AUBO i5 Robot
Joint Replacement Manual

Joint 6

Version 1.1

1. Operation Target Description

Figure 1. AUBO i5 Robot

2. Tools for Operation

1

1. 2mm Slotted Screwdriver

2

2. Tweezers

3

3. 5.5 mm Open-end Wrench

4

4. 2.5mm Allen Wrench

Figure 2. Tools

3. Safety Instructions

Warning

Warning: Before replacing any components in the control board, it is very important to shut down the system completely and cut off the power supply.

Caution

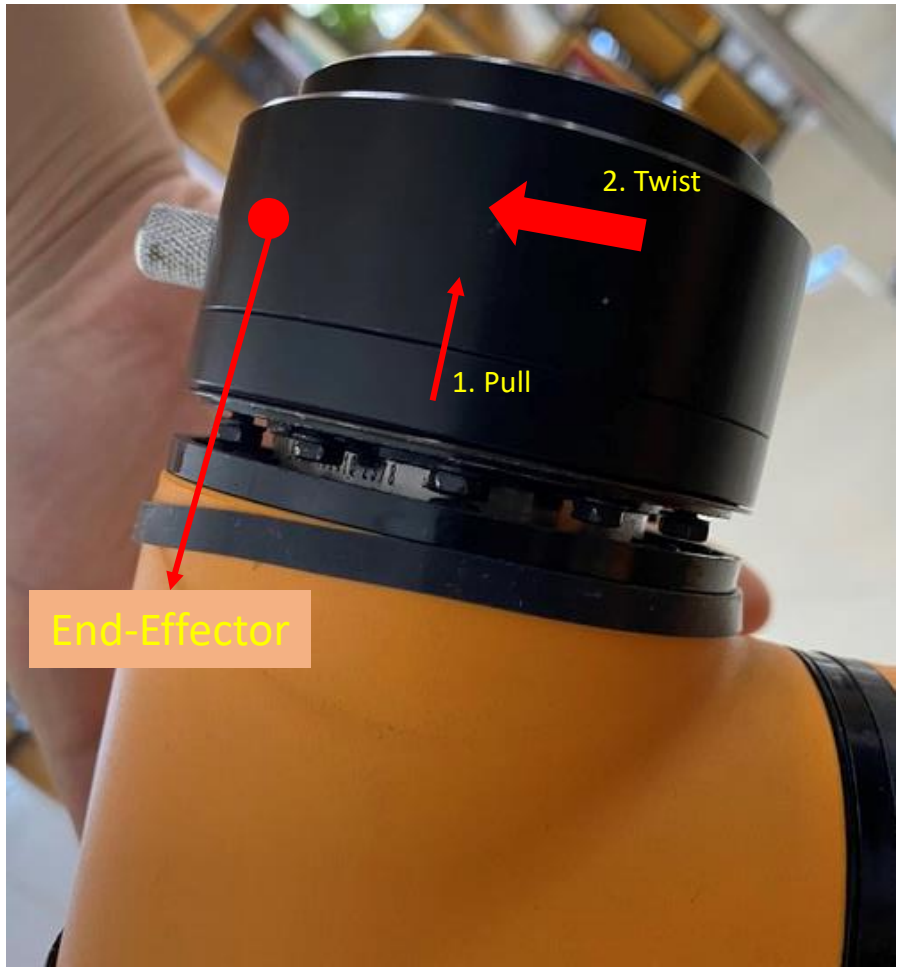
Caution: The cable socket is plugged in tightly, please pay attention when plugging and unplugging to ensure do not damage the interface board and the circuit.

4. Disassembly Procedures (End-Effector)

Figure 3,4. Overview of Joint 1-joint 2 junction

1. Use tweezers to pick up and pull rubber band to one side at joint 3;
2. Use 2.5mm Allen wrench to unscrew limit screw
3. Use 5.5mm Open-end Wrench to loose (just loose, don't unscrew them down)bolts at the junction. (Ten bolts in total)

4. Disassembly Procedures (End-Effector)



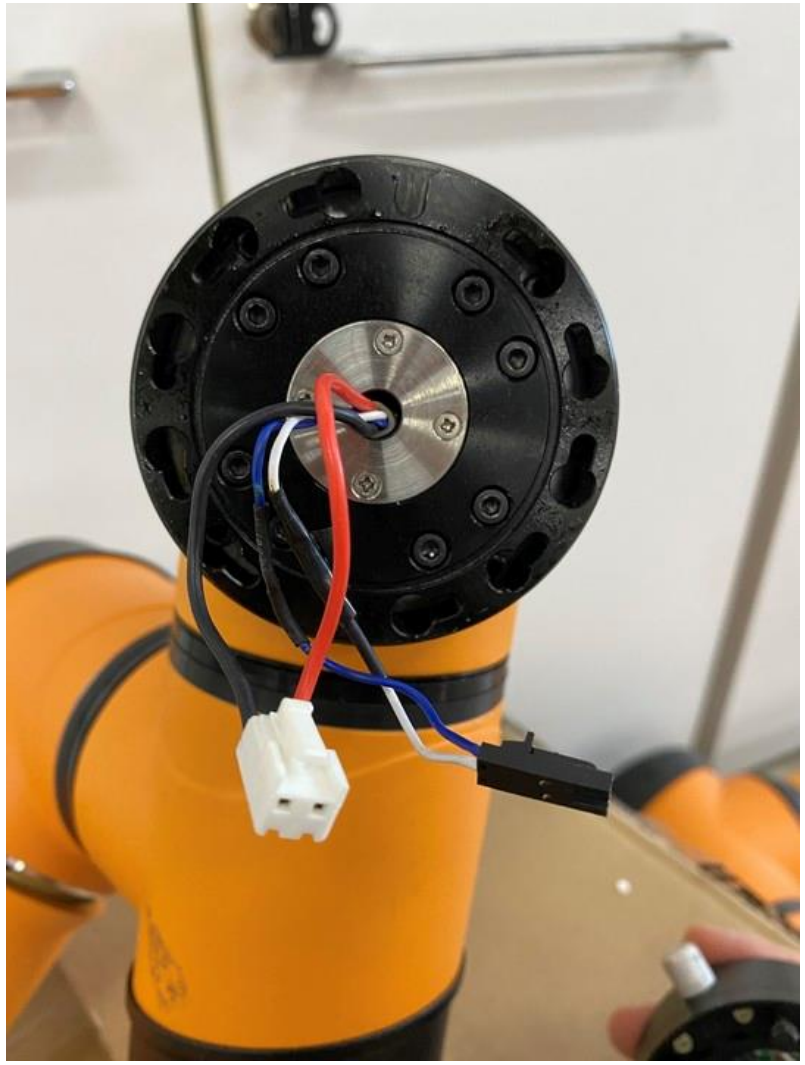
4. Once ten bolts are loose, pull the end-effector out a little bit, then twist it;

