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.

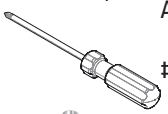
Only qualified personnel should install Dress Out Kit.

Select your arm: K4253-IRB1660ID-A

ITEM	Lincoln PN	DESCRIPTION	UNIT
1	M25433-20	3 AXIS CABLE MANAGEMENT BRACKET	1
2	M25433-21	WIREFEEDER BRACKET	1
3	M25433-4	Rotation bracket	1
4	M25433-5	Cable management bulkhead bracket B	1
5	M25433-6	Link 2 Cable Holder	1
6	M25433-7	Rear braket	1
7	M25455-1	Block, Cable Holder Bracket	5
8	M25431-22	52mm Conduit, PARAB Nylon	1.2
9	S30266-24	Conduit Clamp Insert	4
10	S30266-27	Conduit Clamp Housing	4
11	S30266-25	Rubber Holder, Axis 1	2
12	S30266-26	Block, Cable Holder	5
13	S30266-8	Gas Fitting Adapter	2
14	S30268-6	FEMALE CONNECTOR	2
15	M25437-2	GAS HOSE , (4.4M)	1
16	M25439-1	POWER CABLE WITH BEND,(4.3M)	1
17	M25440-5	CONTROL CABLE (ArcLink 5 pin) , (4.3M)	1
18	S16656-5	OUTPUT STUD	1
19	M20007	OUTPUT STUD COVER	2
20	S30267-5	HARDWARE KIT	1
21	S31896	WATER CONNECTION KIT	1
22	M25438-3	WATER HOSE(4.4M)-Red & Blue	1
23	S27052-2	LEAD GROMMET	3
24	IM10400	INSTRUCTION MANUAL	1
25	S22325-140	Gas Fitting	1

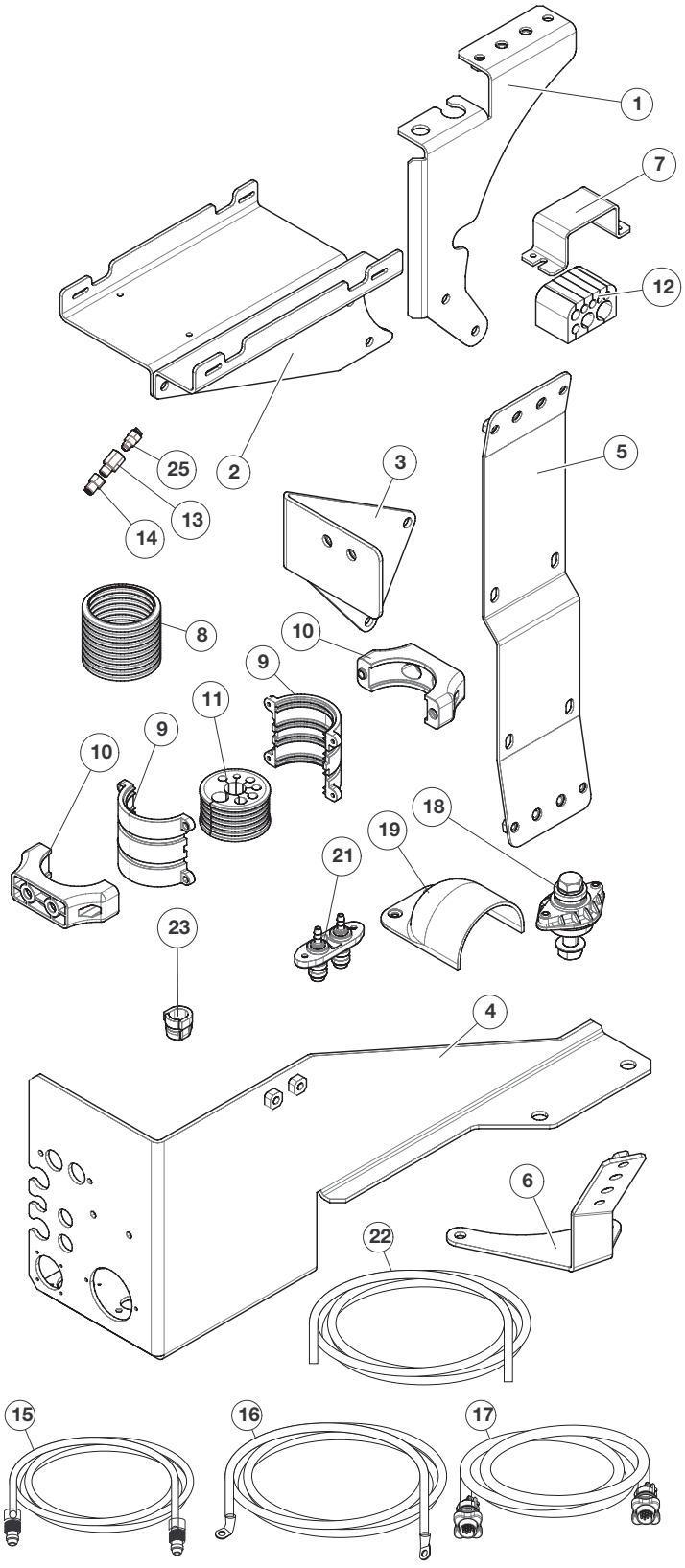
Required Tools:

