ABB Dress Out Kit Instruction Manual

⚠ WARNING

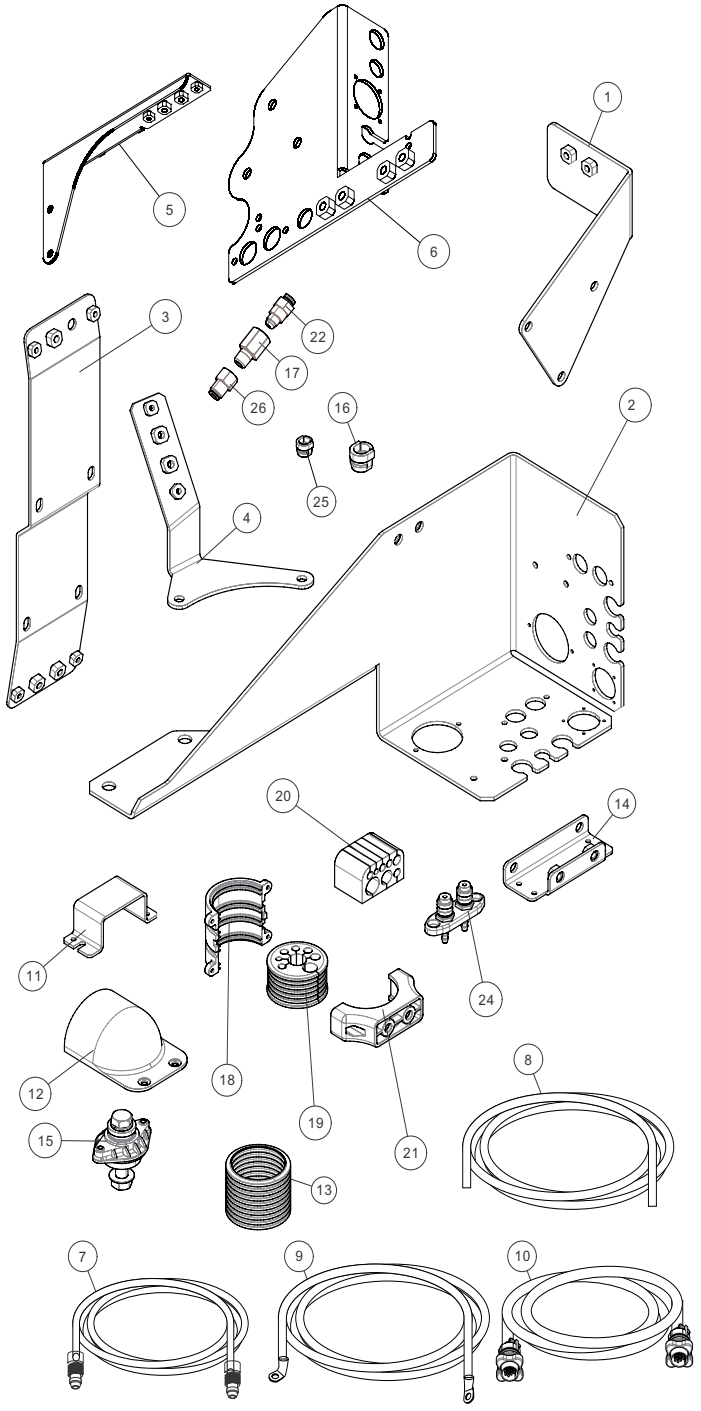
ELECTRIC SHOCK CAN KILL

Turn off power to arm and feeder before installing dress out kit. Verify that power is not available to wirefeeder.

Only qualified personnel should install Dress Out Kit.

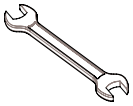
Select your arm: K4253-IRB1600-B

ITEM	Lincoln PN	DESCRIPTION	QTY
1	M25433-4	ROTATION BRACKET	1
2	M25433-5	CABLE MANAGEMENT BULKHEAD BRACKET B	1
3	M25433-6	CABLE HOLD BASE BRACKET	1
4	M25433-7	REAR BRACKET	1
5	M25433-29	WIREFEEDER BRACKET A-RH	1
6	M25433-30	WIREFEEDER BRACKET A-LH	1
7	M25442-5	GAS HOSE OF K4253-IRB1600-B	1
8	M25443-5	WATER HOSES OF K4253-IRB1600-B	1
9	M25439-20	POWER CABLE WITH BEND	1
10	M25440-8	CONTROL CABLE (14 PIN)	1
11	M25455-1	BLOCK CABLE,CABLE HOLDER BRACKET ,TOP	4
12	M20007	OUTPUT STUD COVER	2
13	M25431-22	52MM CONDUIT , PARAB NYLON	1.2M
14	M25433-15	WIREFEEDER HOLD BRACKET(For 4R220)	1
15	S16656-5	OUTPUT STUD	1
16	S27052-2	LEAD GROMMET	2
17	S30266-16	FEMALE CONNECTOR	1
18	S30266-24	CONDUIT CLAMP INSERT	4
19	S30266-25	RUBBER HOLDER , AXIS 1	2
20	S30266-26	BLOCK , CABLE HOLDER	4
21	S30266-27	CONDUIT CLAMP HOUSING	4
22	S30268-5	GAS FITTING (One of them in gas hose)	2
23	S30267-20	HARDWARE KIT	1
24	S31896	WATER CONNECTION KIT	2
25	S27052-1	LEAD GROMMET	2
26	S30268-6	GAS CONNECTOR (In gas hose)	1
27	IM10426	INSTRUCTION MENU	1