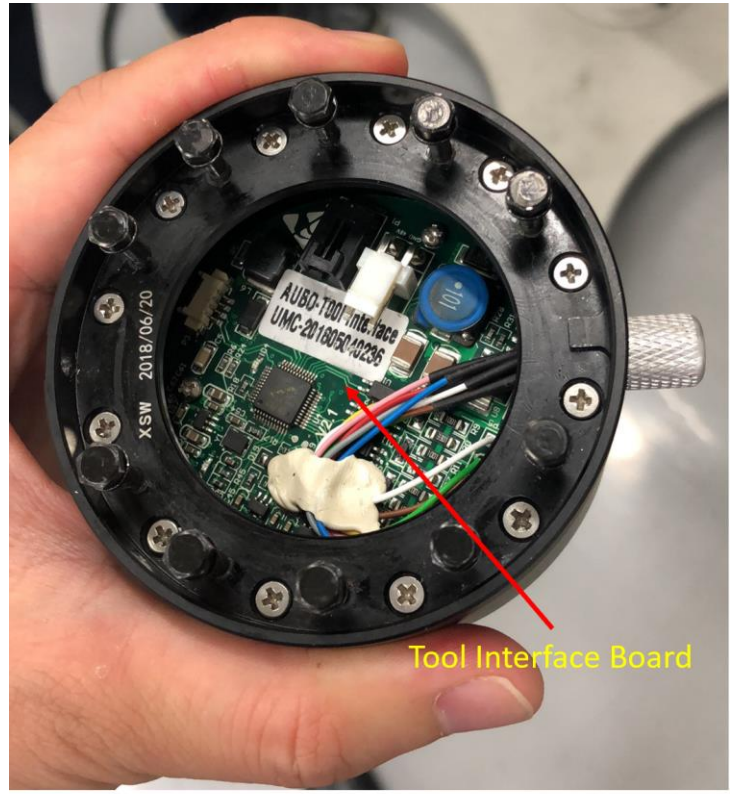
*,**: The existence of groove and protrusion is the reason for step 4 to pull the end-effector before twist it.

5. Gently place the end-effector to horizontal. Then, unplug the power cable connector (1) and the CANBUS cable connector (2).

