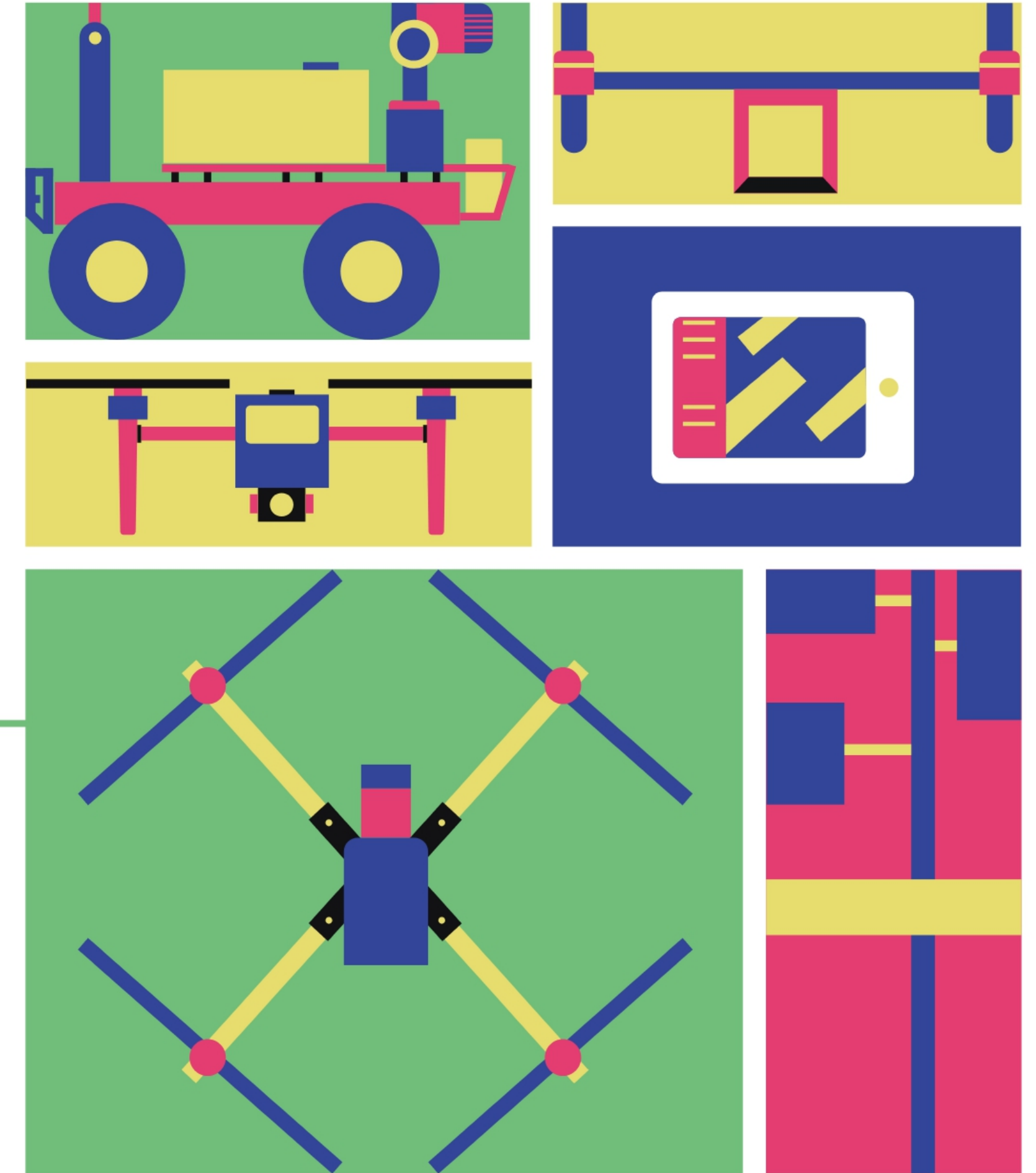


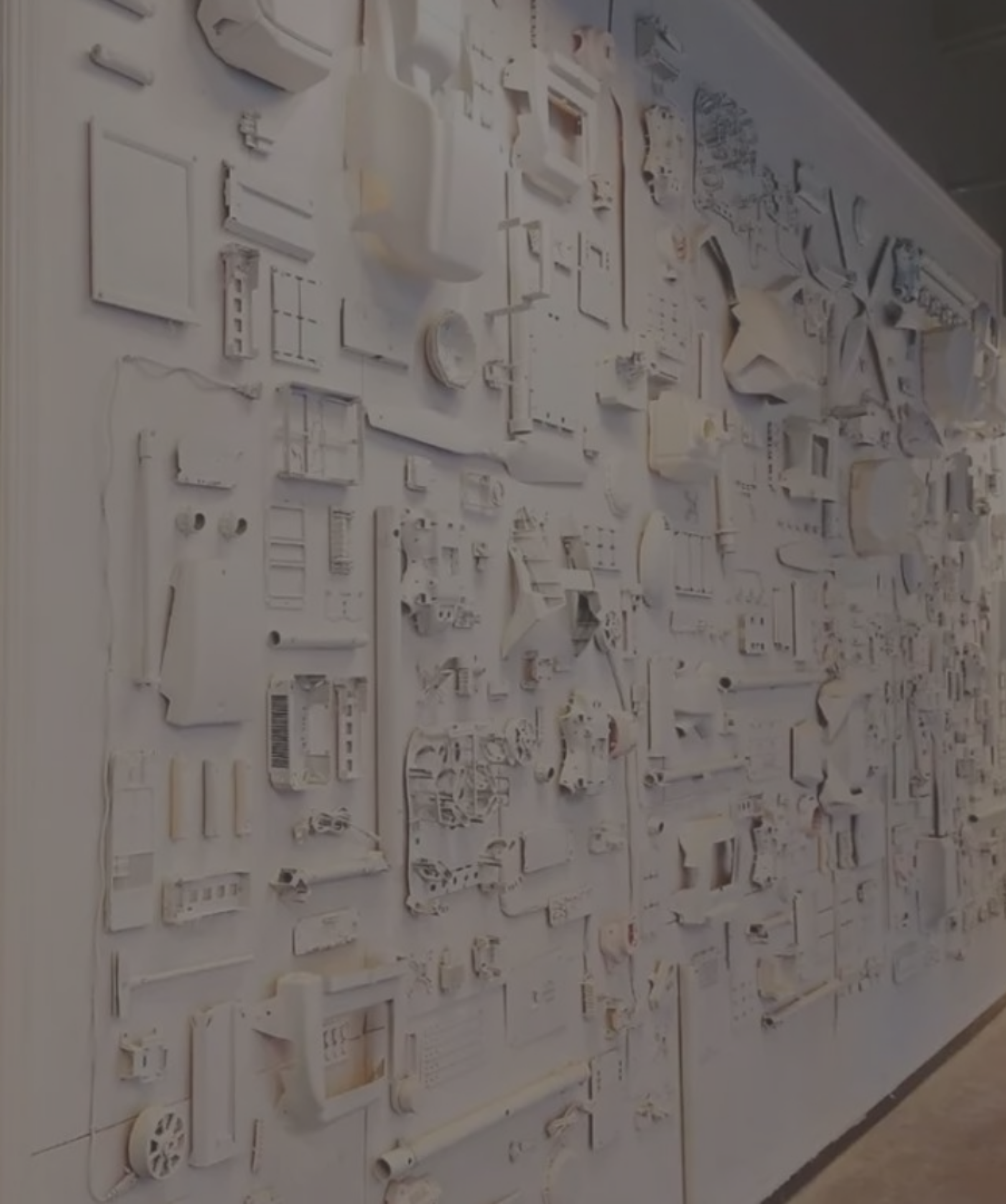
XAG P150 & P60 Agricultural Drone Maintenance, Fit and Remove Training



Preface



The content of this course mainly focuses on how to fit and remove the key components of the P150 Agricultural Drone, P60 Agricultural Drone and their related payload system. For the fit and remove process and related technical guidelines not mentioned in this article, please refer to the XAG P150/60 Agricultural Drone Fit and Remove Guide Manual. In this chapter, the disassembly procedures of key components of the 2024 XAG agricultural drones as well as the detailed maintenance instructions are presented with illustrations and corresponding serial numbers. For the assembly procedures, most of them are carried out in the reverse order of the disassembly procedures. However, for some structures, the assembly sequences are different from those of the disassembly. Please read it carefully. In addition, before disassembling the structure and related electronic components, please ensure that the power supply cables, communication cables, and pipelines have been separated and confirmed that there is no power supply in any form.



Chapter 1 Maintenance Specifications

- Requirements for Maintenance Environment and Device Storage
- Introduction and Maintenance of Common Maintenance Tools
- Engineer's Maintenance Standards and Responsibilities
- Introduction to Common Damage Phenomena

Chapter 2 Introduction and Specification of Fit and Remove Procedures

- Explanation of Assumptive Conditions for Fit and Remove Procedures
- Special Case Handling
- Notes to Fit and Remove Abnormalities Handling
- Assembly and Mounting Rules

Chapter 3 Agricultural Drone Fit and Remove Procedures

- General Fit and Remove - Drone
- General Fit and Remove - Payload System
- Fine Fit and Remove - Sensor System
- Fine Fit and Remove - RevoCast System

Chapter 1 Maintenance Specifications



Requirements for
Maintenance Environment
and Device Storage



Introduction and Maintenance of
Common Maintenance Tools



Engineer's Maintenance
Standards and Responsibilities



Introduction to Common
Damage Phenomena

Chapter 1 Maintenance Specifications –

Requirements for Maintenance Environment and Device Storage

Requirements for Fit and Remove Environment and Storage

Please ensure adequate indoor lighting. For maintenance, the drone shall be placed on the maintenance platform in the designated maintenance area. Micro parts after removal should be placed in storage boxes or other containers; electrical equipment should be placed away from water sources, and should not be placed at will. Sharp and vulnerable accessories disassembled shall be wrapped or protected with foam materials before being placed.



Chapter 1 Maintenance Specifications –

Introduction and Maintenance of Common Maintenance Tools

Tool Description	Tool Attribute	Scope of Application
Allen screwdriver	Fastener tools	For removing and installing fasteners on the device
Electric screwdriver		
Slotted/cross screwdriver		
Spanner/ratchet wrench		
Socket wrench		
Pointed-nose pliers/vice		
Torque wrench	Inspection and check tools	For checking device appearance, circuits and fastening inspection points
Multimeter		
Flashlight		
Electrical tape	Protective, securing and wrapping tools	For protective wrapping and cable securing
Acetate tape		
Cable tie		
Electric soldering iron and solder	Welding tools	For welding of cables in the main motor and device

Common tools



Open-end wrench



Hex socket set



Flat-nose plier



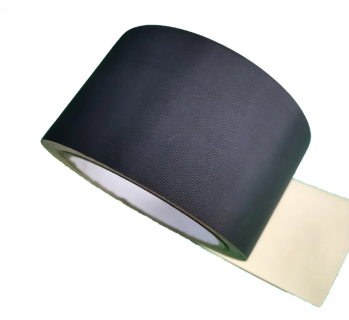
Torque wrench



Multimeter



Loosening agent



Acetate tape



Electrical tape



Rubber hammer



Pistol drill

Chapter 1 Maintenance Specifications –

Introduction and Maintenance of Common Maintenance Tools

Tool Storage and Maintenance Requirements

I. Storage requirements

- Store different types of tools, such as wrenches, screwdrivers, and pliers, separately. Use tool cabinets, drawer dividers, or toolboxes for categorization to facilitate easy identification and access.
- Special tools, such as power tools and precision measuring tools, shall be stored separately to avoid collisions with other tools.
- Choose a dry and well-ventilated area for tool storage. A humid environment may cause rust and corrosion of the tool, reducing its service life.
- For sharp tools, such as cutters and drilling bits, implement safety measures during storage to prevent injuries. Use dedicated cutter boxes or protective sleeves.
- Heavy tools, such as hammers and wrenches, shall be stored in stable positions to prevent accidental falls.

II. Maintenance requirements

- Clean tools promptly after use to remove oil, dust, and debris from surfaces. Use a clean cloth or brush for cleaning.
- For precision tools, such as measuring instruments, use dedicated cleaning agents to avoid damaging their accuracy.
- For tools with moving parts, such as wrenches and pliers, perform regular lubrication to maintain their agility and service life. Use lubricating oil or grease for lubrication.
- Regularly inspect tool appearance and performance, and deal with any problems found in time. For example, if scratches, deformation, or rust are observed, repair or replace the tools promptly.

Chapter 1 Maintenance Specifications –

Engineer's Maintenance Standards and Responsibilities

Definition of Engineer's Maintenance Standards and Responsibilities

The maintenance engineer shall be responsible for the maintenance and management of the equipment received. In case the equipment under maintenance or repair is to be handed over, abnormal information, maintenance progress, precautions, and other information shall be collected and managed well prior to the handover. The above mentioned information shall be checked together with the receiving engineer at the time of the handover.

I. Maintenance responsibilities

- ◆ Ensure the timeliness of repairs and maintenance;
- ◆ Ensure the rationality and standardization of repairs and maintenance;
- ◆ Ensure integrity of the equipment after repair and maintenance.

II. Management responsibilities

- ◆ Ensure the device stored properly;
- ◆ Ensure the integrity of the device;
- ◆ Ensure the completeness of the handover information.



Chapter 1 Maintenance Specifications –

Engineer's Maintenance Standards and Responsibilities

Protection and Safety Requirements

Do not wear slippers to perform repair. In routine repairs, in the case of drones or devices involving serious contamination, protective gloves should be worn for cleaning.

Safety requirements



Wearing open-toe shoes is prohibited while working



No tossing



No smoking



Loose clothing and long hair are prohibited at work



No chasing

Chapter 1 Maintenance Specifications –

Introduction to Common Damage Phenomena

● Cracks

It refers to cracks generated under the action of stress and/or environment, and is one of the important performance indexes of materials. The appearance and propagation of cracks significantly degrade the mechanical properties of a material.

● Ductile Cracks/Cracking

Ductile cracks are also called ductile fractures, which are formed with significant plastic deformation. The fracture surface is perpendicular or inclined to the tensile stress, on which there are fine concave and convex features presenting a fibrous appearance. The ductile fracture follows extensive plastic deformation (necking). Ductile fracture describes the ultimate failure of a ductile material subjected to tension. The material does not break, but “pulls away”, which generally leaves a rough surface. In this case, there is a slow growth and a large amount of energy absorption before fracture.

● Penetrating Cracks/Cracking

A penetrating crack refers to a crack that runs through the entire thickness of a member, often extending to more than half of the thickness. It is treated as an ideal sharp crack, that is, the radius of curvature at the tip of the crack goes to zero. It can be straight, curved or in other shapes.



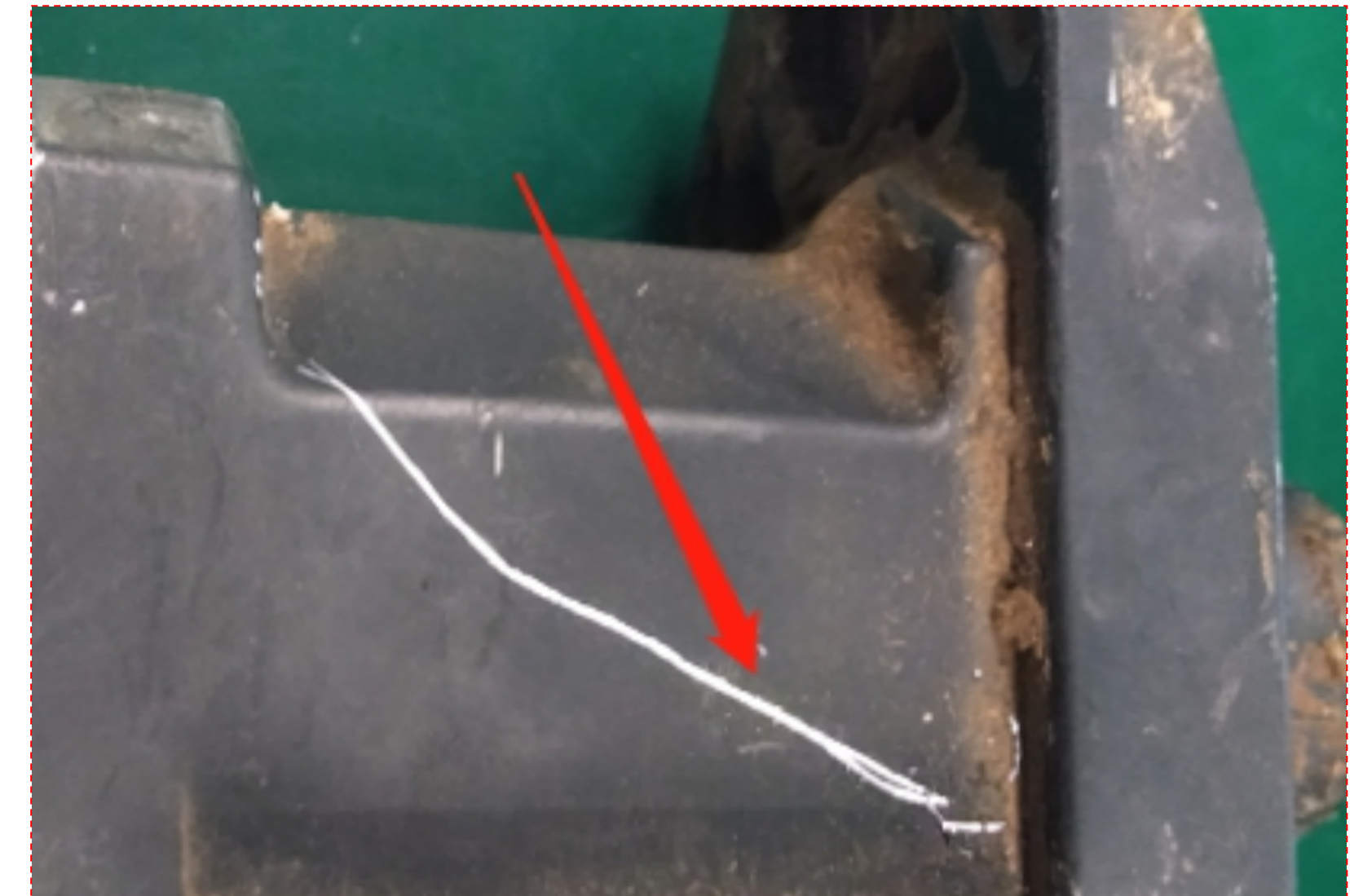
Chapter 1 Maintenance Specifications – Introduction to Common Damage Phenomena

● Nicks

A nick is generally caused when a workpiece is scratched or cut on the surface by a sharp article. In general, the nick will not cause penetrating damage, but it may lead to the contact between the inside of the workpiece and the environment, resulting oxidation or corrosion reactions, which may eventually cause cracking.

● Perforation

Perforation is a phenomenon caused by drilling, chiseling, or striking by a sharp object and penetrating the surface of an object. Irregular perforations can induce cracks. Perforation will affect the mechanical properties of an original object and induce deformation of the object.



Chapter 1 Maintenance Specifications –

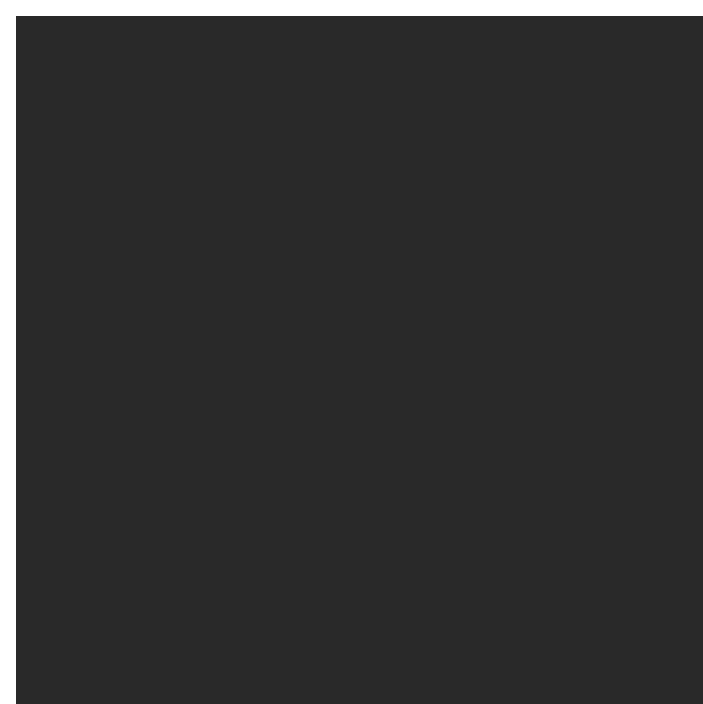
Introduction to Common Damage Phenomena

● Stress whitening

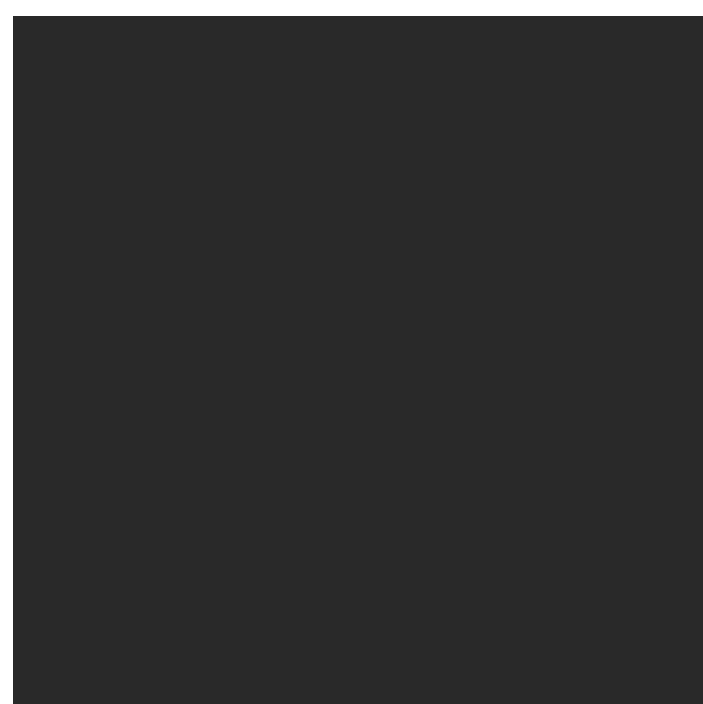
Stress whitening refers to the whitening of a high-molecular polymer under deformation caused by external force. Specifically, under the action of external force, there are holes, fractures or stratification inside the material. Materials (such as plastic and rubber) with stress whitening will lose their mechanical properties, causing fracture.



Chapter 2 Introduction and Specification of Fit and Remove Procedures



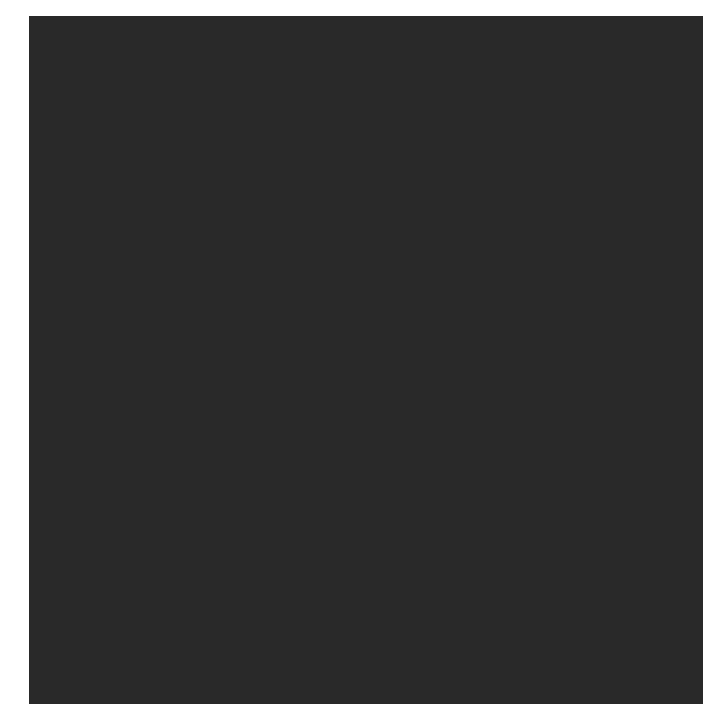
Explanation of Assumptive
Conditions for Fit and Remove
Procedures



Special Case
Handling



Notes to Disassembly
Abnormalities Handling

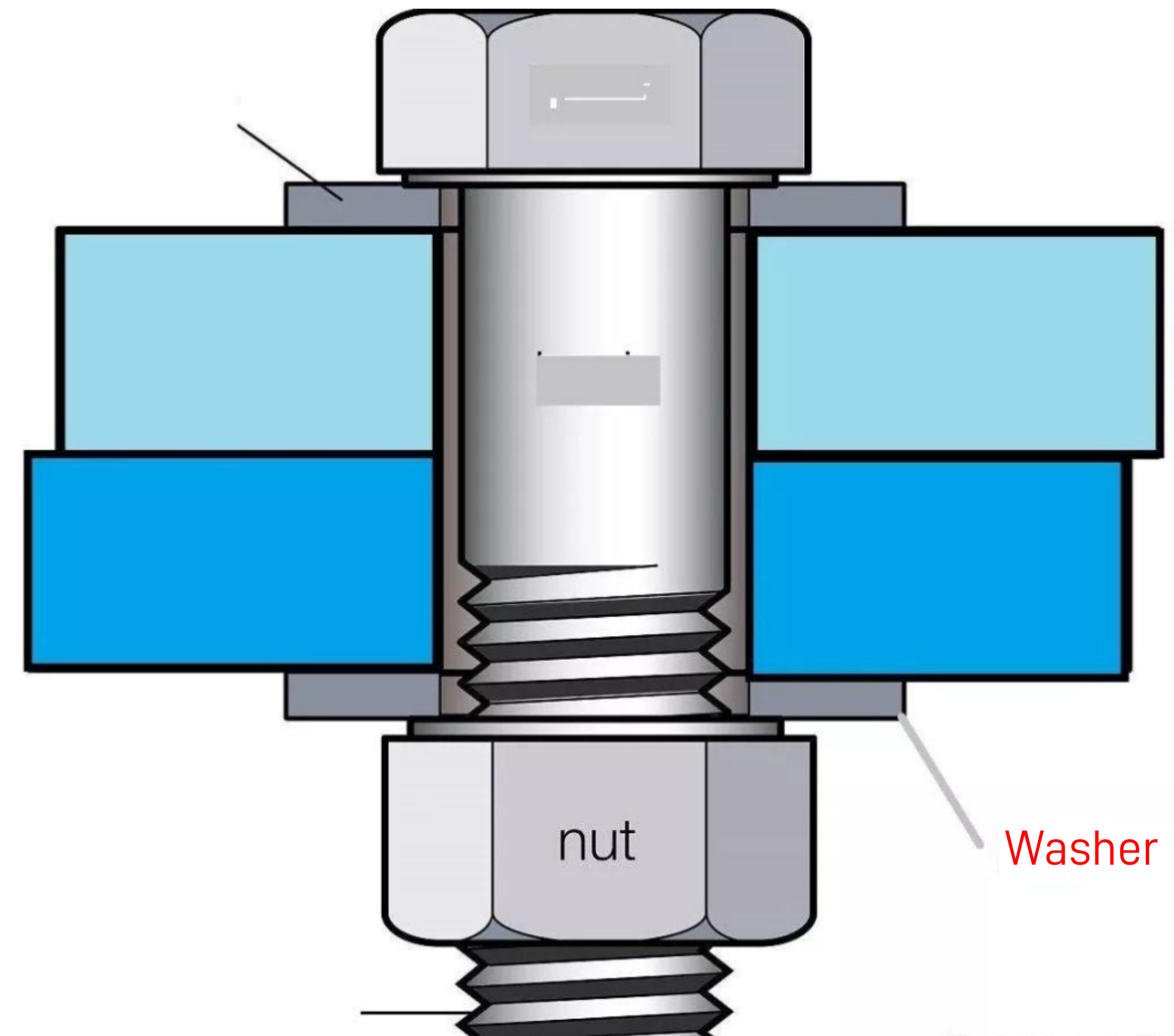


Assembly and
Mounting Rules

Chapter 1 Maintenance Specifications –

Explanation of Assumptive Conditions for Fit and Remove Procedures

- Screws and components are free of dirt, ensuring smooth disassembly;
- The structure exhibits no severe deformation or damage;
- Components shall be engaged with each other properly.



Chapter I Maintenance Specifications –

Special Case Handling

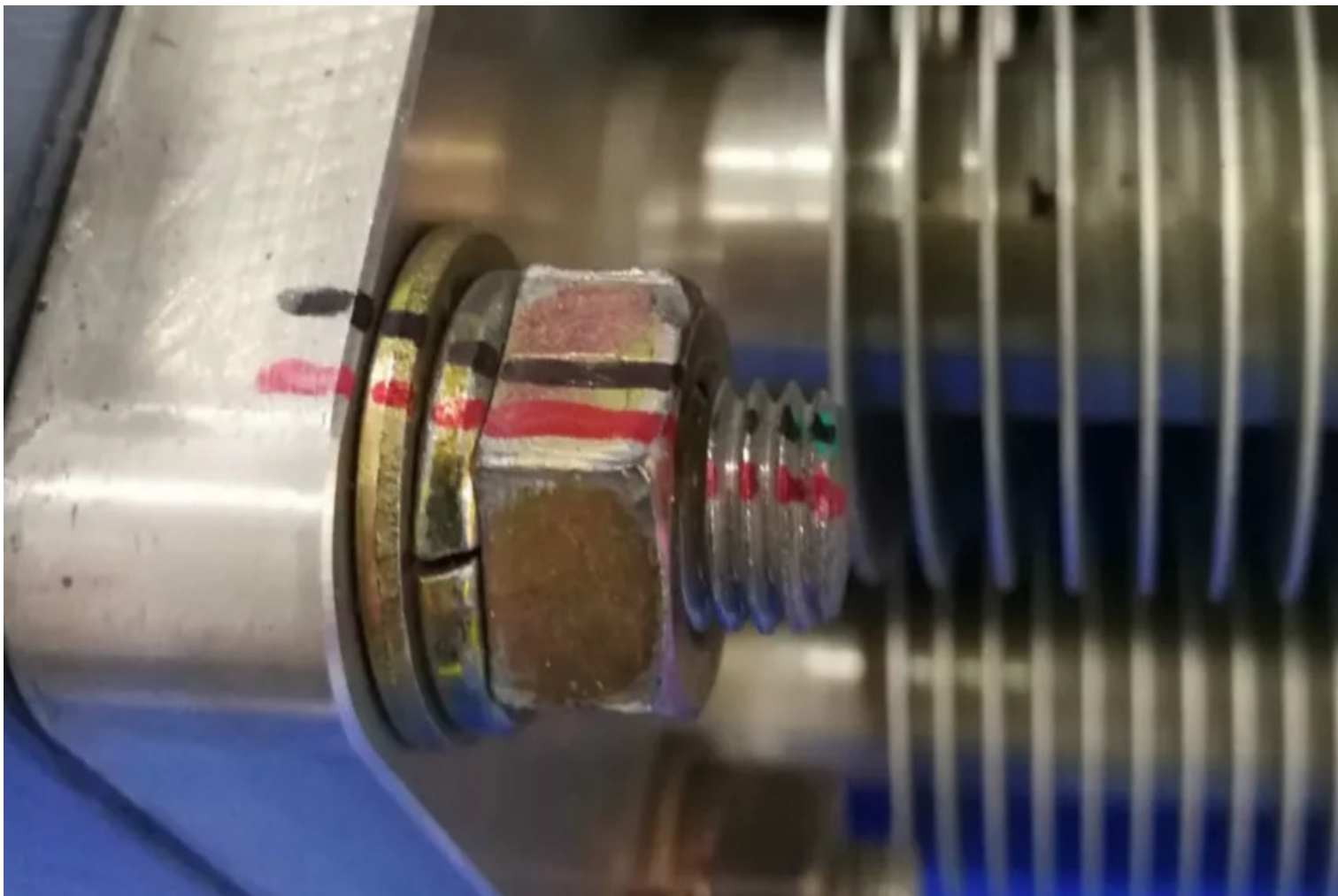
After prolonged device operation, contaminants or chemical corrosion on surfaces may hinder the disassembly of fasteners or certain components. Therefore, prior to device disassembly, clean the maintenance area thoroughly. In case of stuck fasteners, apply screw loosening agent before further handling.



