ROBOTICS

Product manual, spare parts

IRB 1510

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Skribenta version 5.5.019

Product manual, spare parts

IRB 1510ID - 4/1.5

IRC5, IRC5C, OmniCore

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Revision: B

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Overview of this manual

About this manual

This manual contains spare parts for:

- IRB 1510

Usage

This manual shall be used as a complement to the product manual for IRB 1510 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.

References

Reference	Document ID
Product manual - IRB 1510	*3HAC087870-001*
Circuit diagram - IRB 1510	*3HAC087368-003*

Revisions

Revision	Description
A	First edition
B	Published in release 24B. The following updates are done in this revision: • Added support for OmniCore controllers.

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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.

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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 part lists and illustrations

1.1 Spare parts - complete robot

Spare part list

Pos.	Description	Spare part no.	Qty
A	Labels and plate set	3HAC039497-001	1 pc

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1.2 Spare parts - motors

Spare part list

All the spare part numbers for the motors include both the pinion and required o-ring. The o-ring can also be ordered separately and is listed directly under the motor spare part.

Note

Motors and connection boxes for Type B are not compatible with other types and can therefore only be used to replace other motors and connection boxes of Type B.

Pos.	Description	Spare part no.	Color	Qty
A	Motor, axis 1	3HAC050430-001 (for other than Type B)	Graphite White	1 pc
		3HAC054858-001 (for Type B)		
B	O-ring, axis 1 motor	3HAB3772-102	-	1 pc
C	Connection box	3HAC050431-001 (for other than Type B)	Graphite White	2 pcs
		3HAC056382-001 (for Type B)		
D	Motor cover	3HAC050432-001	Graphite White	2 pcs
E	Motor, axis 2	3HAC050433-001 (for other than Type B)	Graphite White	1 pc
		3HAC054860-001 (for Type B)		
F	O-ring, axis 2 motor	3HAB3772-102	-	1 pc
G	Motor, axis 3	3HAC041749-001 (for other than Type B)	-	1 pc
		3HAC054861-001 (for Type B)		
H	O-ring, axis 3 motor	3HAB3772-112	-	1 pc
J	Motor, axis 4	3HAC021799-003	-	1 pc
K	O-ring, axis 4 motor	3HAB3772-81	-	1 pc
L	Motor, axis 5	3HAC021799-003	-	1 pc
M	O-ring, axis 5 motor	3HAB3772-81	-	1 pc
N	Motor, axis 6	3HAC17342-1	-	1 pc

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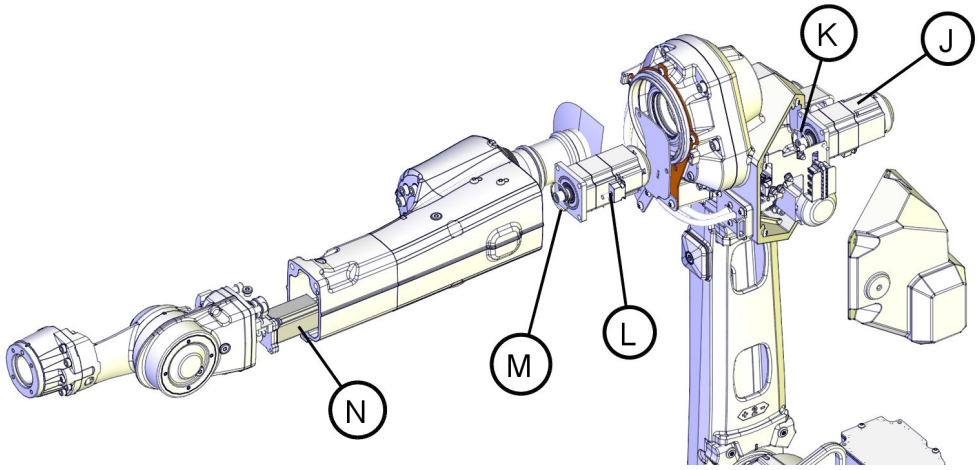
Spare part - illustrations