Figure 5,6. Overview of Joint 6 and end-effector

4. Disassembly Procedures (End-Effector)





Regular End-effector

Figure 7,8,9. Joint 6 and end - effector

End-Effector Removal Complete
Next step, Joint 6 removal

4. Disassembly Procedures (Joint 6)

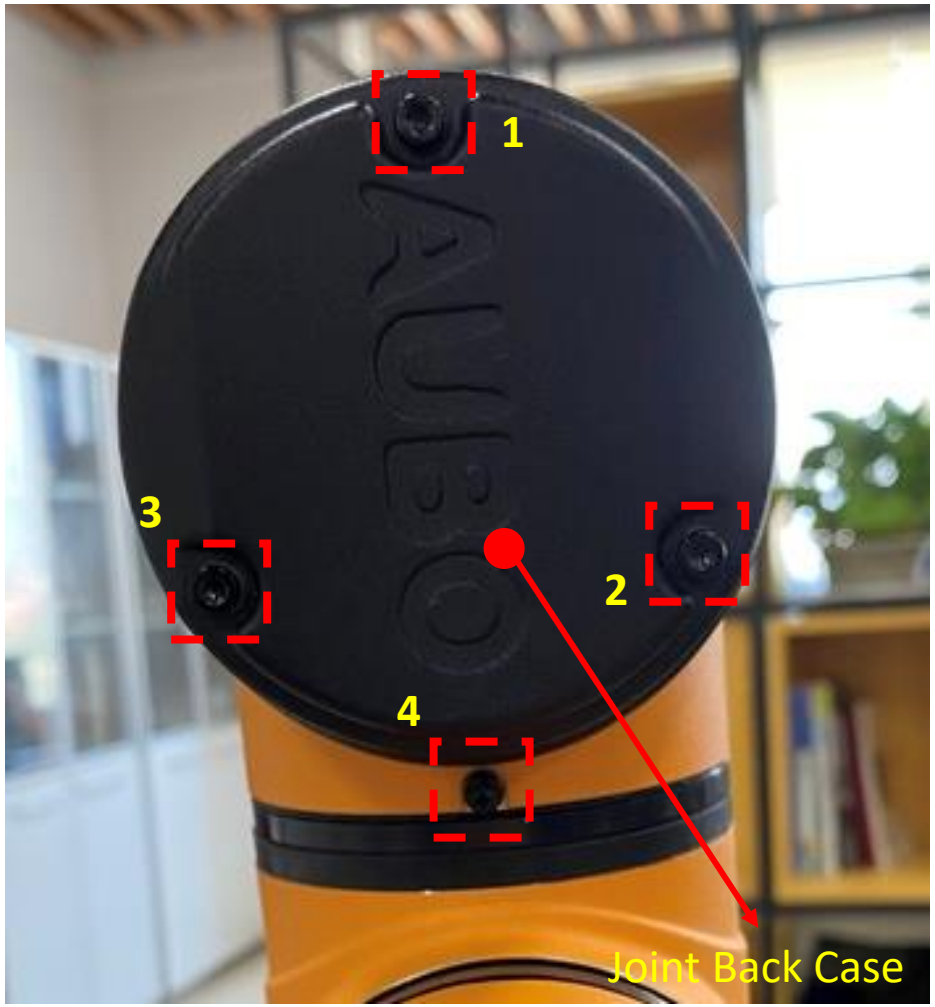
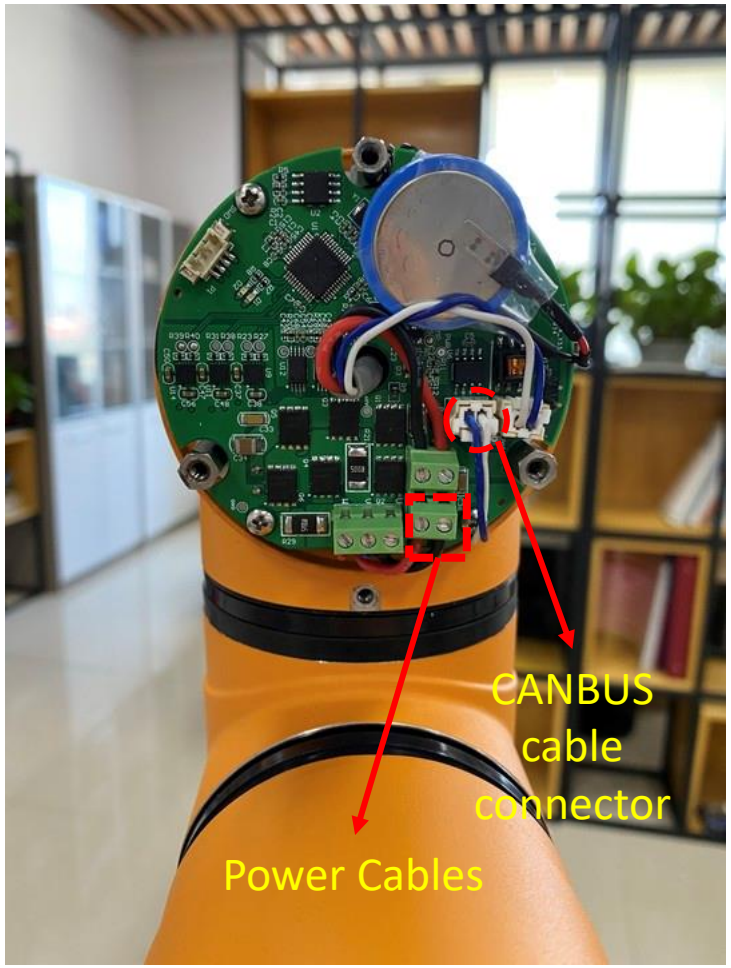
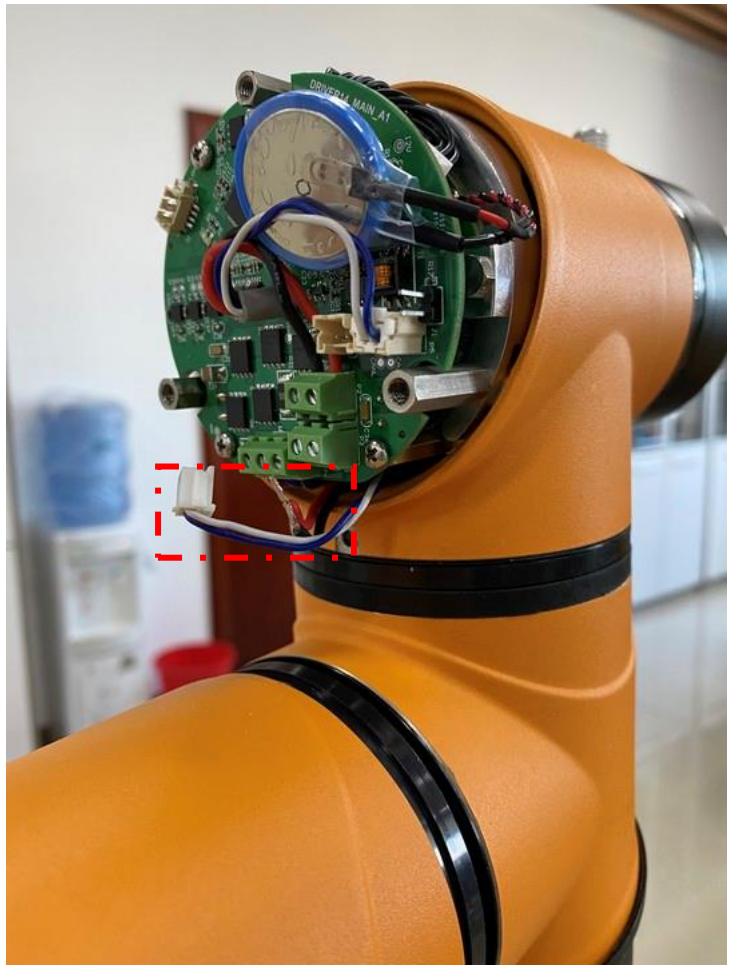


Figure 10. Overview of Joint 6 (with back case)

1. Use 2.5mm Allen wrench to unscrew screws no. 1 to no.3.
2. Use 2.5mm Allen wrench to unscrew limit screw no. 4.
3. Remove the Joint back case