Chapter I Maintenance Specifications – Assembly and Mounting Rules

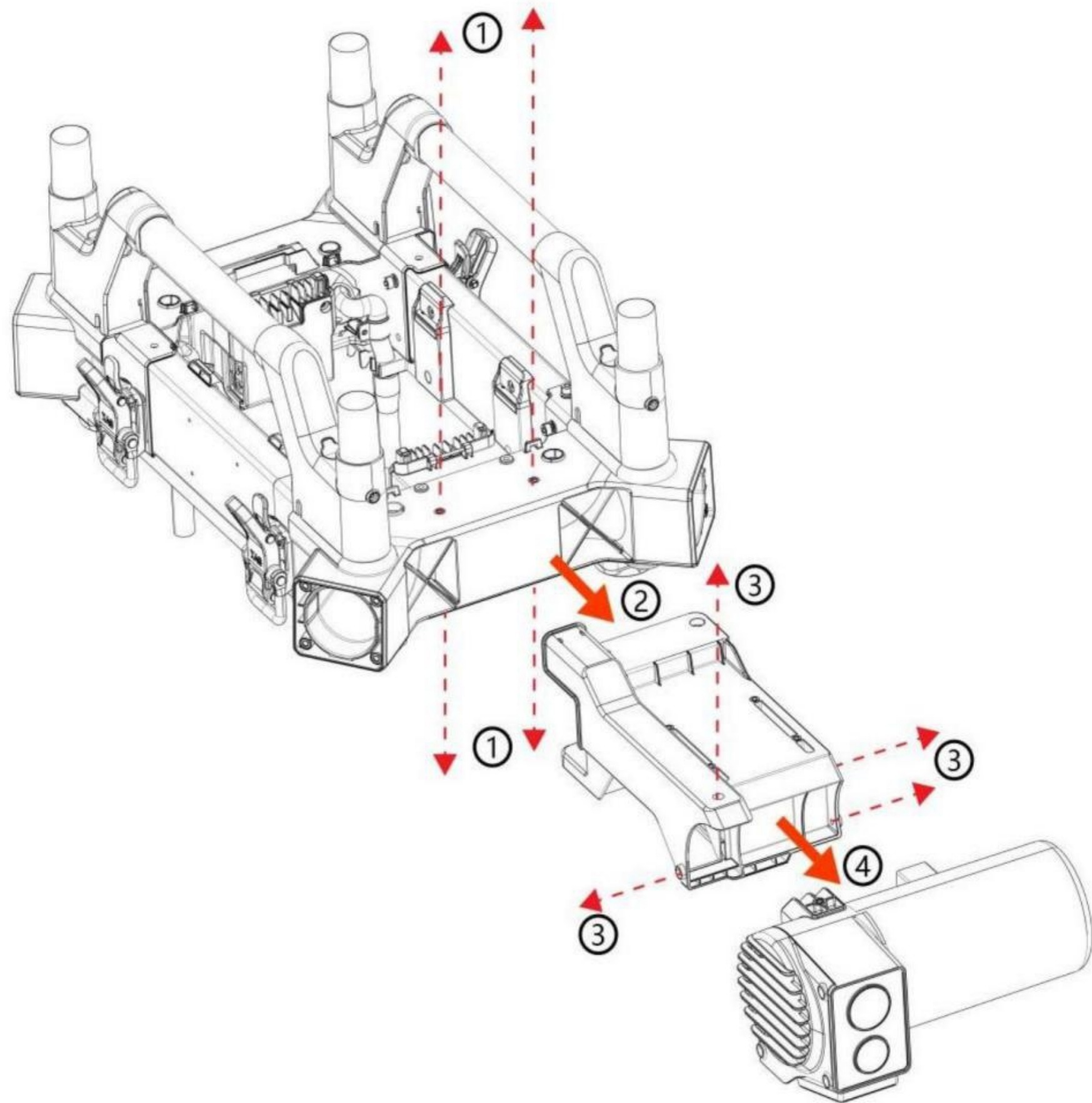
Before the assembly and mounting, it shall be verified that the accessories for replacement are undamaged, and assembly and installation operations shall be carried out in the environment with adequate lighting. If screws are required for fastening during installation, screws with corresponding specifications shall be used. Before installation, the requirements of the "fit and remove quality measurement and control points" of the corresponding model shall be understood, and the screws shall be tightened with the specified torque according to the regulations. After the installation is completed, a torque wrench shall be used for check, and a red or white marker pen shall be used for anti-loosening identification after confirming that the specified torque requirements have been met.

Components	Parts installed	Torque control point	Installation requirement
Nose	Connection between the nose and the fuselage	29 - 31 kgf.cm	-
	Dynamic radar	21 - 22 kgf.cm	-
Arm	Propeller	48 - 52 kgf.cm	-
	ESC (Electronic Speed Controller)	12 - 14 kgf.cm	-
	Arm and fuselage	29 - 31 kgf.cm	-
	Motor and its base	Pre-tightening: 35-41 kgf.cm	Installed in a diagonal manner
	Motor and its base	Tightening: 49 kgf.cm	Mark with a red oil-based pen
	Arm and motor base	Pre-tightening: 35 - 35 kgf.cm	Threaded end facing outward along the steel sleeve
	Arm and motor base	Tightening: 49 kgf.cm	Mark with a red oil-based pen
	Motor ESC terminal	25 - 26 kgf.cm	Assemble the three-phase wires corresponding to their colors
Fuselage frame	Bus board	12 - 14 kgf.cm	Wipe up the terminal face with alcohol
			8-pin interface facing the nose
	ESC incoming line	25 - 26 kgf.cm	Do not wind cables during assembly, and leave the 3/4 arm outgoing line above the tube
	Load butt joint	12 - 14 kgf.cm	Verify whether the terminal rubber coating is cracked
			Cabling of battery socket and signal cables: Positive cable at the inside, negative cable at the outside, no tangling.



Chapter 3 Agricultural Drone Fit and Remove Procedures -

General Fit and Remove Procedures (Hood)



S/N	Screw spec.	Material No.	Torque requirement
①	M5*14	02-004-01266	29 - 31 kgf.cm
③	M4*14*8	02-004-00835	21 - 22 kgf.cm

Disassembly Procedures

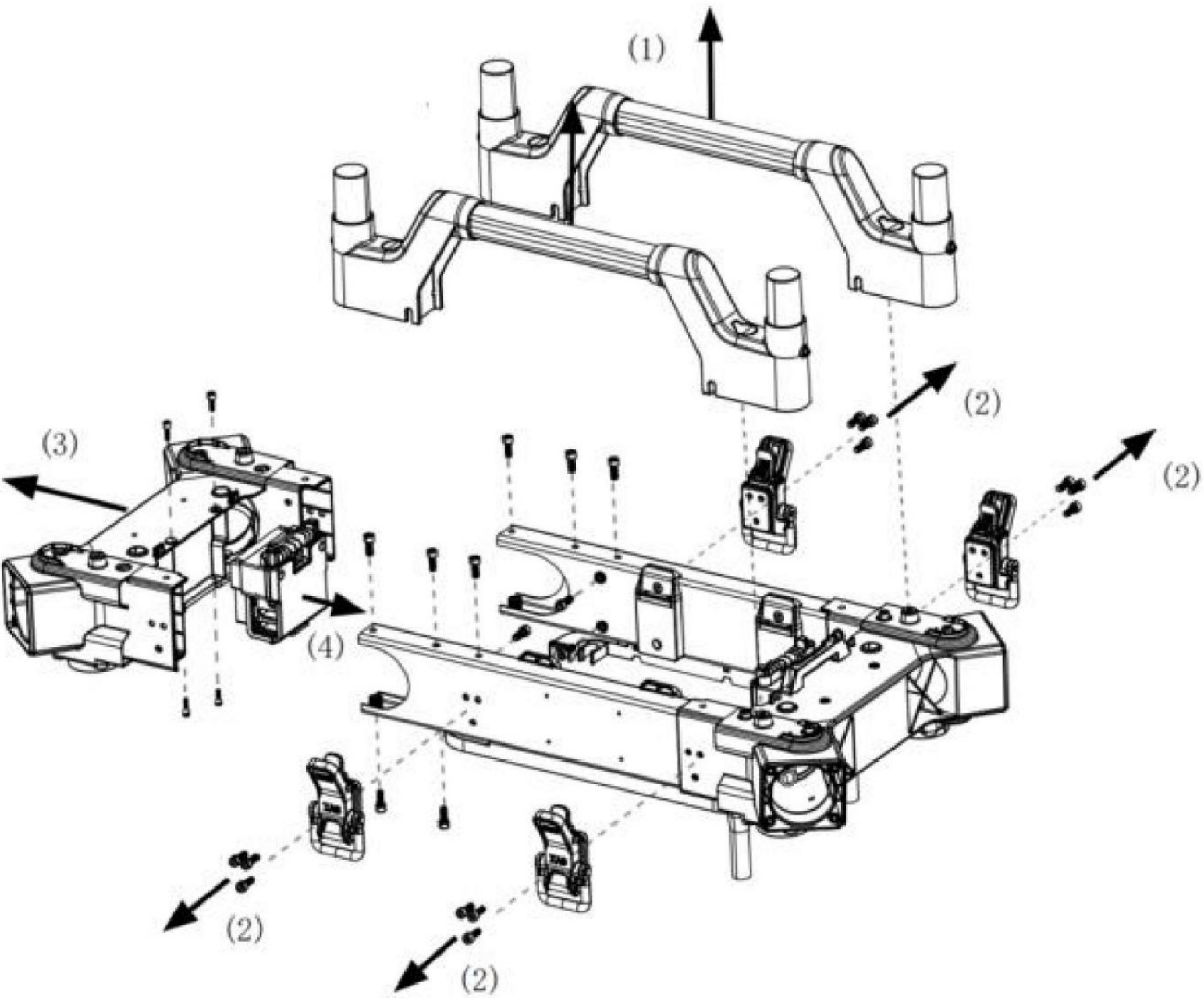
1. Remove the 4 M5*14 large set screws that connect the airframe to the top and bottom of the hood.
2. Pull outward to separate the hood structure (the hood and the sensor module structure can be separated completely).
3. Remove the M4*14*8 screws that connect the sensor module and the hood.
4. Pull forward to separate the sensor module.

Installation Process

1. Fix the hood to the mounting position on the airframe, and install the upper and lower screws in the hood.
2. Install the set screws in the sensor module.

Chapter 3 Agricultural Drone Fit and Remove Procedures -

General Fit and Remove Procedures (Airframe)



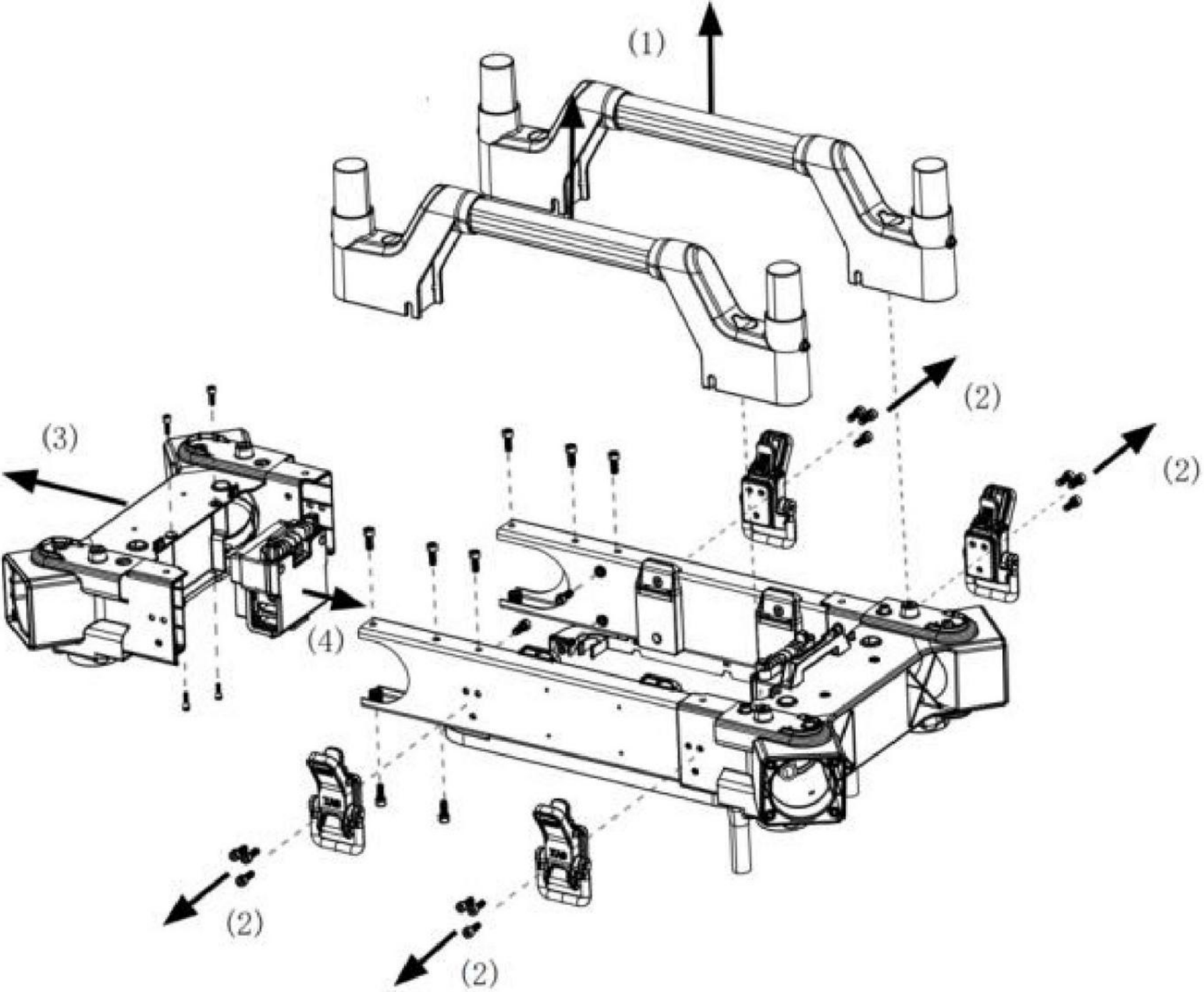
S/N	Screw spec.	Material No.	Torque requirement
①	M4*10*8		12 - 14 kgf.cm

Disassembly Procedures

- 1. Remove the handle rubber plug and unscrew screws*4.
- 2. Disconnect the antennas*6 linking the handle to the flight controller.
- 3. Separate the handle from the airframe.
- 4. Remove the snap fit screws*12.
- 5. Separate the snap fit from the airframe.
- 6. Remove the fastening screws*14 that connect the cross beam and the side beam. Note the fastening screws on the inner side of the side beam.
- 7. Separate the side beam from the cross beam.
- 8. Note: The battery plug module can be directly removed without disassembling the airframe.
- 9. Remove the upper and lower fastening screws*4.
- 10. Separate the battery plug module from the cross beam.

Chapter 3 Agricultural Drone Fit and Remove Procedures -

General Fit and Remove Procedures (Airframe)



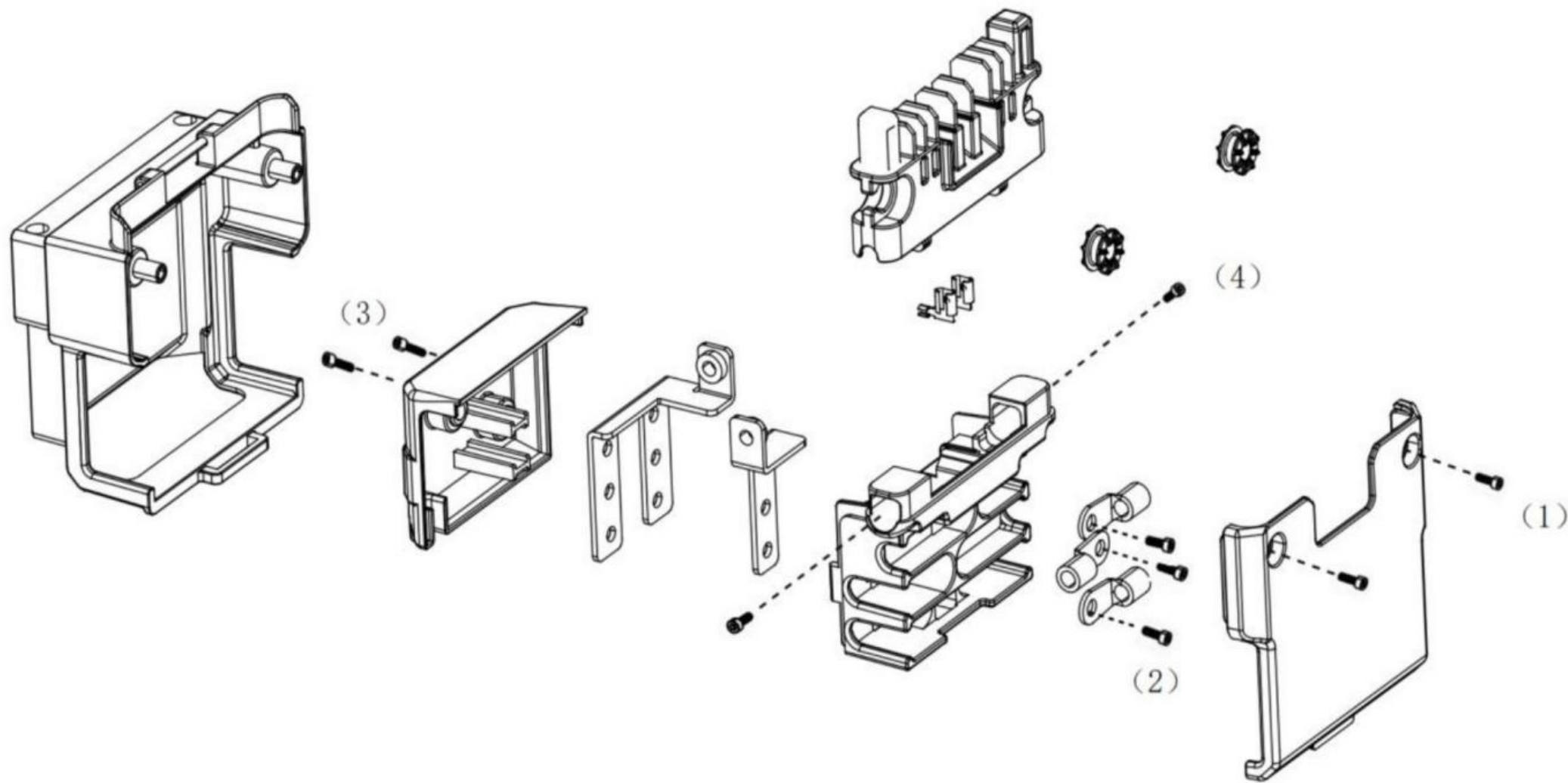
S/N	Screw spec.	Material No.	Torque requirement
①	M4*10*8		12 - 14 kgf.cm

Installation Process

1. Fix the rear frame structure to the mounting position on the airframe, and install the upper and lower screws in the rear frame structure.
2. Fix the battery plug module to the mounting position on the rear frame, and install the set screws.
3. Assemble the battery plug module with the airframe cross beam. Screws *4.
4. Assemble the airframe cross beam and frame. Since the assembly gap is narrow, press tightly and align screws properly. Given no mistake-proof design here, ensure top-bottom alignment. Screws *10 on the upper and lower sides of the frame, screws *4 on the inner side.
5. Install the snap fit. Screws *12.
6. For the installation of the handle, ensure that the side with cables is closer to the flight controller. Screws *4.
7. Note: The main airframe structure is symmetrical, so fit and remove methods for symmetrical components are identical.

Chapter 3 Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Battery Plug Module)



S/N	Screw spec.	Material No.	Torque requirement
②	M4*10*8		24-16kgf.cm
④	M4*10*8		24-16kgf.cm

Disassembly Procedures

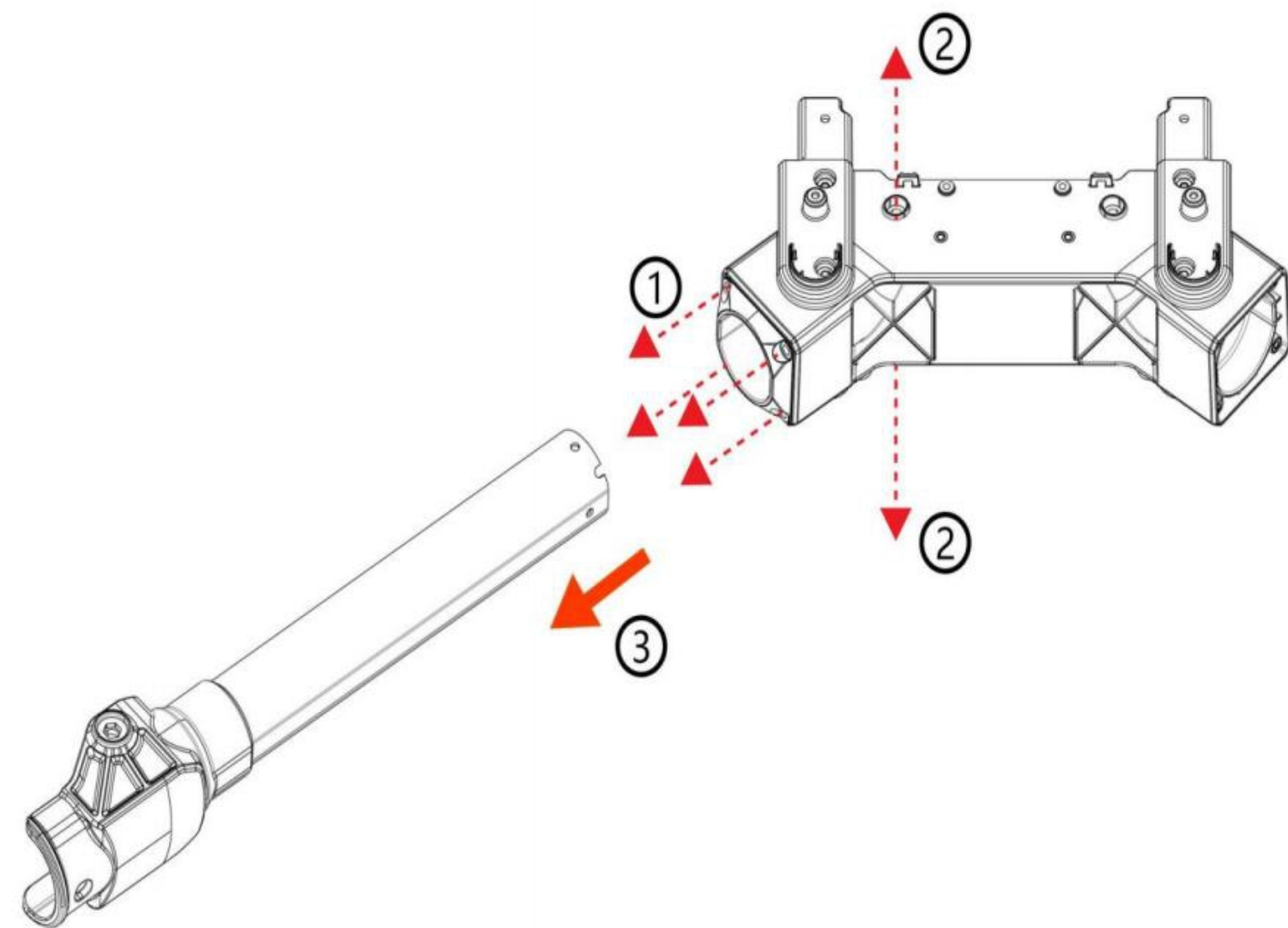
1. Unscrew the screws (1) * 2, and remove the front cover of the battery plug module.
2. Unscrew the screw (2) * 3, detach the power supply cable, and then remove the entire battery plug module.
3. Unscrew the screws (3)*2, and remove the rear cover of the bus bar.
4. Unscrew the screws (4) * 2, and separate the battery plug, the front cover of the bus bar and the battery plug copper wire.
5. Disconnect the battery signal cable from the battery plug.

Installation Process

1. Place the assembled battery plug and copper wire into the groove of the bus bar front housing, then connect the battery signal cable to the battery plug.
2. Assemble the battery plug and bus bar front housing up and down. Tighten screws (4)*2 while pressing the assembled battery plug and copper wire firmly by hand to prevent misalignment during tightening.
3. Attach the rear cover of the bus bar to the front housing and tighten screws (3)*2.
4. Tighten the screws (3) of the power supply cable, ensuring correct polarity.
5. Secure the assembled unit between the front and rear covers of the battery plug module, then fasten screws (1)*2.

Chapter 3 Agricultural Drone Fit and Remove Procedures -

General Fit and Remove Procedures (Arm)



S/N	Screw spec.	Material No.	Torque requirement
①②	M5*14	02-004-01266	29 - 31 kgf.cm

Disassembly Procedures

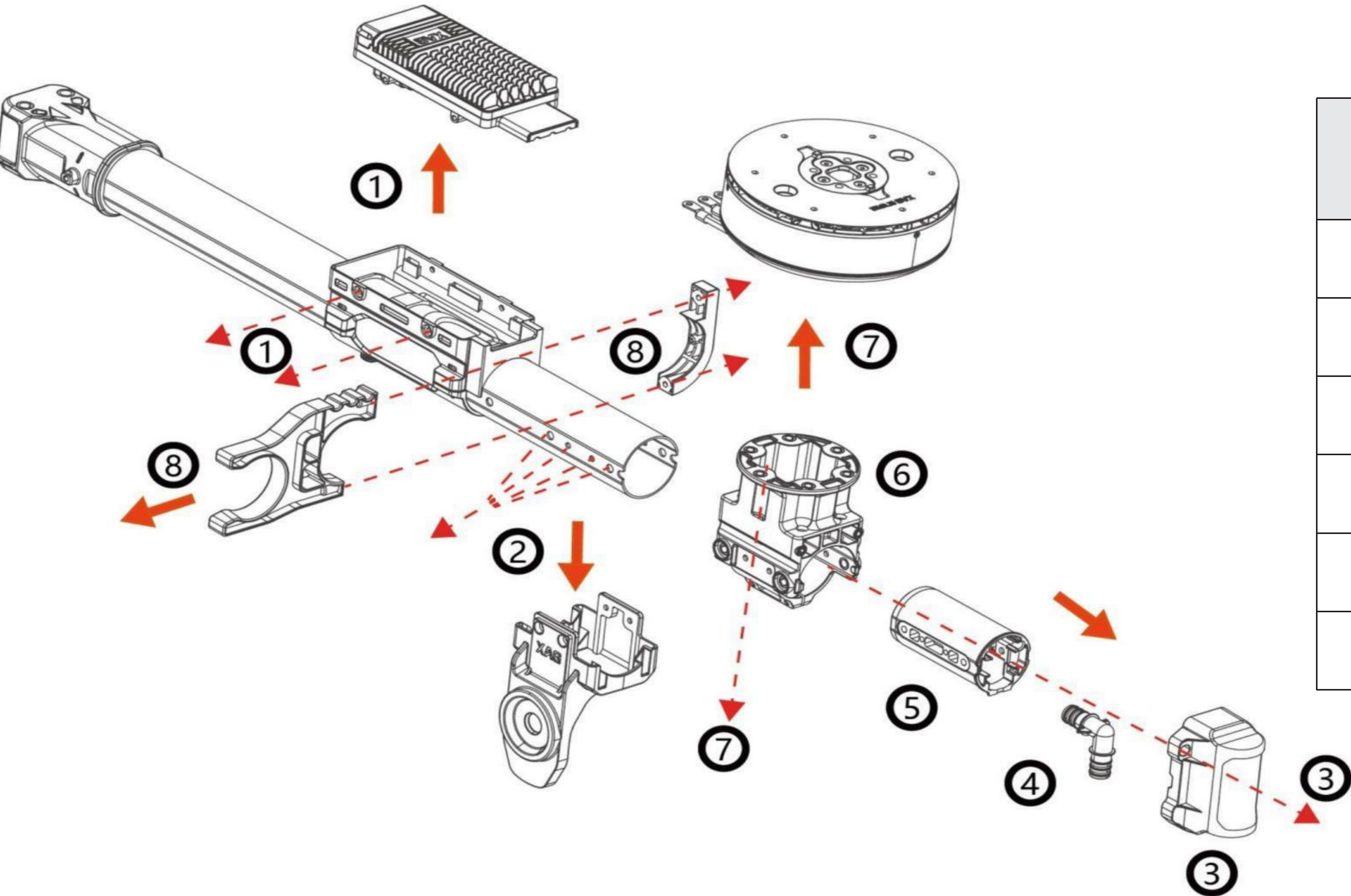
1. Remove the 4 M5*14 screws right in front of the contact surface between the arm and the airframe.
2. Pull outward to separate the arm (after confirming that the arm cable and tube have been separated).

Installation Process

1. Install each arm, and insert it to the corresponding mounting hole.
2. Tighten the 4 M5*14 screws diagonally in order.
3. During installation, take care to avoid scratches and breakage when routing the cables and tubes through the arms and the airframe. Straighten the cables before final assembly.

Chapter 3 Agricultural Drone Fit and Remove Procedures -

General Fit and Remove Procedures (Propulsion System)



S/N	Screw spec.	Material No.	Torque requirement
①	M4*10*8	02-004-00833	12 - 14 kgf.cm
②	M4*14*8	02-004-00835	12 - 14 kgf.cm
②	M5*14	02-004-01266	49 kgf.cm
③	M4*12*8	02-004-00834	12 - 14 kgf.cm
⑦	M5*14	02-004-01266	35 - 41 kgf.cm
⑧	M4*10*8	02-004-00833	12 - 14 kgf.cm

Chapter 3 Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Propulsion System)

Disassembly Procedures

1. Remove the 4 M4*10*8 screws from the main ESC fixing lug and separate the ESC.
2. Remove the 3 M4*10*8 screws on the three-phase wire terminal of the main motor and separate the three-phase wire of the main motor.
3. Remove the 2 M2.5*8*4.5 screws and remove the power cable holder.
4. Remove the 8 M2.5*10*4.5 set screws of the signal cable terminals and separate the ESC signal cable and the nozzle signal cable.
5. Remove the 2 M4*10*8 screws on the power cable terminal of the main ESC, then separate the power cable of the main ESC and the main ESC itself.
6. Remove the 4 M4*12*8 screws in the trim cover and separate the trim cover.
7. Remove the 4 M5*14 screws to take out the motor-end aluminum tube inserts and motor mount threaded liner.
8. Pull the motor mount outward and remove it along with the main motor.
9. Remove the 6 M5*14 screws and separate the motor mount from the main motor.

Installation Process

1. Align the main motor with the motor mount and use the main motor screws for fixation.
2. Insert the motor mount into the arm and push it inward to the installation position.
3. Embed the motor-end aluminum tube inserts and motor mount threaded liners into the arm, then fix them secure with motor mount screws.
4. Install the trim cover and fasten it with screws.
5. Install the power cable of the ESC and secure it with screws.
6. Install the ESC signal line and nozzle signal line, then secure them with screws.
7. Install the power cable holder and secure it with screws.
8. Install the motor three-phase wires in color sequence and secure them with screws.
9. Organize cables, position the ESC, and secure it with screws.

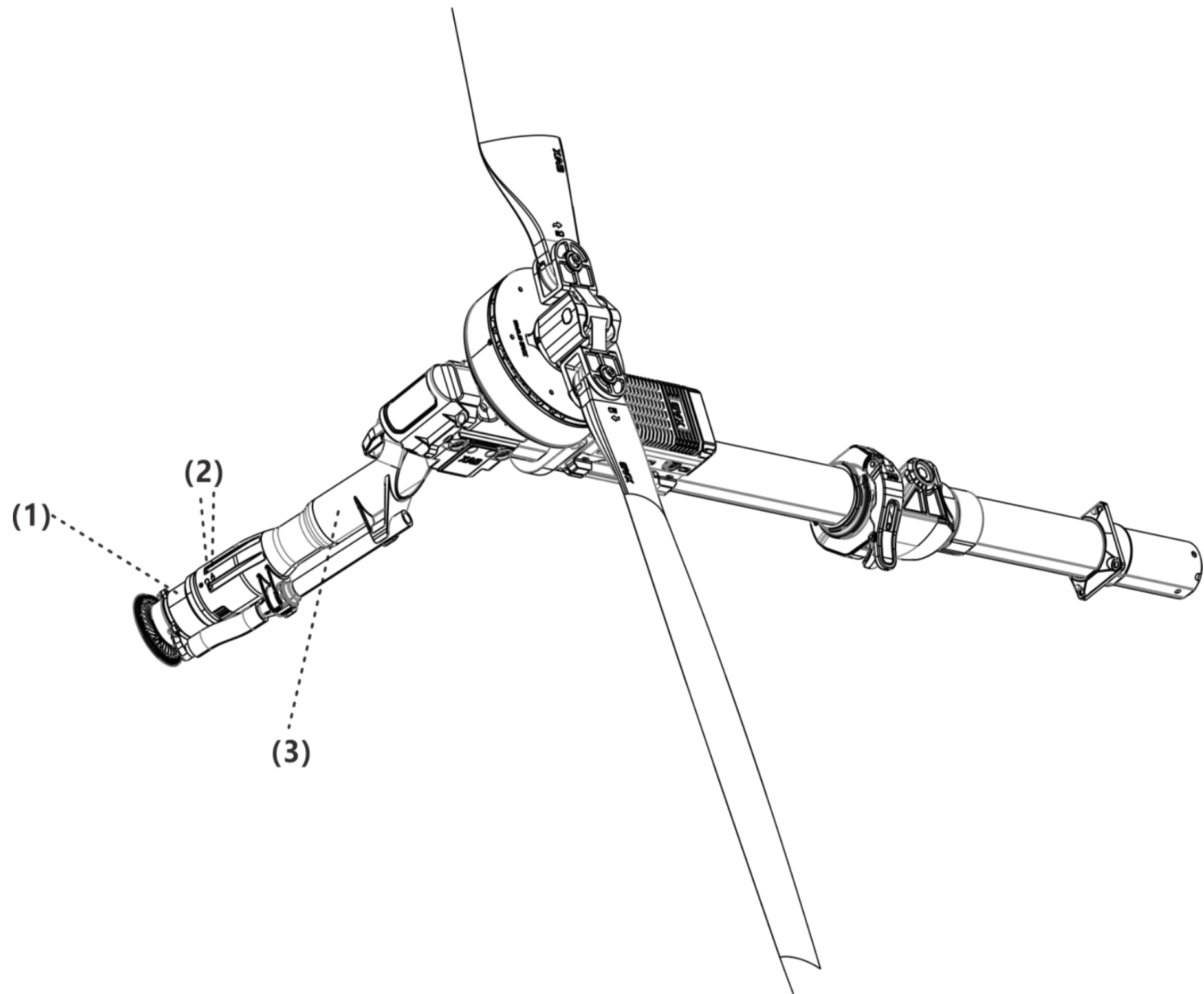
Notes

If a spray rod is included in the arm, remove the cables of the spray rod first, and then remove the spray rod mount before the disassembly and assembly of the main motor and motor mount.

Chapter 3 Agricultural Drone Fit and Remove Procedures -

General Fit and Remove Procedures (Spraying System Module)

S/N	Screw spec.	Material No.	Torque requirement
(2)	M3*10*6	02-004-00624	6 - 7 kgf.cm



Disassembly Procedures

1. Remove the hose connected to the nozzle.
2. Remove screws (2) and disconnect the internal wire harness of the nozzle.
3. Remove the nozzle (1) from the spray rod.