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1.2 Spare parts - motors
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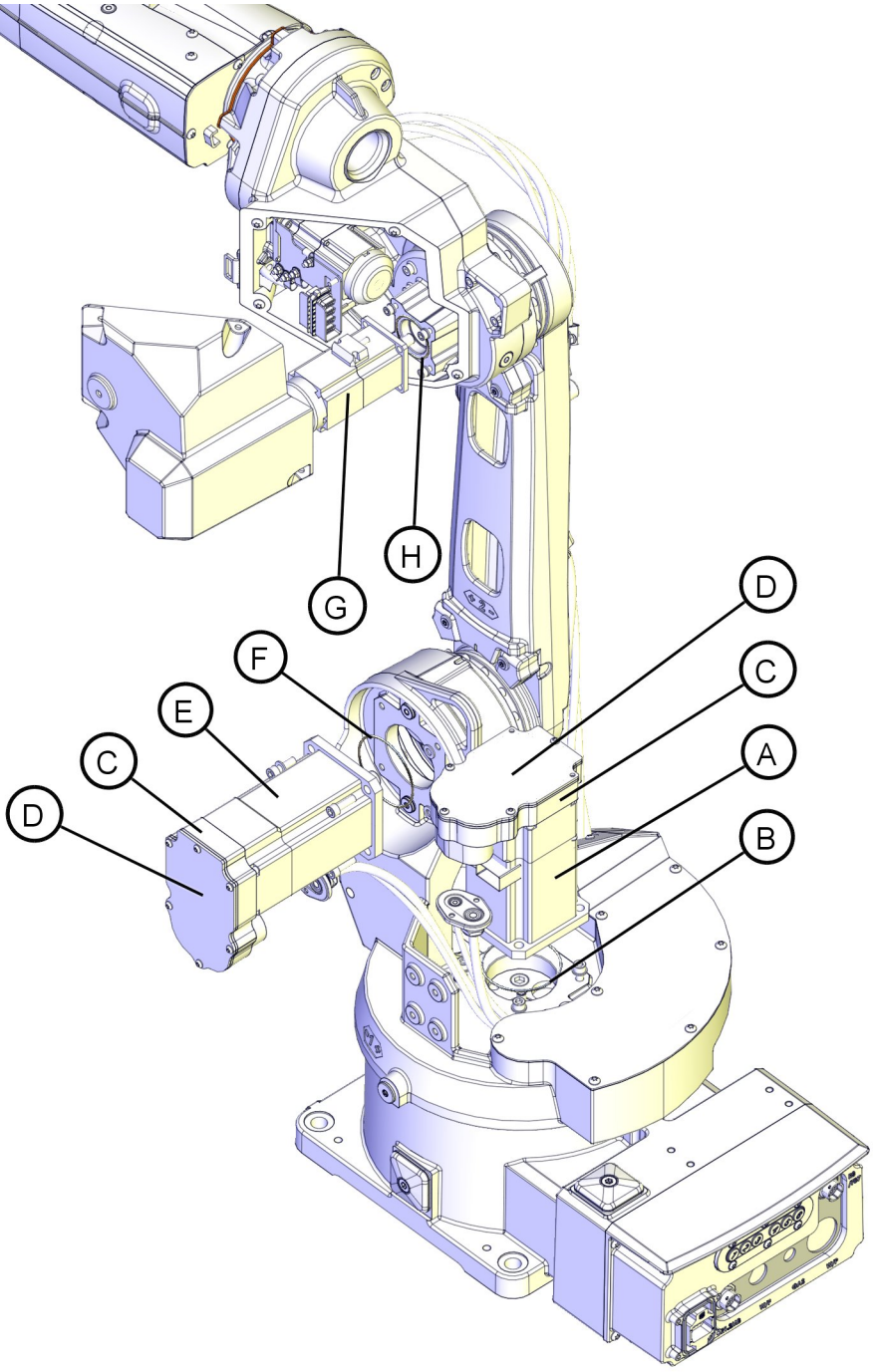

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1.3 Spare parts - gearboxes

Spare part list

Pos.	Description	Spare part no.	Color	Qty
A	Gearbox, axis 1	3HAC037835-001	-	1 pc
B	O-ring, axis 1 gearbox	3HAB3772-65	-	1 pc
C	O-ring, axis 1 gearbox	21520431-20	-	6 pcs
D	Gearbox, axis 2	3HAC050429-001	Graphite White	1 pc
E	Gearbox, axis 3	3HAC050429-001	Graphite White	1 pc