4. Disassembly Procedures (Joint 6)





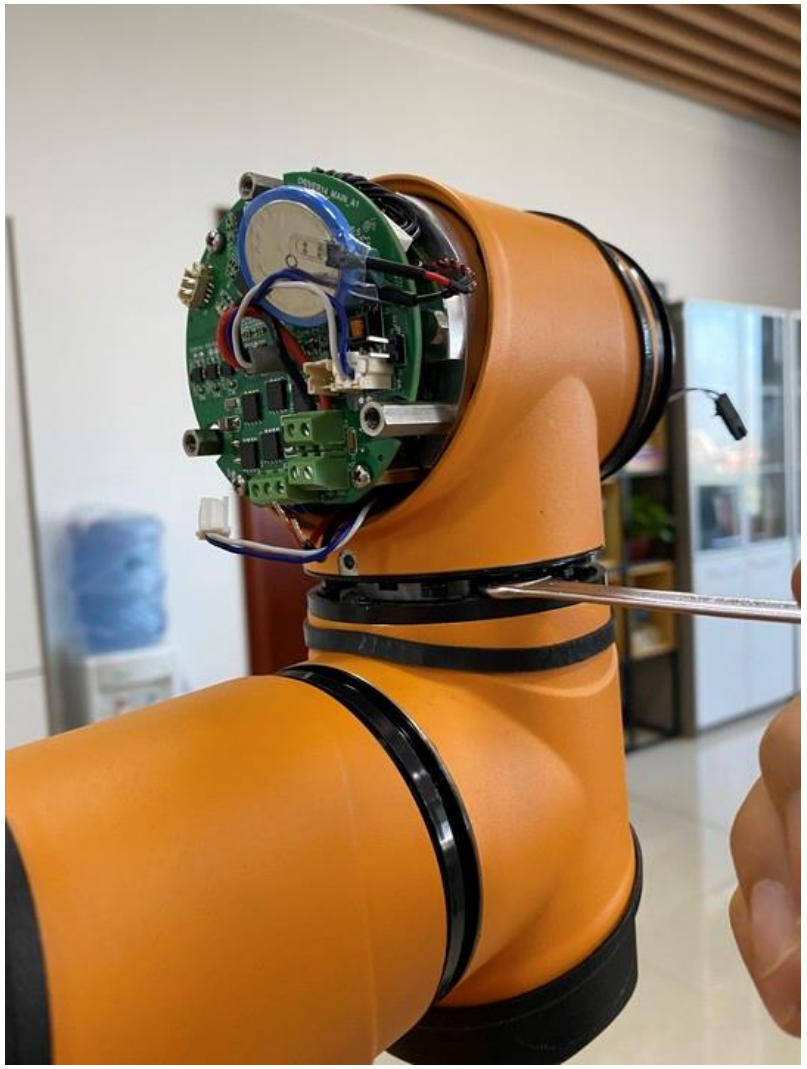
4. 2mm Slotted Screwdriver loosen two power cables and unplug them gently.

5. Unplug the CANBUS connector. (See figure 12)

Note: Joint internal design may vary according to the joint's hardware version, but its assembly is pretty much the same.

Figure 11,12. Overview of Joint 6 (without back case)

4. Disassembly Procedures (Joint 6)



6. Use tweezers to pick up and pull rubber band to one side at joint 6;

7. Use 5.5mm Open-end Wrench to loose (just loose, don’t unscrew them down)bolts at the junction. (Ten bolts in total)

Figure 13, 14. Sideview of Joint 6 (without back case)

