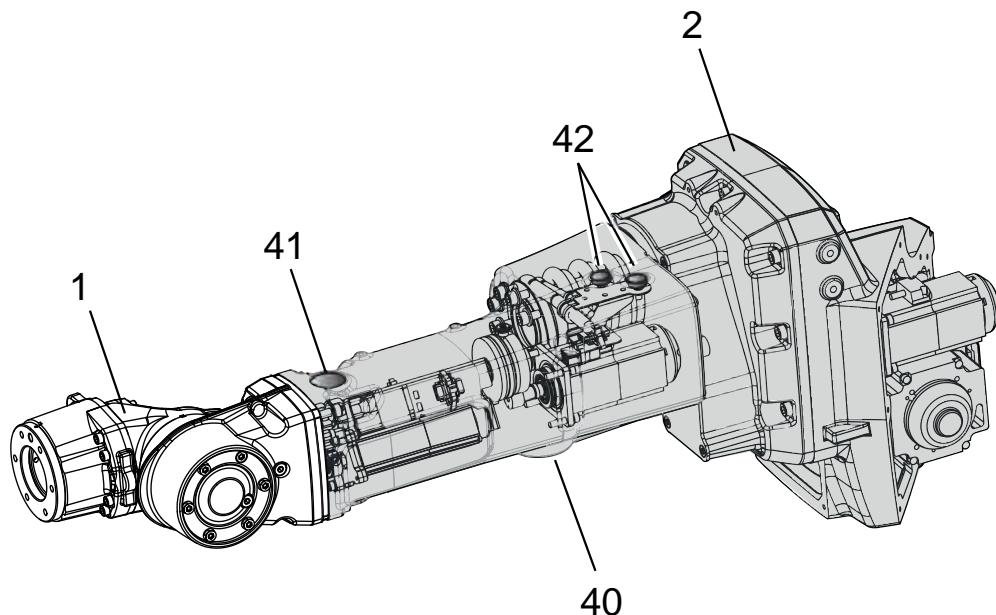
Type and amount of oil is detailed in a separate manual, *Technical reference manual - Lubrication in gearboxes*.

Spare parts, upper arm

Link to illustration [Illustration, upper arm on page 23](#).

Position	Upper arm parts	Spare part	Color
1	Process wrist, IRB 2600ID-15/1.85	3HAC059444-001	ABB Orange
	Process wrist, IRB 2600ID-15/1.85	3HAC059444-002	Graphite White
	Process wrist, long, IRB 2600ID-8/2.00	3HAC059443-001	ABB Orange
	Process wrist, long, IRB 2600ID-8/2.00	3HAC059443-002	Graphite White
2	Upper arm, Process IRB 2600ID-15/1.85	3HAC059438-001	ABB Orange
	Upper arm, Process IRB 2600ID-15/1.85	3HAC059438-002	Graphite White
	Upper arm, Process IRB 2600ID-8/2.0	3HAC059439-001	ABB Orange
	Upper arm, Process IRB 2600ID-8/2.0	3HAC059439-002	Graphite White
40	VK-cover	3HAA2166-19	
41	VK-cover	3HAA2166-18	
42	VK-cover (2 pcs)	3HAA2166-17	

Illustration, upper arm



xx1400001990

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8 Motors

IRB 2600

Motors for Type B



Note

Motors for Type B (IRB 2600) are not compatible with other types and can therefore only be used to replace other motors of Type B.

Position	Spare part number	AC motor with pinion	Color
1	3HAC047586-002	Axis-1	ABB Orange
1	3HAC047586-003	Axis-1	Graphite White
2	3HAC047584-002	Axis-2	ABB Orange
2	3HAC047584-003	Axis-2	Graphite White
3	3HAC047575-002	Axis-3	-
4	3HAC047574-002	Axis-4, -5 & -6	-

Motors for Type A



Note

Motors for Type A (IRB 2600) can not be replaced by motors of Type B. Motors for Type B are not compatible with other types.