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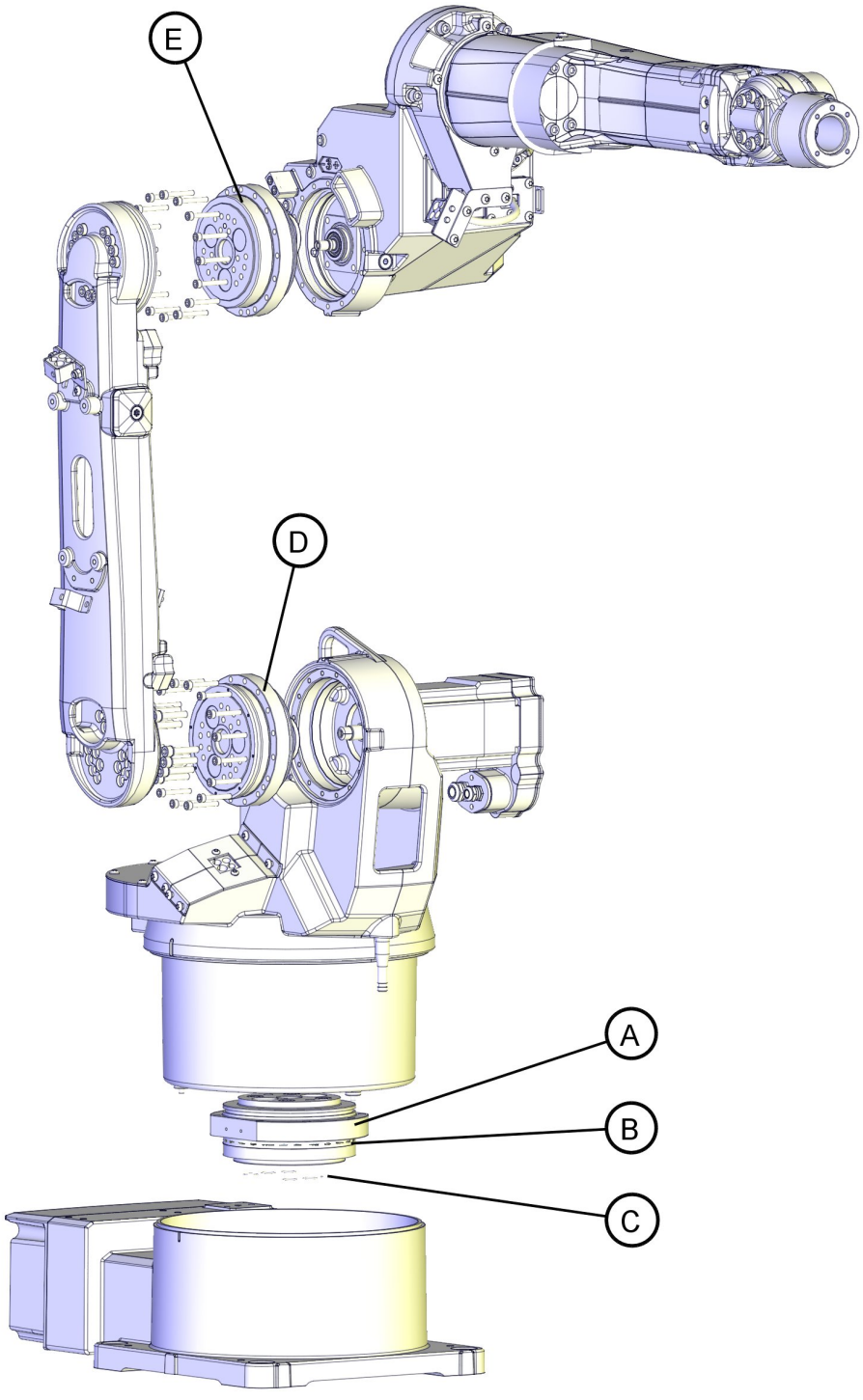
1.3 Spare parts - gearboxes
Continued