M2.5, M3, M5 and M6 Allen Wrenches



#2 Phillips Head Screwdriver

M8 tap and tap handle



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K4253-IRB1660ID-A

S30267-5 Hardware Kit Contents		
Hardware AA (Bracket B to Robot base)	M12x30 hex head bolt	2
	M12 spring washer	2
	M12 flat washer	2
Hardware AT (control cables and water hose for A&B Bracket)	M3x10 screws	4
	M5x15 screw	2
	M5 nut	2
	M5 flat washer	4
	M5 spring washer	2
	Water hose clamp	4
Hardware AC (corrugated pipe to bracket)	M8×20 bolt	7
	M8 spring washer	7
	M8 flat washer	7
	M6×45bolt	4
	M6 nut	4
	M3x10 screws	8
	M3 nut	8
Hardware AR (Clamp bracket to Robot base)	M6x16 bolt	10
	M6 spring washer	10
	M6 flat washer	10
	M8×20 bolt	8
	M8 spring washer	8
	M8 flat washer	8
Hardware AS (wire feeder & feeder brackets to arm)	M8x20 bolt	2
	M8 spring washer	2
	M8 flat washer	2
	#8-32 x .375 Screw	4
	#8 flat washer	4
	#8 spring washer	4
Hardware AF (output stud and cover)	M4x18 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

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 female connector (Item 14). See last page for customer connection requirements.

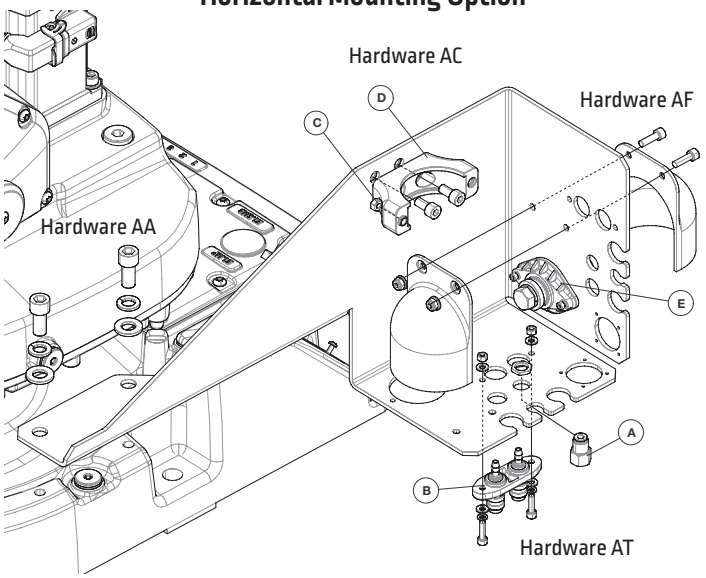
b. Install the water bulkhead (Item 21) using hardware AT. Note the direction of mounting.

c. Press in two M6 nuts from hardware AC in the conduit clamp housing (item 10) to make it easier when finishing the clamp assembly later.

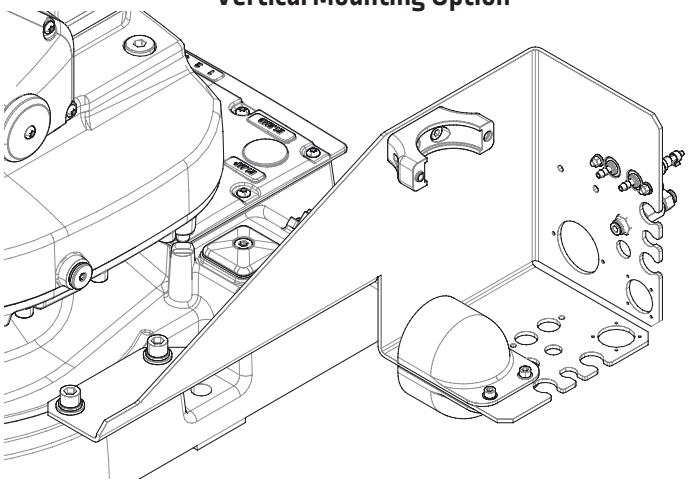
d. Install one part of the conduit clamp housing (Item 10) using hardware AC.

e. Using hardware AF, install the output stud (Item 18) with the M4 bolts, and the output stud cover (Item 19) with the M6 bolts, washers and nut.