Required Tools:

M3, M4, M5, M6 and M8
Allen Wrenches



M7, M8, (2)M17 & M18 Wrenches

K4253-IRB1600-B

S30267-20 Hardware Kit Contents		
Hardware AA (Bracket B to Robot base)	M12x20 bolt	2
	M12 spring washer	2
	M12 flat washer	2
Hardware AB (control cables and water hose for A&B Bracket)	M3x10 screws	8
	M5×16 screw	4
	M5 nut	4
	M5 spring washer	4
	M5 flat washer	4
	Water hose clamp	4
Hardware AC (corrugated pipe to bracket)	M8×20 bolt	3
	M8 spring washer	3
	M8 flat washer	3
	M8x15 bolt	4
	M6×45bolt	4
	M6 nut	4
	M3 nut	8
	M3x10 bolt	8
Hardware AD (Clamp bracket to Robot base)	M6x16 bolt	8
	M6 spring washer	8
	M6 flat washer	8
	M8×20 bolt	6
	M8 spring washer	6
	M8 flat washer	6
Hardware AZ (feeder brackets to arm)	M8x20 bolt	8
	M8 spring washer	8
	M8 flat washer	8
	M8x20 bolt(for 4R220)	3
	M8 spring washer(for 4R220)	3
	M8 flat washer(for 4R220)	3
Hardware AF (output stud and cover)	M4x15 bolt	2
	M6x20 bolt	2
	M6 nut	2
	M6 flat washer	4
	1/2 Bolt	1
	1/2 flat washer	2
	1/2 Nut	1
Hardware J	Black Zip Tie	10

NOTES: all the steps have images associated with them. You may have extra hardware once the install is complete. It is recommended to chase the tapped holes on the robot that will be used (there will be paint in the holes).

Step 1

Assemble and install the base bulkhead.

Note: there are 2 directions that the cables can be mounted on the base bulkhead; horizontal and vertical. Use the mounting option best suited for the application.

a. Install the gas fitting (Item 26). See last page for customer connection requirements.

b. Install the water connection kit (Item 24) using hardware AB. Note the direction of mounting.

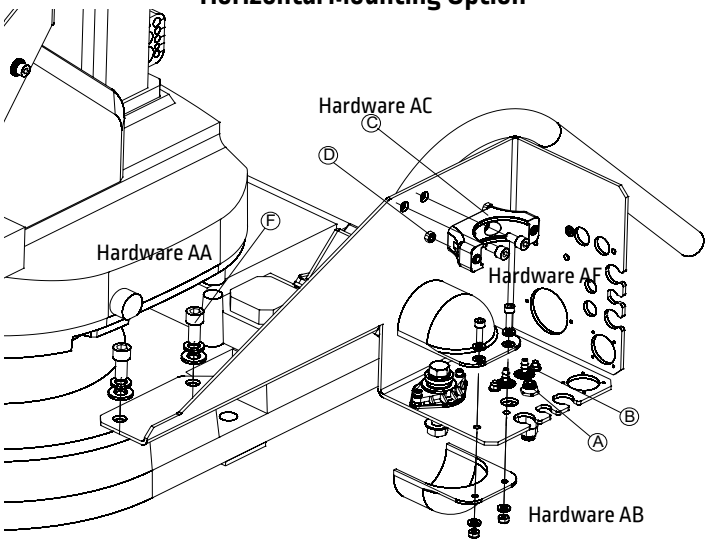
c. Press in two M6 nuts from hardware AC in the conduit clamp housing (item 21) to make it easier when finishing the clamp assembly later.

d. Install one part of the conduit clamp housing (Item 21) using hardware AC.