4. Disassembly Procedures (Joint 6)

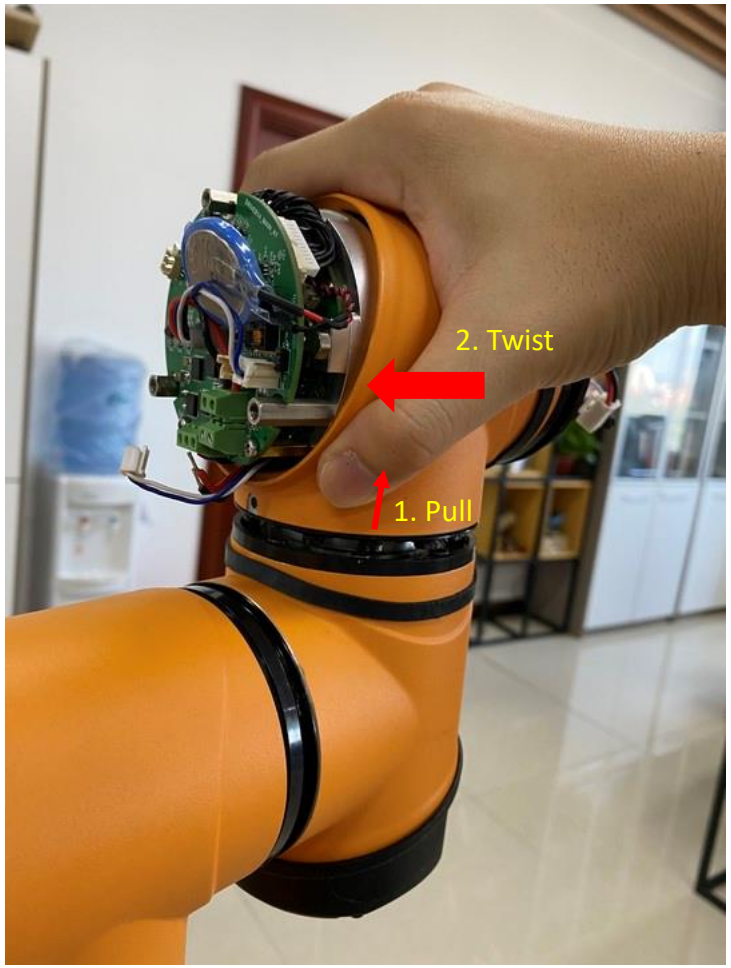


Figure 15,16. Overview of Joint 6

11. Once ten bolts are loose, pull the end-effector out a little bit, then twist it;

12. Lift the joint gently, meanwhile, use tweezers to pull those two cable sets out of joint 6.

4. Disassembly Procedures (Joint 6)

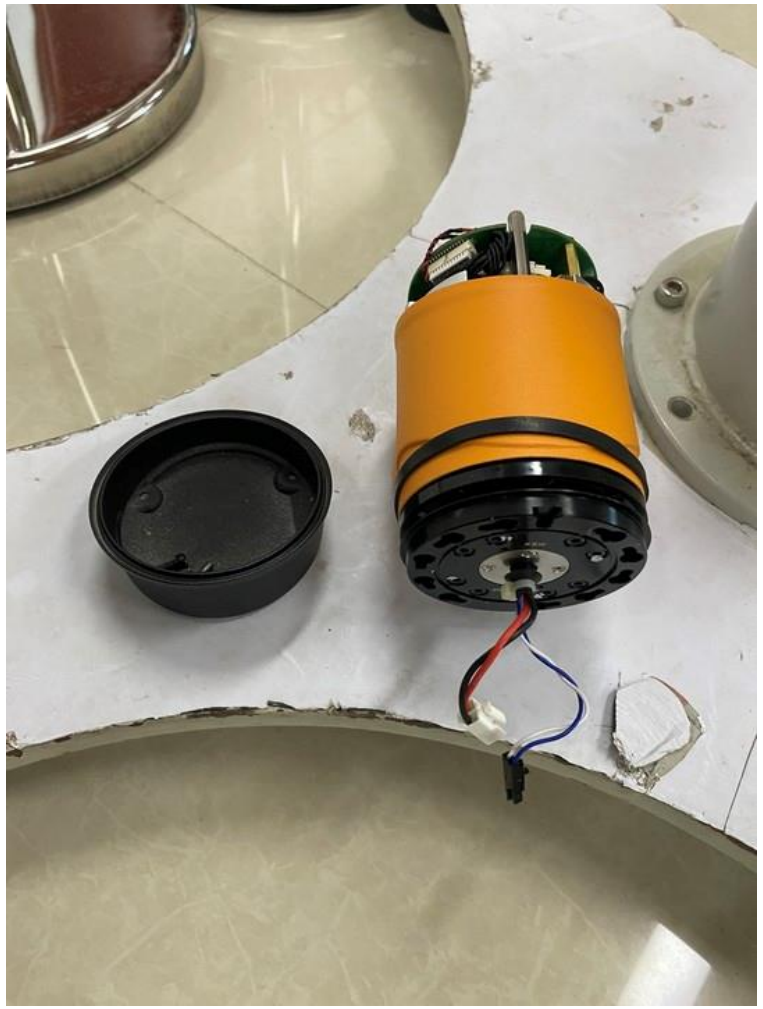


Figure 17. Joint 6 and back case

Figure 18. The rest of the robot

Joint 6
Remove complete.