Horizontal Mounting Option



Vertical Mounting Option



Step 2

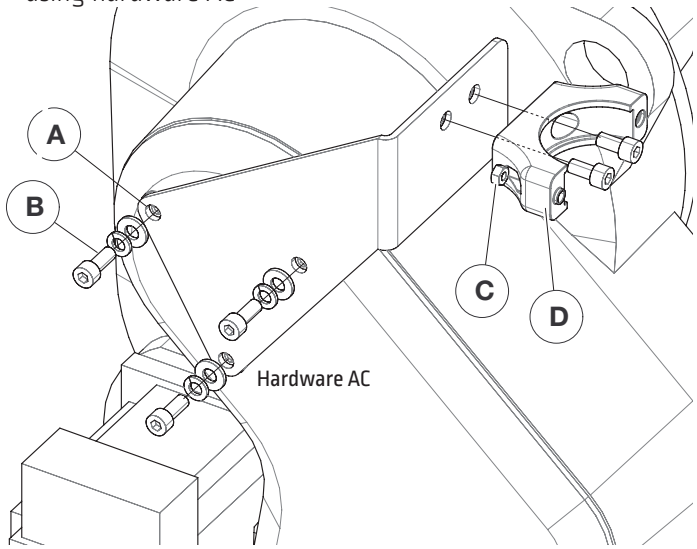
Assemble and install the Rotation Bracket.

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

b. Install the Rotation Bracket (Item 3) using hardware AC.

c. Press in two M6 nuts from hardware AC in the conduit clamp housing (item 10) to make it easier when finishing the clamp assembly later.

d. Install one part of the conduit clamp housing (Item 10) using hardware AC

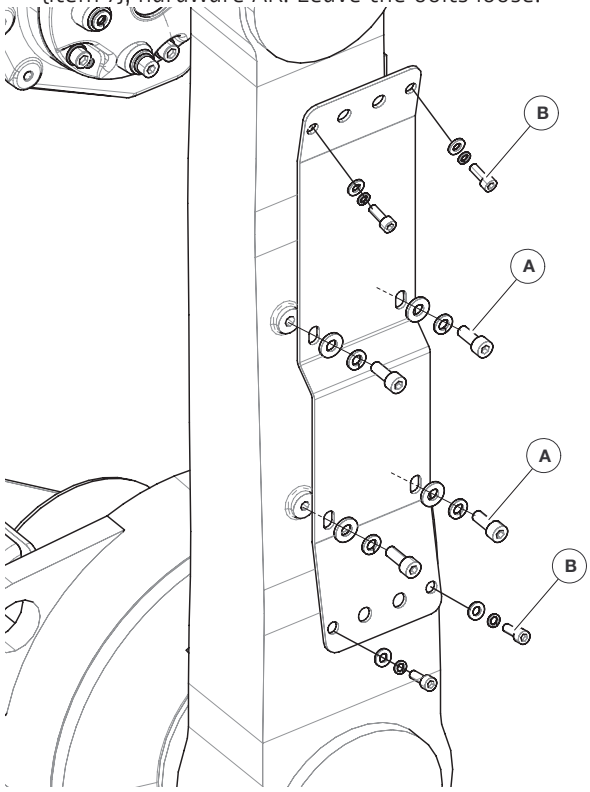


Step 3

Install the Link 2 Cable Holder Bracket

a. Install the Link 2 Cable Holder Bracket (Item 5) with hardware AC.

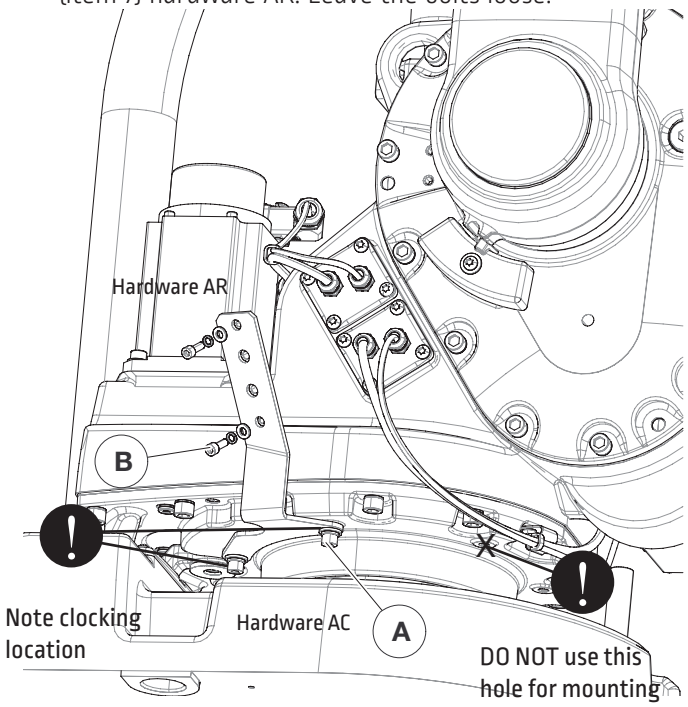
b. Install the hardware for the Block, Cable Holder Bracket (item 7), hardware AR. Leave the bolts loose.