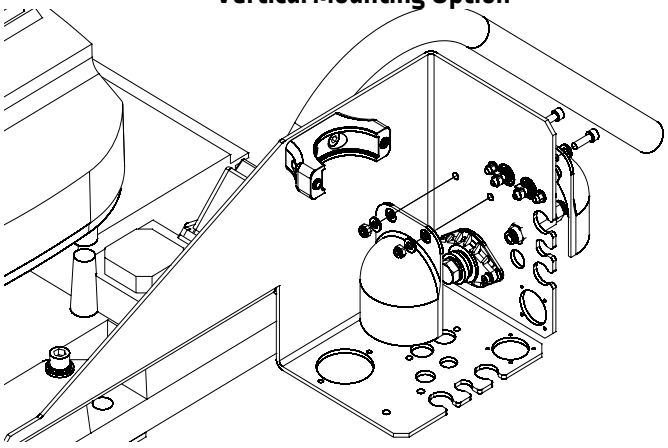
e. Using hardware AF, install the output stud (Item 15) with the M4 bolts, and the output stud cover (Item 12) with the M6 bolts, washers and nut.

f. Install the Cable Management Bulkhead Bracket B (item2) assembly on the robet

Horizontal Mounting Option



Vertical Mounting Option



Step 2

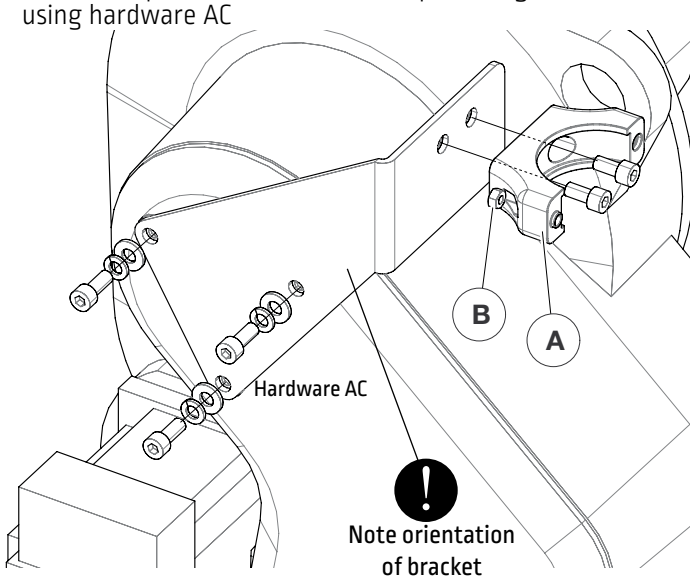
Assemble and install the Rotation Bracket.

a. Tap the holes in the robot using an M8-1.25 tap.

b. Install the Rotation Bracket (Item 1) using hardware AC.

c. Press in two M6 nuts from hardware AC in the conduit clamp housing (item 21) to make it easier when finishing the clamp assembly later.