Spare part - illustration



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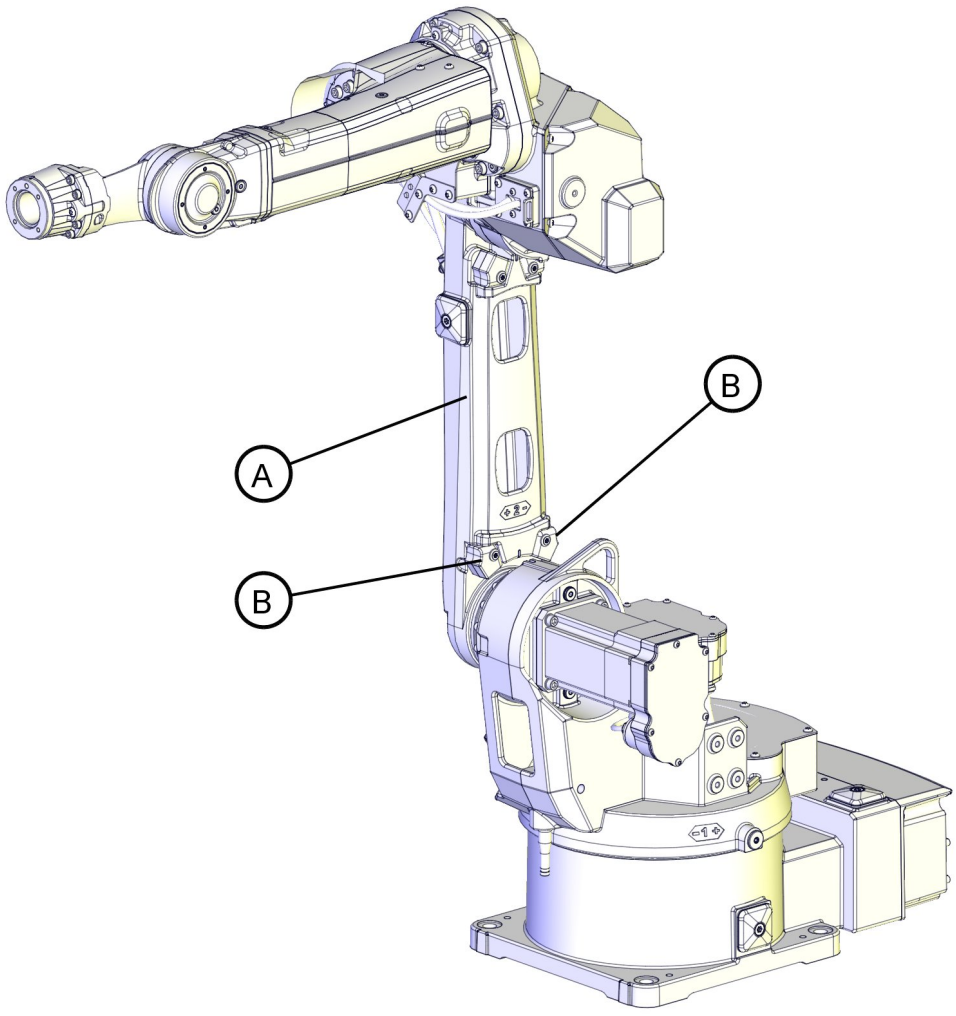
1.4 Spare parts - lower arm

Spare part list

Pos.	Description	Spare part no.	Color	Qty
A	Lower arm	3HAC050427-001	Graphite White	1 pc
B	Damper, axis 2	3HAC041533-001	-	2 pcs