Step 4
Install the rear bracket

a. Install the Rear Bracket (Item 6) using hardware AC

b. Install the hardware for the Block, Cable Holder Bracket (Item 7) hardware AR. Leave the bolts loose.



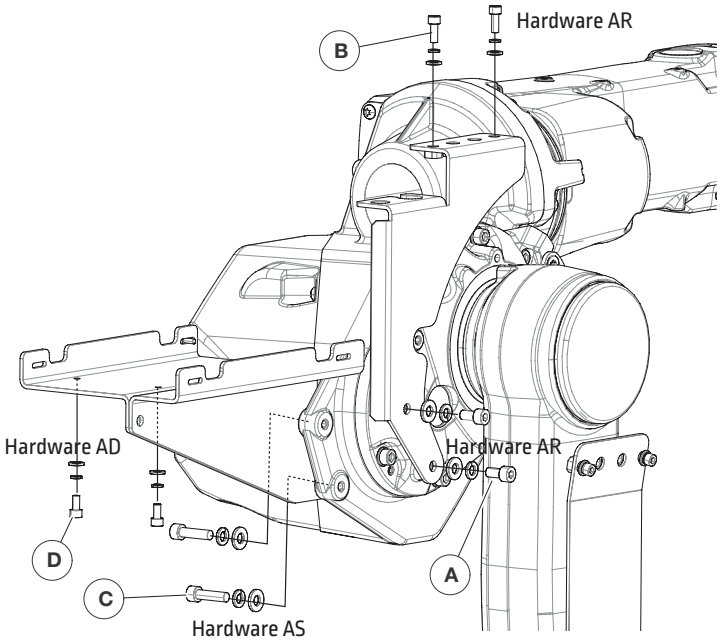
Step 5
Install both axis 3 brackets.

a. Install the 3 Axis Cable Management Bracket (Item 1) with hardware AR.

b. Install the hardware for the Block, Cable Holder Bracket (Item 7), hardware AR. Leave the bolts loose.

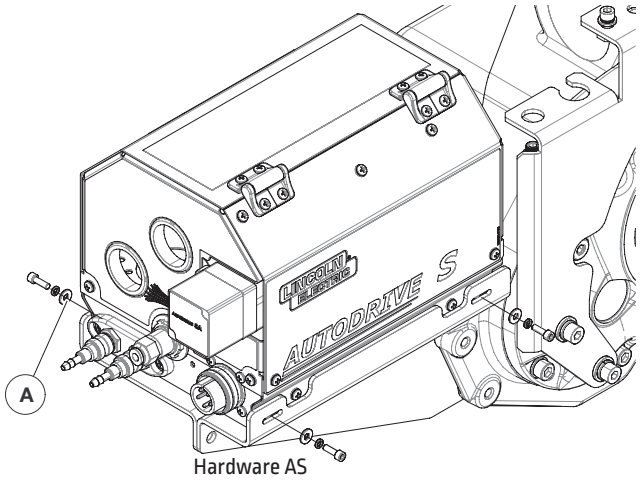
c. Install the Wirefeeder Bracket (Item 2) with hardware AS.

d. Install the hardware for the Block, Cable Holder Bracket (Item 7), hardware AR that mounts under the wire feeder. Leave the bolts loose.



Step 6
Install the Wire Feeder.

a. Use hardware AS to install the wirefeeder.