d. Install one part of the conduit clamp housing (Item 21) using hardware AC

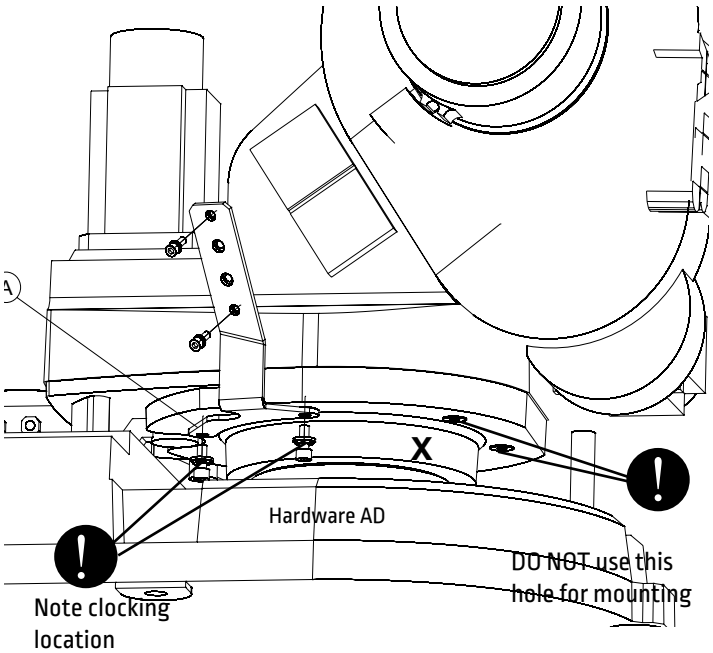


Step 3

Install the rear bracket

a. Install the Rear Bracket (Item 4) using hardware AD

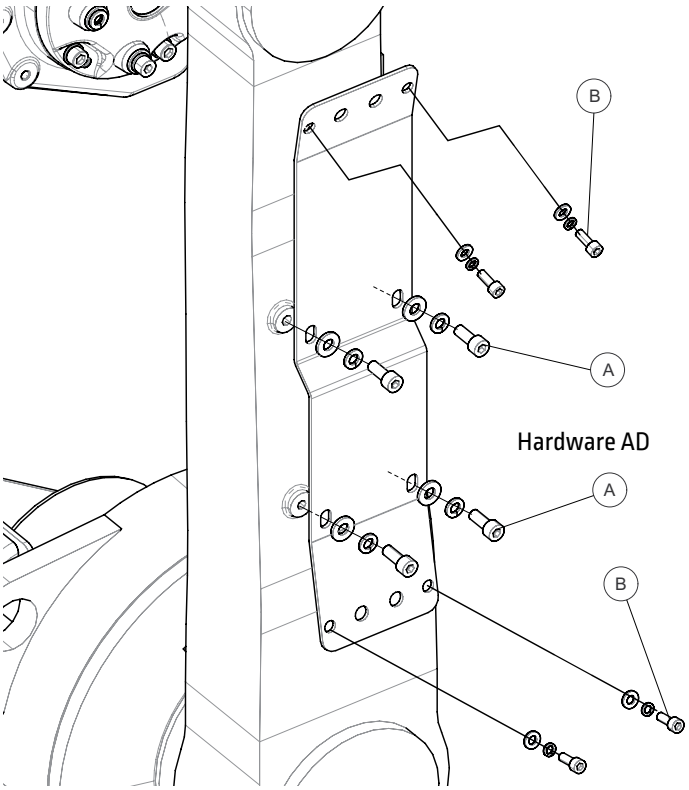
b. Install the hardware for the Block, Cable Holder Bracket (Item 11) hardware AD. Leave the bolts loose.



Step 4

Install the Link 2 Cable Holder Bracket

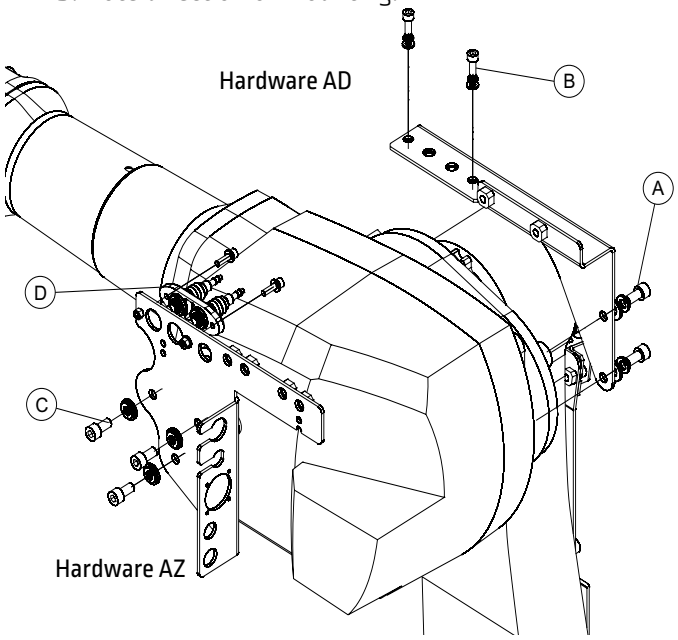
a. Install the Link 2 Cable Holder Base Bracket (Item 3) with hardware AD.
b. Install the hardware for the Block, Cable Holder Bracket (item 11), hardware AD. Leave the bolts loose.



Step 5

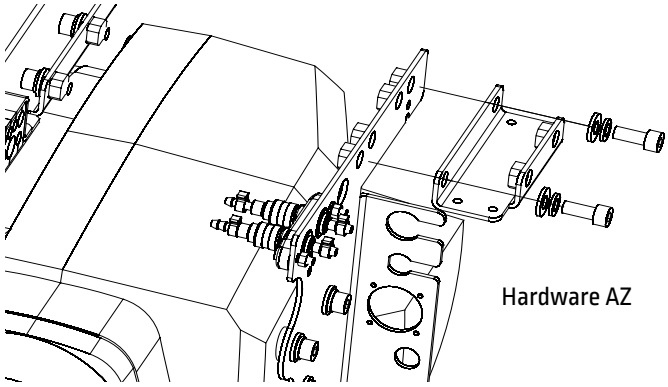
Install both axis 3 brackets.

a. Install the wirefeeder bracket A-RH (Item5) with hardware AZ.
b. Install the hardware for the Block, Cable Holder bracket (Item 11), hardware AD.
c. Install Wirefeeder bracket A-LH (Item 6) with hardware AZ.
d. Install the water connection kit (item 24) with hardware AB. Note direction of mounting.



