**Assembly**

Leg mechanism (includes tibia, femur, and joint) is one piece attached to the gear system (3:1 ratio gear). Ribbon wires are bundled using heat shrink and routed accordingly to ease connection. Motors are accessible and easily mounted. The hardware cover does not require screws and instead attaches to the top chassis using magnets. Connect all electronics connected to the 3Dot board which include motors, ultrasonic sensor, light sensors (x3), IR LEDs (x3), and red LEDs(x2). Test

**Disassembly**

Cover is easily taken off. Legs can be disconnected from the gear system. All electronics disconnected from the 3Dot board and custom PCB. Top chassis and bottom sensor enclosure are removed. All will be done within 10 minutes.

**Inspection:**

Wire management: Check for no exposed or dangling wires.

Peripheral devices: Check for:

1. Ultrasonic sensor (x1)
2. Red LED (x2)
3. IR LED (x3)
4. Light sensor (x3)
5. Custom sensor PCB (x1)

## 

**Assumptions on rules for assembly/disassembly:**

Disassembly:

All robot will be disassembled by the E&C and Manufacturing engineers – 2 engineers in total.

All teams will disconnect all electronics connected to the 3Dot board.

All 3Dot boards will be clear of electronics

All teams will disconnect motors.

Assembly:

All robots will be reassembled by the E&C and Manufacturing engineers – 2 engineers total.

All teams will be allowed to use a cable tree as well as an assembly diagram as necessary.

All robots will be tested after reassembly to confirm its functionality.

* + 1. Test will be conducted using the Arxterra App
    2. Robot should be able to go forward
    3. Robot should be able to do a left or right turn