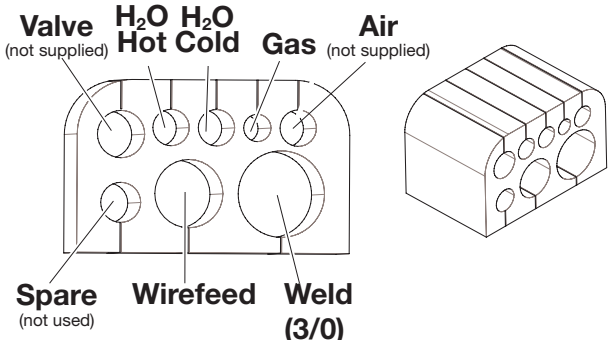


Step 7
CABLE BUNDLE INSTALLATION ON THE ROBOT

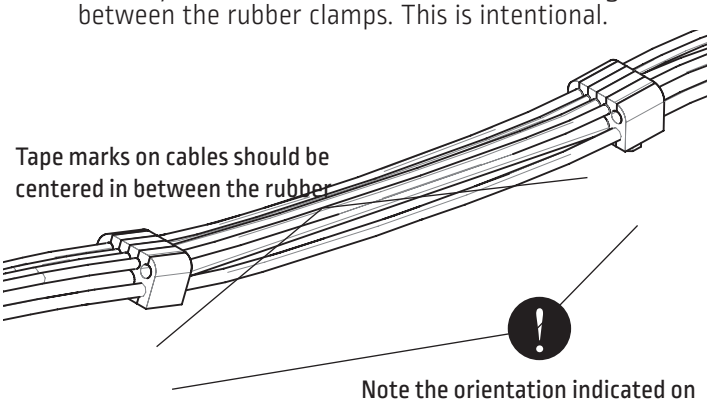
1. Lay all the cables out on the floor or on a table. Gather the following components:
   - Item 15, 16, 17 and 22 (all cables and hoses)
   - Item 11 (Rubber Holder Axis 1)
   - Item 12 (Block, Cable Holder)
   - Item 8 (52mm Conduit, PARAB Nylon)
   - Item 9 (Conduit Clamp Insert)
   - Hardware AC
   - Optional customer supplied cables and hoses. Cables and hoses should be 1mm of the nominal size listed below:

     8mm OD air line

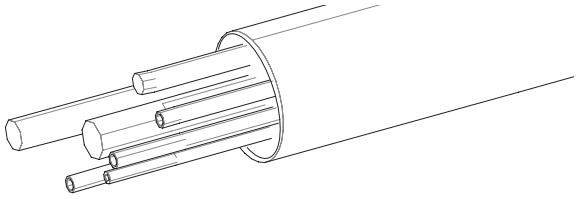
     Valve cable for valve pack mounted at axis 3 (not supplied), 10.4mm DIA
   - Make sure the cables are all going the same direction (e.g. all the wire feeder connections at one end and all the base bulkheads at the other.
2. Insert the cables into the Block, Cable Holder (Item 12) where the tape markers are. The tape on the cables and hoses should be centered in the middle of the rubber clamps. Check the graphic on page 6 for the orientation of the block, cable holder (Item 12).
   - 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.



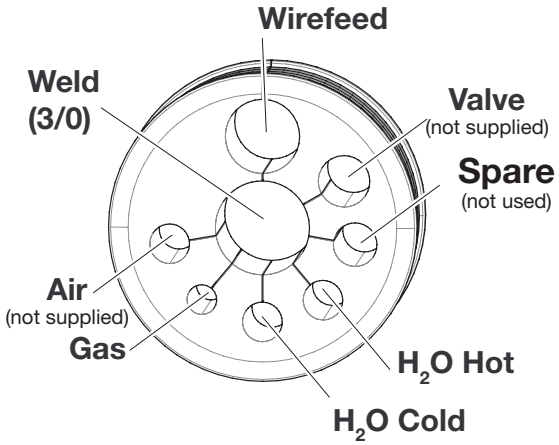
   - It's okay that the cables aren't all the same length between the rubber clamps. This is intentional.



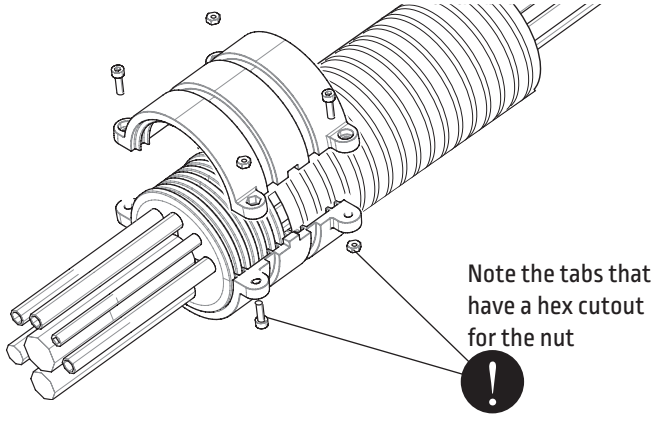
3. Slide the conduit over the cables on the base bulkhead end. It helps to stagger the cables, push one a few inches through, then insert another one in, and keep doing that until all the cables come out the other end.



4. Put the two Rubber Holder, Axis 1 clamps 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. Use M3-0.5 x 10L and M3 nuts to secure the Insert, Conduit Clamp (Item 9) to the Rubber Holder, Axis 1 (Item 14) and the 52mm Conduit, PARAB Nylon (Item 8) on both ends.
   - The Insert, Conduit Clamps (Item 9) 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.