Position	Spare part number	AC motor with pinion	Color
1	3HAC034644-003	Axis-1	ABB Orange
1	3HAC034644-004	Axis-1	Graphite White
2	3HAC031218-003	Axis-2	ABB Orange
2	3HAC031218-004	Axis-2	Graphite White
3	3HAC030215-003	Axis-3	-
4	3HAC030216-003	Axis-4, -5 & -6	-

IRB 2600ID

Motors for Type B



Note

Motors for Type B (IRB 2600ID) are not compatible with other types and can therefore only be used to replace other motors of Type B.

Position	Spare part number	AC motor with pinion	Color
1	3HAC047586-002	Axis-1	ABB Orange
1	3HAC047586-003	Axis-1	Graphite White
2	3HAC047584-002	Axis-2	ABB Orange

Continues on next page

8 Motors

Continued

Position	Spare part number	AC motor with pinion	Color
2	3HAC047584-003	Axis-2	Graphite White
3	3HAC047575-002	Axis-3	-
5	3HAC047574-002	Axis-4	-
6	3HAC047574-002	Axis-5	-
7	3HAC17342-1	Axis-6	-

Motors for Type A



Note

Motors for Type A (IRB 2600ID) can not be replaced by motors of Type B. Motors for Type B are not compatible with other types.

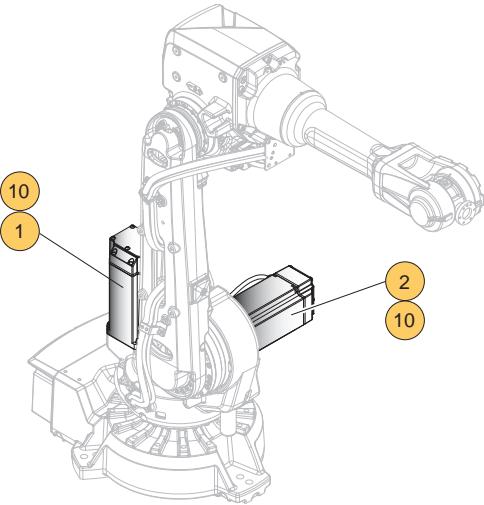
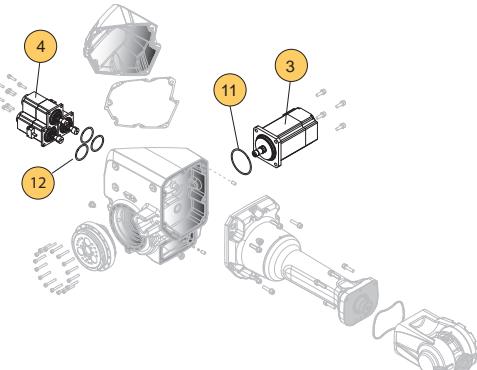
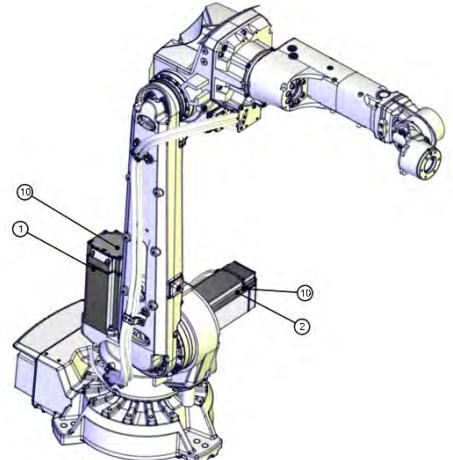
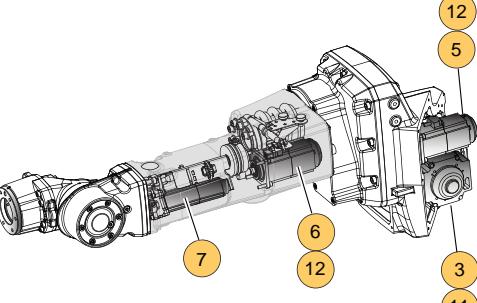
Position	Spare part number	AC motor with pinion	Color
1	3HAC034644-003	Axis-1	ABB Orange
1	3HAC034644-004	Axis-1	Graphite White
2	3HAC031218-003	Axis-2	ABB Orange
2	3HAC031218-004	Axis-2	Graphite White
3	3HAC030215-003	Axis-3	-
5	3HAC030216-003	Axis-4	-
6	3HAC030216-003	Axis-5	-
7	3HAC17342-1	Axis-6	-