Step 6

If you have a 4R220 wire feeder, install the 4R220 wire feeder bracket adapter (Item 14) with hardware AZ. Tighten these bolts completely. You will have limited access to these bolts when the wire feeder is put on.



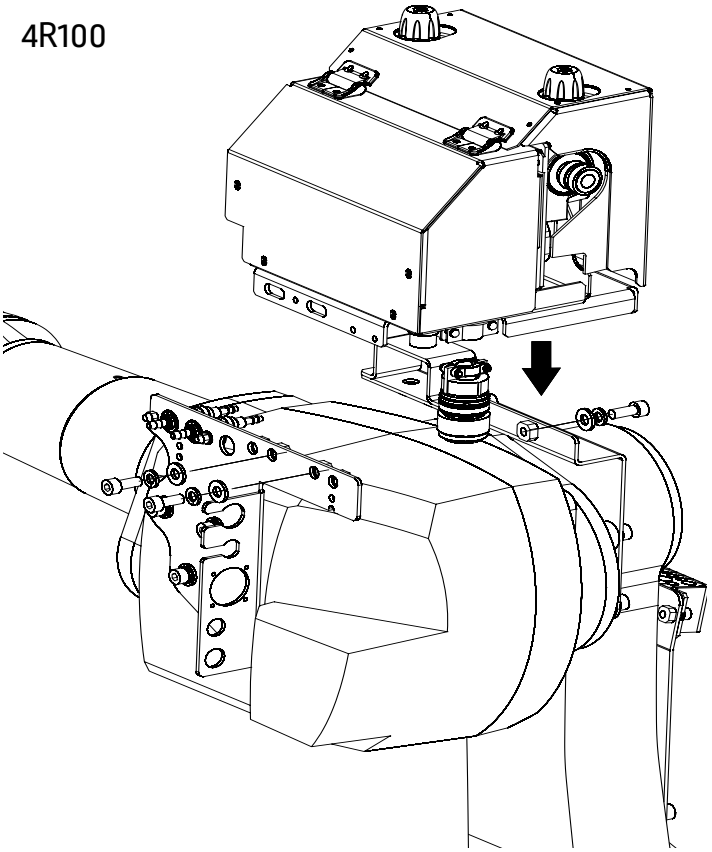
Step 7

Install the Wire Feeder.

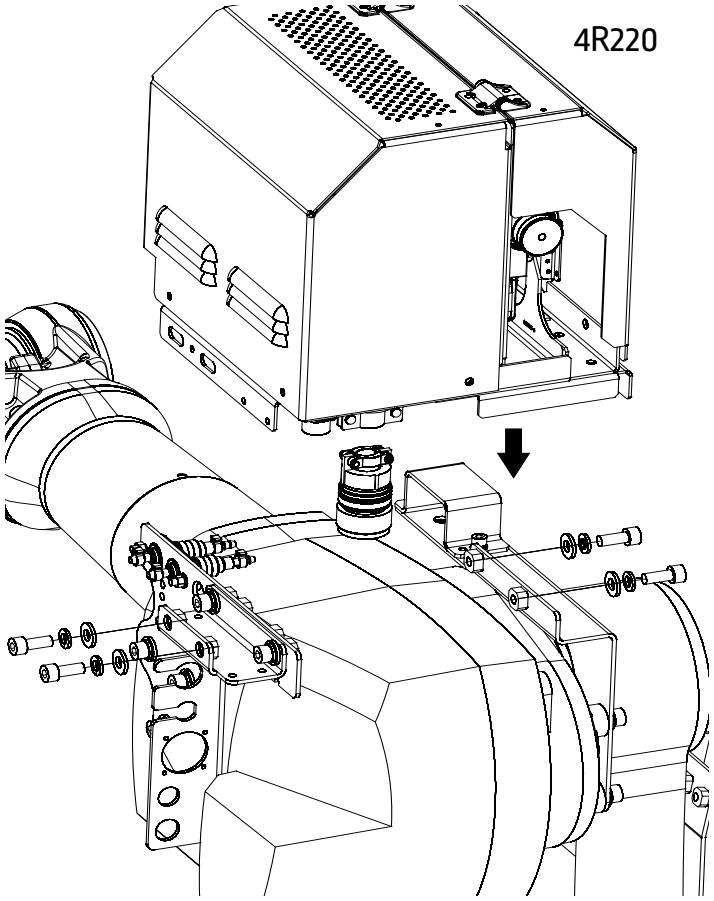
a. Use hardware AZ to secure the wirefeeder to the wire-feeder brackets.

b. Tighten all bracket bolts down securing the wire feeder to the robot.