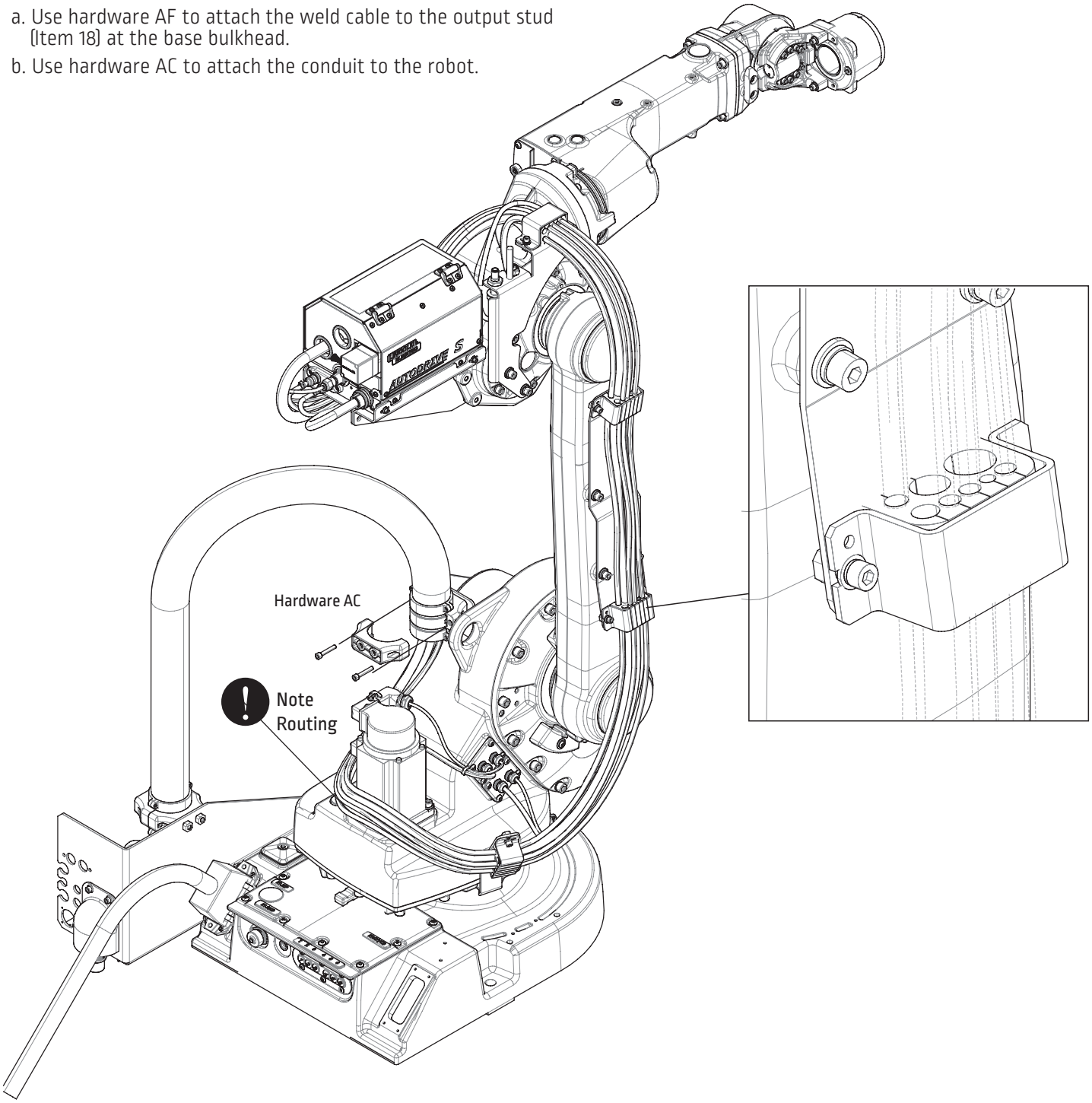
6. Place the dress kit on the robot. Starting at the top, secure the first Block, Cable Holder (Item 12) to the robot. Work your way down the robot arm until you reach the base bulkhead.