Next step:
Joint 6 Assembly

5. Assembly Procedures (Joint 6)

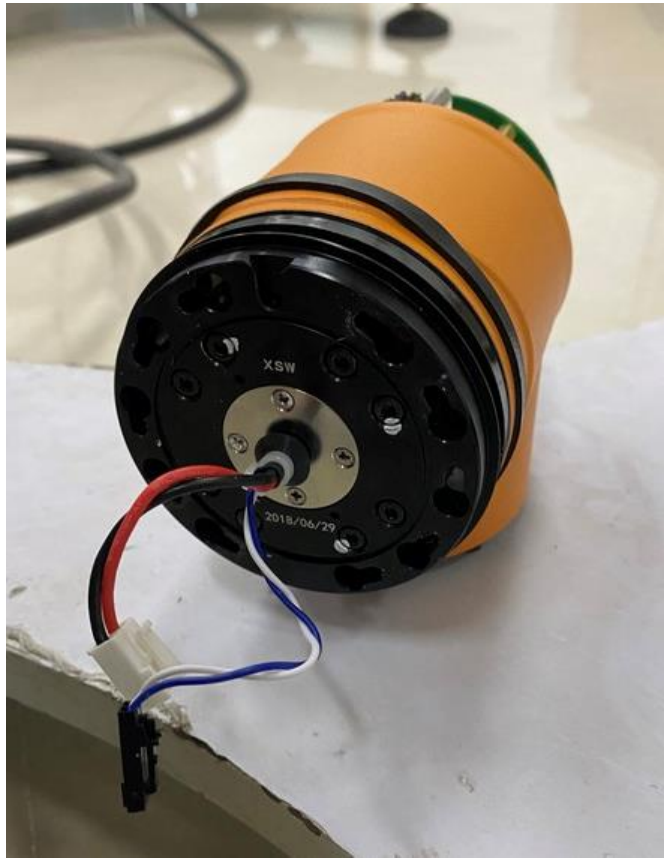


Figure 19. Prepare a new joint 6

Figure 20. The rest of the robot and joint 6

Figure 21. Picking cables from the bottom of joint 6

1. Prepare a new joint 6, use tweezers to pick the two cable sets of joint 5 through joint 6 bottom.

5. Assembly Procedures (Joint 6)

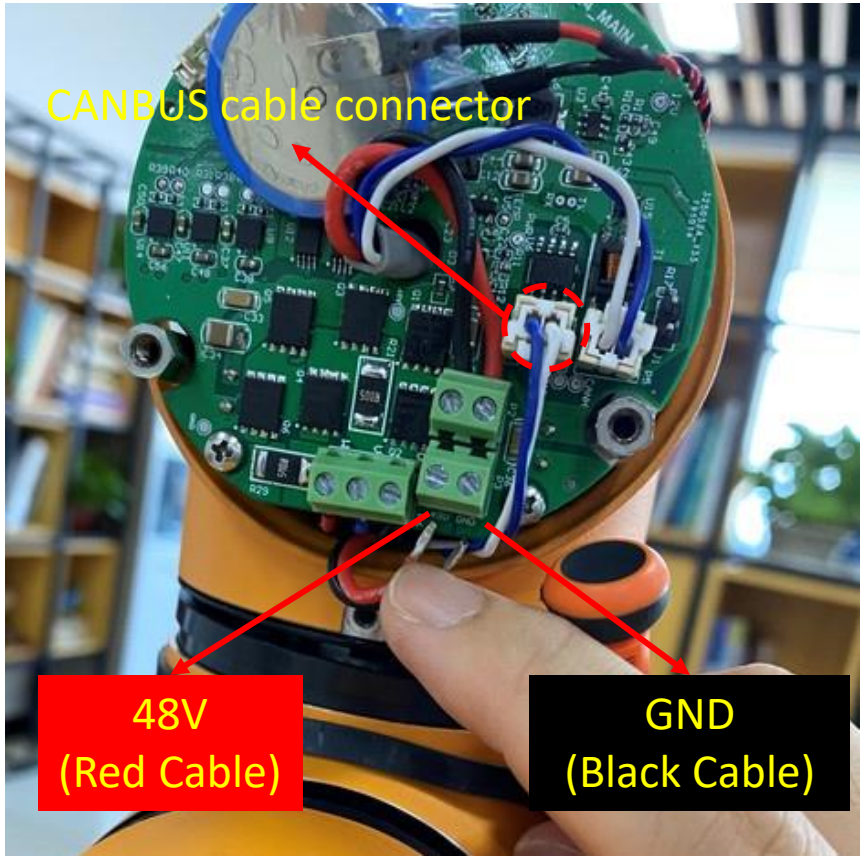


Figure 22. Joint 6 cable connection

Figure 23. Close-up of joint 5

Figure 24. Close-up of joint 6 bottom

Figure 25. Twist joint 6 to assemble

2. Plug in CANBUS cable connector and power cables, use 2mm Slotted Screwdriver to tighten the power cable.
3. Cover base with new joint 6 with extra caution. (**Warning:** Use tweezers to pull cables to prevent any cable from being squeezed by the structure)
4. Twist joint 6 until the structure at figure 23 and figure 24 are perfectly together.

5. Assembly Procedures (Joint 6)

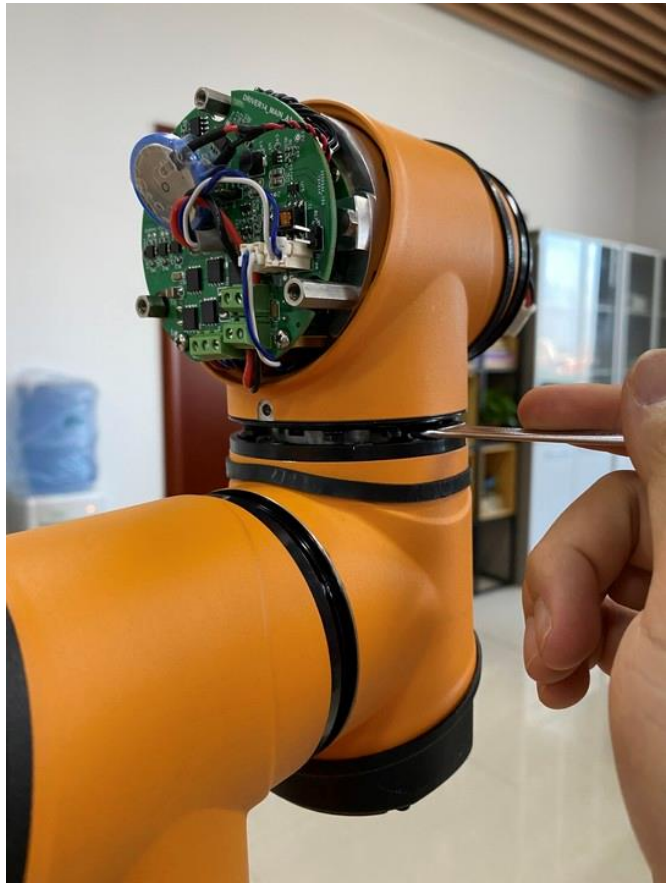


Figure 26,27. Joint 6 overview

4. Use 5.5mm Open-end Wrench to tighten (with a small torque, to protect bolts)bolts at the junction. (Ten bolts in total)