Installation Process

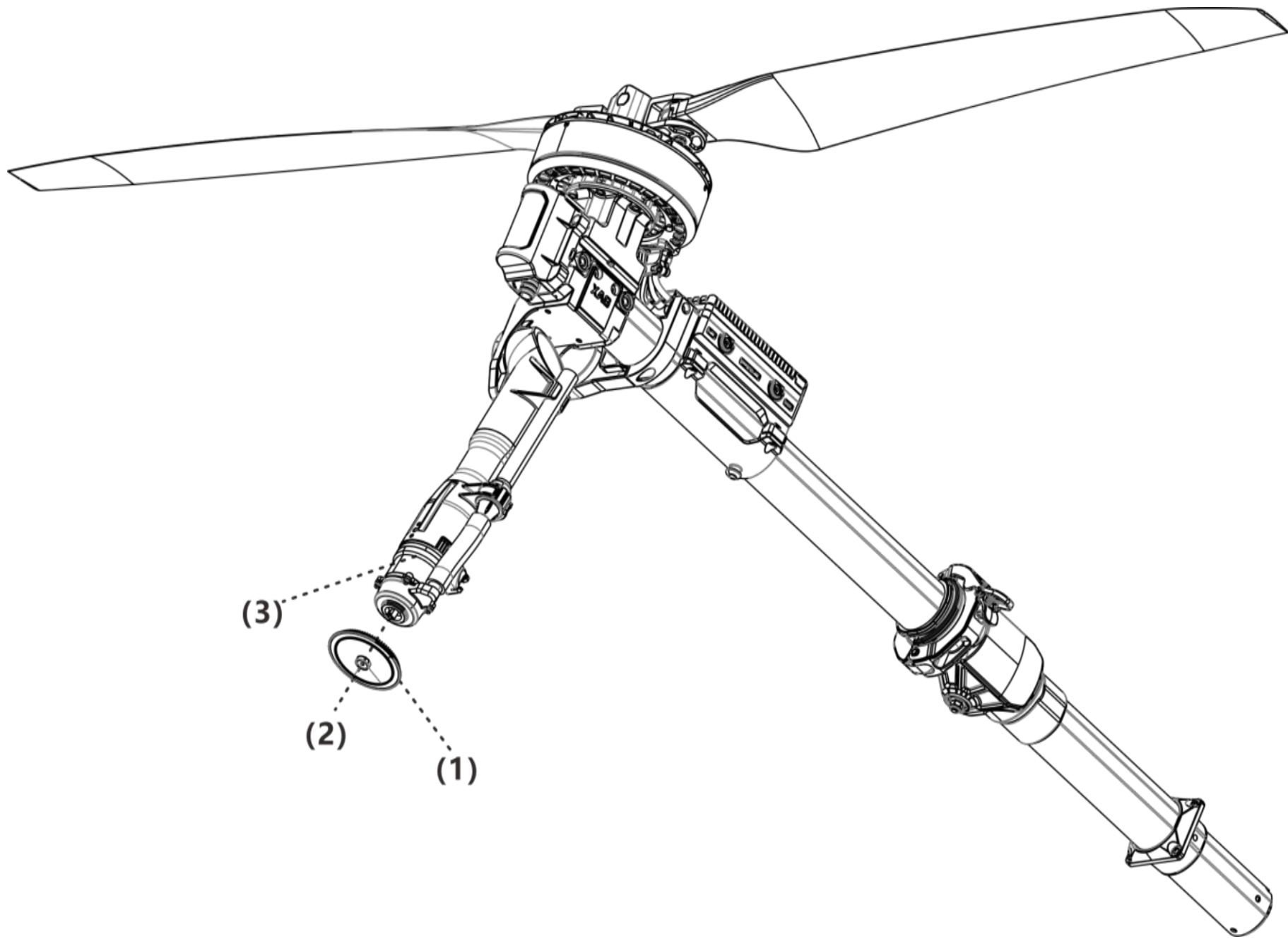
1. Install the nozzle (1) onto the spray rod and insert the nozzle wire harness into the nozzle.
2. Secure the nozzle to the spray rod (3) and tighten it with screws (2) (torque: 6 - 7 kgf.cm).
3. Connect the hose to the nozzle and fasten it tightly with a cable tie.

Note: Ensure the liquid tank is filled with ≥ 3 L liquid before testing.

Confirm no significant vibration or looseness in the nozzle and spray disc.

Chapter 3 Agricultural Drone Fit and Remove Procedures -

General Fit and Remove Procedures (Spraying System Module)



S/N	Screw spec.	Material No.	Torque requirement
(2)	M3*10*6	02-004-00624	6 - 7 kgf.cm

Disassembly Procedures

Remove screws to take off the spray disc from the nozzle.

Installation Process

Install the new spray disc onto the nozzle and tighten it with screws (torque: 6 - 7 kgf.cm).

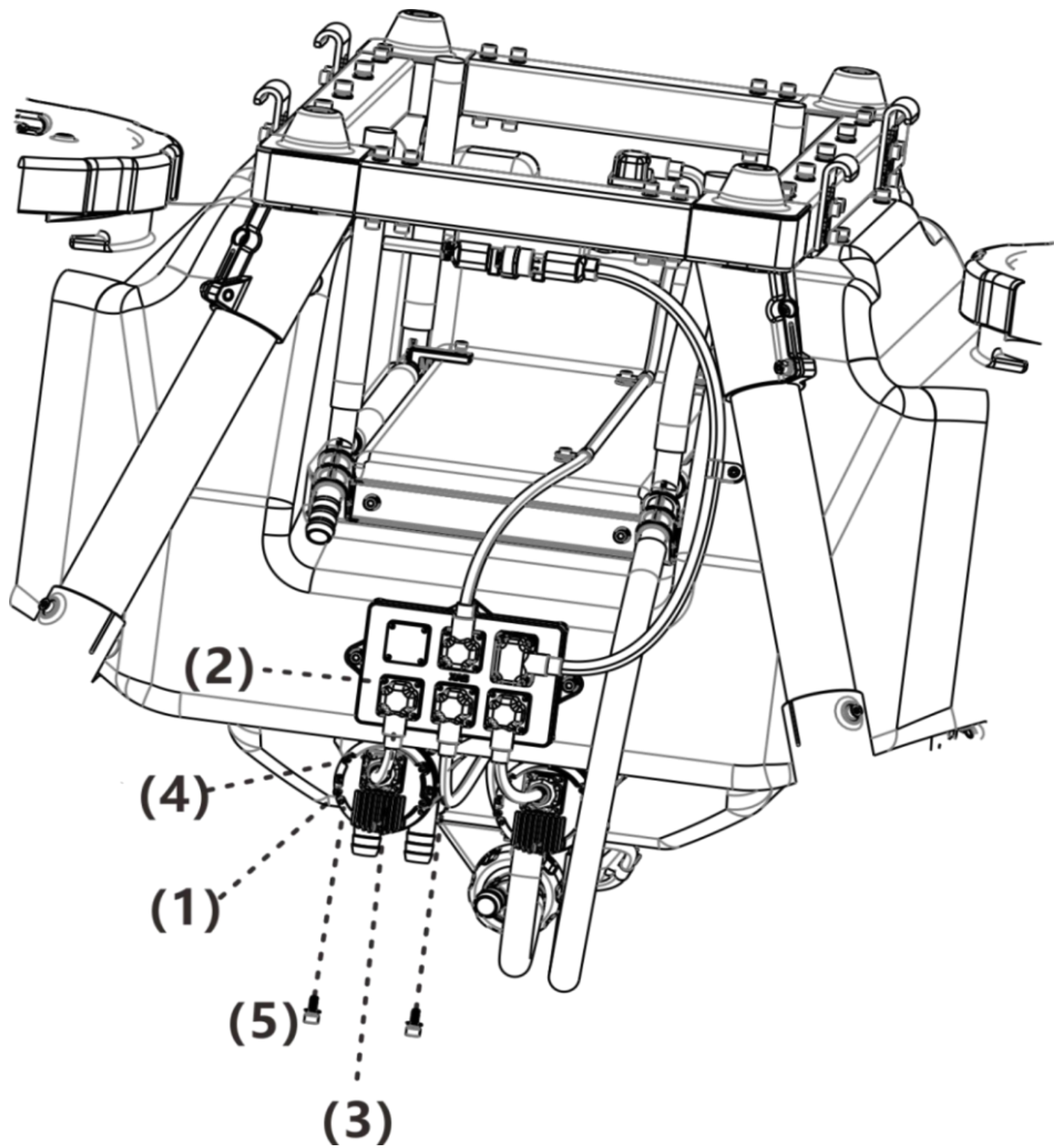
Test

1. Note: Ensure the liquid tank is filled with ≥ 3 L liquid before testing.
2. Confirm no significant vibration or looseness in the nozzle and spray disc.
3. Adjust the atomization level and observe the atomization effect.

Warning: Wear rubber gloves or cotton gloves before disassembly, as the residual liquid with corrosive and harmful substances may endanger personal health and safety.

Chapter 3 Agricultural Drone Fit and Remove Procedures -

General Fit and Remove Procedures (Spraying System Module)



S/N	Screw spec.	Material No.	Torque requirement
(2)	M3*10*6	02-004-00624	5 - 6 kgf.cm
(4)	M3*6	02-004-00936	5 - 6 kgf.cm
(5)	M4*8*8	02-004-00618	11 - 12 kgf.cm

Warning: Wear rubber gloves or cotton gloves before disassembly, as the residual liquid with corrosive and harmful substances may endanger personal health and safety.

Chapter 3 Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Spraying System Module)

Disassembly Procedures

1. Disconnect the hose connected to the impeller pump.
2. Remove the plug screws (2) of the impeller pump wire harness (3) on the cable hub side.
3. Remove the plug screws (4) on the impeller pump side, and remove the impeller pump wire harness.
4. Remove the set screws (5) on the impeller pump, and remove the impeller pump (1).

Warning: Wear rubber gloves or cotton gloves before disassembly, as the residual liquid with corrosive and harmful substances may endanger personal health and safety.

Installation Process

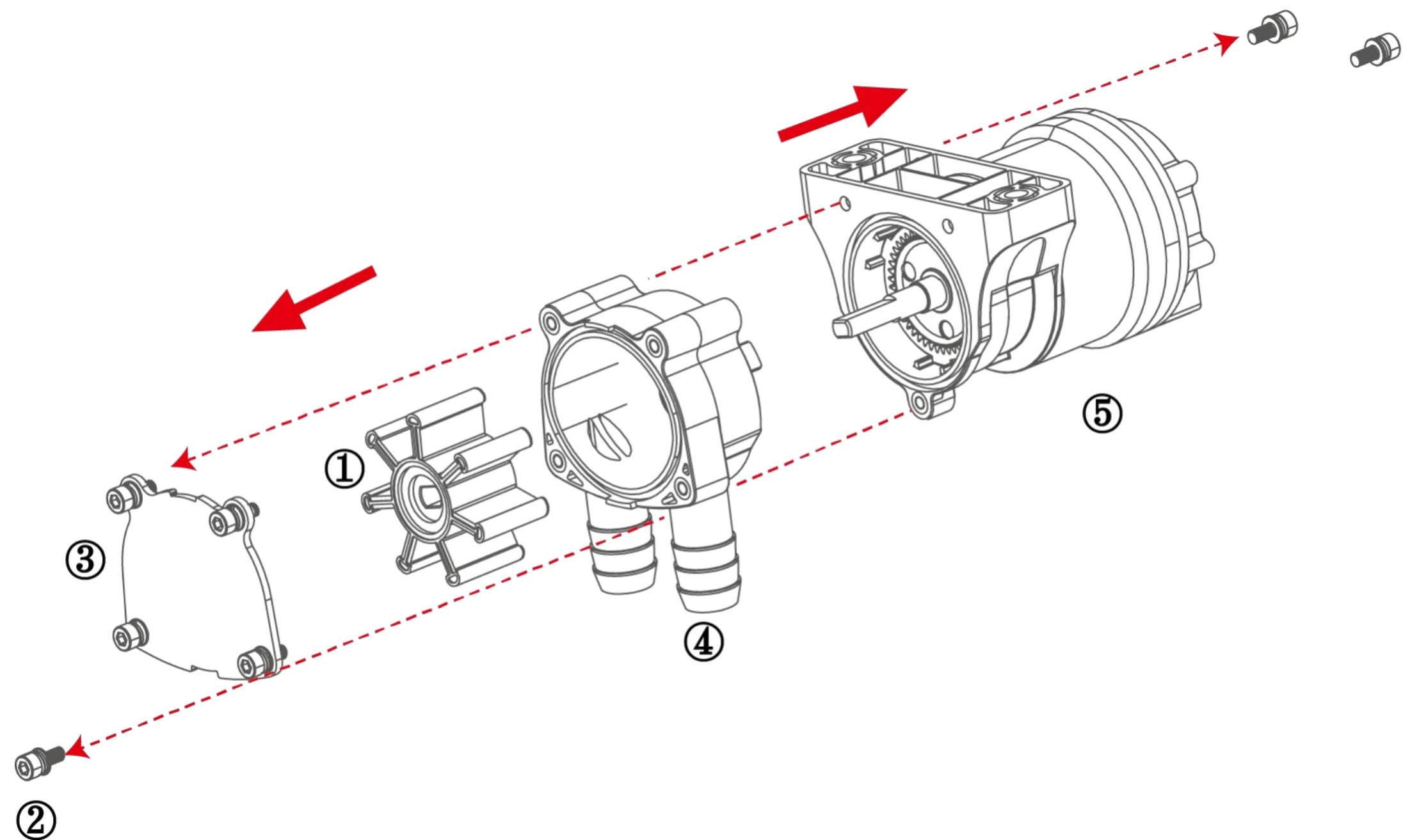
1. Use screws (5) (torque: 11 - 12 kgf.cm) to secure the impeller pump (1) onto the liquid tank bottom, and tighten them.
2. Insert the impeller pump wire harness (3) into the connection port, and tighten it with screws (2) (4) (torque: 6 - 7 kgf.cm).
3. Note: The wire harness ends are differentiated, with no anti-loosening buckle on the socket connecting the cable hub and an anti-loosening buckle on the socket connecting the impeller pump.
4. Connect the hose to the impeller pump, and fasten it with a cable tie.

Test

1. Note: Ensure the liquid tank is filled with ≥ 3 L liquid before testing. Verify that the impeller pump operates without abnormal noise.
2. Check the sealing of the impeller pump, and confirm no leaks.
3. Confirm no significant vibration or looseness in the nozzle and spray disc.
4. Adjust the atomization level and observe the atomization effect.

Chapter 3 Agricultural Drone Fit and Remove Procedures -

General Fit and Remove Procedures (Spraying System Module)



Warning: Wear rubber gloves or cotton gloves before disassembly, as the residual liquid with corrosive and harmful substances may endanger personal health and safety.

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S/N	Screw spec.	Material No.	Torque requirement
②			kgf.cm

Disassembly Procedures

1. Remove screws ②, and detach the sheet metal ③.
2. Take out the impeller ① from the pump ④.

Installation Process

Install the impeller ① into the pump ④, and secure the sheet metal ③ to the pump with screws ②.

Test:

Note: Ensure the liquid tank is filled with ≥ 3 L liquid before testing. Verify that the impeller pump operates without abnormal noise.

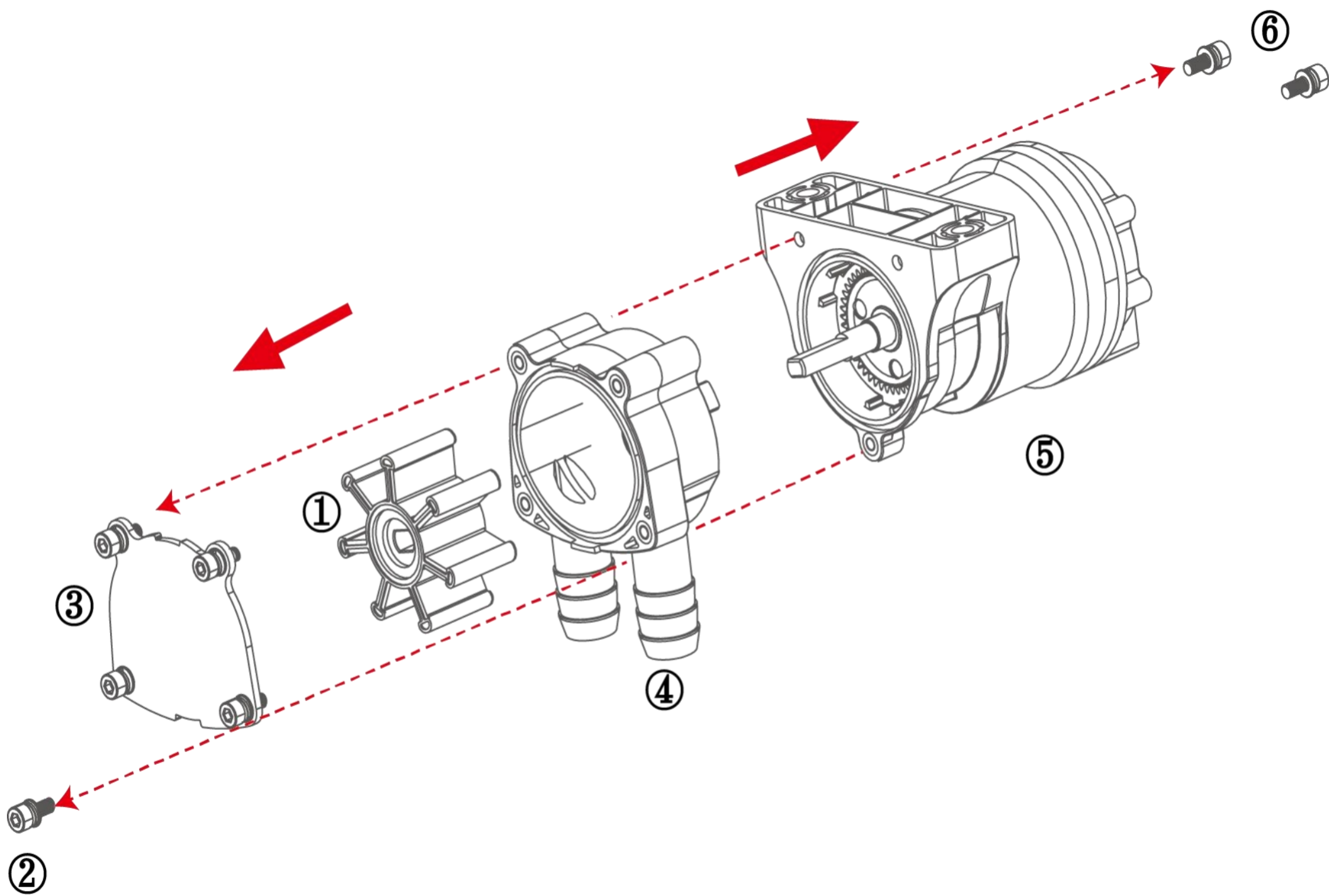
Check the sealing of the impeller pump, and confirm no leaks.

Confirm no significant vibration or looseness in the nozzle and spray disc. Adjust the atomization level and observe the atomization effect.

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Chapter 3 Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Spraying System Module)



Warning: Wear rubber gloves or cotton gloves before disassembly, as the residual liquid with corrosive and harmful substances may endanger personal health and safety.

S/N	Screw spec.	Material No.	Torque requirement
②			kgf.cm
③			kgf.cm
⑥			kgf.cm

Disassembly Procedures

- 1. Remove screws ②, and detach the sheet metal ③.
- 2. Take out the impeller ① from the pump ④.
- 3. Remove screws ⑥ and take out the pump from the motor ⑤.

Installation Process

- 1. Install the pump ④ onto the motor ⑤, and fix it with the screws ⑥ (torque: kgf.cm).
- 2. Install the impeller ① into the pump, and secure the sheet metal ③ to the pump with screws ②.

Test:

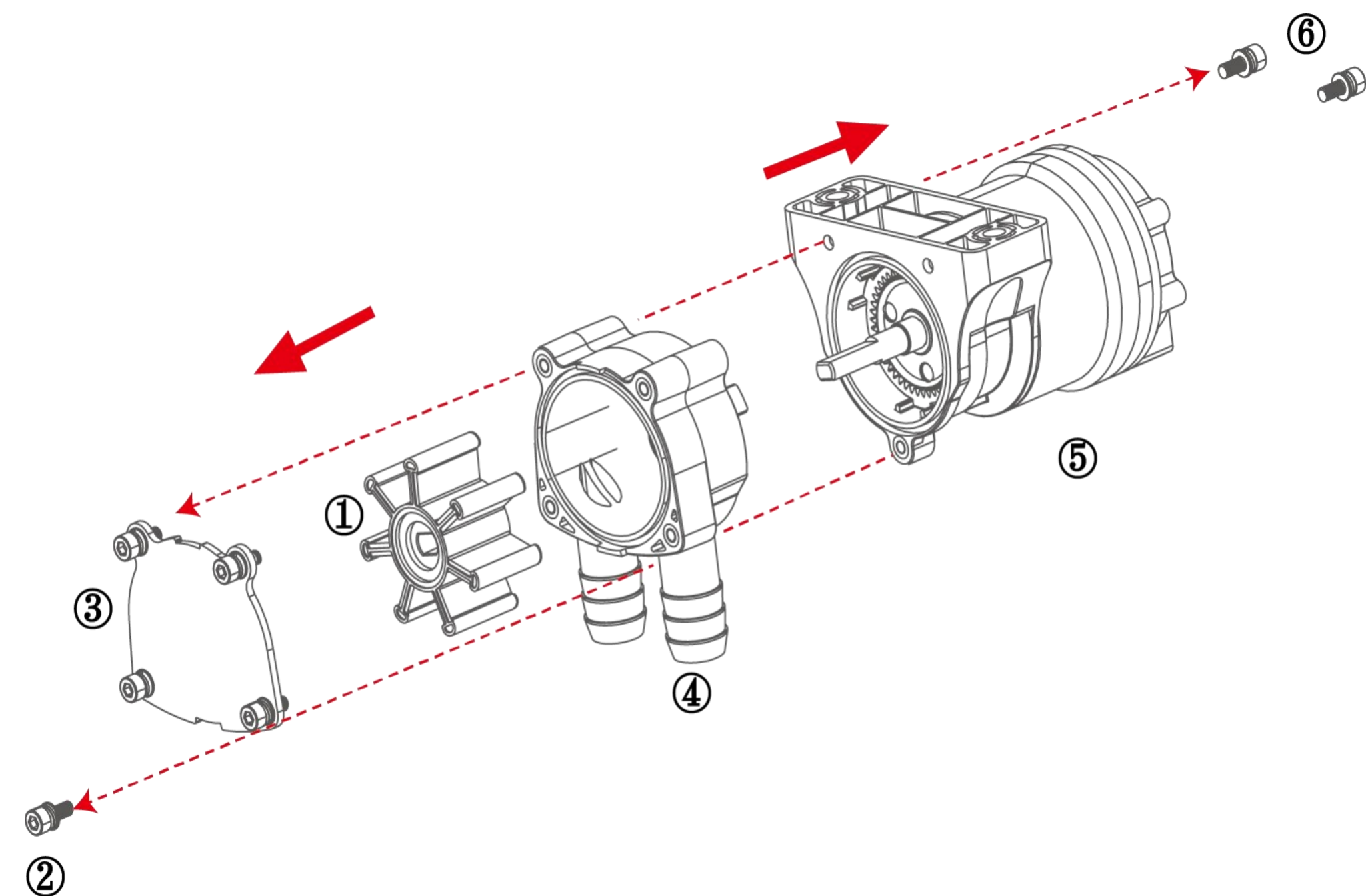
Note: Ensure the liquid tank is filled with ≥3L liquid before testing. Verify that the impeller pump operates without abnormal noise.

Check the sealing of the impeller pump, and confirm no leaks.

Confirm no significant vibration or looseness in the nozzle and spray disc. Adjust the atomization level and observe the atomization effect.

Chapter 3 Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Spraying System Module)



Warning: Wear rubber gloves or cotton gloves before disassembly, as the residual liquid with corrosive and harmful substances may endanger personal health and safety.

S/N	Screw spec.	Material No.	Torque requirement
②			kgf.cm

Disassembly Procedures

1. Remove screws ② and ⑥, and separate the impeller pump motor ⑤ from the pump ④.
2. Remove screws ⑦, and separate the impeller pump motor cover ⑩ from the motor.
3. Remove screws ⑨, and separate the impeller pump motherboard ⑧ from the impeller pump motor.

Installation Process

1. Install the impeller pump motherboard ⑧ to the impeller pump motor ⑤, and tighten it with screws ⑨ (torque: kgf.cm).
2. Install the impeller pump motor cover ⑩ onto the impeller pump motor, and tighten it with screws ⑦ (torque: kgf.cm).
3. Install the impeller pump motor to the pump ④, and tighten it with screws ② and ⑥ (torque: kgf.cm).

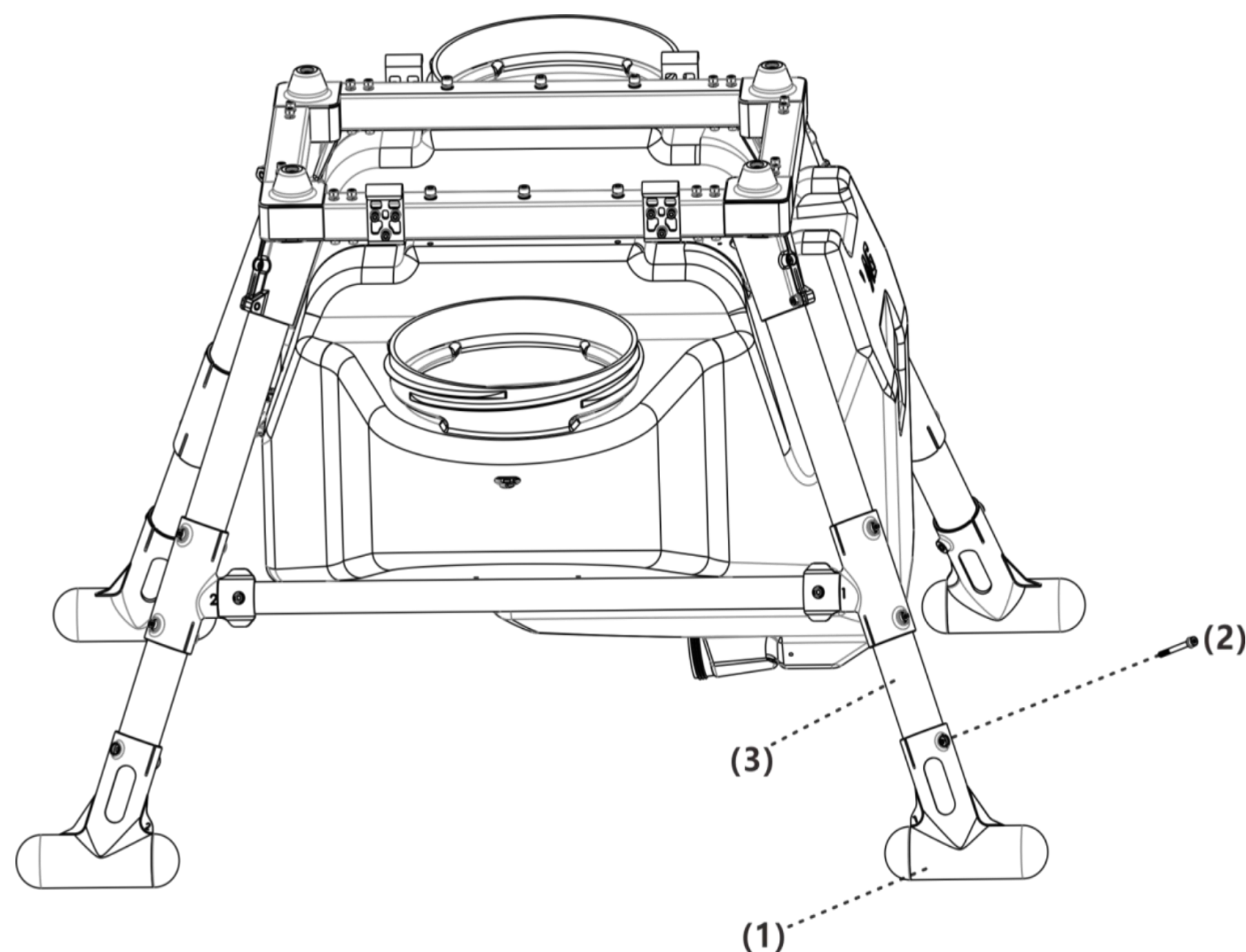
Test:

Note: Ensure the liquid tank is filled with $\geq 3\text{L}$ liquid before testing. Verify that the impeller pump operates without abnormal noise.

Check the sealing of the impeller pump, and confirm no leaks.

Chapter 3 Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Landing Gear)



Warning: Before disassembly, disconnect the drone with the hose and the payload system harness connected to it, and then remove the drone, to prevent accidental component damage due to drone instability during fit and remove process.

Installation Process

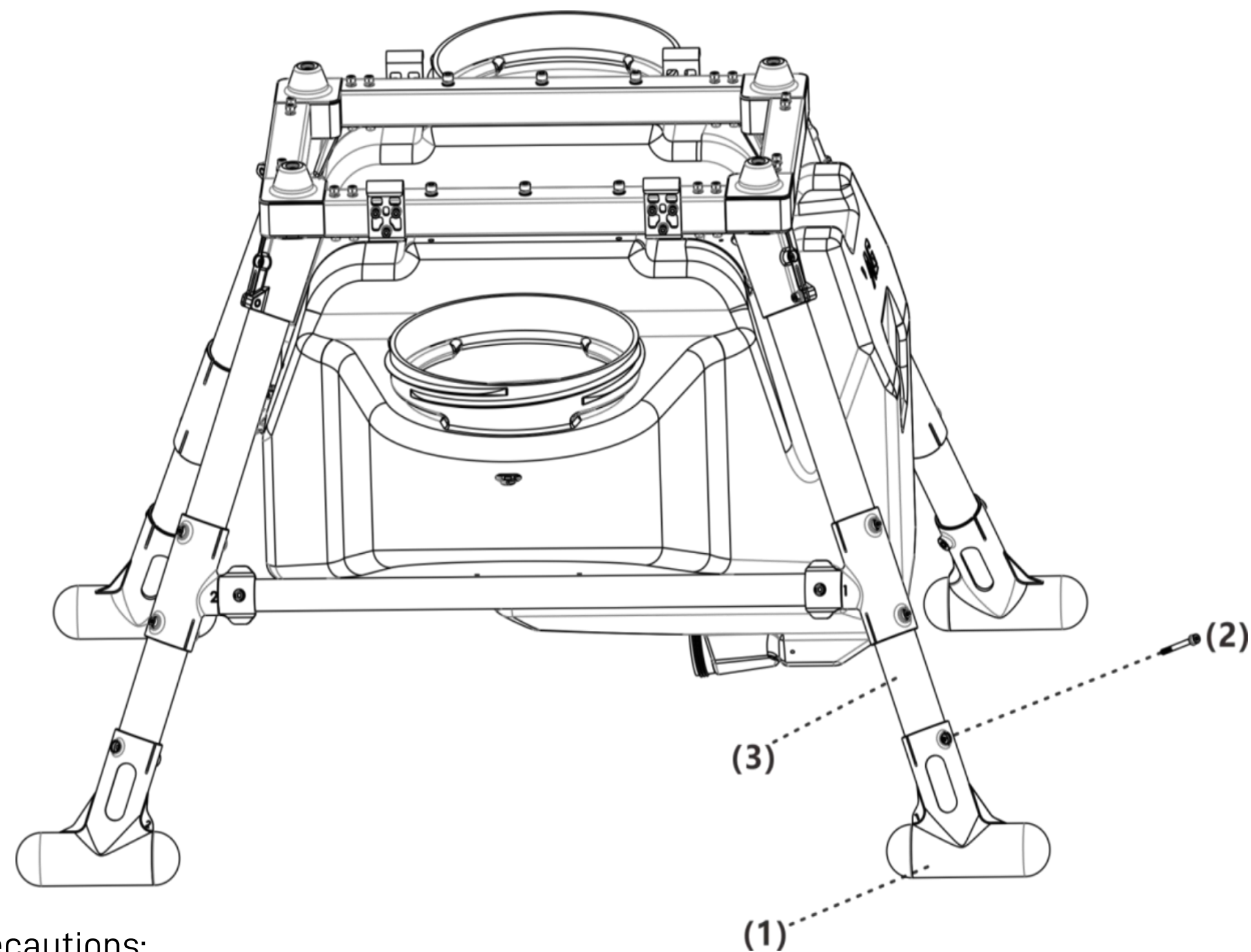
1. Before installation, inspect the holder and joint piece of the load square tube (5) for deformation, cracks, or damage. Replace it immediately if any defects are found.
2. Install the new landing gear tube (1) to the holder and joint piece of the load square tube. Secure it with screws (2) and (3) (Torque: 12 - 13 kgf·cm).
3. Fasten the landing gear tee fittings (6) using screws (2).
4. Attach the landing gear grounding part (4) to the landing gear, and secure it with screws (2).

Test:

Perform a hovering flight to ensure no significant shaking of the drone. Confirm smooth and level landing without tilting.

Chapter 3 Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Landing Gear)



Precautions:

The landing gear tee fitting is directional. Ensure the numbered face of the landing gear tee fitting faces outward and aligns with the load square tube (long tube). Incorrect orientation will prevent proper installation.

S/N	Screw spec.	Material No.	Torque requirement
(2)	M4*45*8	02-004-01272	11 - 13 kgf.cm

Disassembly Procedures

1. Remove screws (2) of the landing gear grounding part (1).
2. Remove the landing gear grounding part from the landing gear (3).