O-rings

Position	Spare part number	Variant	O-ring
10	3HAB3772-107	IRB 2600 IRB 2600ID	Axis-1
10	3HAB3772-107	IRB 2600 IRB 2600ID	Axis-2
11	3HAB3772-102	IRB 2600 IRB 2600ID	Axis-3
12	3HAB3772-112	IRB 2600 IRB 2600ID	Axis-4
12	3HAB3772-112	IRB 2600 IRB 2600ID	Axis-5
12	3HAB3772-112	IRB 2600	Axis-6

Continues on next page

Illustration

Axis 1 and -2 motor	Axis 3, 4, 5 and 6 gearbox
<p>IRB 2600</p>  <p>xx1400001993</p>	<p>IRB 2600</p>  <p>xx1400001992</p>
<p>IRB 2600ID</p>  <p>xx1400001994</p>	<p>IRB 2600ID</p>  <p>xx1400001991</p>

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9 Gearboxes

Delivery of spare part gearboxes

Spare part gearboxes are delivered with o-ring.

Gearboxes

Information about lubrication oil can be found in

For lubrication oil see *Type of oil, gearboxes* in *Technical reference manual - Lubrication in gearboxes*.

Position	Axis	Spare part number	Type	Variants	Color
1	Axis-1	3HAC028837-004	TS245RHS-125	IRB 2600 IRB 2600ID	ABB Orange
1	Axis-1	3HAC028837-009	TS245RHS-125	IRB 2600 IRB 2600ID	Graphite White
2	Axis-2	3HAC039109-002	TS225R i = 137	IRB 2600 IRB 2600ID	ABB Orange
2	Axis-2	3HAC039109-004	TS225R i = 137	IRB 2600 IRB 2600ID	Graphite White
3	Axis-3	3HAC028705-003	RV-42N i = 126	IRB 2600 IRB 2600ID	ABB Orange
3	Axis-3	3HAC028705-004	RV-42N i = 126	IRB 2600 IRB 2600ID	Graphite White

O-rings

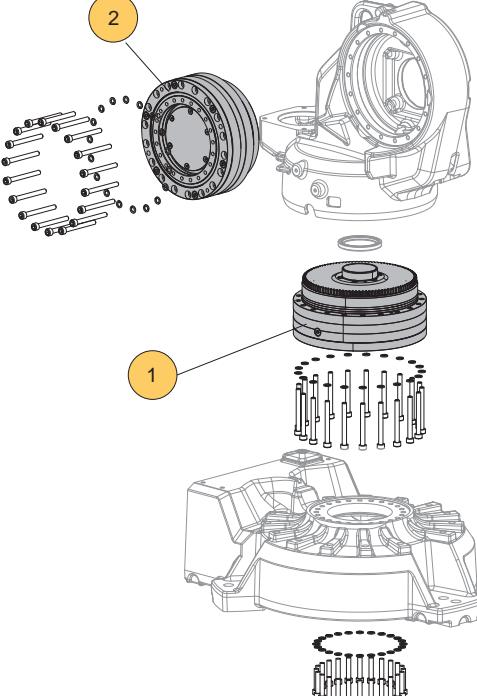
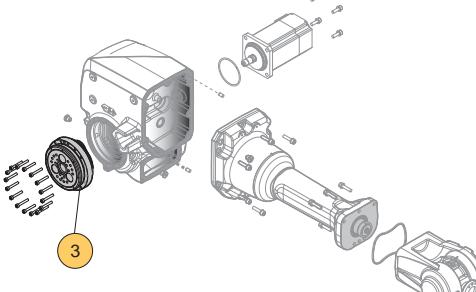
Spare part number	Axis	All variants
3HAB3772-128	Axis-1	X
3HAB3772-107	Axis-2	X
3HAB3772-105	Axis-3	X

Continues on next page

9 Gearboxes

Continued

Illustration

Axis-1 and -2 gearbox	Axis-3 gearbox
 <p>xx1400001987</p>	 <p>xx1400001988</p>

10 Calibration items

Calibration items

Spare part number	Description	Note
3HAC059487-001	Protection cover and plug set	Contains replacement calibration pin covers and protective plugs for the bushing.
Protective plug on turning disc	3HAC057676-001 (IRB 2600ID) 3HAC057511-001 (IRB 2600)	Replace if damaged or missing.