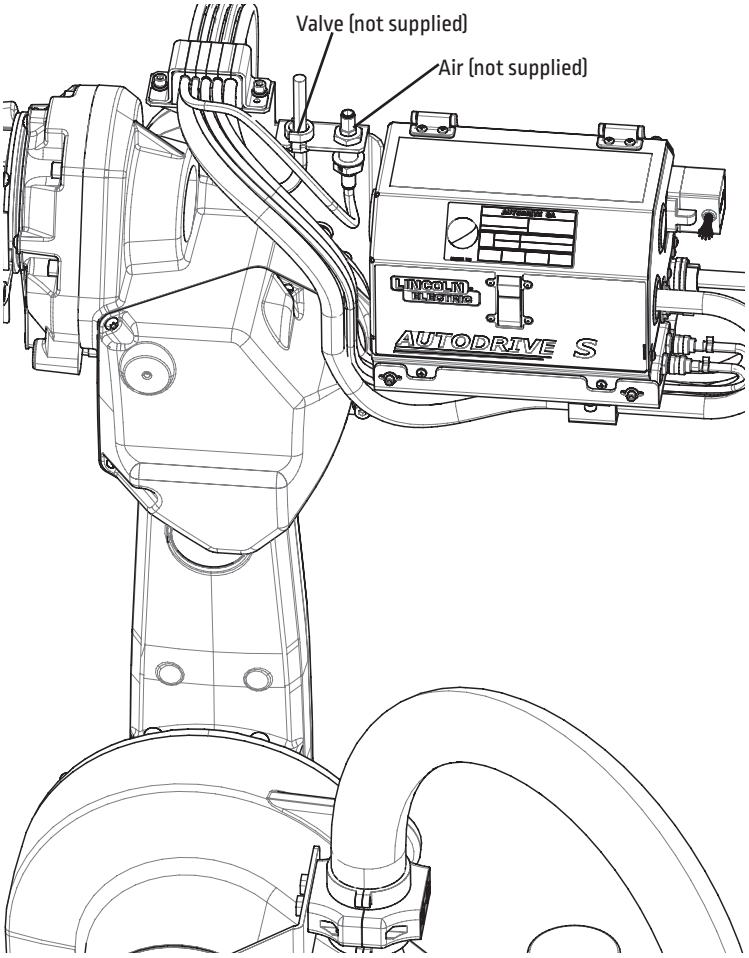
Step 8

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.

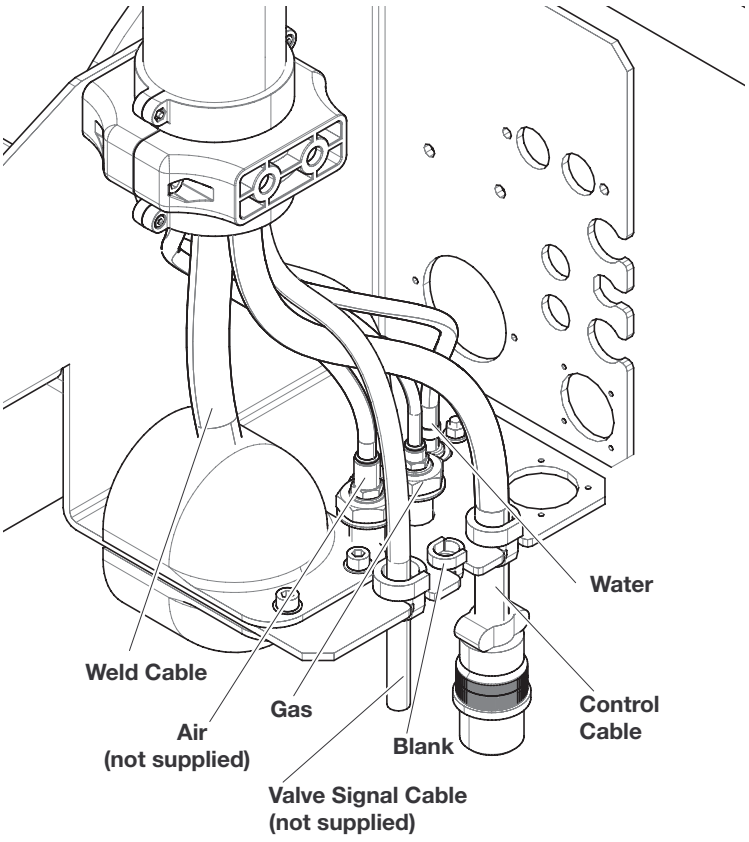
a. Use hardware AF to attach the weld cable to the output stud (Item 18) at the base bulkhead.

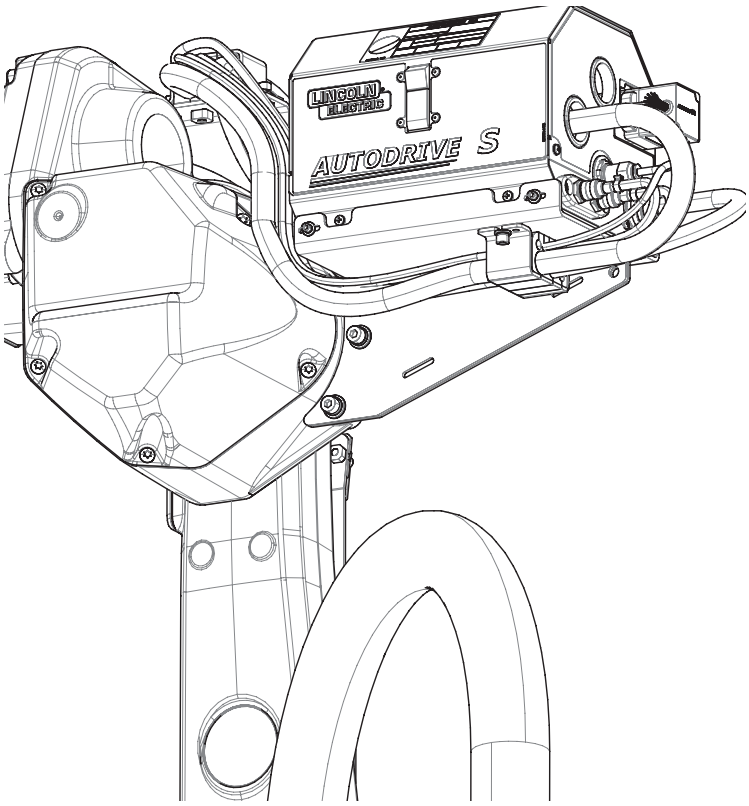
b. Use hardware AC to attach the conduit to the robot.