Installation Process

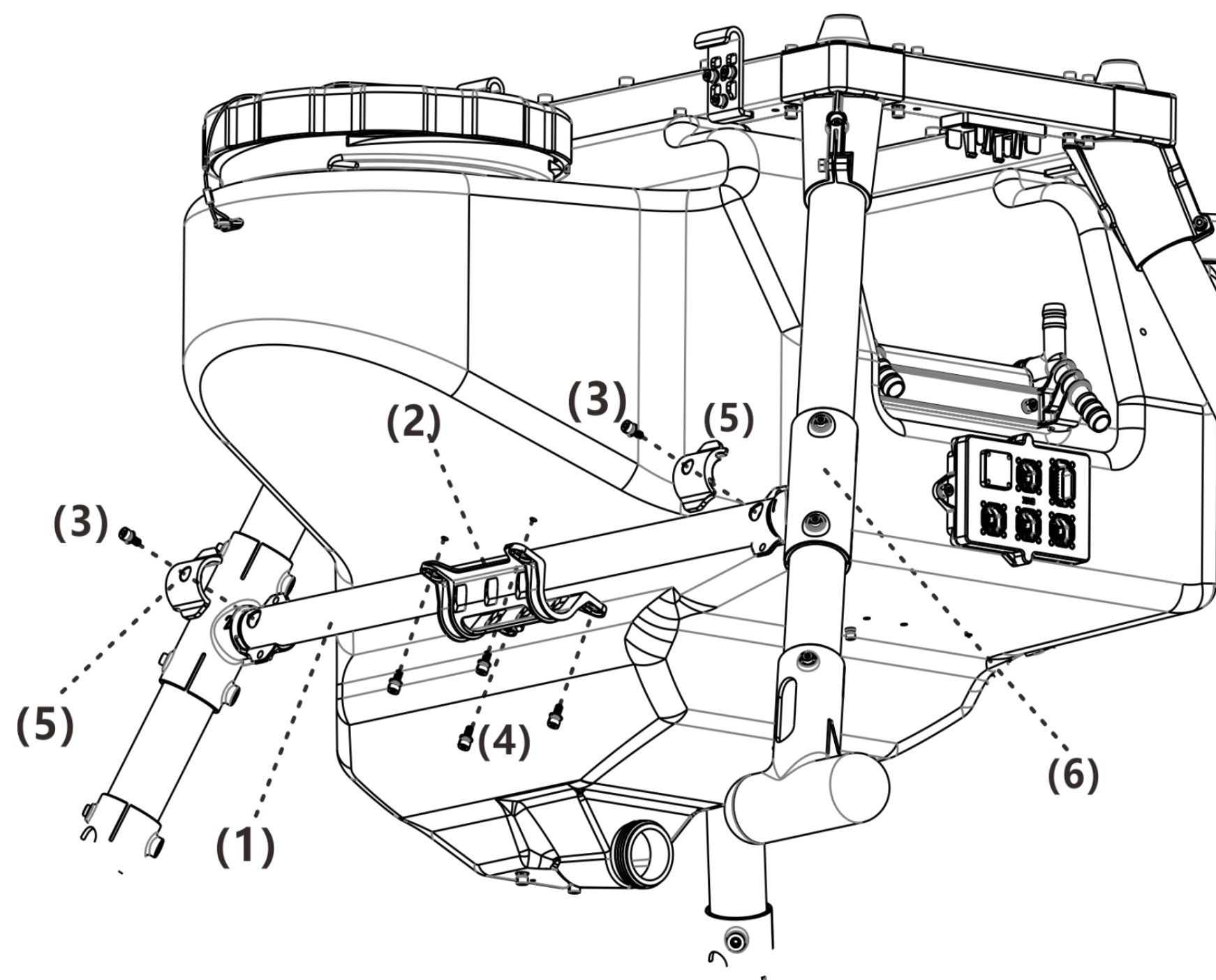
Install the landing gear grounding part (1) into the landing gear (3), and fasten it with screws (2) (torque: 11 - 13 kgf.cm).

Test: Perform a hovering flight to ensure no significant shaking of the drone. Confirm smooth and level landing without tilting.

Warning: Before disassembly, disconnect the drone with the hose and the payload system harness connected to it, and then remove the drone, to prevent accidental component damage due to drone instability during fit and remove process.

Chapter 3 Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Crossbar)



S/N	Screw spec.	Material No.	Torque requirement
(3)	M4*12*8	02-004-00834	12 - 13 kgf.cm
(4)	M4*12*8	02-004-00834	12 - 13 kgf.cm

Disassembly Procedures

1. Remove screws (4), and remove the landing gear holder (2) at the bottom of the liquid tank.
2. Remove screws (3), and remove the landing gear T-clamp (5).
3. Remove the crossbar (1) from the landing gear tee fitting (6).

Installation Process

1. Install the new crossbar (1) to the landing gear tee fitting (6).
2. Install the landing gear T-clamp (5) onto the crossbar, and fasten it with screws (3) (torque: 12 - 13 kgf.cm).
3. Install the bottom holder (2) of the liquid tank to the bottom of the liquid tank, and tighten it with screws (4) (torque: 12 - 13 kgf.cm).

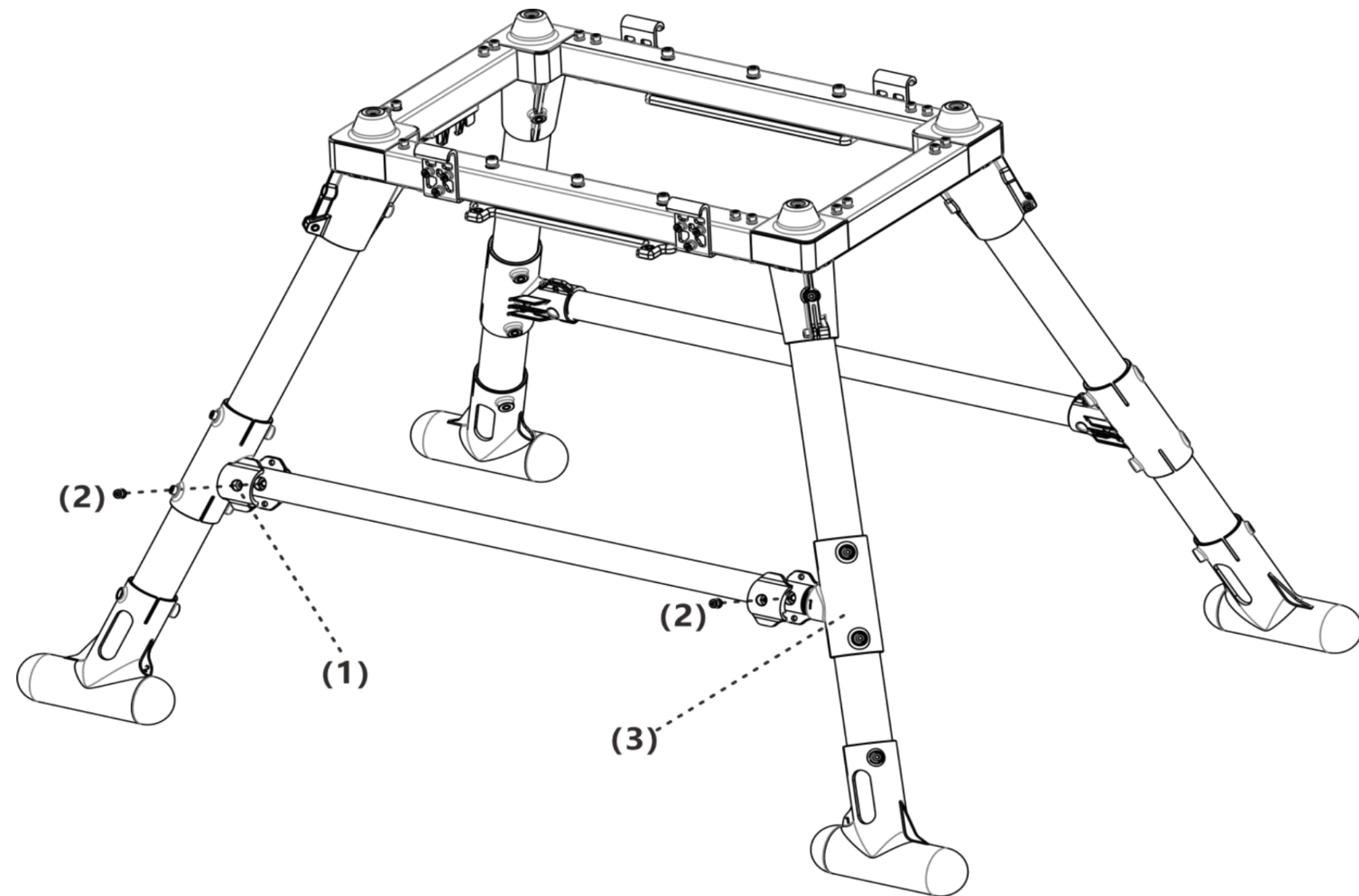
Test:

Perform a hovering flight to ensure no significant shaking of the drone.
Confirm smooth and level landing without tilting.

Warning: Wear rubber gloves or cotton gloves before disassembly, as the residual liquid with corrosive and harmful substances may endanger personal health and safety.

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Landing Great Tee Fitting)



S/N	Screw spec.	Material No.	Torque requirement
(2)	M4*12*8	02-004-00834	12 - 13 kgf.cm

Disassembly Procedures

Remove screws (2), and remove the landing gear T-clamp (1) from the landing gear tee fitting (3).

Installation Process

Install the new landing gear T-clamp (1) to the landing gear tee fitting (3), and tighten it with screws (2) (torque: 12 - 13 kgf.cm).

Test:

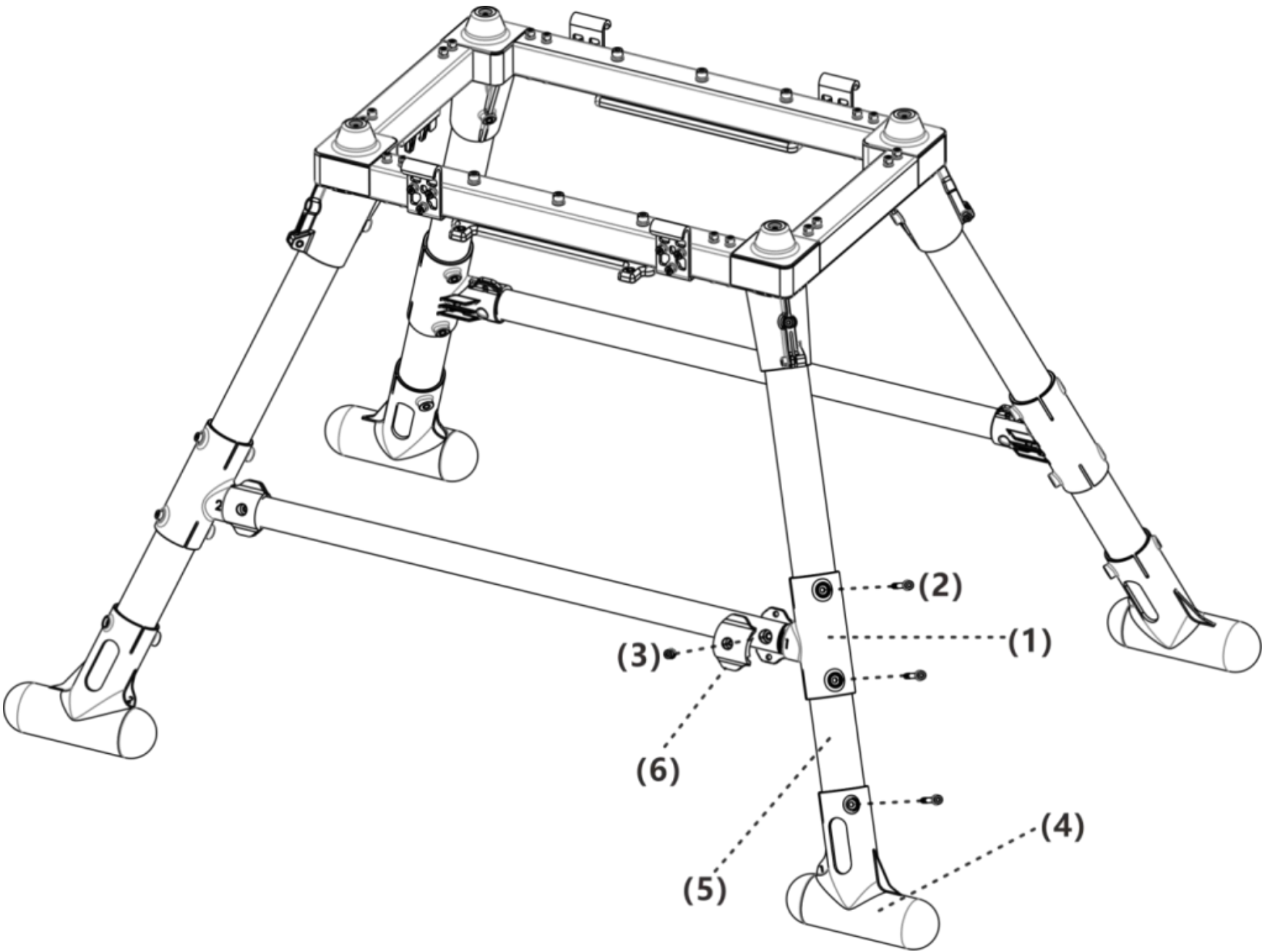
Perform a hovering flight to ensure no significant shaking of the drone.

Confirm smooth and level landing without tilting.

Warning: Wear rubber gloves or cotton gloves before disassembly, as the residual liquid with corrosive and harmful substances may endanger personal health and safety.

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Landing Great Tee Fitting)



Warning: Before disassembly, disconnect the drone with the hose and the payload system harness connected to it, and then remove the drone, to prevent accidental component damage due to drone instability during fit and remove process.

S/N	Screw spec.	Material No.	Torque requirement
(2)	M4*45*8	02-004-01272	11 - 13 kgf.cm
(3)	M4*12*8	02-004-00834	12 - 13 kgf.cm

Disassembly Procedures

- 1. Remove screws (3), and remove the landing gear T-clamp (6).
- 2. Remove screws (2), and remove the landing gear grounding part (4).
- 3. Remove screws (2), and remove the landing gear tee fitting (1) from the landing gear (5).

Installation Process

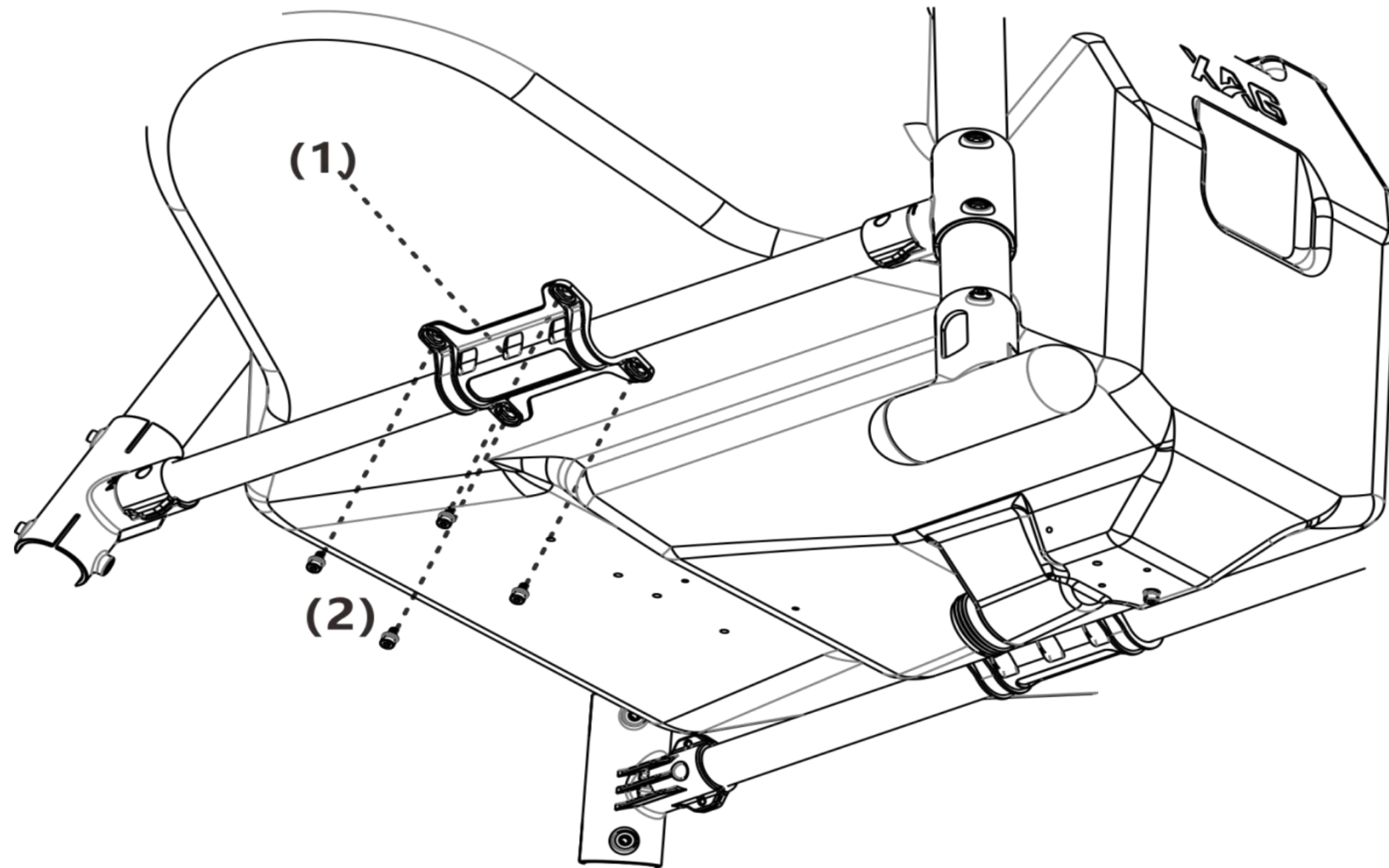
- 1. Install the new landing gear tee fitting (1) to the landing gear (5), and fasten it with screws (2) (torque: 11 - 13 kgf.cm).
- 2. Install the landing gear grounding part (4) to the landing gear, and fasten it with screws (2).
- 3. Install the landing gear T-clamp (6) to the landing gear tee fitting, and tighten it with screws (3) (torque: 12 - 13 kgf.cm).

Test:

Perform a hovering flight to ensure no significant shaking of the drone.
Confirm smooth and level landing without tilting.

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Liquid Tank Bottom Holder)



Warning: Before disassembly, disconnect the drone with the hose and the payload system harness connected to it, and then remove the drone, to prevent accidental component damage due to drone instability during fit and remove process.

S/N	Screw spec.	Material No.	Torque requirement
(3)	M4*12*8	02-004-00834	12 - 13 kgf.cm

Disassembly Procedures

Remove screws (2), and remove the liquid tank bottom holder (1).

Installation Process

Install the liquid tank bottom holder (1) to the bottom of the liquid tank, and fasten it with screws (2) (torque: 12 - 13 kgf.cm).

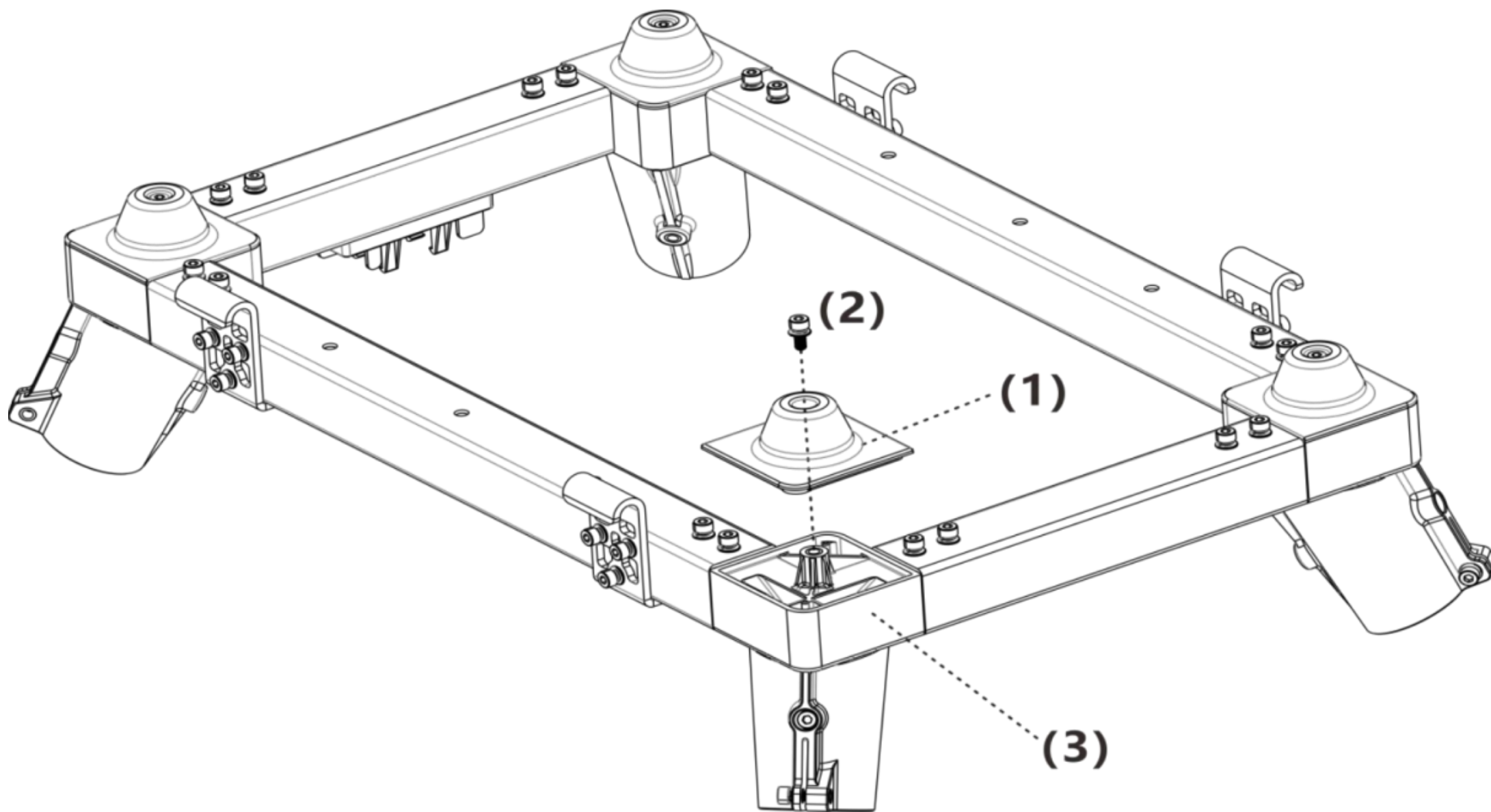
Test:

Perform a hovering flight to ensure no significant shaking of the drone.

Confirm smooth and level landing without tilting.

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Liquid Tank Bottom Holder)



S/N	Screw spec.	Material No.	Torque requirement
(2)	M4*12*8	02-004-00834	12 - 13 kgf.cm

Disassembly Procedures

Remove screws (2), and take out the load bump (1) from the load tube joint piece (3).

Installation Process

Install the new load bump (1) to the load tube joint piece (3), and tighten it with screws (2) (torque: 12 - 13 kgf.cm).

Test:

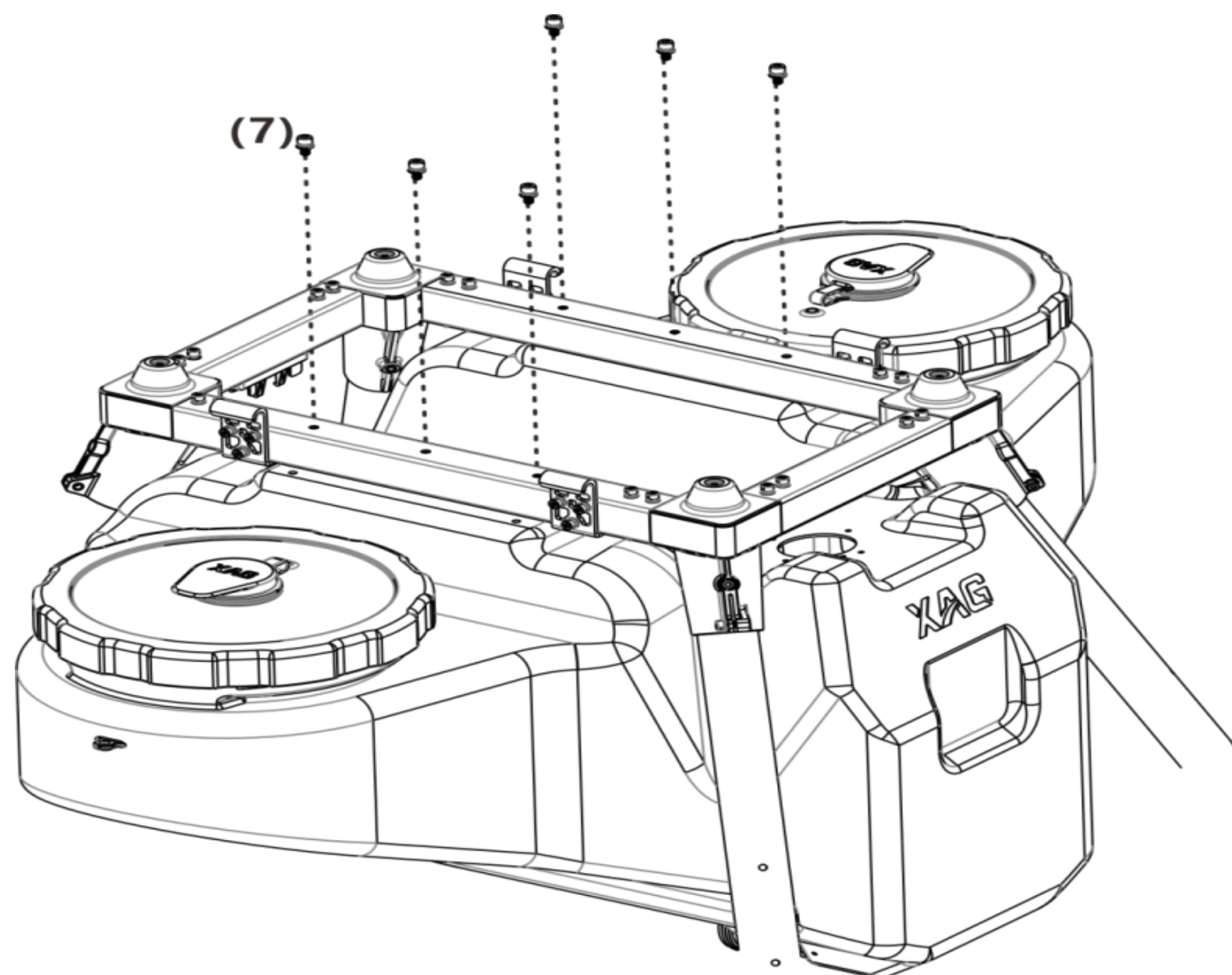
Perform a hovering flight to ensure no significant shaking of the drone.

Confirm smooth and level landing without tilting.

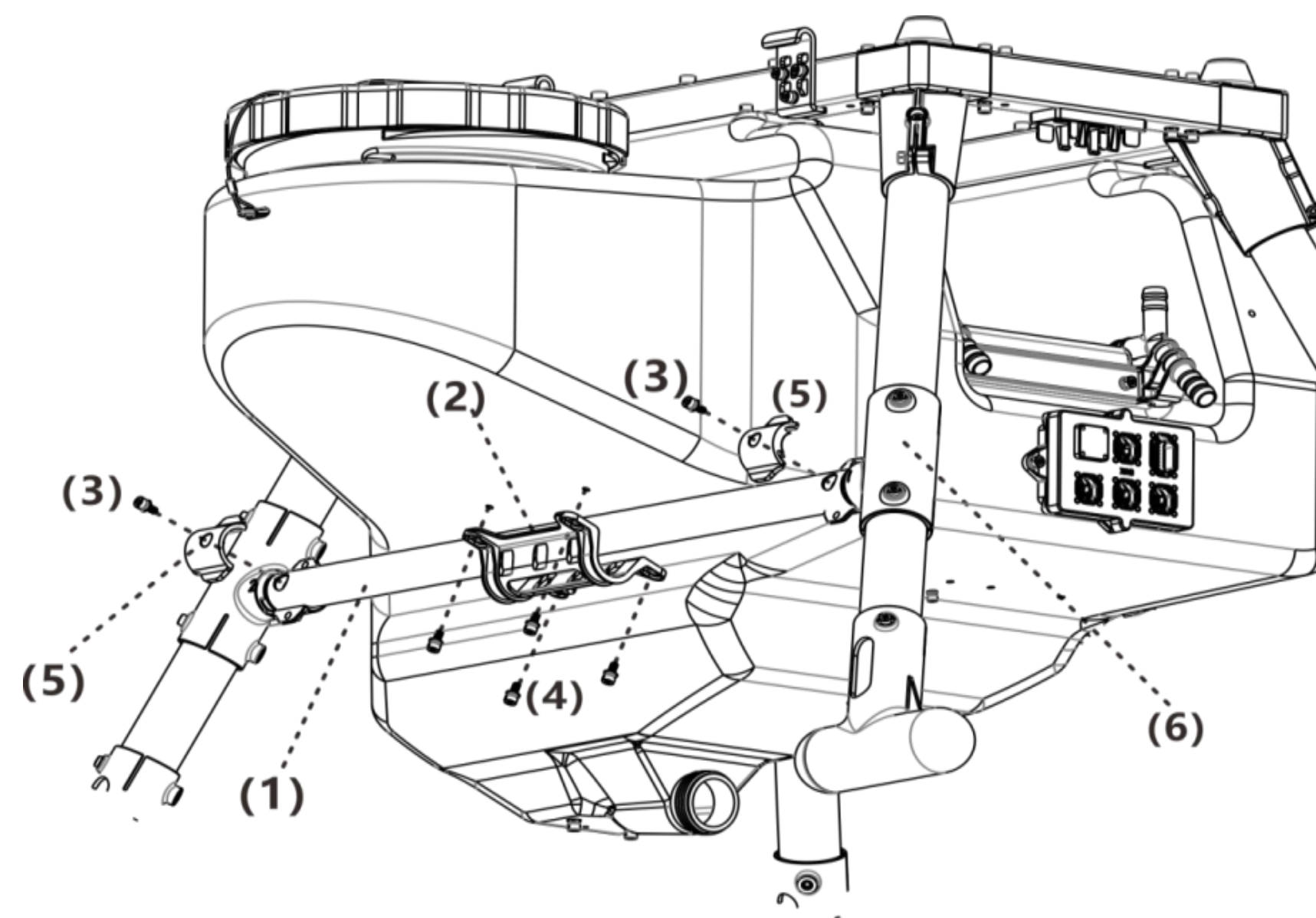
Warning: Before disassembly, disconnect the drone with the hose and the payload system harness connected to it, and then remove the drone, to prevent accidental component damage due to drone instability during fit and remove process.

Chapter III Agricultural Drone Fit and Remove Procedures -

General Fit and Remove Procedures (Short Load Tube)



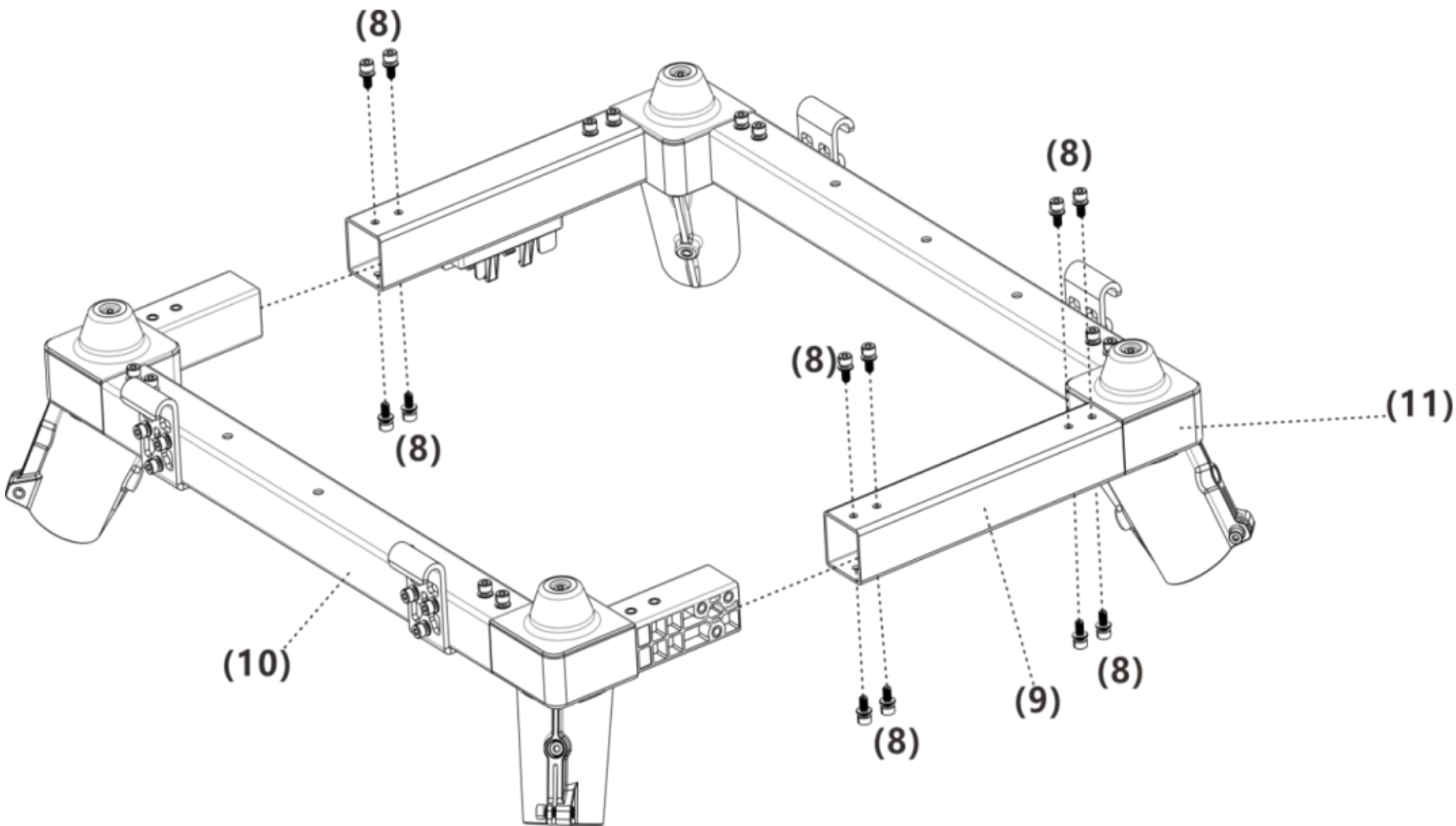
Short load tube -1



Short load tube -2

Chapter III Agricultural Drone Fit and Remove Procedures -

General Fit and Remove Procedures (Short Load Tube)



Short load tube -3

S/N	Screw spec.	Material No.	Torque requirement
(3)	M4*12*8	02-004-00834	12 - 13 kgf.cm
(4)	M4*12*8	02-004-00834	12 - 13 kgf.cm
(7)	M5*10*10	02-004-00747	30 - 31 kgf.cm
(8)	M4*12*8	02-004-00834	12 - 13 kgf.cm

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Short Load Tube)

Disassembly Procedures

1. Remove screws (7) of the long load tube.
2. Turn over the liquid tank, remove screws (4), and remove the liquid tank bottom holder (2).
3. Remove screws (3), and remove the landing gear T-clamp (5).
4. Remove the crossbar (1) from the landing gear tee fitting (6). Note: The crossbars on both sides of the liquid tank must be removed.
5. Remove screws (8), and slowly stretch the long load tube (10) to separate it from the short load tube (9).
6. Remove the short load tube.