Spare part - illustration



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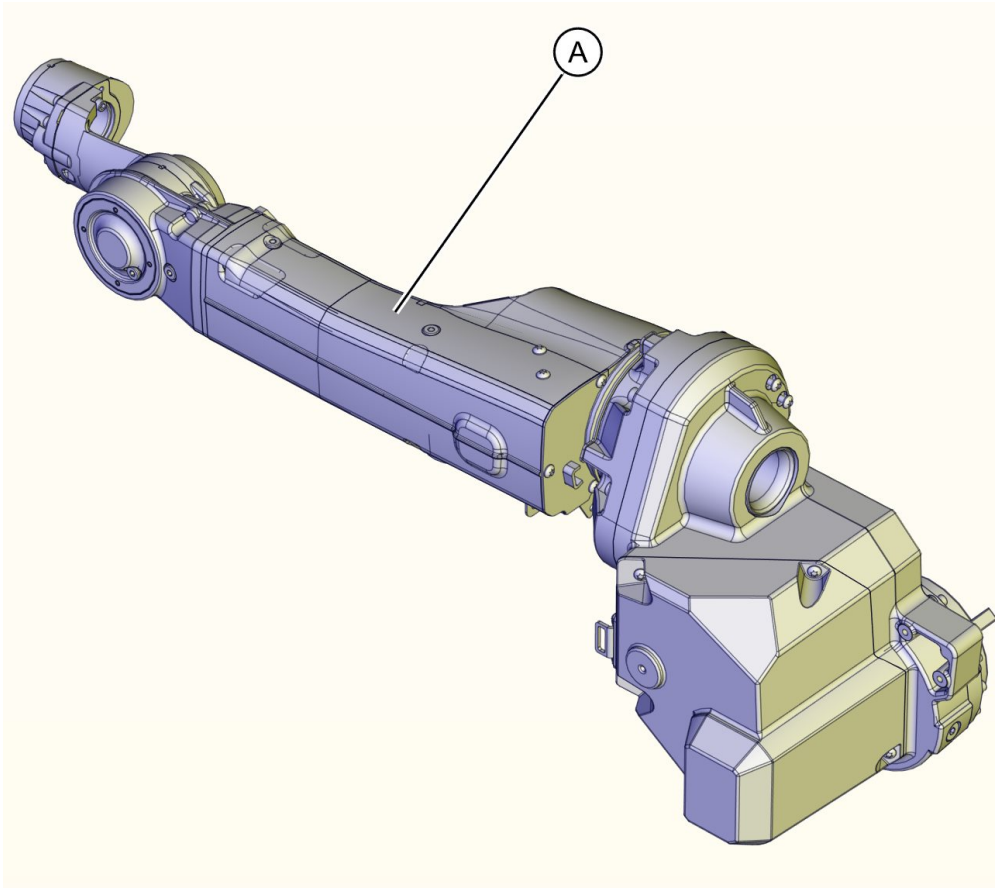
1.5 Spare parts - upper arm and wrist

Spare part list

Pos.	Description	Spare part no.	Color	Qty
A	Upper arm	3HAC050426-001	Graphite White	1 pc
B	Wrist	3HAC050411-001	Graphite White	1 pc
C	Cable harness	3HAC027523-001	-	1 pc
D	Armhouse cover	3HAC050425-001	Graphite White	1 pc
E	Mechanical stop, axis 3	3HAC041768-001	-	1 pc
F	Cover, upper arm tube	3HAC050413-001	Graphite White	1 pc
G	Bracket	3HAC040074-001	-	1 pc
H	V-ring, axis 4	3HAB3732-25	-	1 pc
I	Torx pan head screw	3HAC080811-001	-	4 pcs

Spare part - illustration



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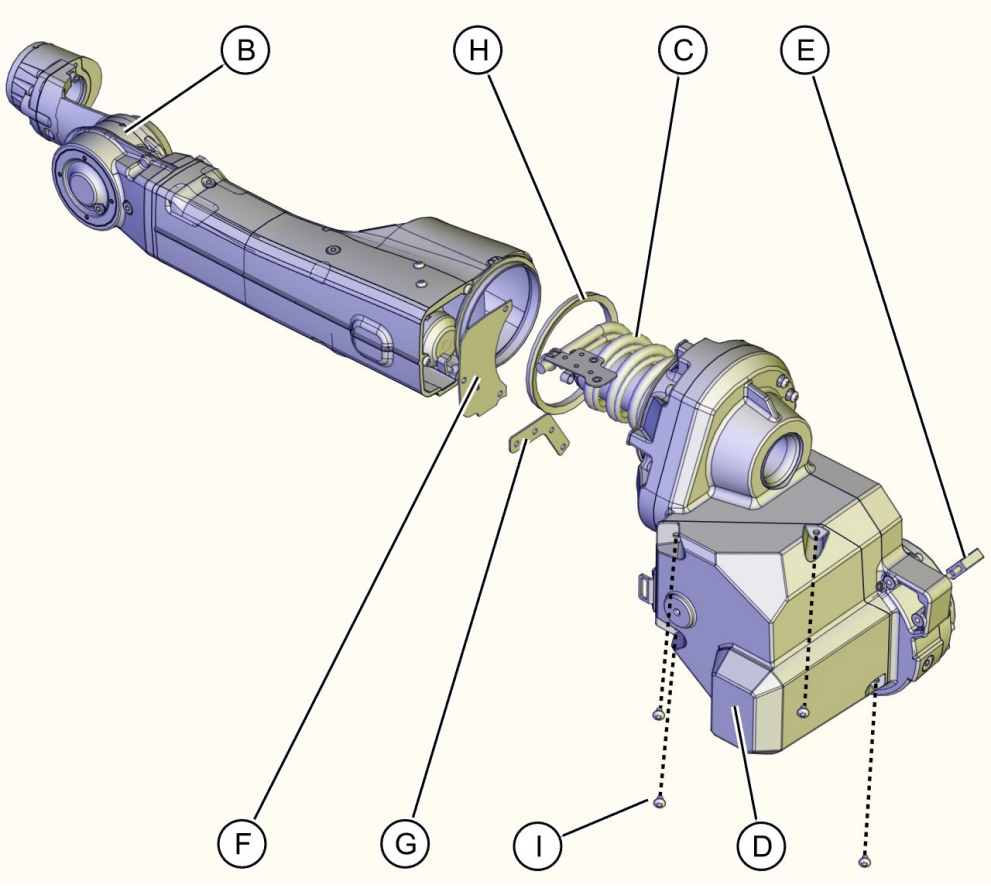