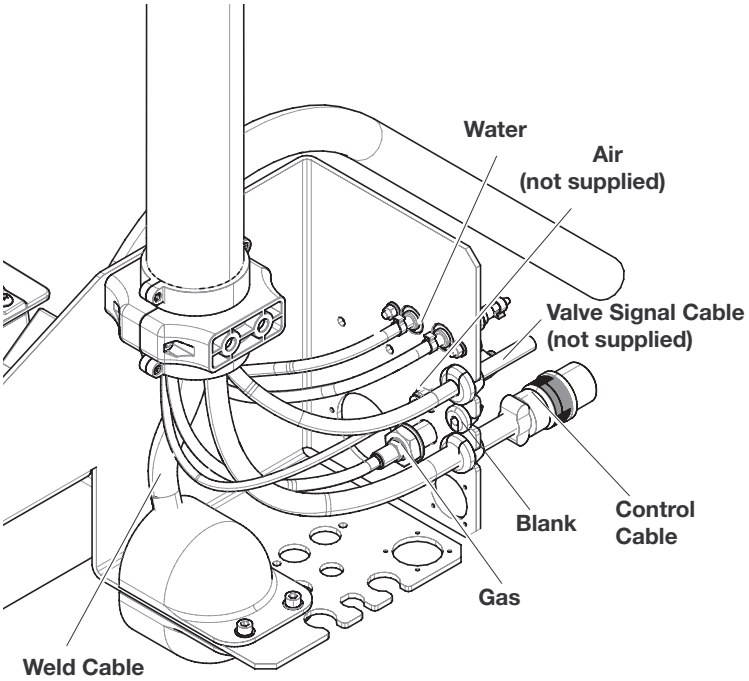


Horizontal Mounting Option

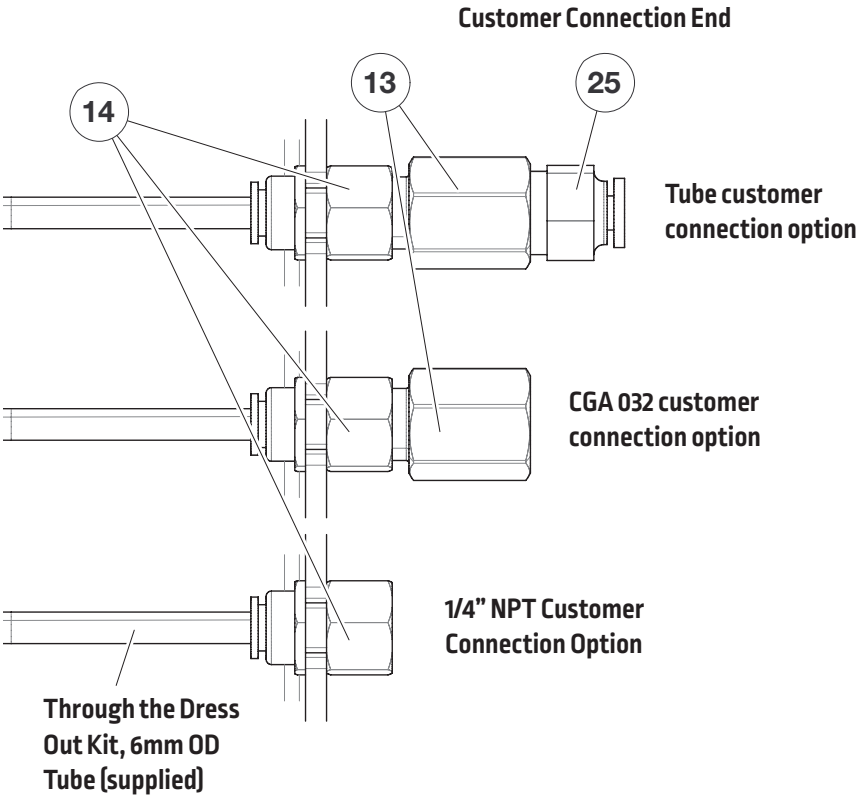




Vertical Mounting Option



Base Bulkhead Gas Plumbing Options



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