Installation Process

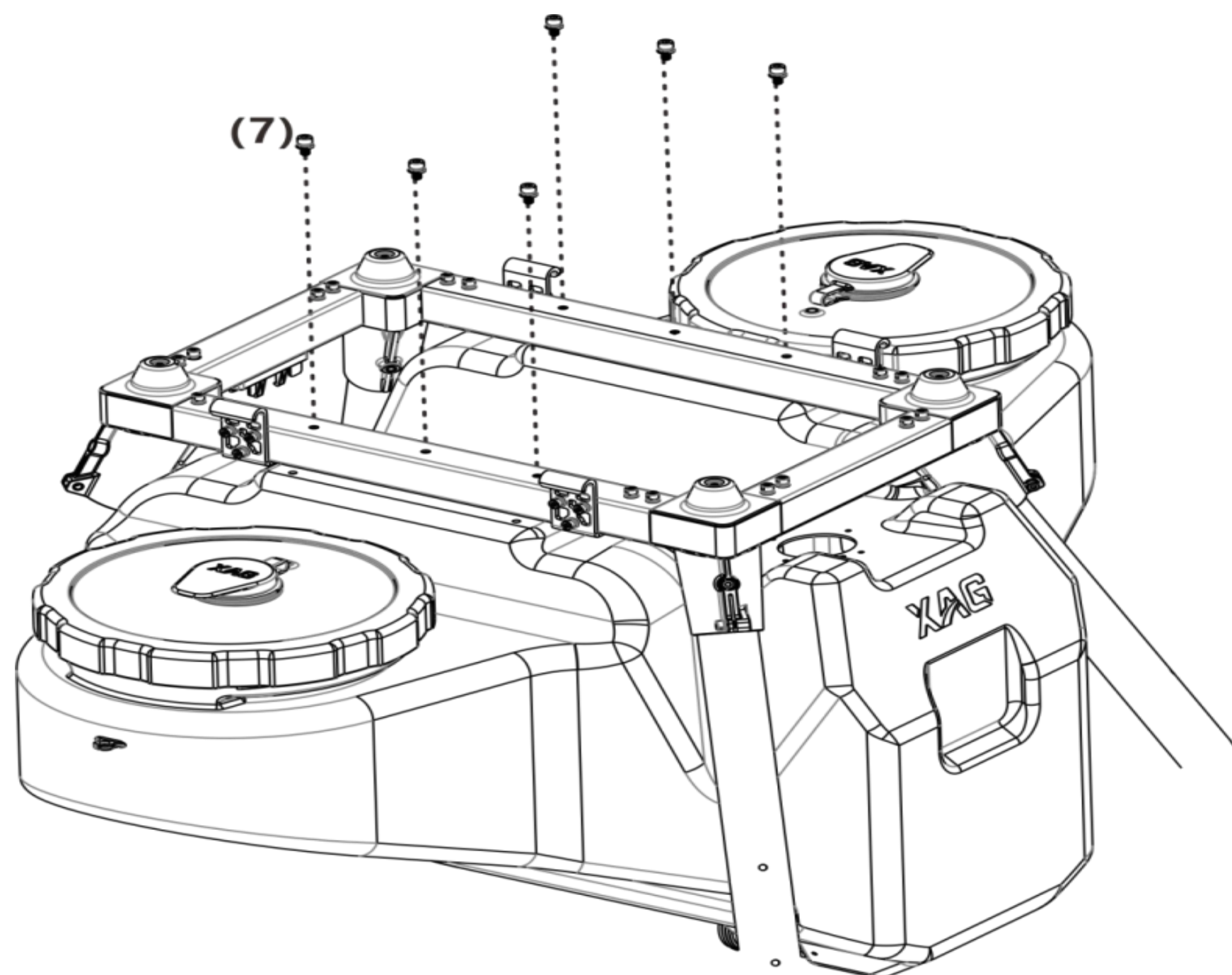
1. Install the new short load tube (9) to the load tube joint piece (11).
2. Install the long load tube (10) to the short load tube, and tighten it with screws (8) (torque: 12 - 13 kgf.cm).
3. Turn over the landing gear, and align the liquid tank with the holes of the long load tube.
4. Install the crossbar (1) into the landing gear tee fitting (6).
5. Install the landing gear T-clamp (5) to the landing gear tee fitting, and fasten it with screws (3) (torque: 12 - 13 kgf.cm).
6. Tighten the liquid tank holder (2) with screws (4) (torque: 12 - 13 kgf.cm).
7. Turn over the landing gear again, and fasten the liquid tank insert with screws (7) (torque: 30 - 31 kgf.cm).

Note: If the screws (7) are not aligned with the holes of the long load tube, remove the liquid tank cover, and move the liquid tank insert by hand to align it with the holes.

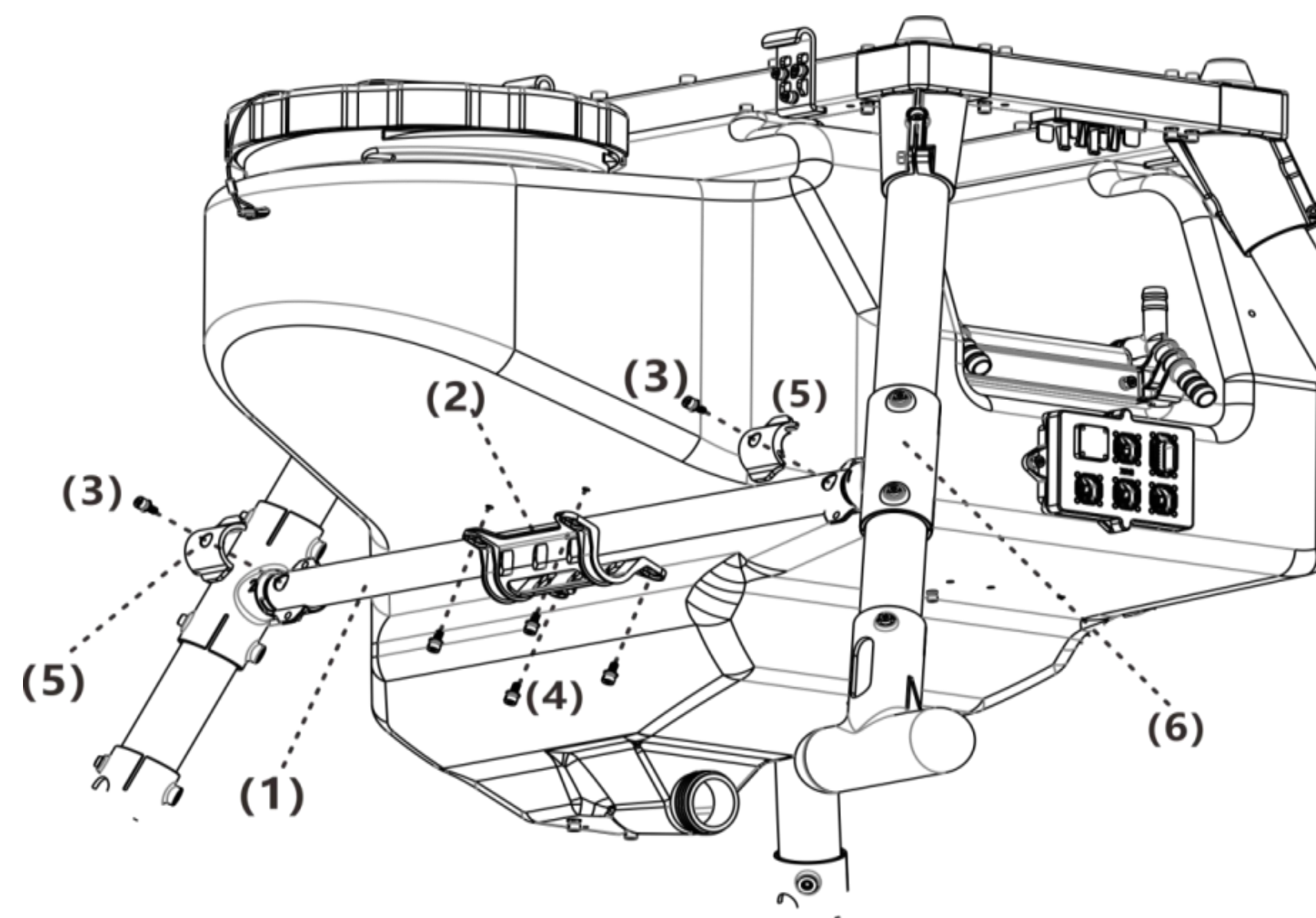
Warning: Before disassembly, disconnect the drone with the hose and the payload system harness connected to it, and then remove the drone, to prevent accidental component damage due to drone instability during fit and remove process.

Chapter III Agricultural Drone Fit and Remove Procedures -

General Fit and Remove Procedures (Long Load Tube)



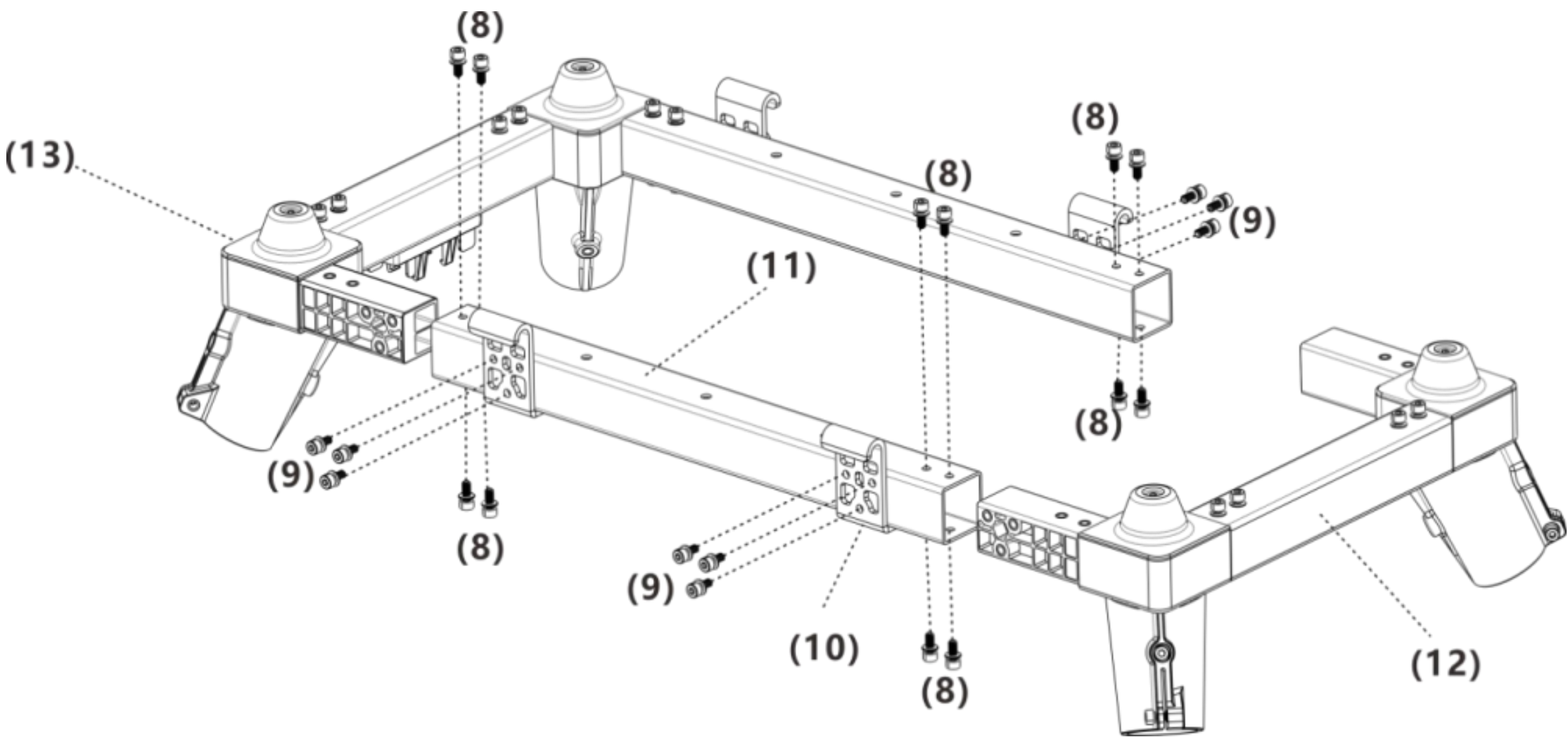
Long load tube -1



Long load tube -2

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Long Load Tube)



Long load tube -3

S/N	Screw spec.	Material No.	Torque requirement
(3)	M4*12*8	02-004-00834	12 - 13 kgf.cm
(4)	M4*12*8	02-004-00834	12 - 13 kgf.cm
(7)	M5*10*10	02-004-00747	30 - 31 kgf.cm
(8)	M4*12*8	02-004-00834	12 - 13 kgf.cm
(9)	M4*12*8	02-004-00834	12 - 13 kgf.cm

Warning: Before disassembly, disconnect the drone with the hose and the payload system harness connected to it, and then remove the drone, to prevent accidental component damage due to drone instability during fit and remove process.

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Long Load Tube)

Disassembly Procedures

1. Remove screws (7) of the long load tube.
 2. Turn over the liquid tank, remove screws (4), and remove the liquid tank bottom holder (2).
 3. Remove screws (3), and remove the landing gear T-clamp (5).
 4. Remove the crossbar (1) from the landing gear tee fitting (6).
- Note: The crossbars on both sides of the liquid tank must be removed.
5. Remove screws (8).
 6. Remove screws (9), and remove the load hook (10).
 7. Slowly pull the short load tube (12) to separate it from the long load tube (11).
 8. Remove the long load tube from the load tube joint piece (13).

Test:

Perform a hovering flight to ensure no significant shaking of the drone.

Confirm smooth and level landing without tilting.

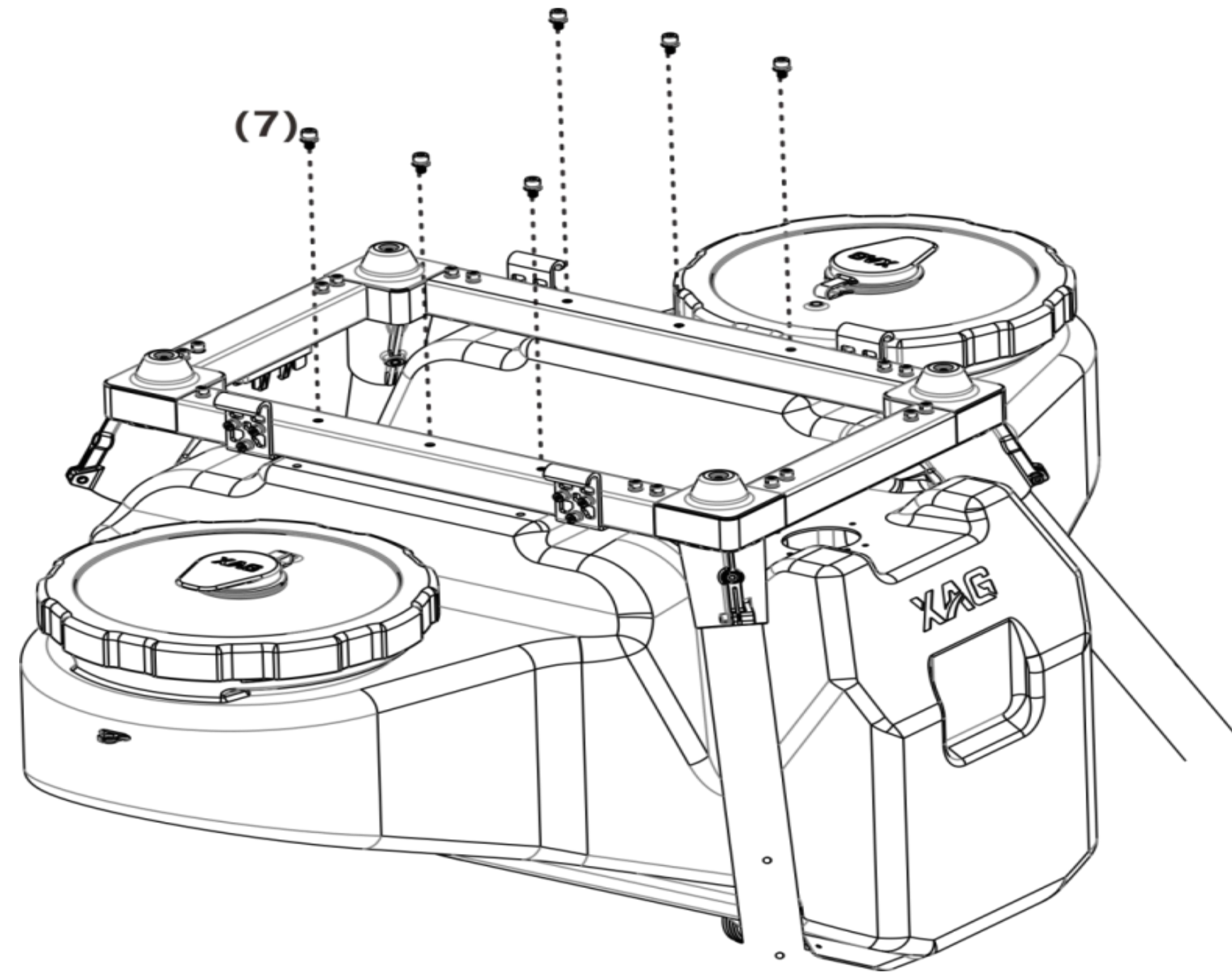
Installation Process

1. Install the new long load tube (11) to the load tube joint piece (13).
 2. Install the short load tube (12) to the long load tube.
 3. Tighten it with screws (8) (torque: 11 - 12 kgf.cm).
 4. Install the load hook (10) to the long load tube, and tighten it with screws (9) (torque: 12 - 13 kgf.cm).
- Note: The load hook screws must be tightened.
6. Turn over the landing gear, and align the liquid tank with the holes of the long load tube.
 7. Install the crossbar (1) into the landing gear tee fitting (6).
 8. Install the landing gear T-clamp (5) to the landing gear tee fitting, and fasten it with screws (3) (torque: 12 - 13 kgf.cm).
 9. Tighten the liquid tank holder (2) with screws (4) (torque: 12 - 13 kgf.cm).
 10. Turn the landing gear over again, and fasten the liquid tank insert with screws (7) (torque: 30 - 31 kgf.cm).

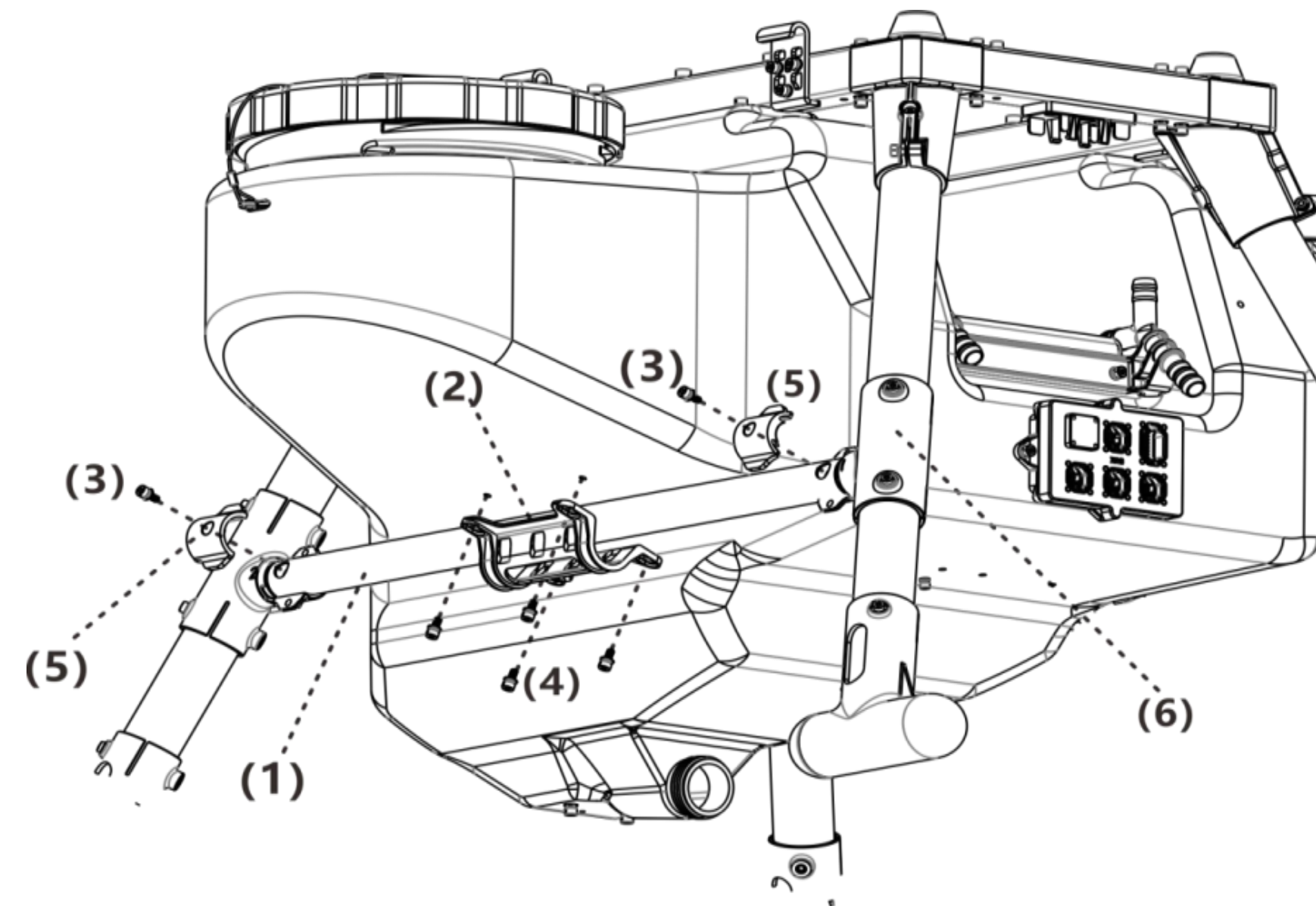
Note: If the screws (7) are not aligned with the holes of the long load tube, remove the liquid tank cover, and move the liquid tank insert by hand to align it with the holes.

Chapter III Agricultural Drone Fit and Remove Procedures -

General Fit and Remove Procedures (Load Tube Joint Piece)



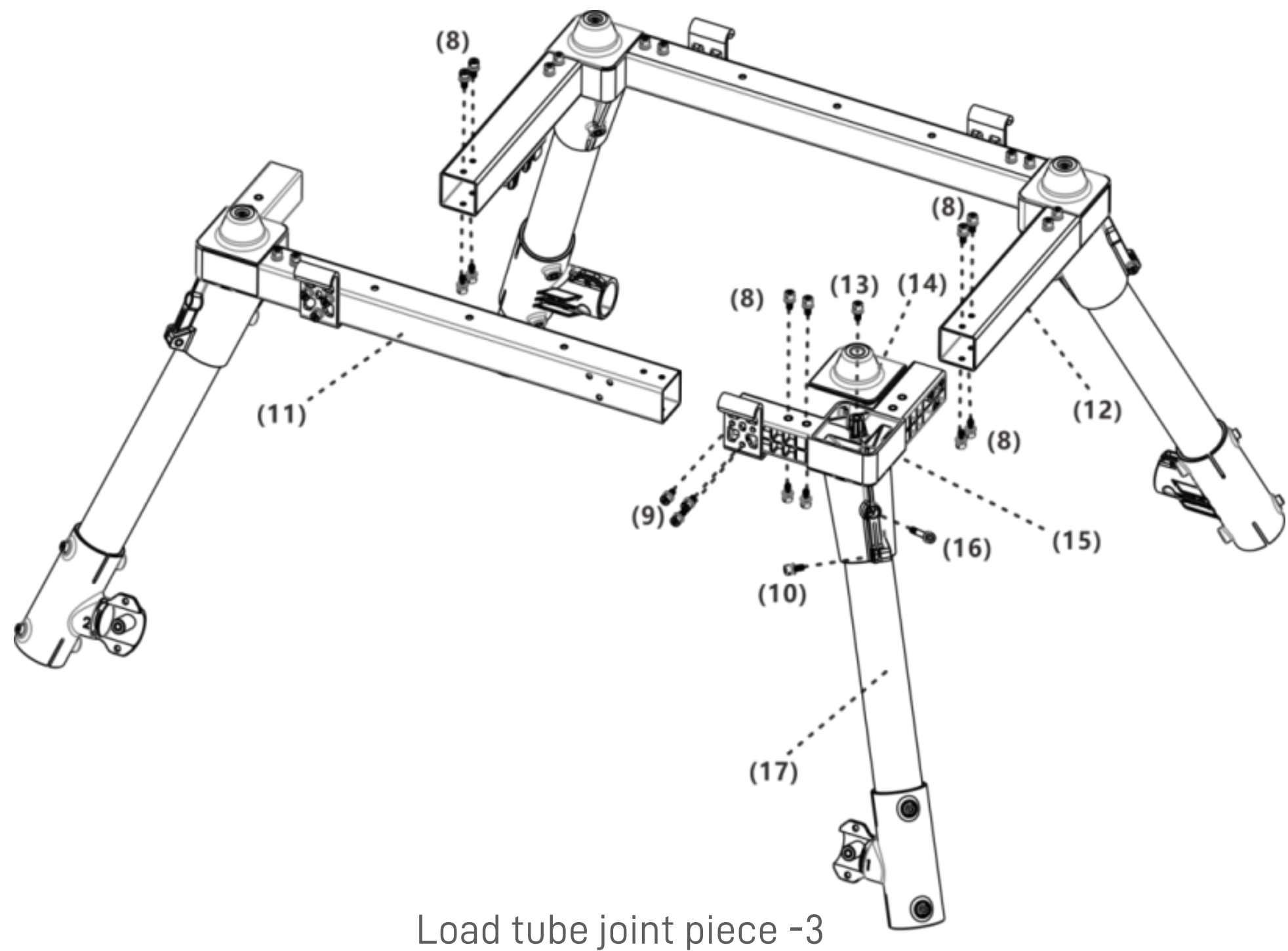
Load tube joint piece -1



Load tube joint piece -2

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Load Tube Joint Piece)



S/N	Screw spec.	Material No.	Torque requirement
(3)	M4*12*8	02-004-00834	12 - 13 kgf.cm
(4)	M4*12*8	02-004-00834	12 - 13 kgf.cm
(7)	M5*10*10	02-004-00747	30 - 31 kgf.cm
(8)	M4*12*8	02-004-00834	12 - 13 kgf.cm
(9)	M4*12*8	02-004-00834	12 - 13 kgf.cm
(10)	M4*12*8	02-004-00834	12 - 13 kgf.cm
(13)	M4*12*8	02-004-00834	12 - 13 kgf.cm
(16)	M4*45*8	02-004-01272	11 - 13 kgf.cm

Warning: Before disassembly, disconnect the drone with the hose and the payload system harness connected to it, and then remove the drone, to prevent accidental component damage due to drone instability during fit and remove process.

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Load Tube Joint Piece)

Disassembly Procedures

1. Remove screws (7) of the long load tube.
 2. Turn over the liquid tank, remove screws (4), and remove the liquid tank bottom holder (2).
 3. Remove screws (3), and remove the landing gear T-clamp (5).
 4. Remove the crossbar (1) from the landing gear tee fitting (6).
- Note: The crossbars on both sides of the liquid tank must be removed.
5. Remove screws (8).
 6. Remove screws (13), and take out the load bump (14).
 7. Remove screws (9), and remove the load hasp.
 8. Remove screws (10) (16).
 9. Slowly stretch the long load tube (11) to separate it from the short load tube (12).
 10. Remove the load tube joint piece (15) from the landing gear (17).

Test:

Perform a hovering flight to ensure no significant shaking of the drone.

Confirm smooth and level landing without tilting.

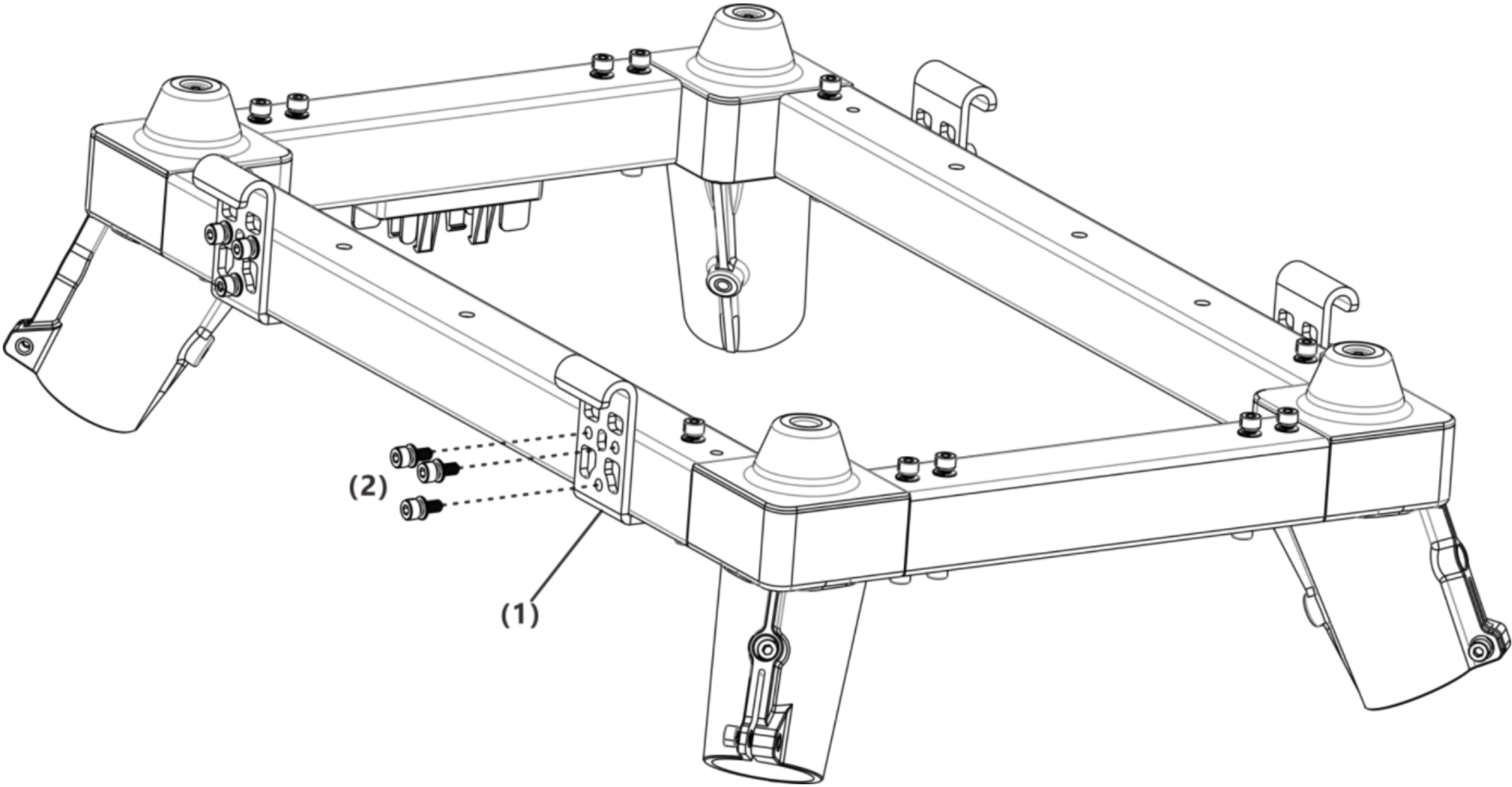
Installation Process

1. Install the new load tube joint piece (15) to the landing gear (17).
2. Connect the load tube joint piece with the long load tube (11) and the short load tube (12), and tighten them with screws (8) (torque: 12 - 13 kgf.cm).
3. Use screws (10) (16) to fasten the load tube joint piece (torque: 12 - 13 kgf.cm).
4. Install the load butt joint bump (14) to the load tube joint piece, and fasten it with screws (13) (torque: 12 - 13 kgf.cm).
5. Use and tighten screws (9) (torque: 12 - 13 kgf.cm) to install the load hook to the long load tube. Note: The load hook screws must be tightened.
6. Turn over the landing gear, and align the liquid tank with the holes of the long load tube.
7. Install the crossbar (1) into the landing gear tee fitting (6).
8. Install the landing gear T-clamp (5) to the landing gear tee fitting, and fasten it with screws (3) (torque: 12 - 13 kgf.cm).
9. Tighten the liquid tank holder (2) with screws (4) (torque: 12 - 13 kgf.cm).
10. Turn the landing gear over again, and fasten the liquid tank insert with screws (7) (torque: 30 - 31 kgf.cm).

Note: If the screws (7) are not aligned with the holes of the long load tube, remove the liquid tank cover, and move the liquid tank insert by hand to align it with the holes.

Chapter III Agricultural Drone Fit and Remove Procedures -

General Fit and Remove Procedures (Load Hook)



Note: When removing the load hook, fully extend the arm and unfasten the hasp.

S/N	Screw spec.	Material No.	Torque requirement
(2)	M4*12*8	02-004-00834	12 - 13 kgf.cm

Disassembly Procedures

Remove screws (2), and remove the load hook (1).