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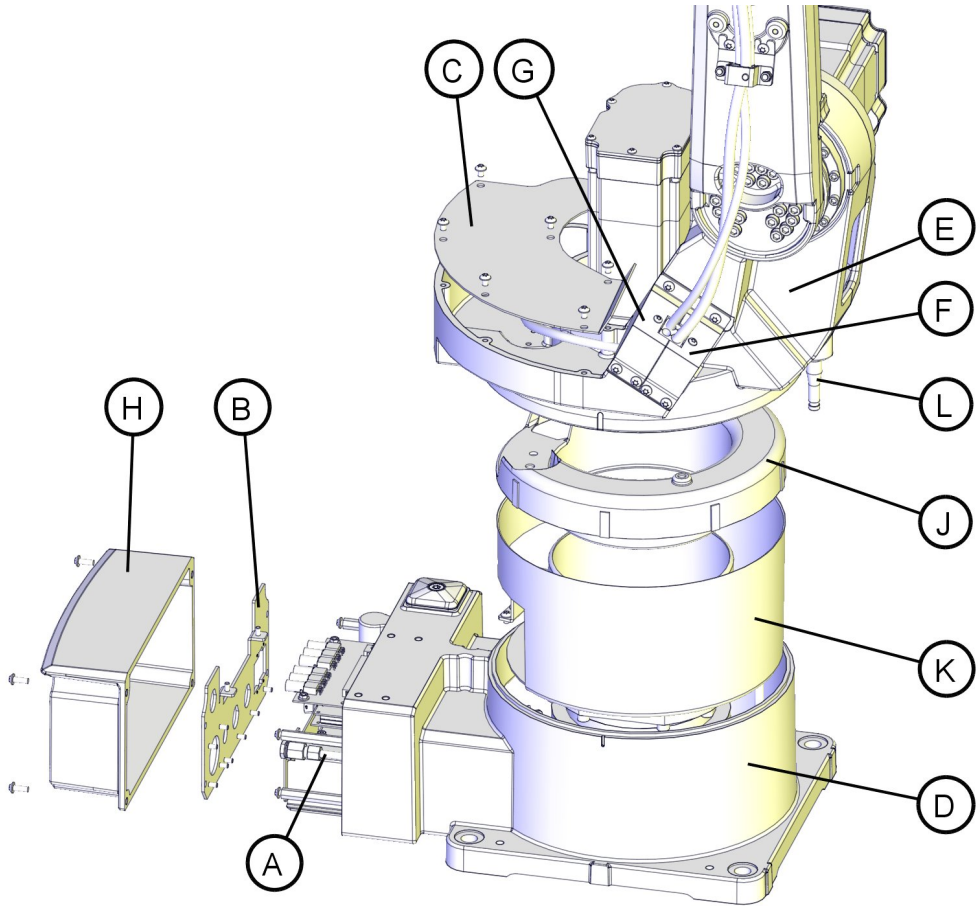
1.6 Spare parts - base and frame