4R100



4R220

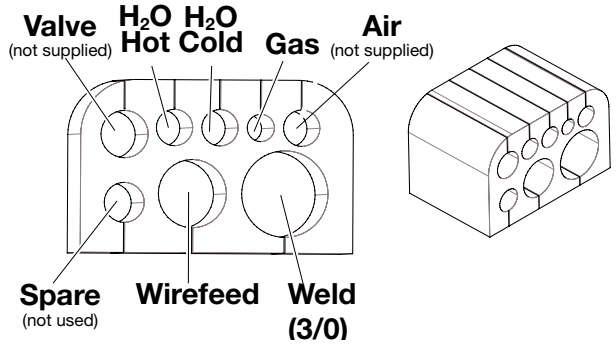


Step 8
CABLE BUNDLE INSTALLATION ON THE ROBOT

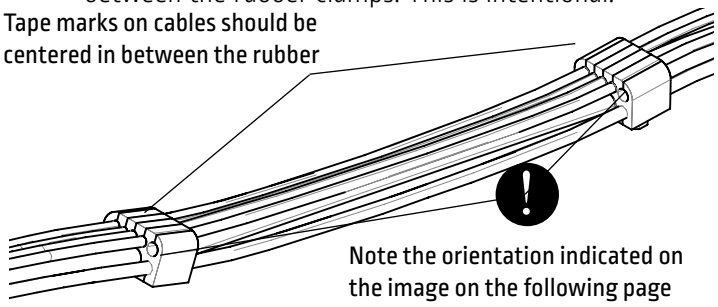
1. Lay all the cables out on the floor or on a table. Gather the following components:
   - Item 7, 8, 9 and 10 (all cables and hoses)
   - Item 19 (Rubber Holder Axis 1)
   - Item 20 (Block, Cable Holder)
   - Item 21 (52mm Conduit, PARAB Nylon)
   - Item 18 (Conduit Clamp Insert)
   - Hardware AC
   - Optional customer supplied cables and hoses. Cables and hoses should be 1mm of the nominal size listed below:

     8mm OD air line

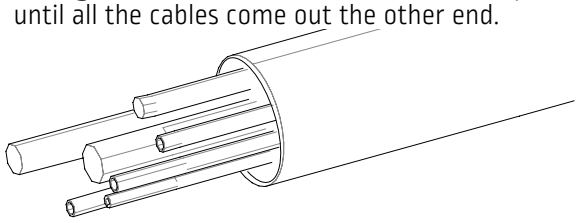
     Valve cable for valve pack mounted at axis 3 (not supplied), 10.4mm DIA
   - Make sure the cables are all going the same direction (e.g. all the wire feeder connections at one end and all the base bulkheads at the other).
2. Insert the cables into the Block, Cable Holder (Item 20) where the tape markers are. The tape on the cables and hoses should be centered in the middle of the rubber clamps. Check the graphic on page 7 for the orientation of the block, cable holder (Item 20).
   - Start with the weld cable for the rectangular clamps.
   - For the top row in the rectangular clamps, start in the middle, with water or gas. Do the torch cable and air last.



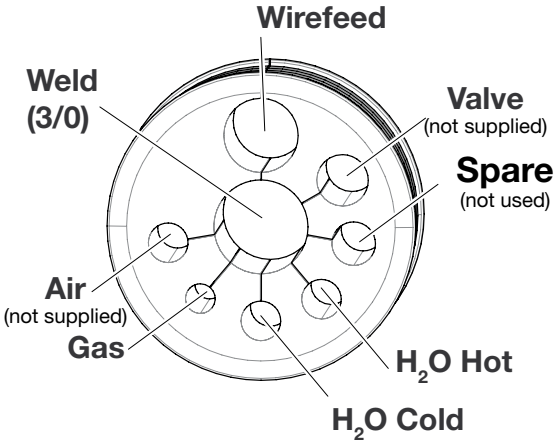
   - It's okay that the cables aren't all the same length between the rubber clamps. This is intentional.



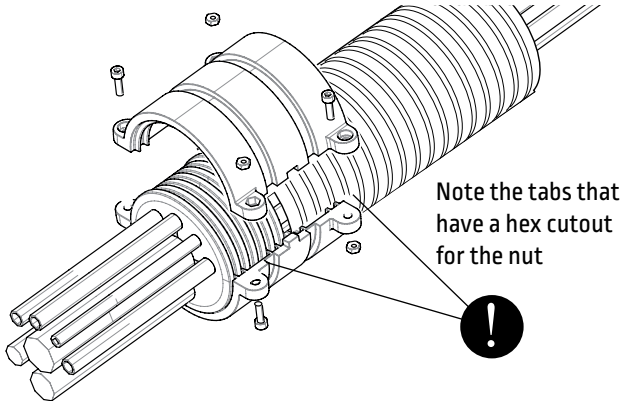
3. Slide the conduit over the cables on the base bulkhead end. It helps to stagger the cables, push one a few inches through, then insert another one in, and keep doing that until all the cables come out the other end.