Installation Process

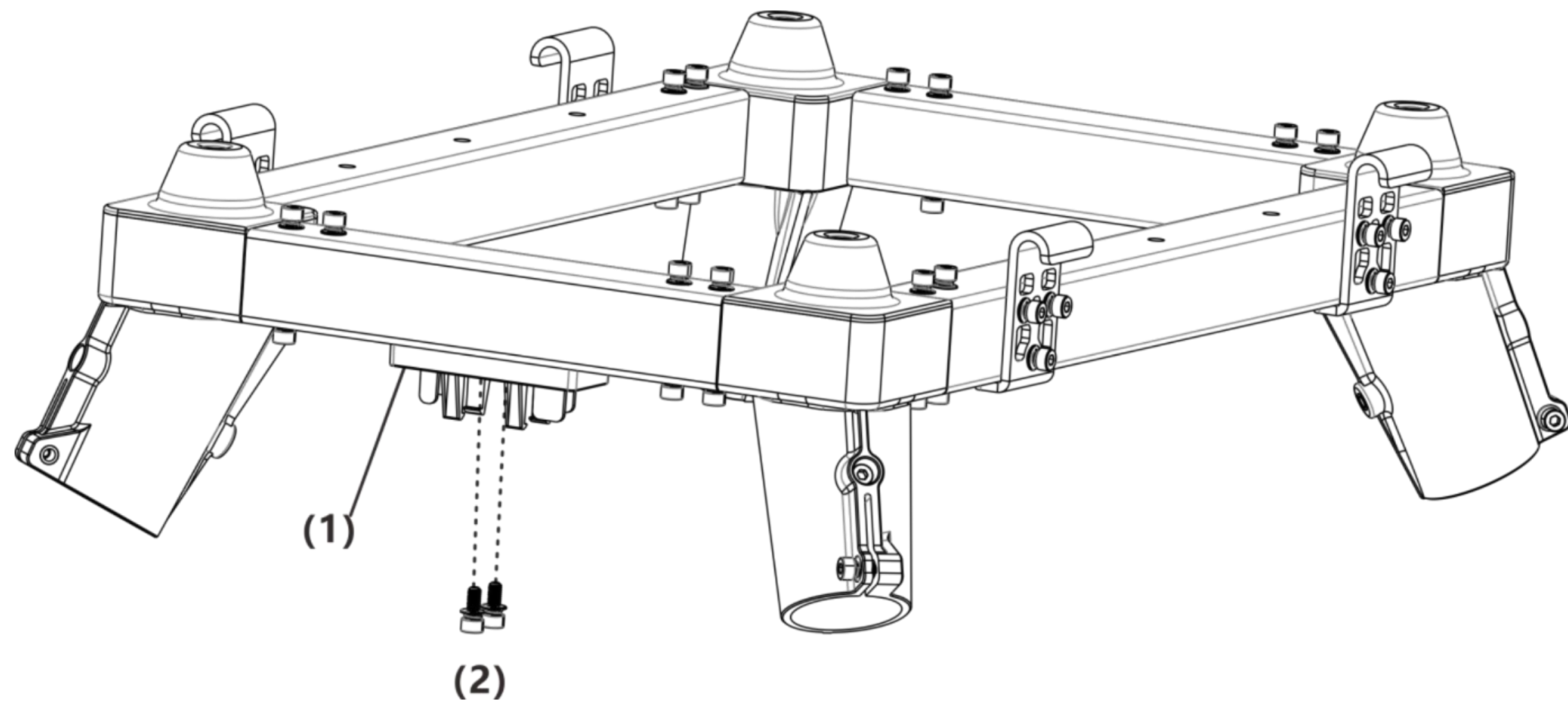
Install a new load hook (1) to the long load tube, and tighten it with screws (2) (torque: 11 - 13 kgf.cm). Note: The load hook screws must be tightened.

Test:

Perform a hovering flight to ensure no significant shaking of the drone.
Confirm smooth and level landing without tilting.

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Connector Fastener of Load Connecting Wire)



S/N	Screw spec.	Material No.	Torque requirement
(2)	M4*12*8	02-004-00834	12 - 13 kgf.cm

Disassembly Procedures

Remove screws (2), and remove the connector fastener of the load connecting wire (1) from the short load tube.

Installation Process

Install the new connector fastener of the load connecting wire (1) to the short load tube, and tighten it with screws (2) (torque: 11 - 13 kgf. cm).

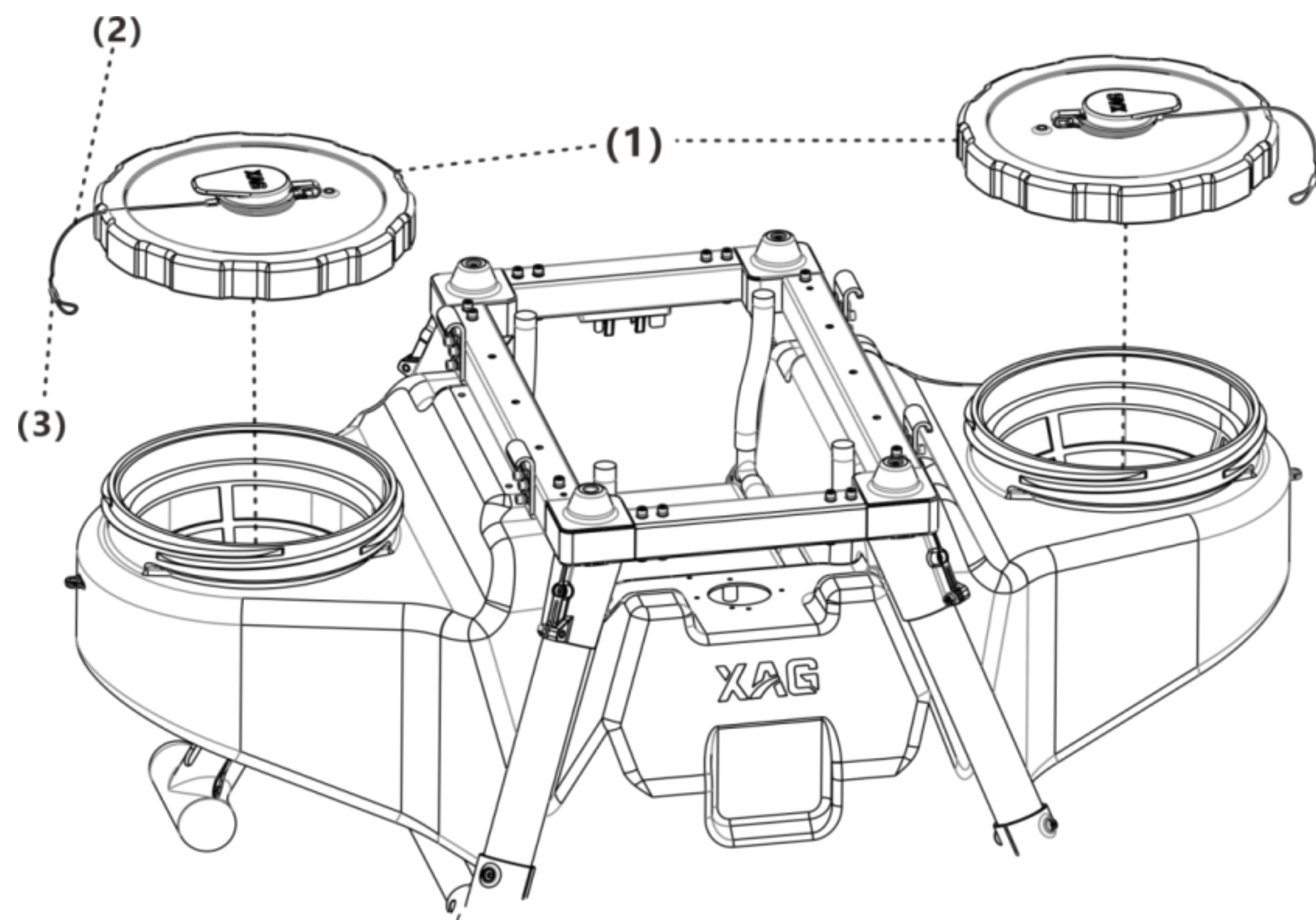
Test:

Perform a hovering flight to ensure no significant shaking of the drone.
Confirm smooth and level landing without tilting.

Warning: Before disassembly, disconnect the drone with the hose and the payload system harness connected to it, and then remove the drone, to prevent accidental component damage due to drone instability during fit and remove process.

Chapter III Agricultural Drone Fit and Remove Procedures -

General Fit and Remove Procedures (Connector Fastener of Load Connecting Wire)



Warning: Wear rubber gloves or cotton gloves before disassembly, as the residual liquid with corrosive and harmful substances may endanger personal health and safety.

Disassembly Procedures

1. Remove the liquid tank cover (1) from the liquid tank by rotating it counterclockwise.
2. Cut the nylon rope (2).

Installation Process

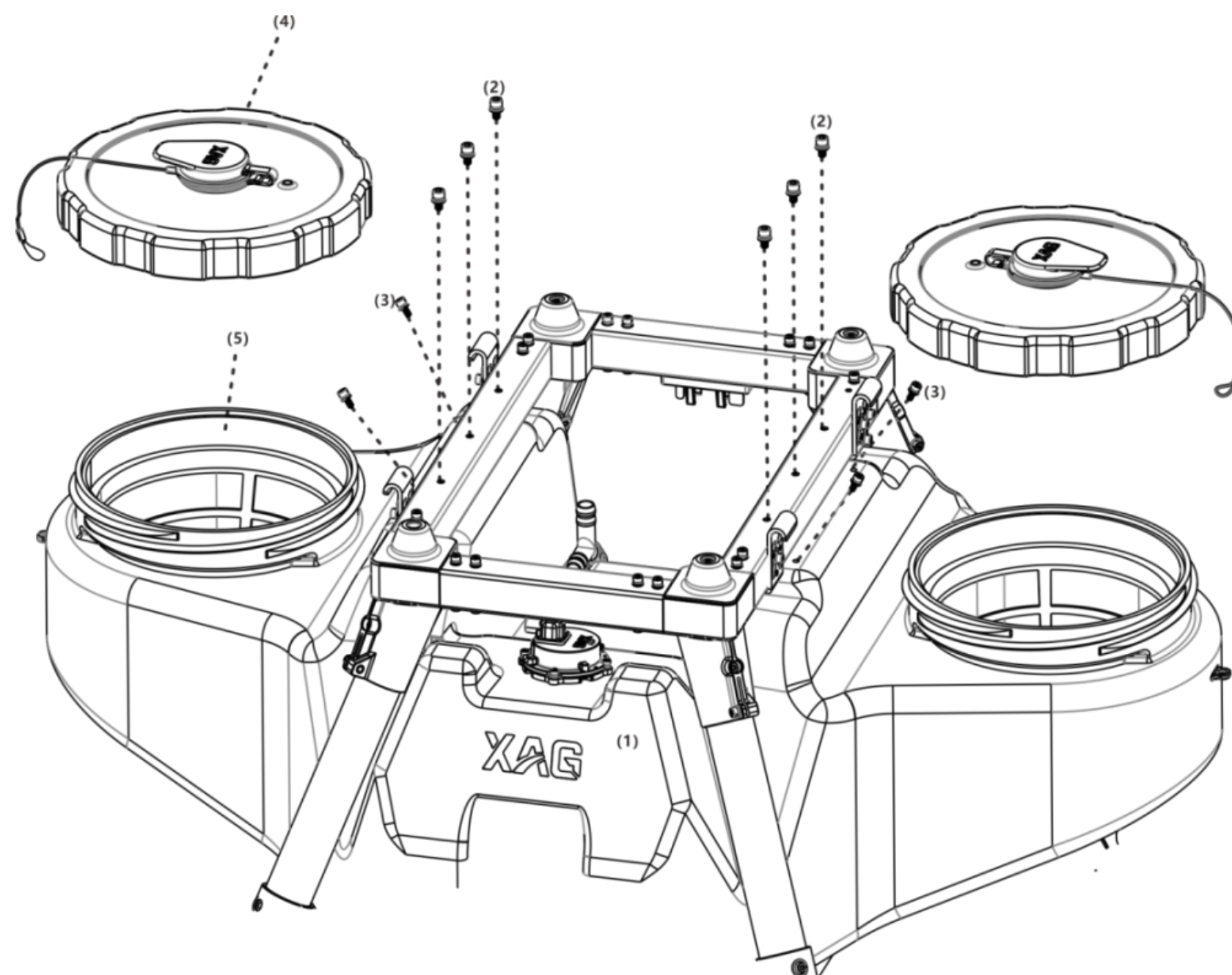
1. When installing the liquid tank cover (1), check the liquid tank cover for damage and cracks, and replace it promptly if any damage or cracks are observed.
2. Rotate the liquid tank cover clockwise to tighten it.
3. Fix an end of the nylon rope (2) to the lug of the liquid tank using stainless steel wire aluminum sleeves (3), and fix the other end to the liquid tank cover. Warning: Ensure that the nylon rope is clamped securely with the stainless steel wire aluminum sleeves, otherwise the rope can be sucked into the propeller, causing the risk of aircraft crashing.

Test:

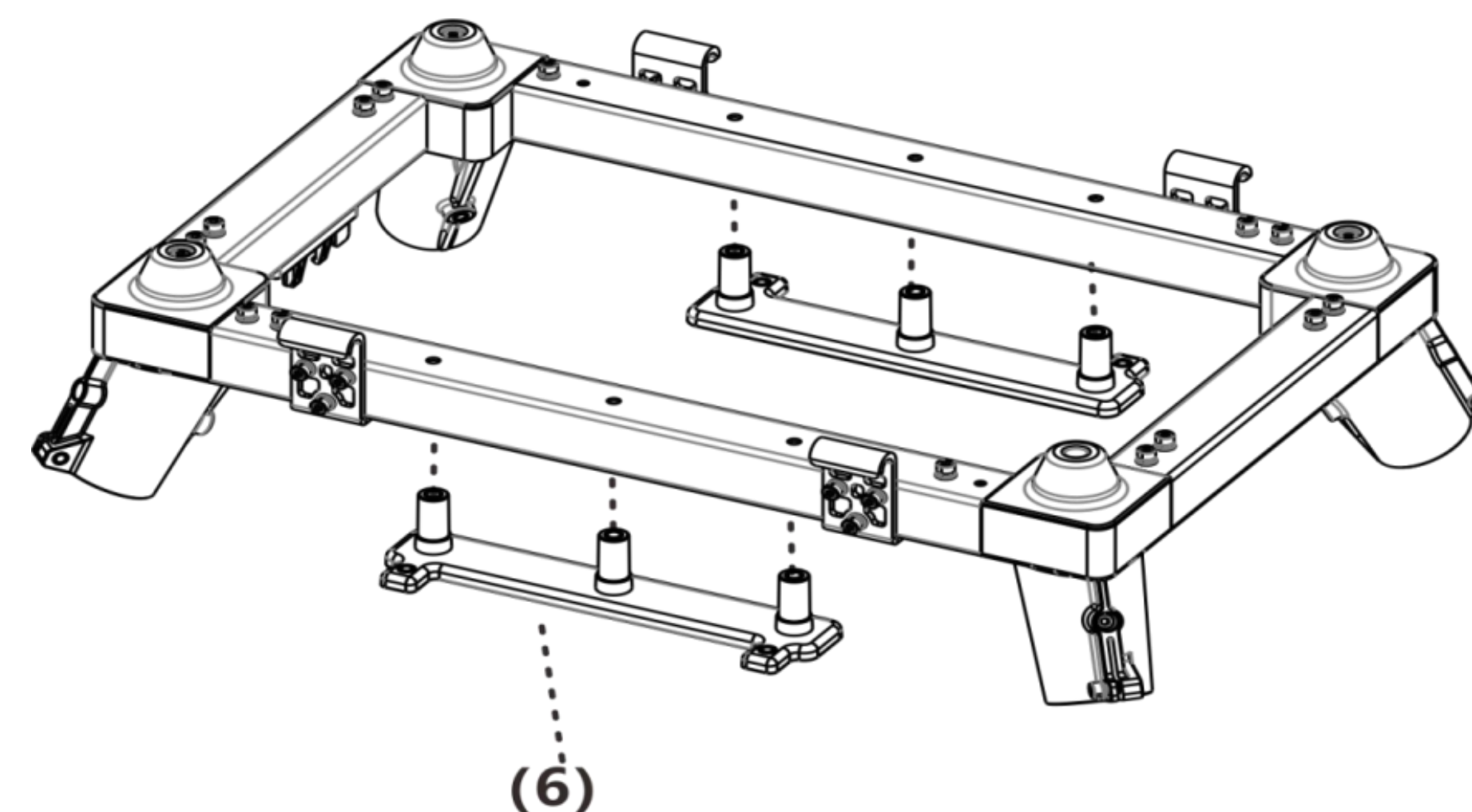
Firmly lift the liquid tank cover upward with both hands to confirm no looseness.

Chapter III Agricultural Drone Fit and Remove Procedures -

General Fit and Remove Procedures (Liquid Tank Insert)



Liquid tank insert -1



Liquid tank insert -2

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Liquid Tank Insert)

S/N	Screw spec.	Material No.	Torque requirement
(2)	M4*10*10	02-004-00747	30 - 31 kgf.cm
(3)	M4*8*8	02-004-00618	12 - 13 kgf.cm

Warning: Wear rubber gloves or cotton gloves before disassembly, as the residual liquid with corrosive and harmful substances may endanger personal health and safety.

Warning: Before disassembly, disconnect the drone with the hose and the payload system harness connected to it, and then remove the drone, to prevent accidental component damage due to drone instability during fit and remove process.

Disassembly Procedures

1. Rotate the liquid tank cover (4) counterclockwise, and remove it from the liquid tank (1).
2. Take out the liquid tank sieve (5).
3. Remove screws (2) (3).
4. Take out the liquid tank bottom insert (6) and sealing ring at the bottom of the liquid tank.

Installation Process

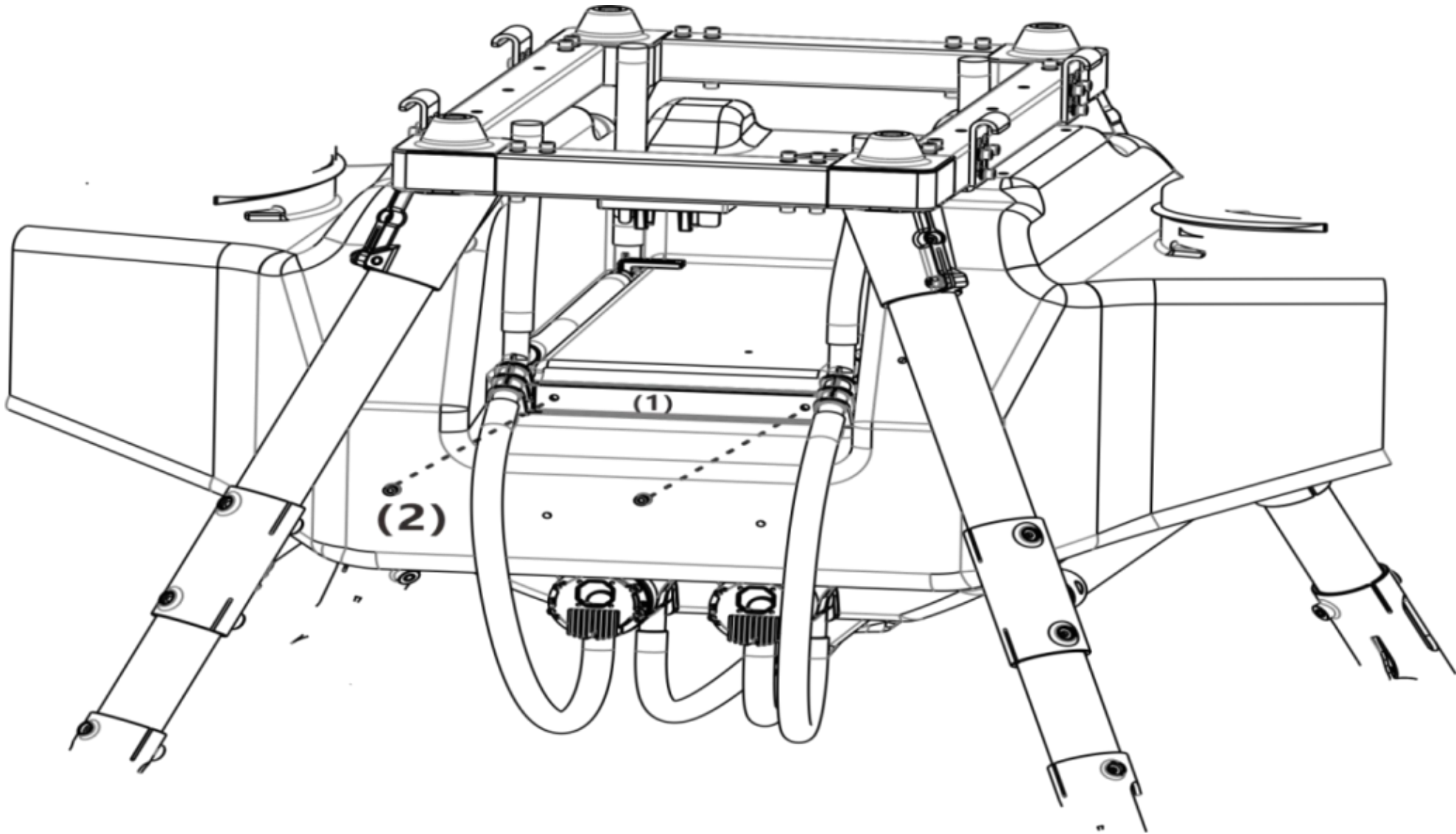
1. Insert the sealing ring into the liquid tank bottom insert (6), and install it into the liquid tank (1).
2. Use screws (2) (torque: 30 - 31 kgf.cm) and screws (3) (torque: 12 - 13 kgf.cm) to tighten the liquid tank bottom holder.
3. Install the liquid tank sieve to the liquid tank inlet.
4. Tighten the liquid tank cover clockwise.

Test:

Perform a hovering flight to ensure no significant shaking of the drone. Confirm smooth and level landing without tilting.

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Tee Fitting)



S/N	Screw spec.	Material No.	Torque requirement
(2)	M4*8*8	02-004-00618	

Disassembly Procedures

- 1. Cut the cable tie of the hose connecting the tee fitting (1), and remove the hose.
- 2. Remove screws (2), and remove the tee fitting.

Installation Process

- 1. Install the new tee fitting (1) to the liquid tank, and tighten it with screws (2) (torque: 11 - 12 kgf.cm).
- 2. Install the hose to the tee fitting, and fasten it with a cable tie.

Test:

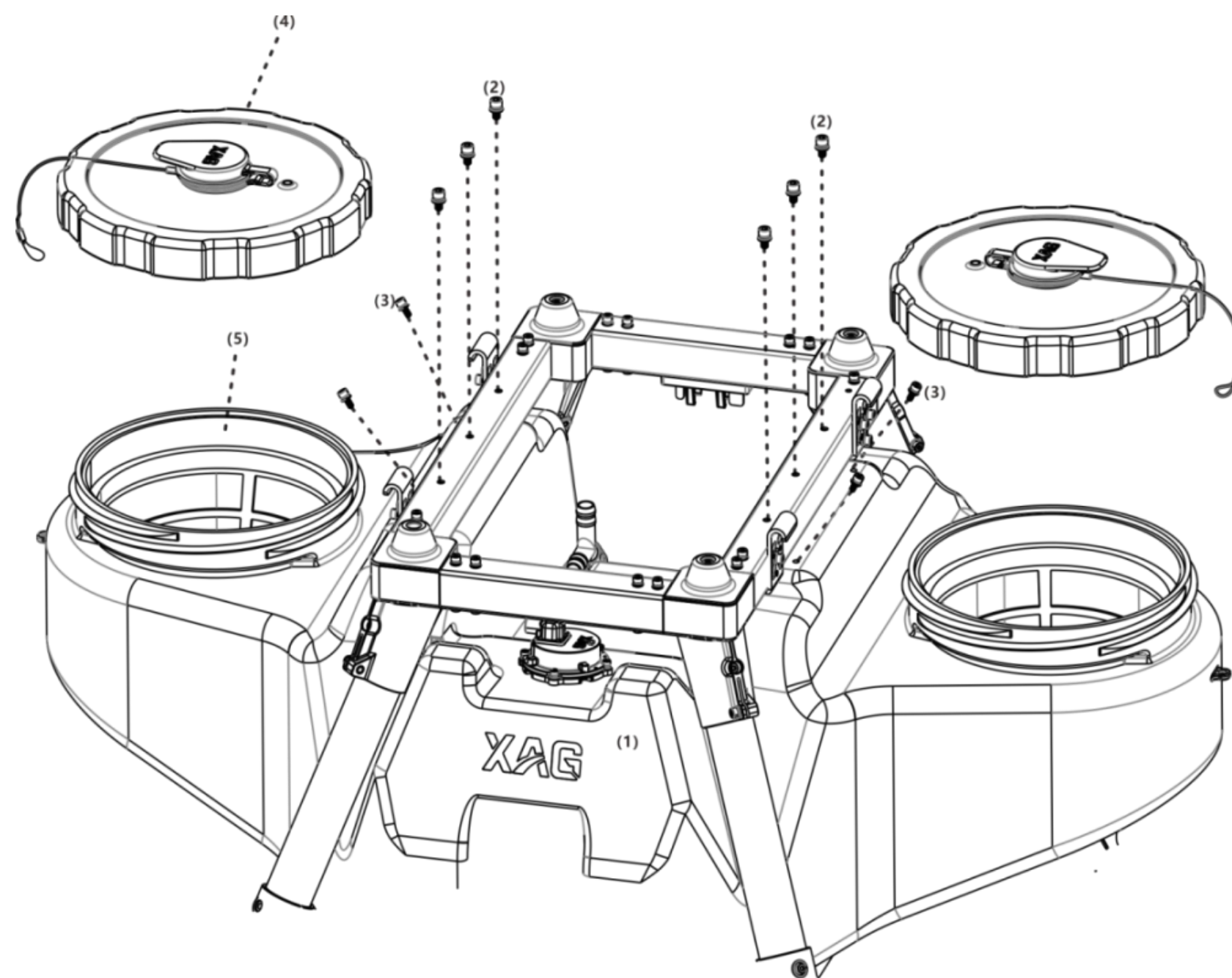
Note: Ensure the liquid tank is filled with ≥ 3 L liquid before testing.

Confirm no leaks in the tee fitting.

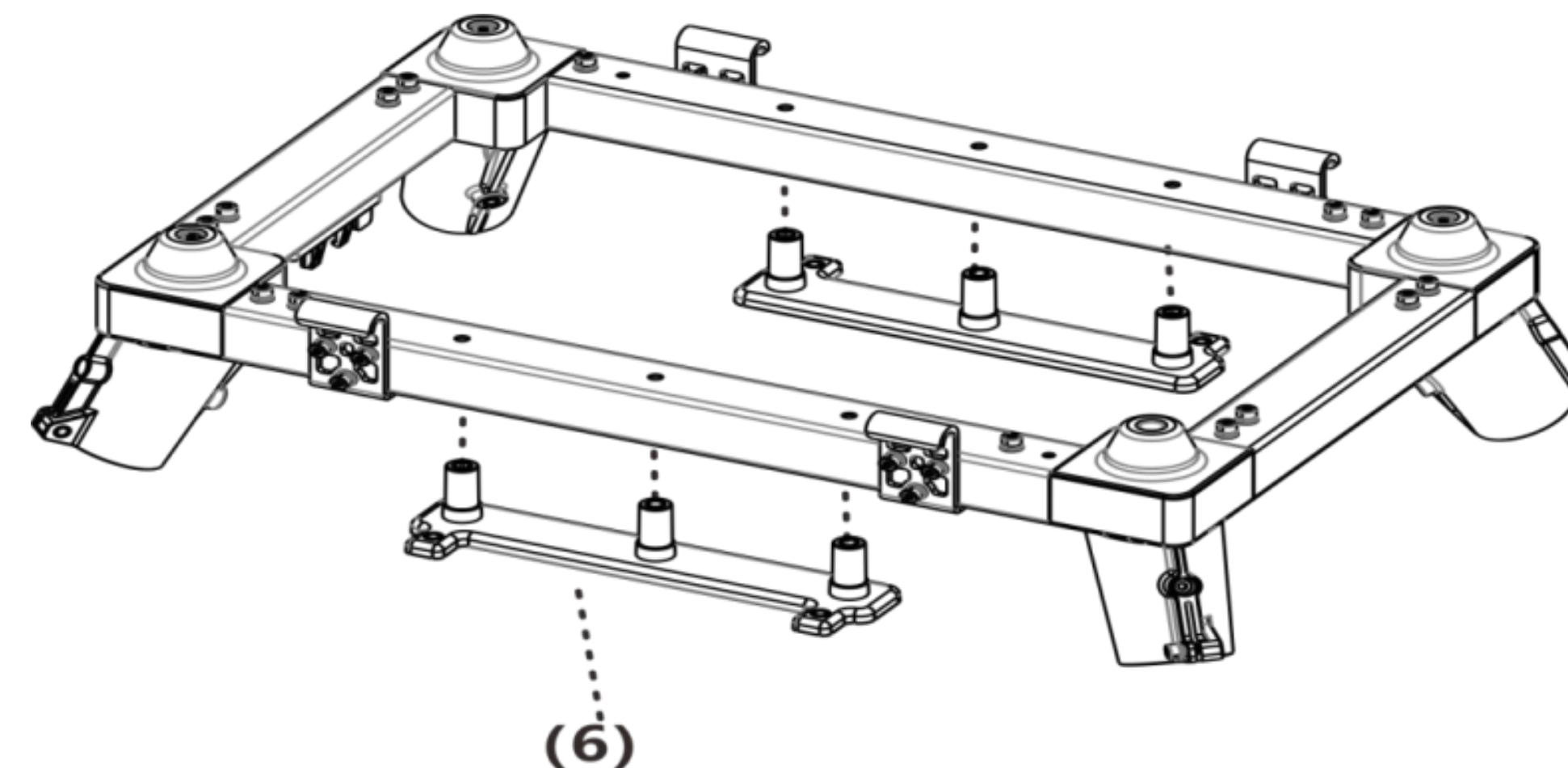
Adjust the atomization level and observe the atomization effect.

Chapter III Agricultural Drone Fit and Remove Procedures -

General Fit and Remove Procedures (Liquid Tank)



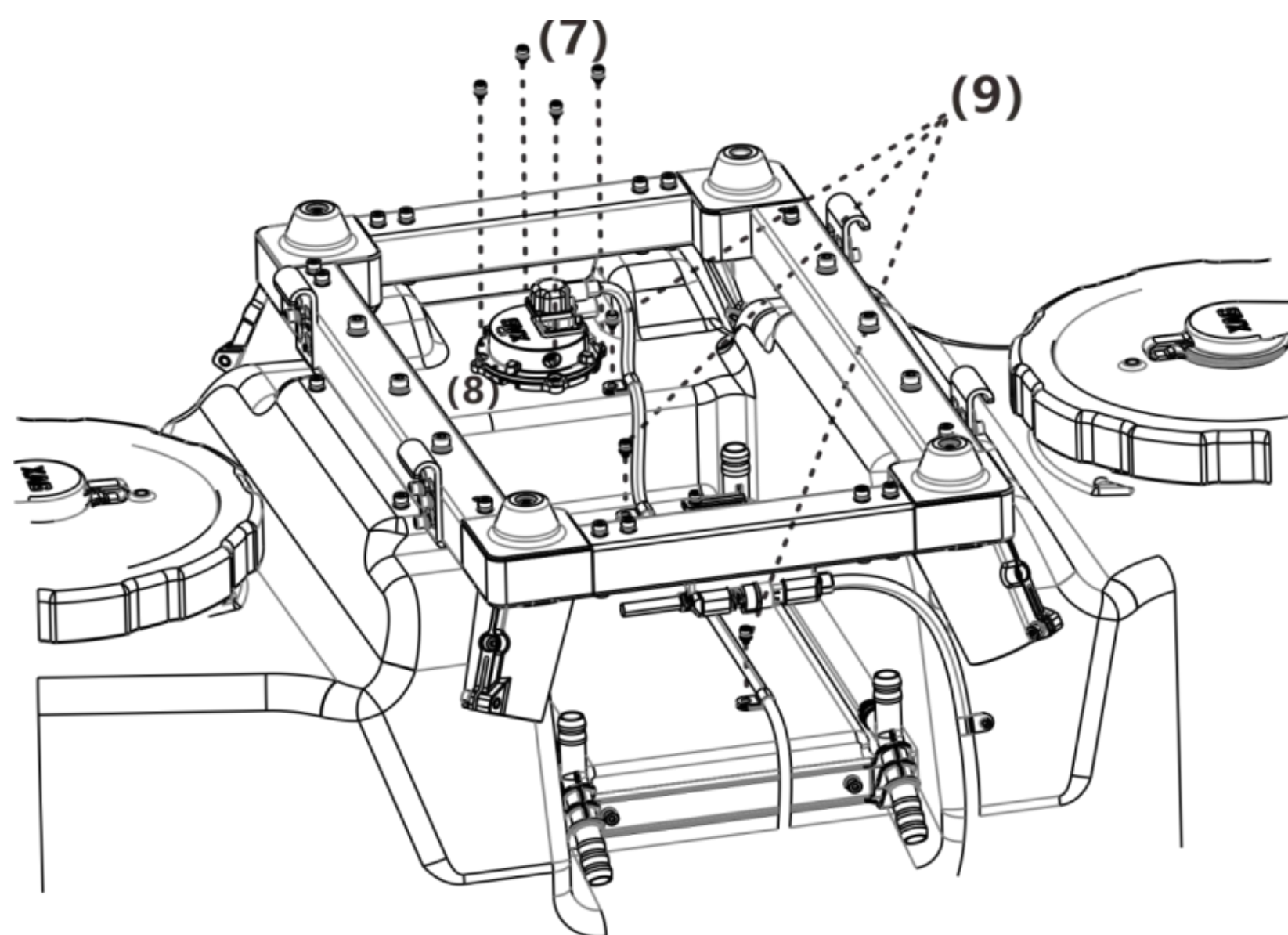
Liquid tank -1



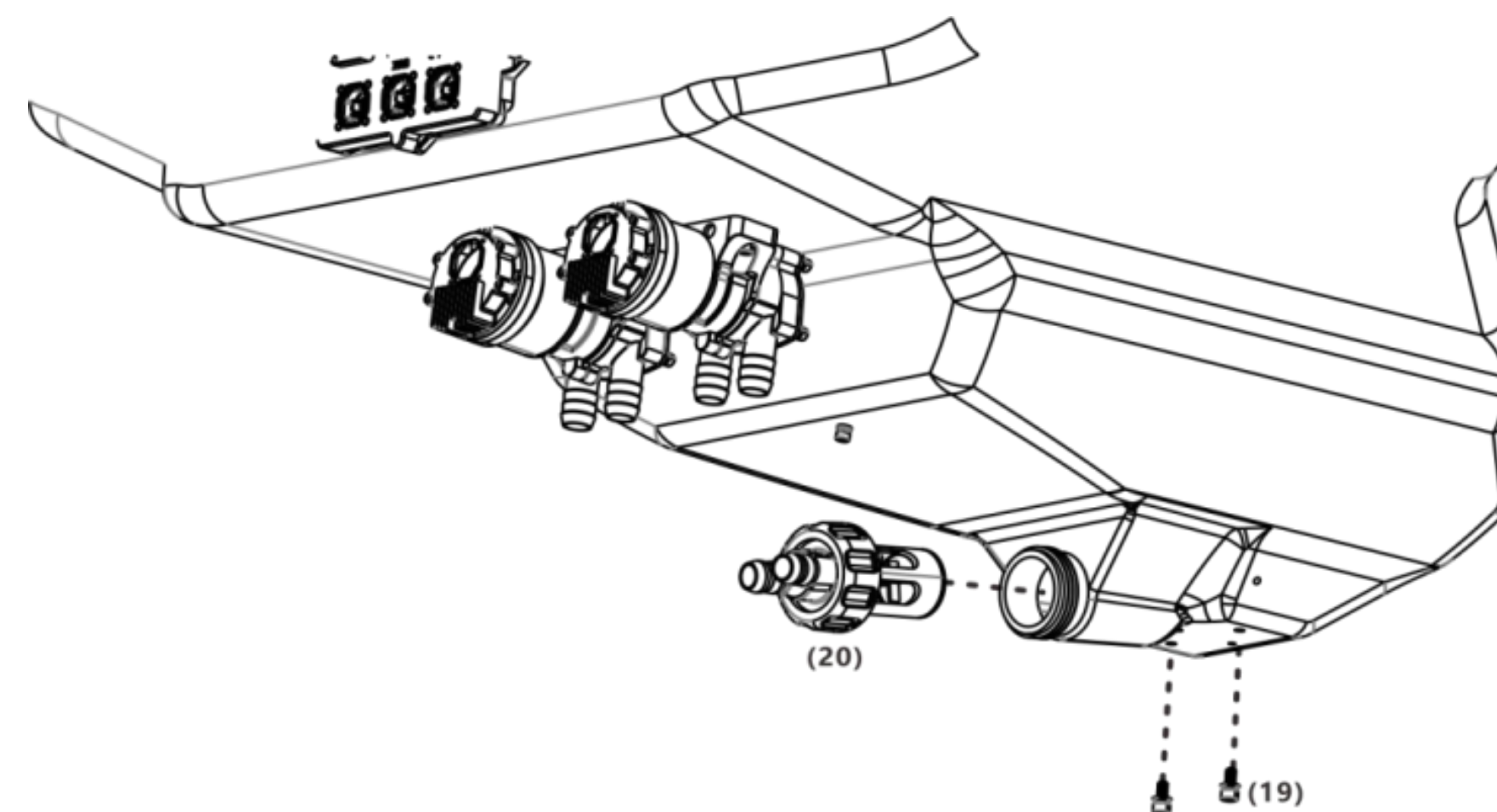
Liquid tank -2

Chapter III Agricultural Drone Fit and Remove Procedures -

General Fit and Remove Procedures (Liquid Tank)