5. Use tweezers to cover the junction with rubber band.

5. Assembly Procedures (Joint 6)

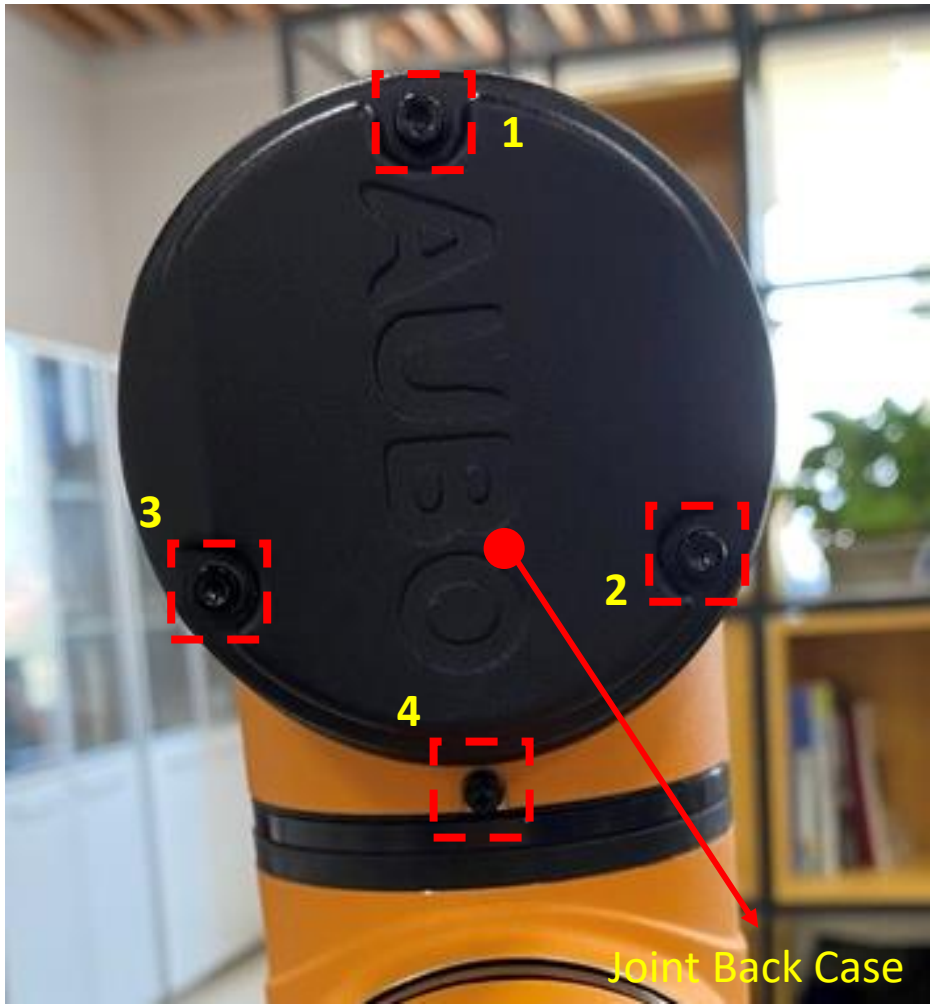


Figure 28. Overview of Joint 6 (with back case)

1. Mount the Joint back case
2. Use 2.5mm Allen wrench to tighten screws no. 1 to no.4.
3. Use 2.5mm Allen wrench to tighten limit screw no. 5.