4. Put the two Rubber Holder, Axis 1 clamps (item 19) on the cables. Push them as far towards the conduit as they will go.
   - Ensure that the rubber is facing the correct direction. There is a natural way that the cables flow from the rectangular orientation to the round orientation.



5. From hardware AC Use M3-0.5 x 10L and M3 nuts to secure the Conduit Clamp Insert (Item 18) to the Rubber Holder, Axis 1 (Item 19) and the 52mm Conduit, PARAB Nylon (Item 13) on both ends.
   - The Conduit Clamp Inserts (Item 18) have a side for the M3 nut to fit into, make sure you put the M3 nut on the correct end or it will never tighten up.
   - The conduit and rubber strain relief should slide into the plastic clamp fairly easily, if it doesn't, make sure that the grooves are lined up with the rubber strain relief and the conduit.



6. Place the dress kit on the robot. Starting at the top, secure the first Block, Cable Holder (Item 20) to the robot. Work your way down the robot arm until you reach the base bulkhead.

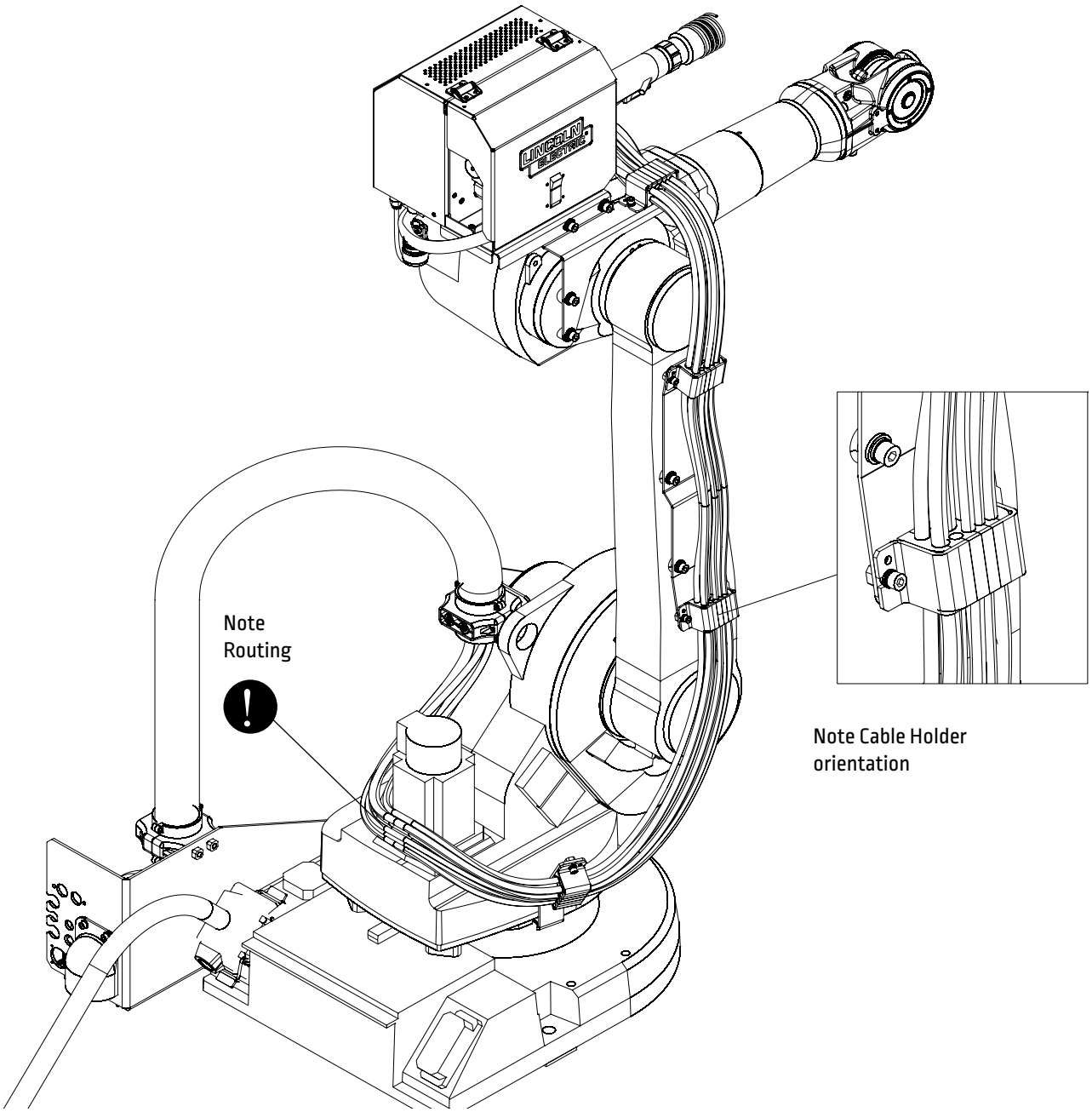
Step 9

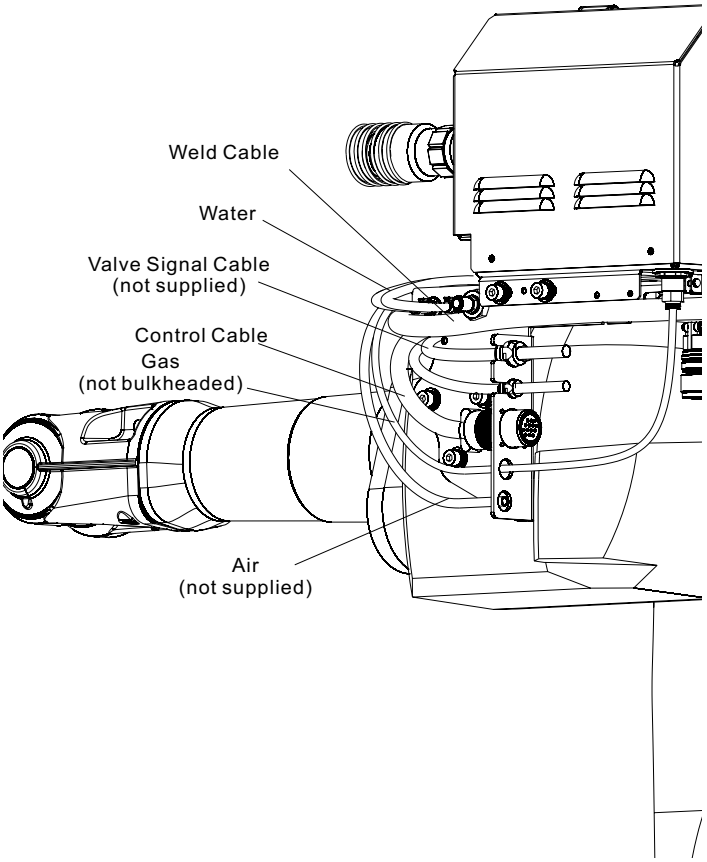
Tighten all hardware on robot. Check movement of arm is not constricted by moving axis 1, 2 and 3 the full range of motion for the application.

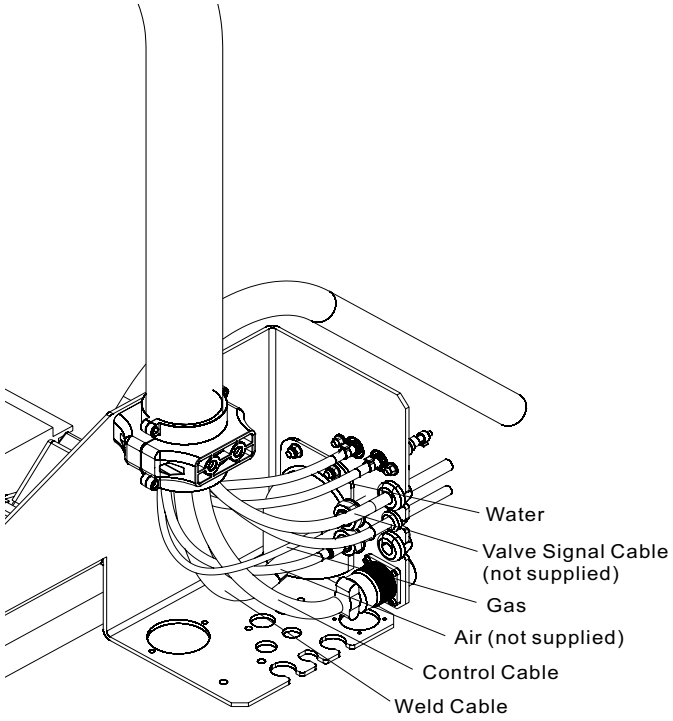
a. Use hardware AF to attach the weld cable to the output stud (Item 15) at the base bulkhead.

b. Use hardware AC to attach the conduit to the robot.

C. Use the M3 bolts from hardware AB to secure the control cable on the Bulkhead Bracket B (Item 2) and in the Wirefeeder Bracket A-LH (Item 6). See next page for graphic.







Base Bulkhead Gas Plumbing Options