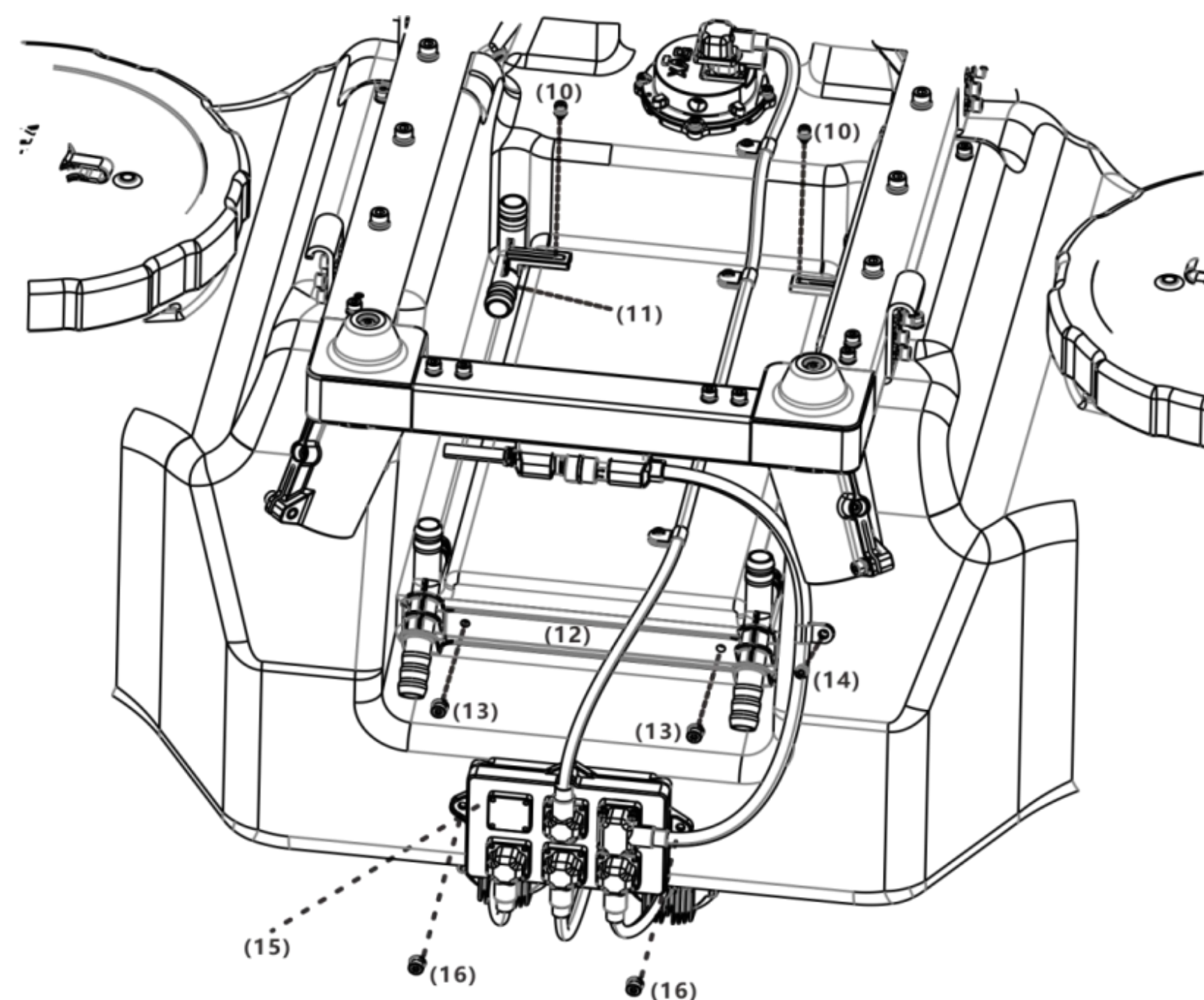
Liquid tank -3



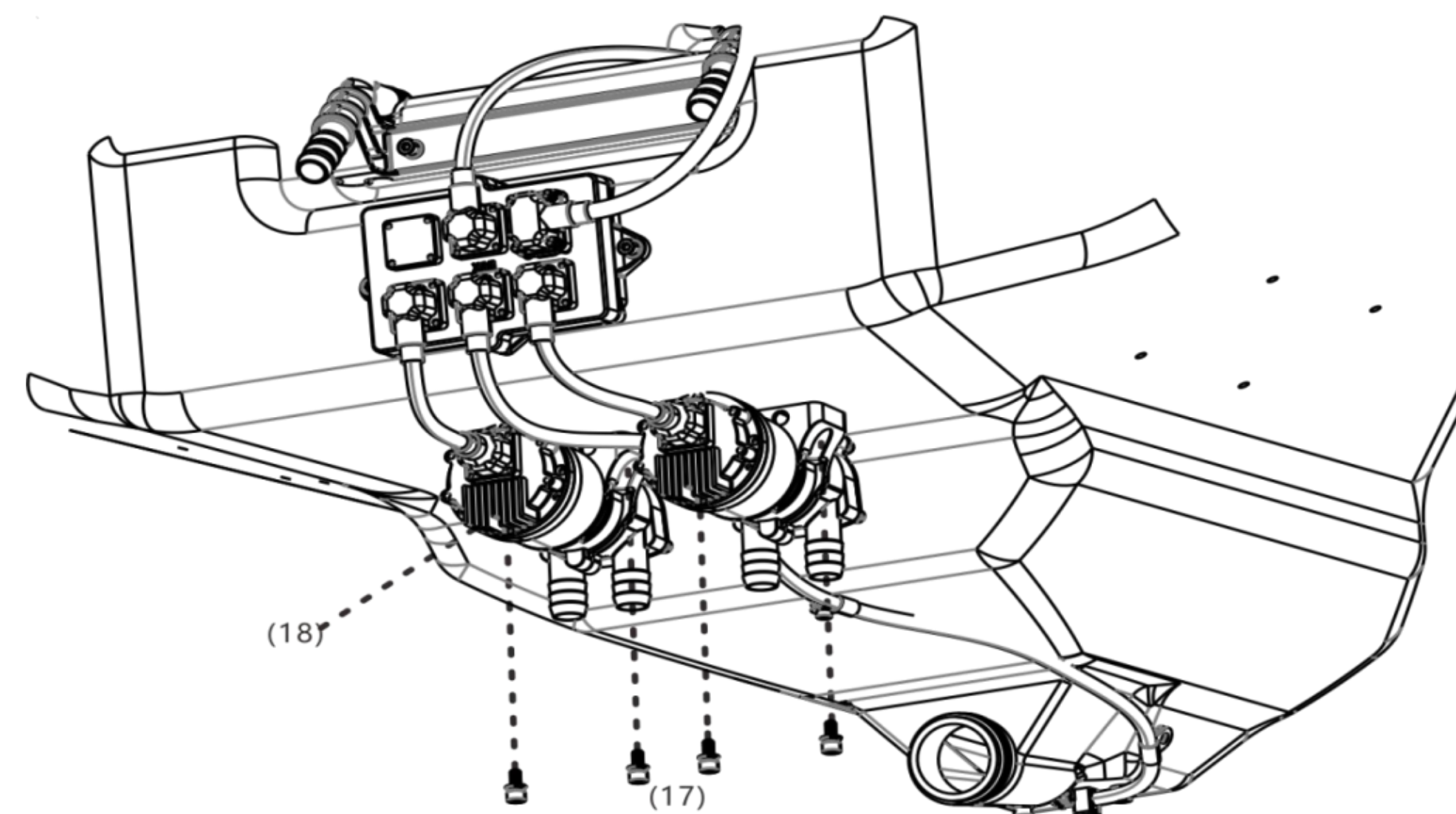
Liquid tank -4

Chapter III Agricultural Drone Fit and Remove Procedures -

General Fit and Remove Procedures (Liquid Tank)



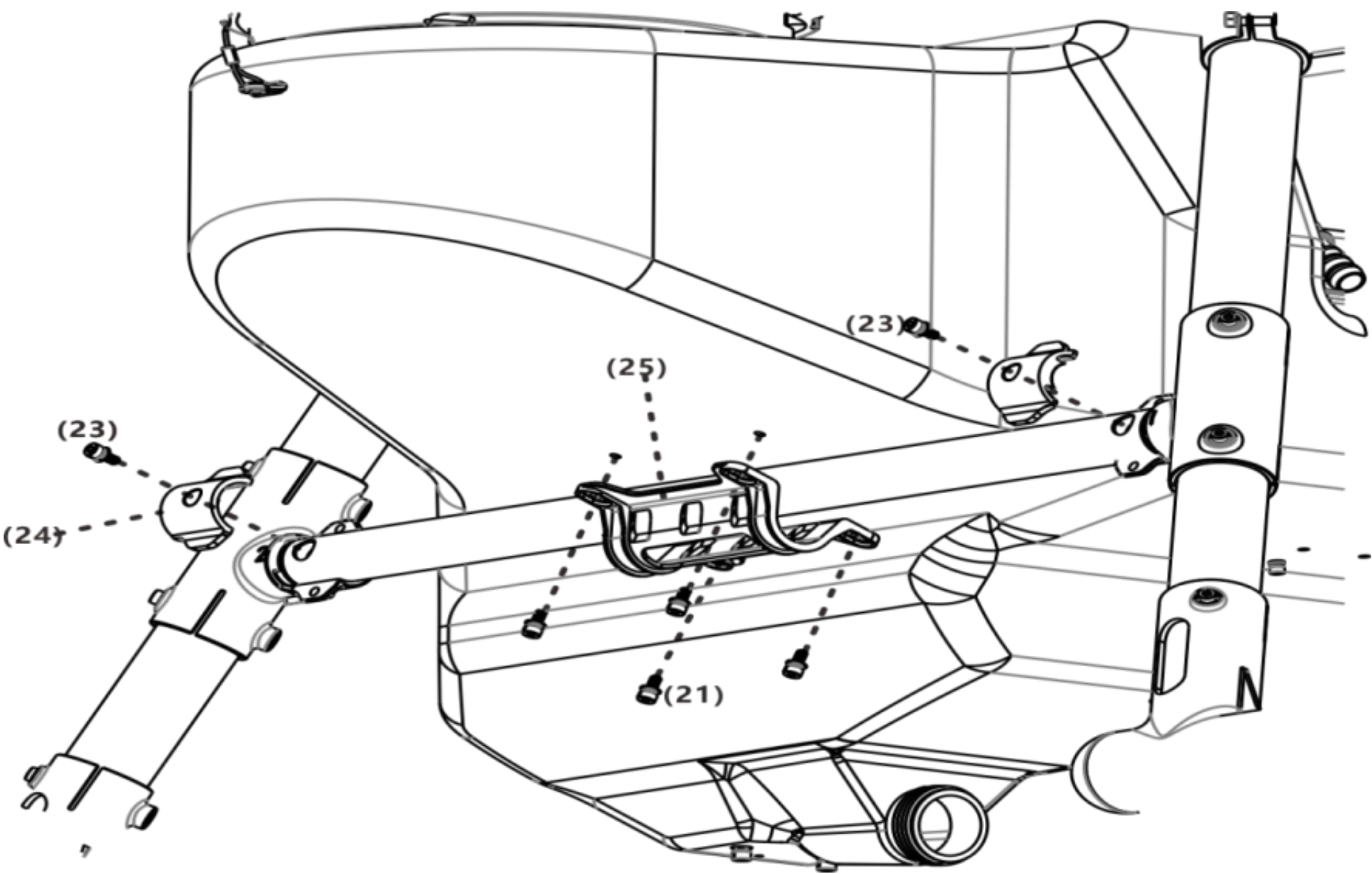
Liquid tank -5



Liquid tank -6

Chapter III Agricultural Drone Fit and Remove Procedures -

General Fit and Remove Procedures (Liquid Tank)



Liquid tank -7

S/N	Screw spec.	Material No.	Torque requirement
(2)	M5*10*10	02-004-00747	30 - 31 kgf.cm
(3)	M4*8*8	02-004-00618	12 - 13 kgf.cm
(7)	M3*10*6	02-004-00624	5 - 6 kgf.cm
(9)	M3*10*6	02-004-00624	5 - 6 kgf.cm
(10)	M3*10*6	02-004-00624	5 - 6 kgf.cm
(13)	M4*8*8	02-004-00618	
(14)	M3*10*6	02-004-00624	5 - 6 kgf.cm
(16)	M4*8*8	02-004-00618	12 - 13 kgf.cm
(17)	M4*8*8	02-004-00618	
(19)	M4*8*8	02-004-00618	
(20)	Liquid tank pagoda-shaped connector cover		Tighten it by hand, with no torque requirement
(21)	M4*12*8	02-004-00834	12 - 13 kgf.cm
(23)	M4*12*8	02-004-00834	12 - 13 kgf.cm

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Liquid Tank)

Disassembly Procedures

1. Rotate the liquid tank cover (4) counterclockwise, and remove it from the liquid tank (1).
2. Take out the liquid tank sieve (5).
3. Remove screws (2) (3).
4. Take out the liquid tank bottom insert (6) and sealing ring at the bottom of the liquid tank.
5. Remove screws (7) of the barometer radar (8).
6. Remove screws (9) of the liquid tank radar wire harness.
7. Turn over the liquid tank, remove the barometer base screws (19), and take out the barometer base from the liquid tank. Note: The hose connected to it must be detached.
8. Remove screws (10), and remove the airframe L-shaped part (11).
9. Remove screws (13), and remove the tee fitting (12).
10. Remove screws (14) (16), and remove the load cable hub (15).
11. Remove screws (17), and remove the impeller pump (18).

12. Turn the liquid tank pagoda-shaped connector cover (20) counterclockwise, and take it out of the liquid tank.
13. Remove screws (21), and remove the liquid tank bottom holder (22).
14. Remove screws (23), and remove the landing gear T-clamp (24).
15. Remove the crossbar (25) from the landing gear tee fitting.

Note: The crossbars on both sides of the liquid tank must be removed.

Warning: Wear rubber gloves or cotton gloves before disassembly, as the residual liquid with corrosive and harmful substances may endanger personal health and safety. Before disassembly, disconnect the drone from the hose and the payload system harness connected to it, and then remove the drone, to prevent accidental component damage due to drone instability during fit and remove process.

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Liquid Tank)

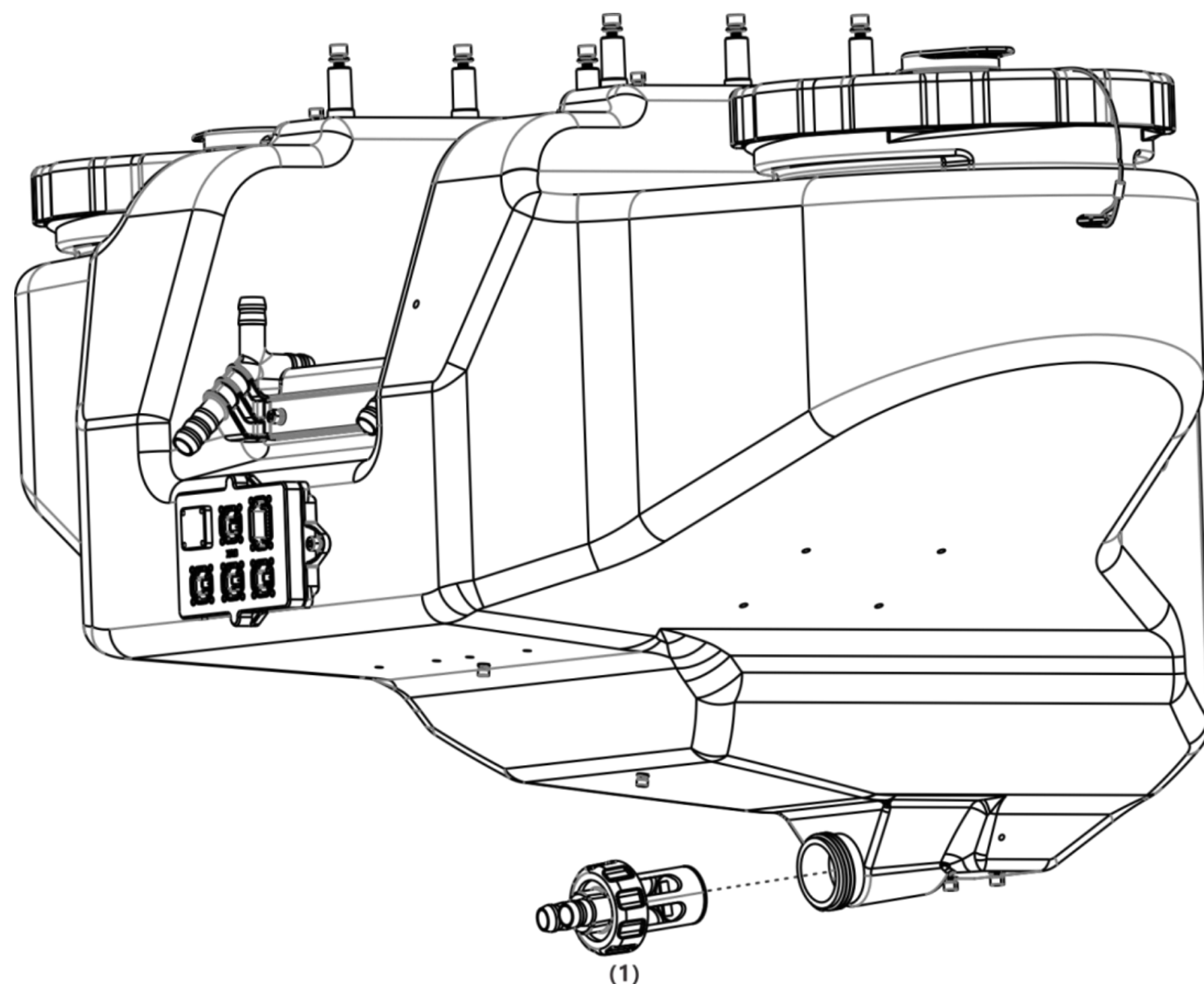
Installation Process

1. Turn over the landing gear, and align the new liquid tank with the holes of the long load tube.
2. Install the crossbar (25) to the landing gear tee fitting.
3. Use screws (23) (torque: 11 - 12 kgf.cm) to fasten the landing gear T-clamp (24) to the landing gear tee fitting.
4. Install the liquid tank bottom holder (22) onto the liquid tank, and tighten it with screws (21) (torque: 11 - 12 kgf.cm). Note: The crossbars on both sides of the liquid tank must be installed.
5. Install the liquid tank pagoda-shaped connector cover (20) into the liquid tank, and tighten it clockwise.
6. Note: Before installation, inspect the sealing ring inside the liquid tank pagoda-shaped connector cover. If cracks or deformations are found, replace it immediately. Failure to do so will compromise the liquid tank's airtightness, resulting in inaccurate radar measurements.
7. Install the impeller pump (18) onto the liquid tank, and use screws (17) (torque: 11 - 12 kgf.cm).
8. Install the load cable hub (15) to the liquid tank, and tighten it with screws (16) (torque: 11 - 12 kgf.cm).
9. Use screws (14) (torque: 5 - 6 kgf.cm) to secure the payload system wire harness to the bottom of the liquid tank.
10. Install the tee fitting (12) to the liquid tank, and tighten it with screws (13) (torque: 11- 12 kgf.cm).

11. Install the airframe L-shaped part (11) to the liquid tank, and tighten it with screws (10) (torque: 5- 6 kgf.cm).
 12. Install the barometer base to the bottom of the liquid tank, and tighten it with screws (19) (torque: 11- 12 kgf.cm).
- Note: Before installation, inspect the sealing ring of the barometer base. If cracks or deformations are found, replace it immediately. Failure to do so will compromise the liquid tank's airtightness, resulting in inaccurate radar measurements.
13. Install the barometer radar (8) to the liquid tank, and tighten it with screws (7) (torque: 5 - 6 kgf.cm).
 14. Use screws (9) (torque: 5 - 6 kgf.cm) to fix the barometer radar wire harness to the liquid tank, and connect the hose to the barometer base.
 15. Install the liquid tank bottom insert (6) into the liquid tank, and tighten it with screws (2) (torque: 24 - 26 kgf.cm) and (3) (torque: 11 - 12 kgf.cm).
- Note: Before installation, inspect the sealing ring of the liquid tank bottom insert. If cracks or deformations are found, replace it immediately. Failure to do so will compromise the liquid tank's airtightness, resulting in inaccurate radar measurements.
16. Install the liquid tank sieve (5) to the liquid tank (1), and tighten the liquid tank cover (4) clockwise.
- Test:
- Note: Ensure the liquid tank is filled with ≥ 3 L liquid before testing. Confirm no leaks in the liquid tank.
- Adjust the atomization level and observe the atomization effect.

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Liquid Tank Filter)



Disassembly Procedures

1. Remove the liquid tank cover (1) from the liquid tank by rotating it counterclockwise.
2. Note: The hose connected to it must be detached.

Installation Process

Tighten the liquid tank filter unit (1) clockwise, connect it to the hose, and fasten it with a cable tie.

Test:

Note: Ensure the liquid tank is filled with $\geq 3\text{L}$ liquid before testing. Confirm no leaks in the liquid tank.

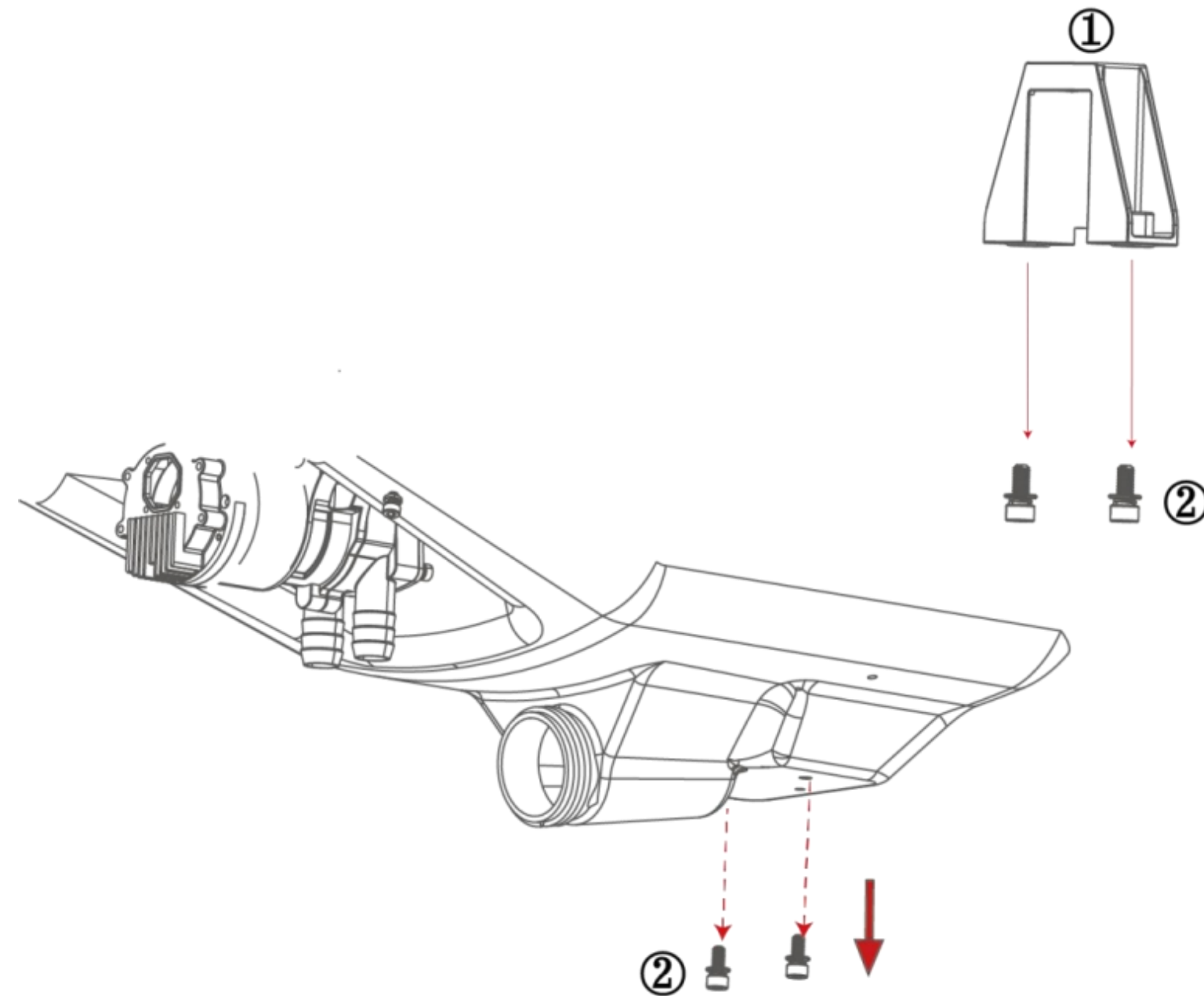
Adjust the atomization level and observe the atomization effect.

Warning: Wear rubber gloves or cotton gloves before disassembly, as the residual liquid with corrosive and harmful substances may endanger personal health and safety.

Warning: Before disassembly, disconnect the drone with the hose and the payload system harness connected to it, and then remove the drone, to prevent accidental component damage due to drone instability during fit and remove process.

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Float Base)



S/N	Screw spec.	Material No.	Torque requirement
(2)	M4*8*8		kgf.cm

Disassembly Procedures

Remove screws ②, and take out the float base ① from the liquid tank.

Installation Process

1. Install the float base ① into the liquid tank, and tighten it with screws ② (torque: kgf.cm).
2. Note: A sealing ring is placed at the screw holes of the float base.

Test:

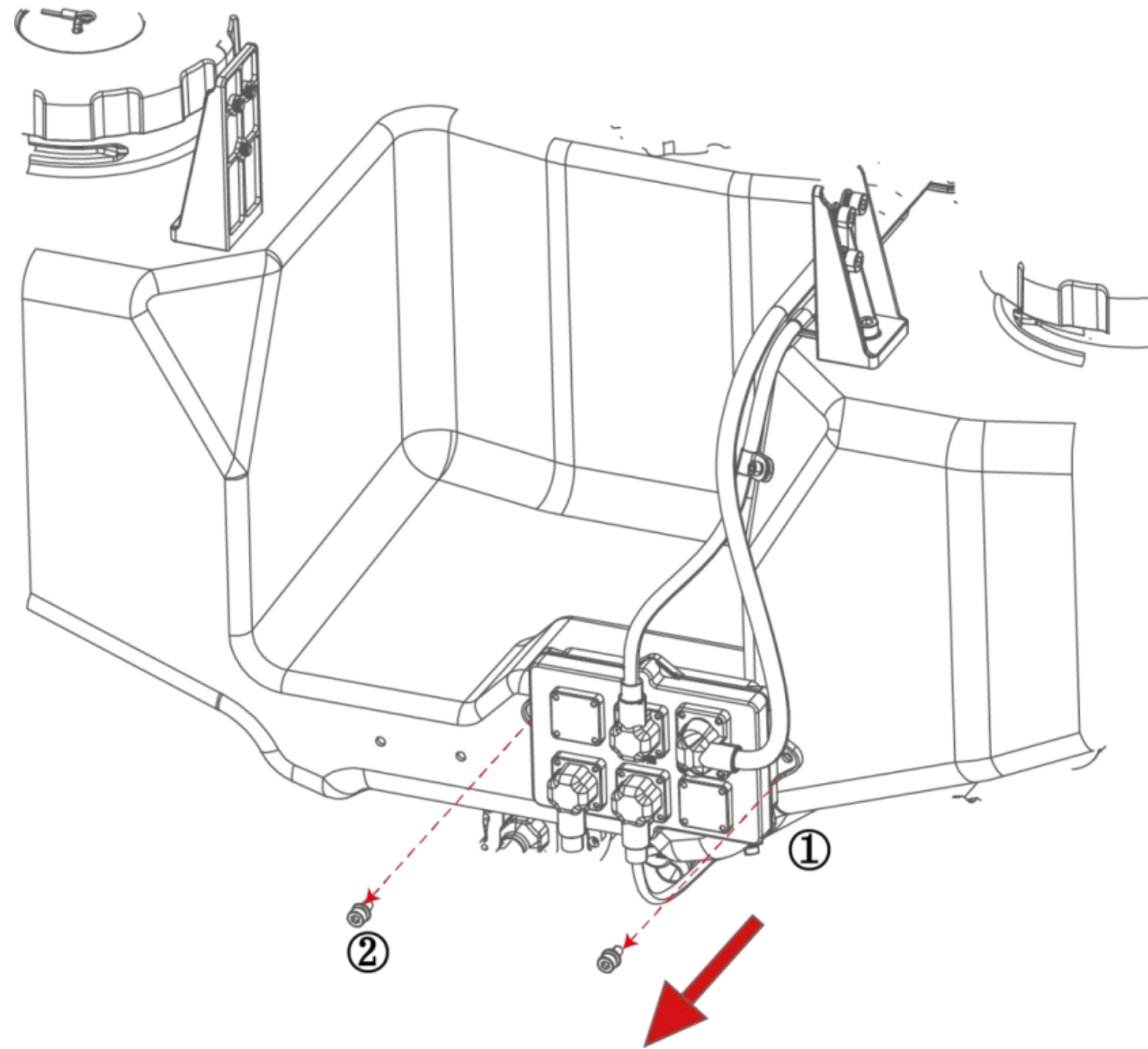
1. Note: Ensure the liquid tank is filled with $\geq 3L$ liquid before testing.
2. Confirm no leaks in the liquid tank.
3. Adjust the atomization level and observe the atomization effect.
4. During the spraying test, after RTH without liquid, inspect the liquid tank to confirm there is no residual liquid.

Warning: Wear rubber gloves or cotton gloves before disassembly, as the residual liquid with corrosive and harmful substances may endanger personal health and safety.

Warning: Before disassembly, disconnect the drone with the hose and the payload system harness connected to it, and then remove the drone, to prevent accidental component damage due to drone instability during fit and remove process.

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Load Cable Hub)



Warning: Before disassembly, ensure the power is turned off or the battery is disconnected and removed.

S/N	Screw spec.	Material No.	Torque requirement
(2)	M4*8*8	02-004-00618	12 - 13 kgf.cm

Disassembly Procedures

1. Remove screws ②, and remove the load cable hub ① from the liquid tank.
2. Note: Be sure to remove all harnesses.

Installation Process

Install the load cable hub ① to the liquid tank, and tighten it with screws ② (torque: kgf.cm).

Test:

Precautions:

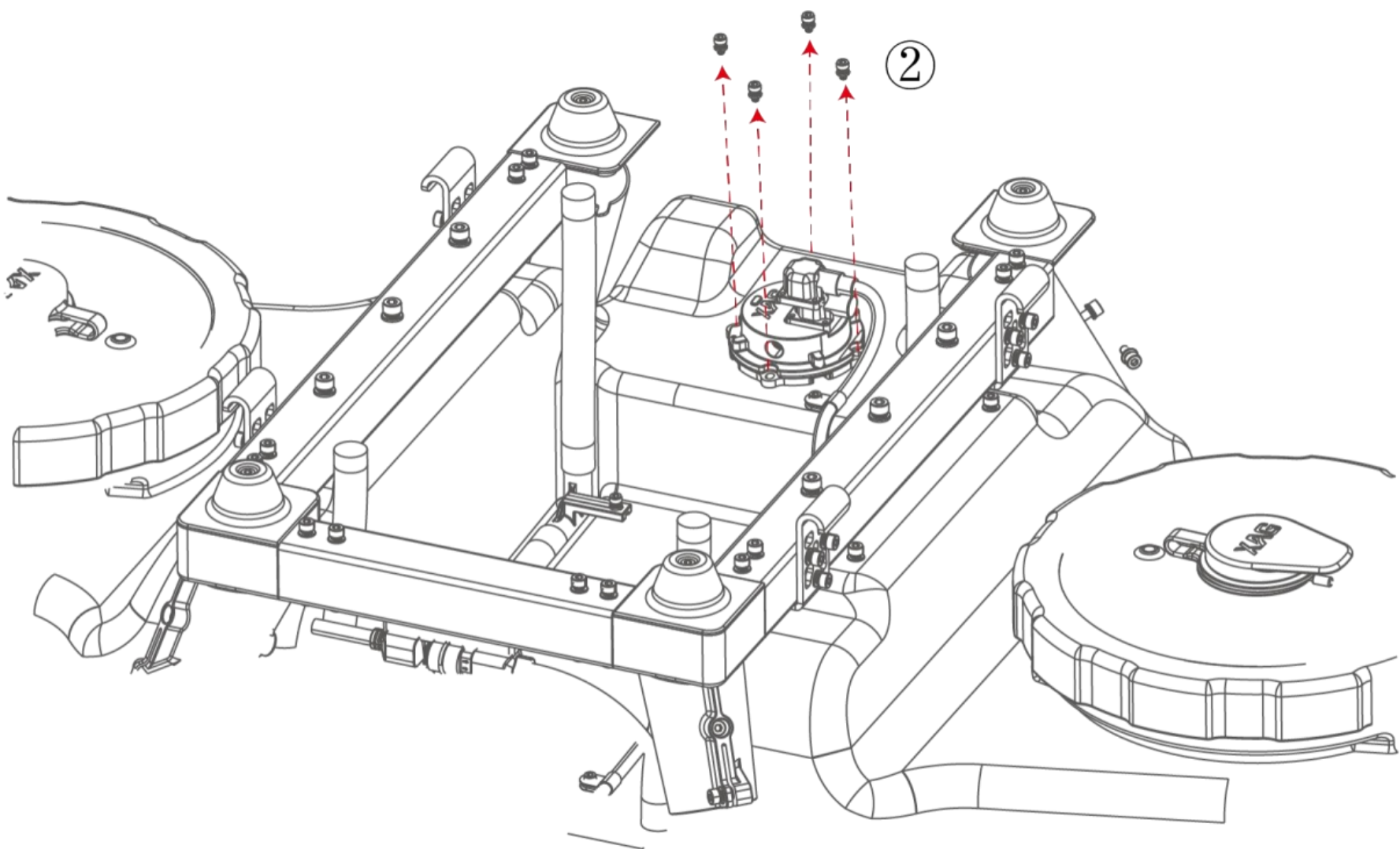
Ensure the liquid tank is filled with ≥ 3 L liquid before testing.