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11 Electrical connections

Spare parts list, electrical connections

Cable harness

Item	Spare part	Spare part number
-	Cable harness, basic	3HAC030006-001
-	Cable harness, upper arm (ID)	3HAC035547-001
-	Manipulator harness axes 1-6, customer connections	3HAC029896-001
-	Cable harness, Multibus	3HAC030007-001
-	Cable harness, Profibus	3HAC037799-001

Other parts

Item	Spare part	Color	Spare part number
A	Connection Box FS130, axis-1	ABB Orange	3HAC054659-005 Includes o-ring 3HAC054692-001
	Connection Box FS130, axis-1	Graphite White	3HAC054659-004 Includes o-ring 3HAC054692-001
B	O-ring axis-1, circular profile ⁱ		3HAC3772-110
	O-ring axis-1, hexagon profile ⁱ		3HAC054692-001
C	Cover Box FS130, axis-1	ABB Orange	3HAC029302-002
	Cover Box FS130, axis-1	Graphite White	3HAC029302-006
D	Connection Box FS130, axis-2	ABB Orange	3HAC054659-005 Includes o-ring 3HAC054692-001
	Connection Box FS130, axis-2	Graphite White	3HAC054659-004 Includes o-ring 3HAC054692-001
E	O-ring axis-2, circular profile ⁱ		3HAC3772-111
	O-ring axis-2, hexagon profile ⁱ		3HAC054692-001
F	Cover Box FS130, axis-2	ABB Orange	3HAC029302-002
	Cover Box FS130, axis-2	Graphite White	3HAC029302-006
G	DSQC 536 Brake release board		3HAC16035-1
H	Battery unit (2-pole battery contact)		3HAC16831-1 Can not be used with SMB board 3HAC044168-001.
	Battery unit (3-pole battery contact)		3HAC044075-001 Can only be used with SMB board 3HAC044168-001.

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11 Electrical connections

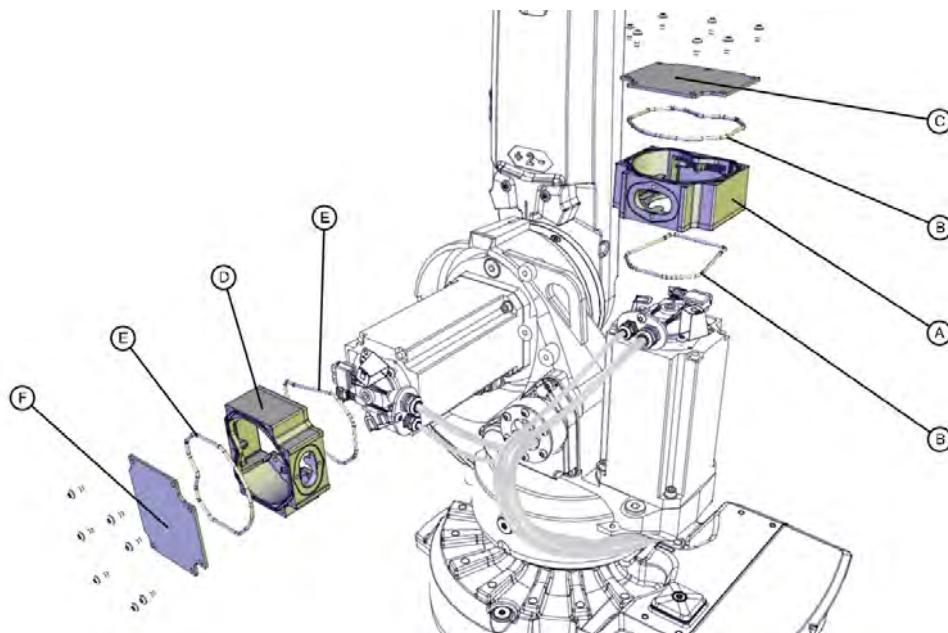
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Item	Spare part	Color	Spare part number
J	SMB replacement kit		3HAC046686-001
	Serial measurement board, RMU 101		3HAC044168-001
-	Serial measurement unit		3HAC046277-001 Contains serial measurement board 3HAC044168-001 and battery pack 3HAC044075-001.
-	Signal cable SMB (Not visible in the figure)		3HAC4050-1
-	SMB replacement set		3HAC046686-001