Joint 6 assembly Complete
Next step, End-Effector assembly

5. Assembly Procedures (end-effector)

Figure 29. Prepare a new end - effector

1. Prepare an end-effector, plug in power cable connector and CANBUS cable connector shown as figure 31.

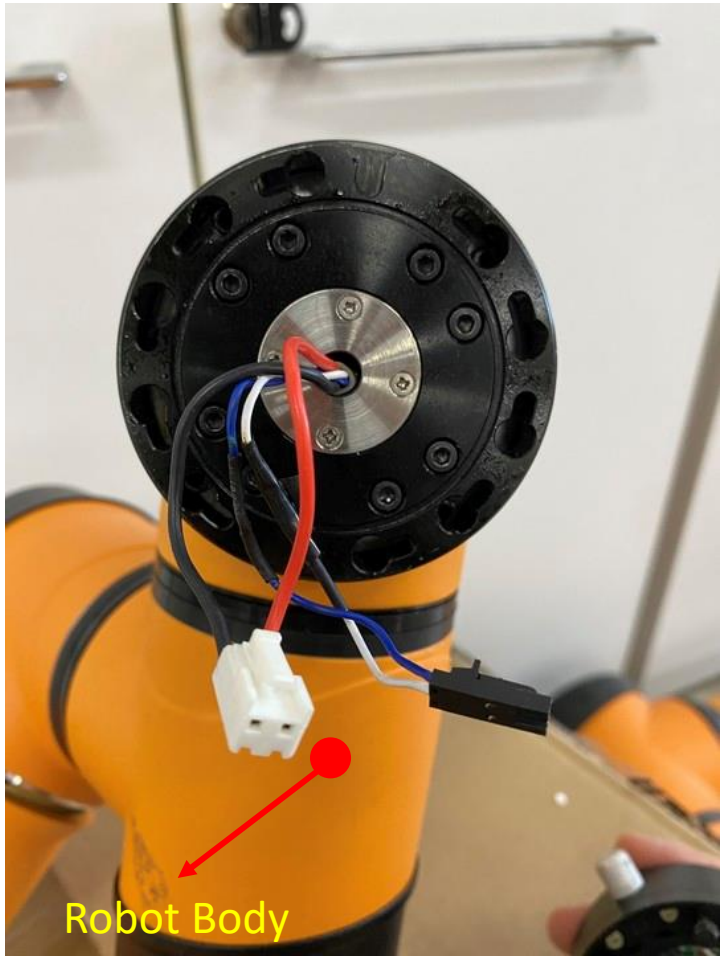


Figure 30. Overview of the robot body

Figure 31. Overview of Joint 6 and end - effector

5. Assembly Procedures

Figure 32. Close-up of joint 6

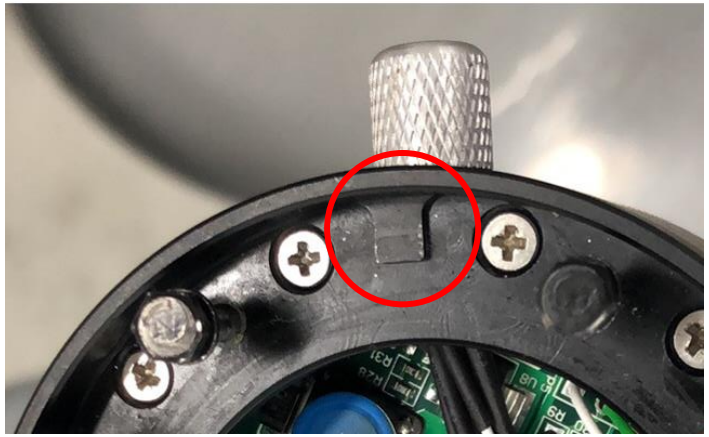


Figure 33. Close-up of end-effector

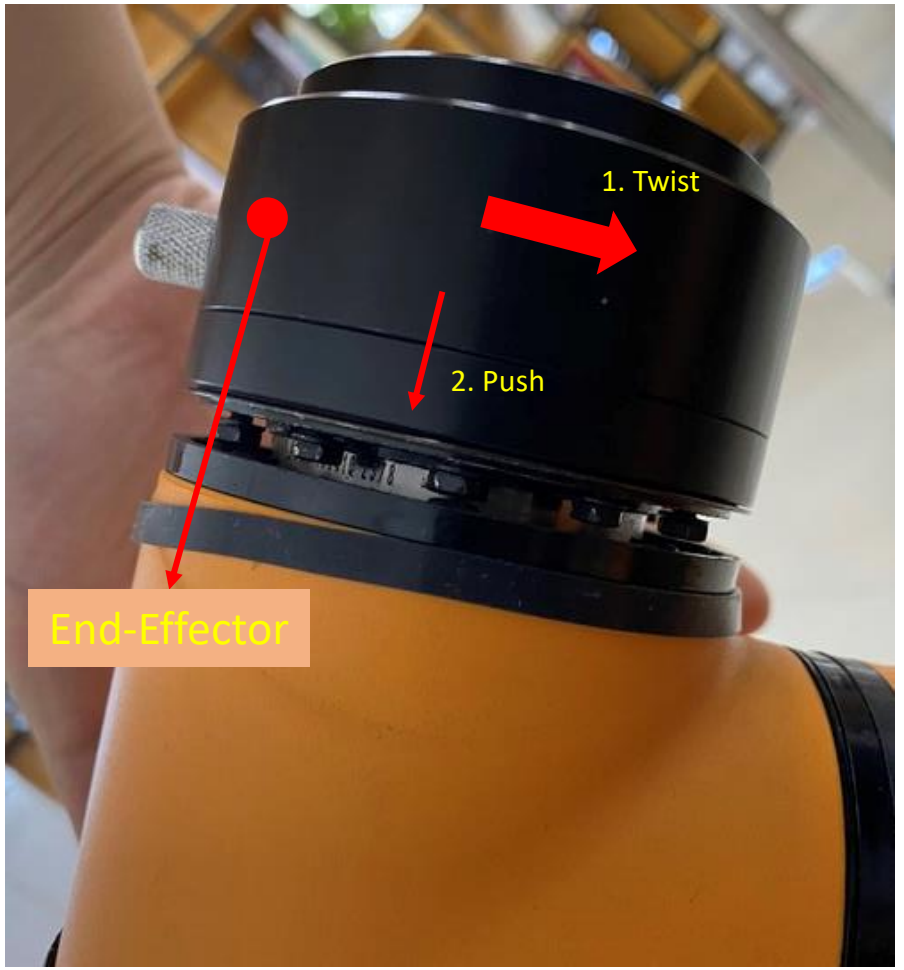


Figure 34. Joint 6 and end-effector assembly

2. Cover base with new end-effector with extra caution. (**Warning:** Use tweezers to pull cables to prevent any cable from being squeezed by the structure)

3. Rotate end-effector until the structure at figure 32 and figure 33 are perfectly together

5. Assembly Procedures

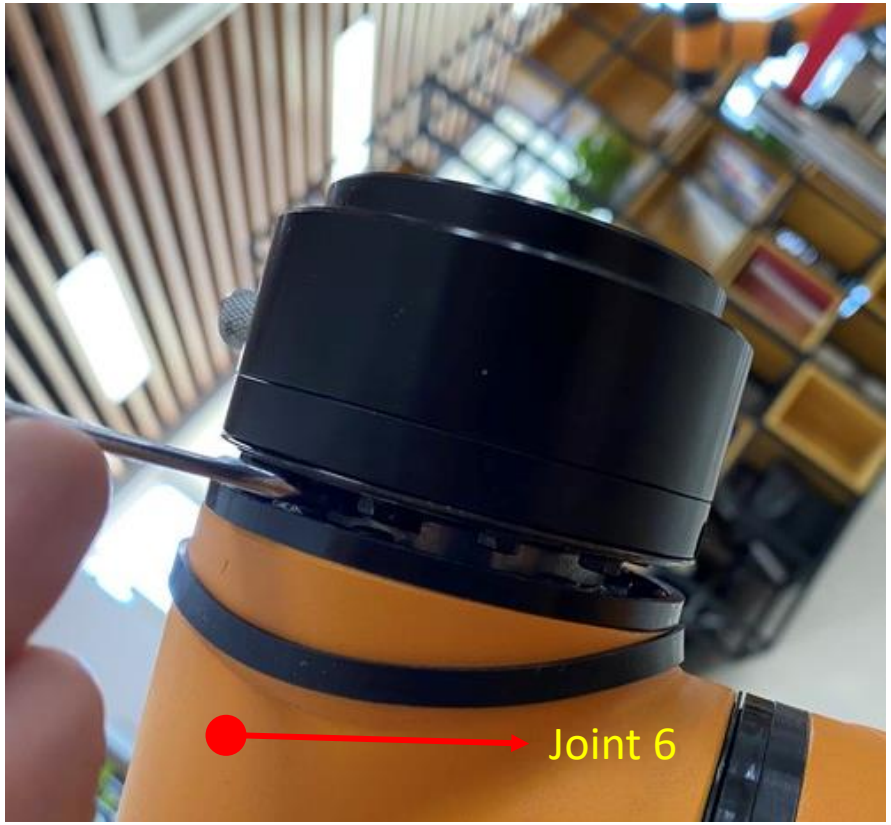


Figure 35,36. Joint 6 and end-effector junction overview

4. Use 5.5mm Open-end Wrench to tighten (with a small torque, to protect bolts)bolts at the junction. (Ten bolts in total);

5. Use 2.5mm Allen Wrench tighten limit screw;

6. Use tweezers to cover the junction with rubber band.

End-effector assembly complete

Joint 6 replacement complete

Thank You For Watching!