Spare part list

Pos.	Description	Spare part no.	Color	Qty
A	Oil draining tube	3HAC041258-001	-	1 pc
B	Plate for connector	3HAC039881-001	-	1 pc
C	Cover, frame	3HAC050424-001	Graphite White	1 pc
D	Base	3HAC050420-001	Graphite White	1 pc
E	Frame	3HAC050423-001	Graphite White	1 pc
F	Cover	3HAC050421-001	Graphite White	1 pc
G	Cover	3HAC050422-001	Graphite White	1 pc
H	Base cover, including gasket (3HAC039951-001)	3HAC050419-001	Graphite White	1 pc
J	Cable protection, frame	3HAC039159-001	-	1 pc
K	Cable protection, base	3HAC039158-001	-	1 pc
L	Mechanical stop, axis 1	3HAC041530-001	-	1 pc

Spare part - illustration



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1.7 Spare parts - cable harness, brake release and SMB

Spare part list

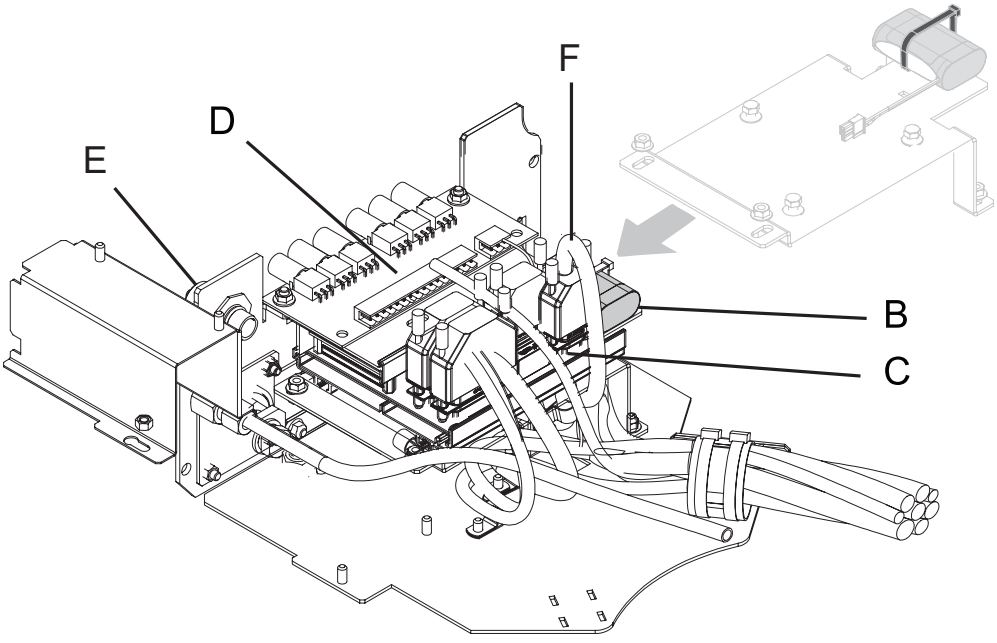
Pos.	Description	Spare part no.	Note
-	Cable harness, standard[i]	3HAC039515-001	
-	Cable harness, AW	3HAC039514-001	
B	Battery pack (3-pole battery contact)	3HAC044075-001	RMU Lithium Can only be used with SMB board 3HAC044168-001
C	Serial measurement board	3HAC044168-001	RMU 101
D	Brake release board/Push button unit	3HAC064944-001	DSQC1054
E	Protection screw	3HAC079177-001	
F	Signal cable SMB	3HAC4050-1	

[i] Cable harness, standard 3HAC039515-001 delivered might be different from the one used in your robot. The difference is the availability of a pin in pin hole 18 on the power connector.

The cable harness with a pin in pin hole 18 on the power connector can only be used for connecting with IRC5 controller; the one without a pin in pin hole 18 can be used for both IRC5 and OmniCore controller.

Spare part - illustration

RMU 101



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1.8 Spare parts - options

Spare part list

Pos.	Description	Spare part no.	Note
-	Cable FB7-SMB 1.7	3HAC15619-1	Option 864-1 On base

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