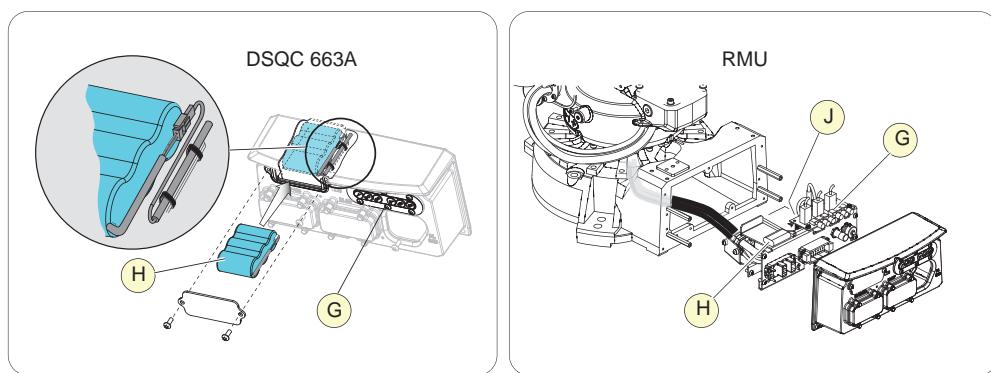
i The cross-section profile is either circular or hexagon. If only ordering the o-ring, order the same profile that is currently installed in the connection box.

Illustration electrical connections

Protection type Standard



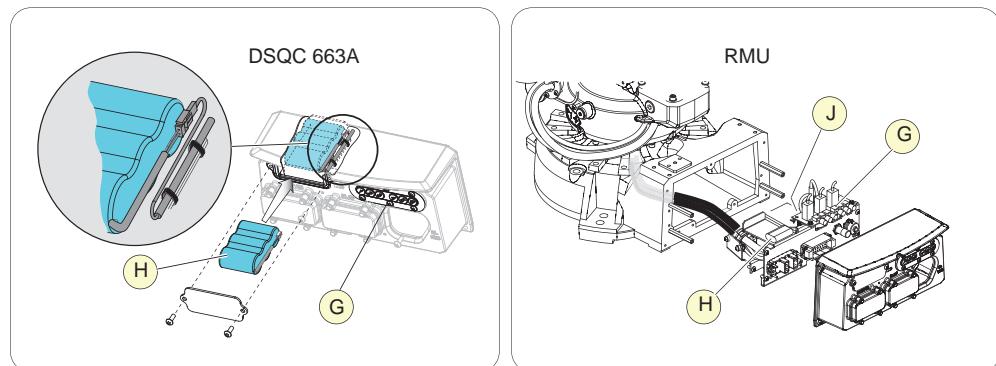
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Protection type Foundry Prime



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12 Options

Spare parts options

Option no.	Spare parts	Spare parts no.
213-1	Safety lamp Protection type Standard	3HAC050417-001
87-1	Cooling fan, set Protection type Standard	3HAC033857-002
224-2	Expansion container with cover (set) (Suspended position)	3HAC033862-005
459-1	CP/CS Proc1, base	3HAC16667-1
28-1	Mechanical stop kit axis 1, adjust (Working range limit, axis 1)	3HAC033134-001
239-1	Connector set on base	3HAC033181-001
	Connector set R2.CP/R2.CS	3HAC025396-001
	Additional mechanical stop set, axis 1	3HAC033134-001

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