Check whether the impeller pump works normally.

Check the sealing of the impeller pump, and confirm no leaks. No load breakdown information is displayed in the APP.

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Barometer)



Warning: Before disassembly, ensure the power is turned off or the battery is disconnected and removed.

S/N	Screw spec.	Material No.	Torque requirement
(2)	M3*10*6	02-004-00624	5 - 6 kgf.cm

Disassembly Procedures

- 1. Remove screws ②, and remove the barometer from the liquid tank.
- 2. Note: Be sure to remove all harnesses.

Installation Process

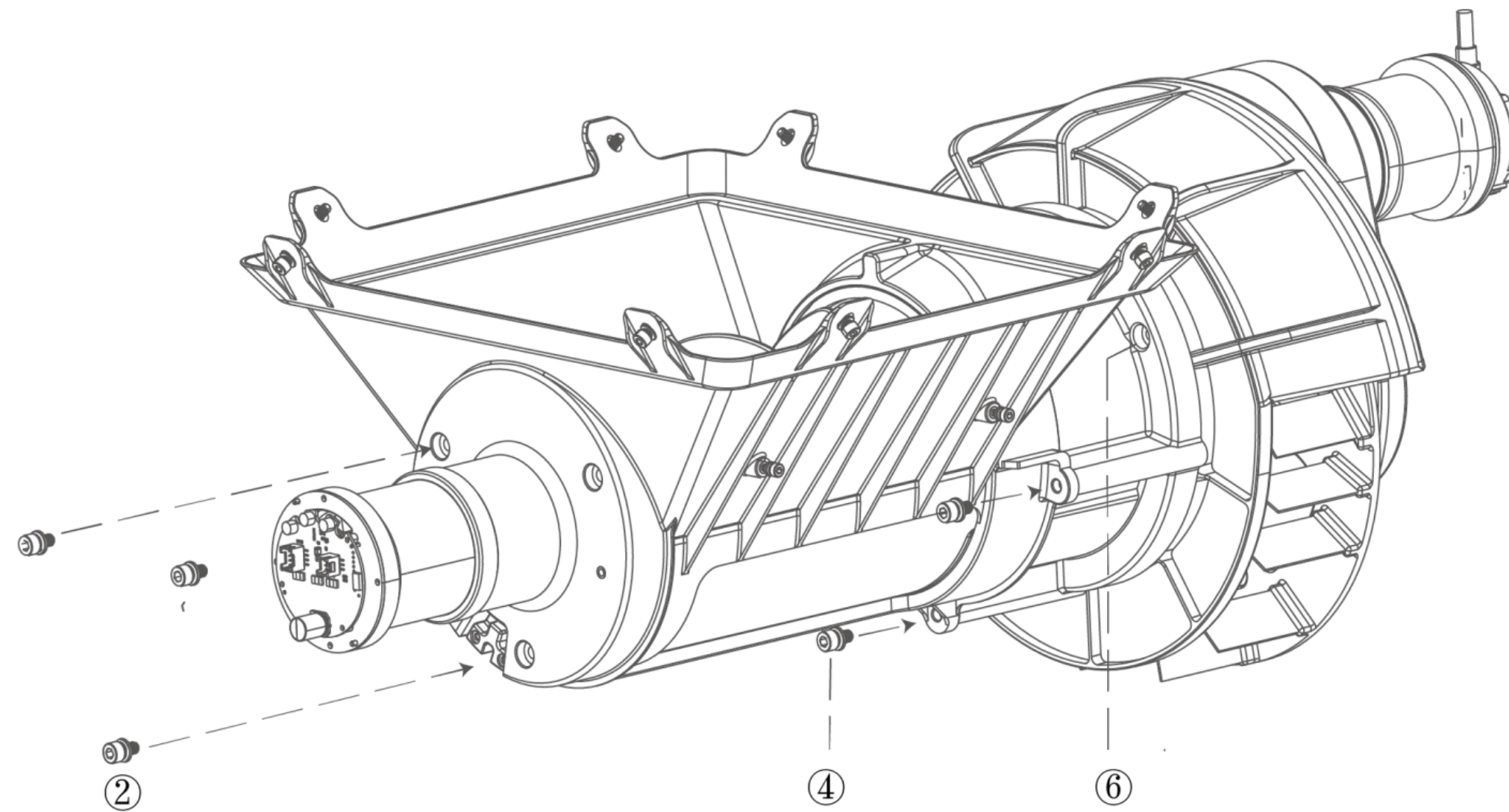
Install the barometer to the liquid tank, and tighten it with screws ② (torque: kgf.cm). Note: Be sure to connect all harnesses.

Test:

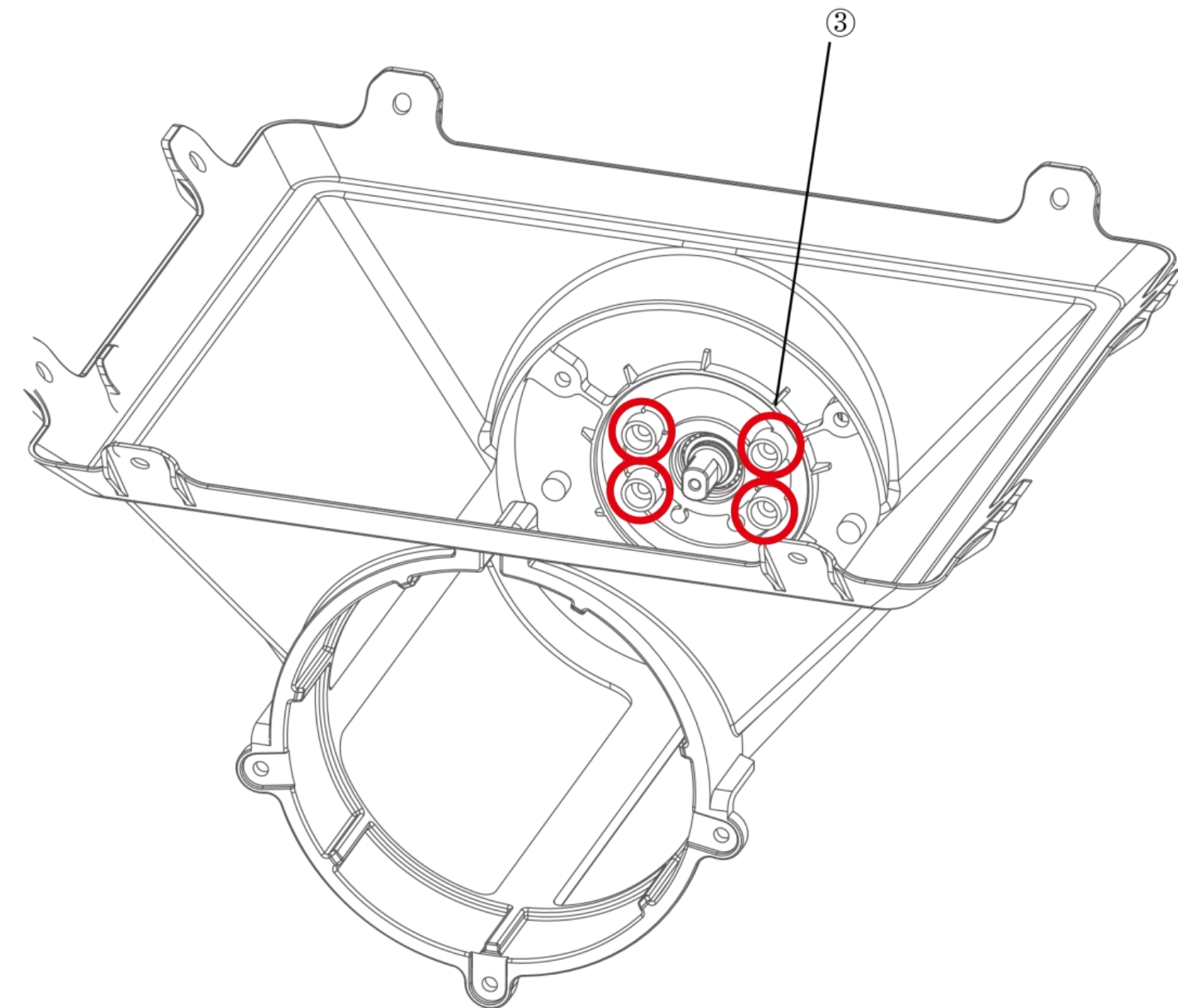
- Precautions:
- Ensure the liquid tank is filled with ≥3L liquid before testing. No barometer breakdown information is displayed in the APP.
 - During the spraying test, after RTH without liquid, check whether there is residual liquid.

Chapter III Agricultural Drone Fit and Remove Procedures -

General Fit and Remove Procedures (RevoCast Main Frame)



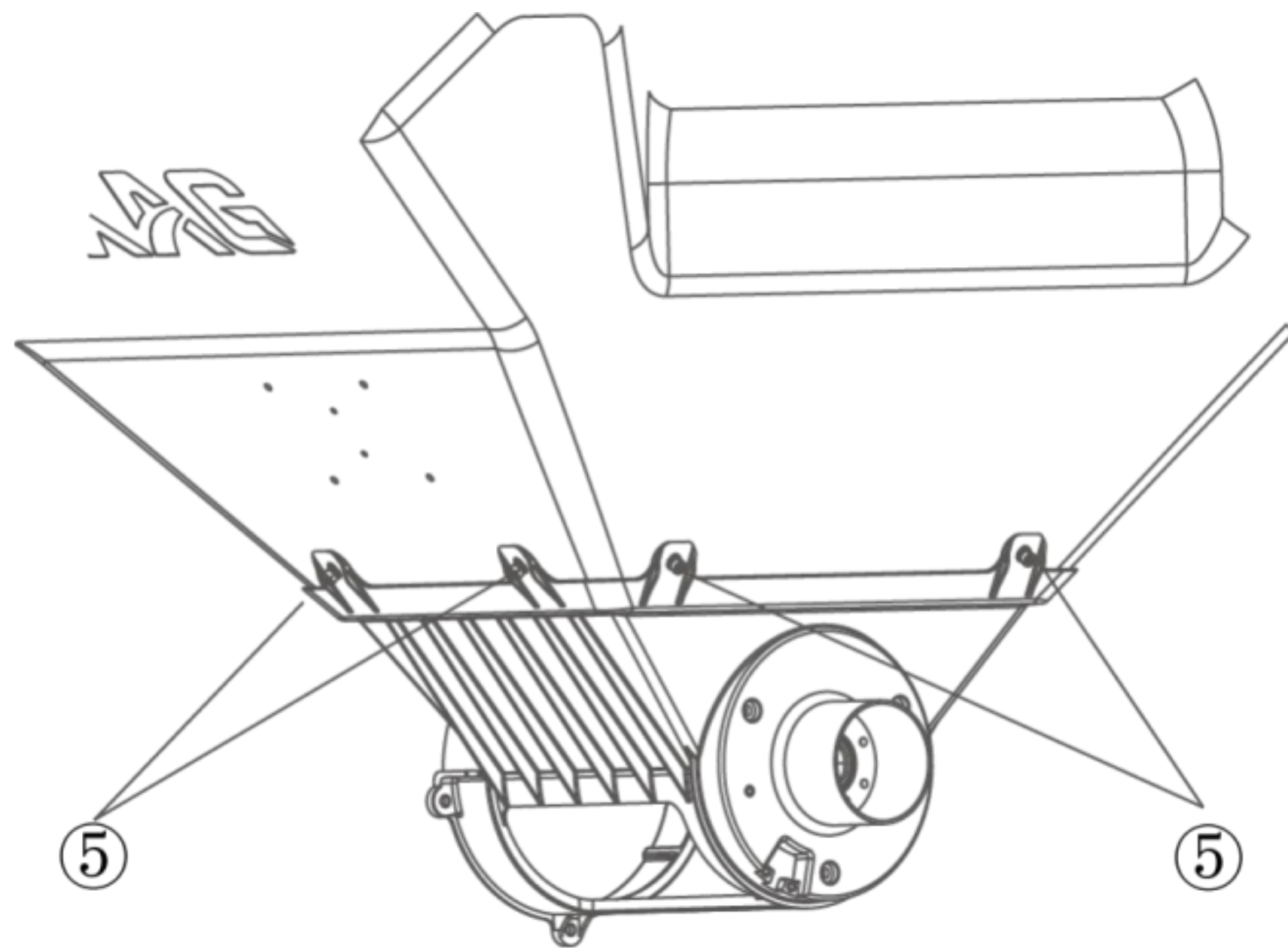
RevoCast main frame - 1



RevoCast main frame - 2

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (RevoCast Main Frame)



RevoCast main frame - 3

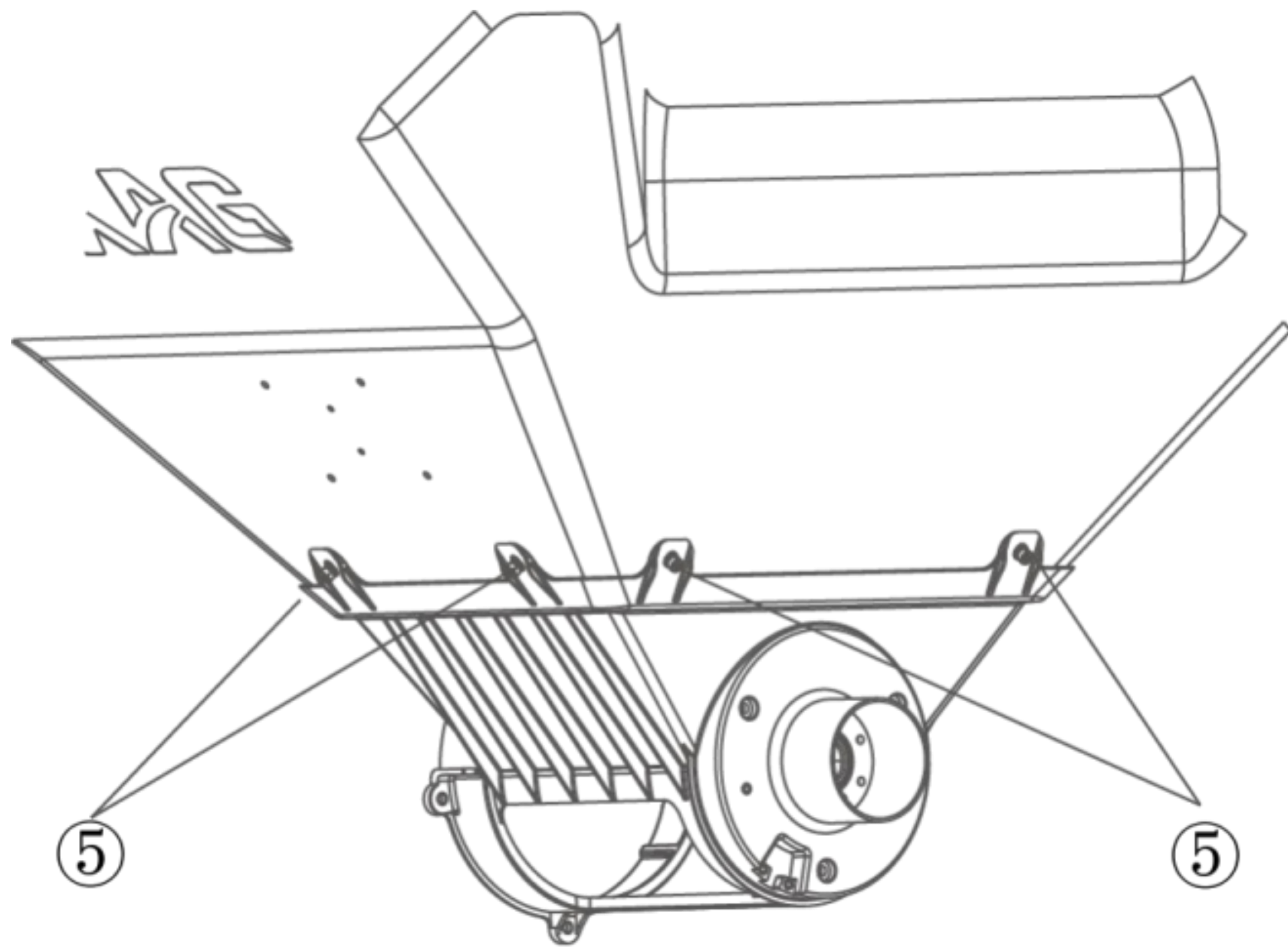
S/N	Screw spec.	Material No.	Torque requirement
(2)	M3*10*6	02-004-00624	5 - 6 kgf.cm
(3)	M4*12*8	02-004-00834	14 - 15 kgf.cm
(4)	M5*10*10	02-004-00747	18 - 19 kgf.cm
(5)	M5*12	02-004-00670	14 - 16 kgf.cm
(6)	M5*12	02-004-00670	18 - 19 kgf.cm

Disassembly Procedures

1. Remove screws ② on the screw feeder motor side, then remove screws ④ ⑥, and take out the spreading disc motor from the feeder shell.
2. Note: Before disassembly, be sure to disconnect the screw feeder motor and spreading disc motor harness from the RevoCast main frame and the cable hub. Otherwise, pulling the wiring harness during the disassembly may damage it.
3. Remove screws ③, and take the screw feeder motor out of the RevoCast main frame.
4. Note: Before disassembly, be sure to disconnect the screw feeder motor and spreading disc motor harness from the RevoCast main frame and the cable hub. Otherwise, pulling the wiring harness during the disassembly may damage it.
5. Remove the RevoCast main frame screws ⑤, and remove the RevoCast main frame from the granule container.

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (RevoCast Main Frame)



RevoCast main frame - 3

S/N	Screw spec.	Material No.	Torque requirement
(2)	M3*10*6	02-004-00624	5 - 6 kgf.cm
(3)	M4*12*8	02-004-00834	14 - 15 kgf.cm
(4)	M5*10*10	02-004-00747	18 - 19 kgf.cm
(5)	M5*12	02-004-00670	14 - 16 kgf.cm
(6)	M5*12	02-004-00670	18 - 19 kgf.cm

Disassembly Procedures

1. Install the RevoCast main frame to the granule container, and tighten it with screws ⑤ (torque: 14 - 16 kgf.cm).
2. Install the screw feeder motor to the RevoCast main frame, and tighten it with screws ③ (torque: 14 - 15 kgf.cm).
3. Install the spreading disc motor to the RevoCast main frame, and tighten it with screws ② (torque: 18 - 19 kgf.cm), ④ (torque: 18 - 19 kgf.cm) and ⑥ (torque: 18 - 19 kgf.cm).

Note: After motor installation, verify that all harnesses have been connected back to their original positions.

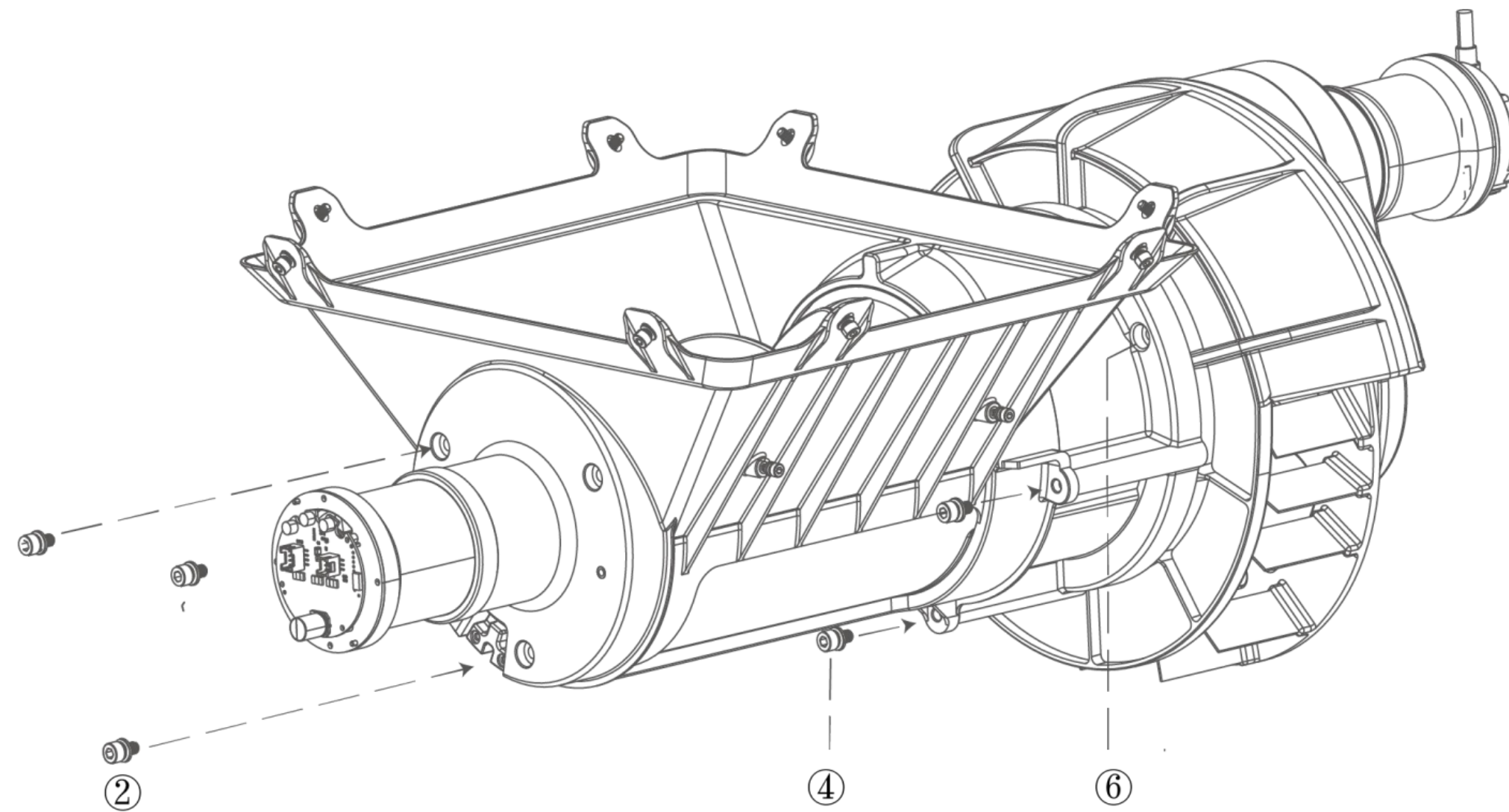
Test:

Power on, perform a spreading test, and observe the rotation of the screw feeder to ensure there is no jamming. Observe the rotation of the spreading disc to ensure there is no jamming.

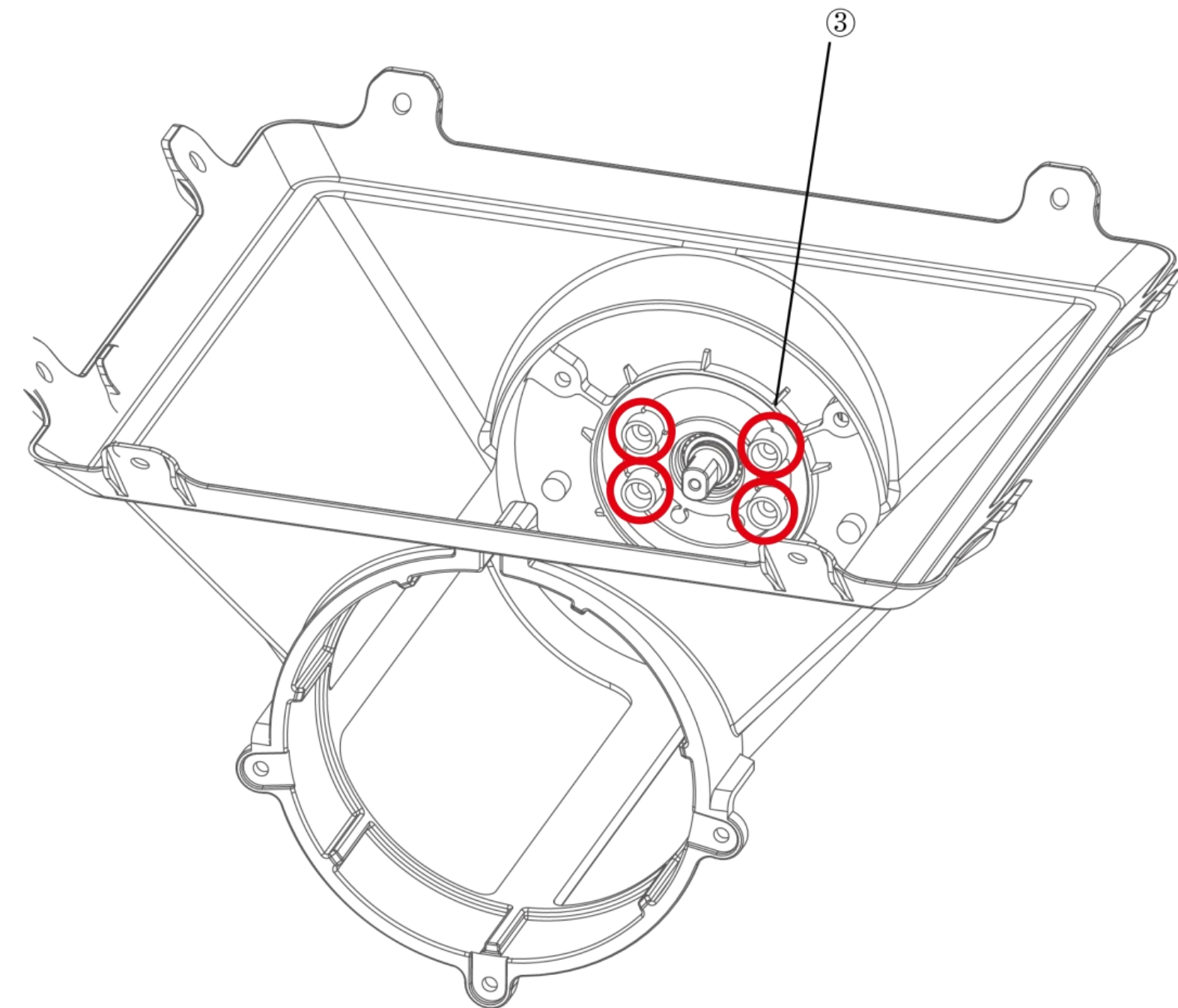
No spreading breakdown information is displayed in the APP.

Chapter III Agricultural Drone Fit and Remove Procedures -

General Fit and Remove Procedures (Screw Feeder Motor)



Screw feeder motor -1



Screw feeder motor -2

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Screw Feeder Motor)

Disassembly Procedures

1. Remove screws ② on the screw feeder motor side, then remove screws ④ ⑥, and take out the spreading disc motor from the feeder shell.

Note: Before disassembly, be sure to disconnect the screw feeder motor and spreading disc motor harness from the RevoCast main frame and the cable hub. Otherwise, pulling the wiring harness during the disassembly may damage it.

2. Remove screws ③, and take the screw feeder motor out of the RevoCast main frame.

3. Note: Before disassembly, be sure to disconnect the screw feeder motor and spreading disc motor harness from the RevoCast main frame and the cable hub. Otherwise, pulling the wiring harness during the disassembly may damage it.

S/N	Screw spec.	Material No.	Torque requirement
(2)	M5*12	02-004-00670	18 - 19 kgf.cm
(3)	M4*12*8	02-004-00834	14 - 15 kgf.cm
(4)	M5*10*10	02-004-00747	18 - 19 kgf.cm
(6)	M5*12	02-004-00670	18 - 19 kgf.cm

Installation Process

1. Install the screw feeder motor to the RevoCast main frame, and tighten it with screws ③ (torque: 14 - 15 kgf.cm).

2. Install the spreading disc motor to the RevoCast main frame, and tighten it with screws ② (torque: 18 - 19 kgf.cm), ④ (torque: 18 - 19 kgf.cm) and ⑥ (torque: 18 - 19 kgf.cm).

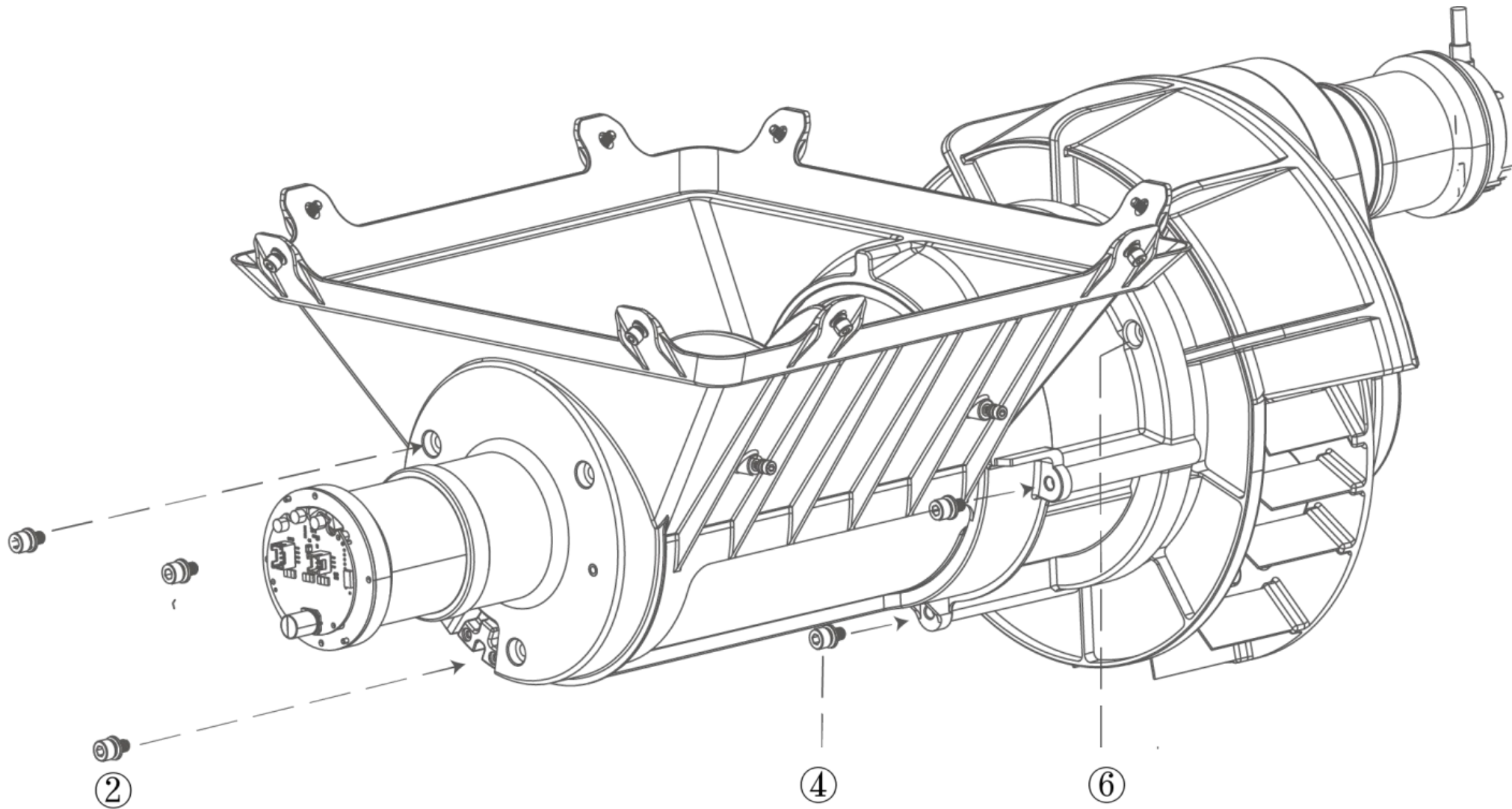
Note: After motor installation, verify that all harnesses have been connected back to their original positions. Test:

Power on, perform a spreading test, and observe the rotation of the screw feeder to ensure there is no jamming. Observe the rotation of the spreading disc to ensure there is no jamming.

No spreading breakdown information is displayed in the APP.

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Feeder Shell & Screw Feeder)



S/N	Screw spec.	Material No.	Torque requirement
(2)	M3*10*6	02-004-00624	5 - 6 kgf.cm
(4)	M5*10*10	02-004-00747	18 - 19 kgf.cm
(6)	M5*12	02-004-00670	18 - 19 kgf.cm

Disassembly Procedures

1. Remove screws ② and ④ on the screw feeder motor side, and take out the spreading disc motor from the feeder shell.

Note: Before disassembly, be sure to disconnect the screw feeder motor and spreading disc motor harness from the RevoCast main frame and the cable hub. Otherwise, pulling the wiring harness during the disassembly may damage it.

2. Remove screws ⑥, and remove the feeder shell from the discharge holder at the screw feeder end.

Installation Process

1. Install the feeder shell to the discharge holder at the screw feeder end, and tighten it with screws ④ and ⑥ (torque: 18 - 19 kgf.cm).

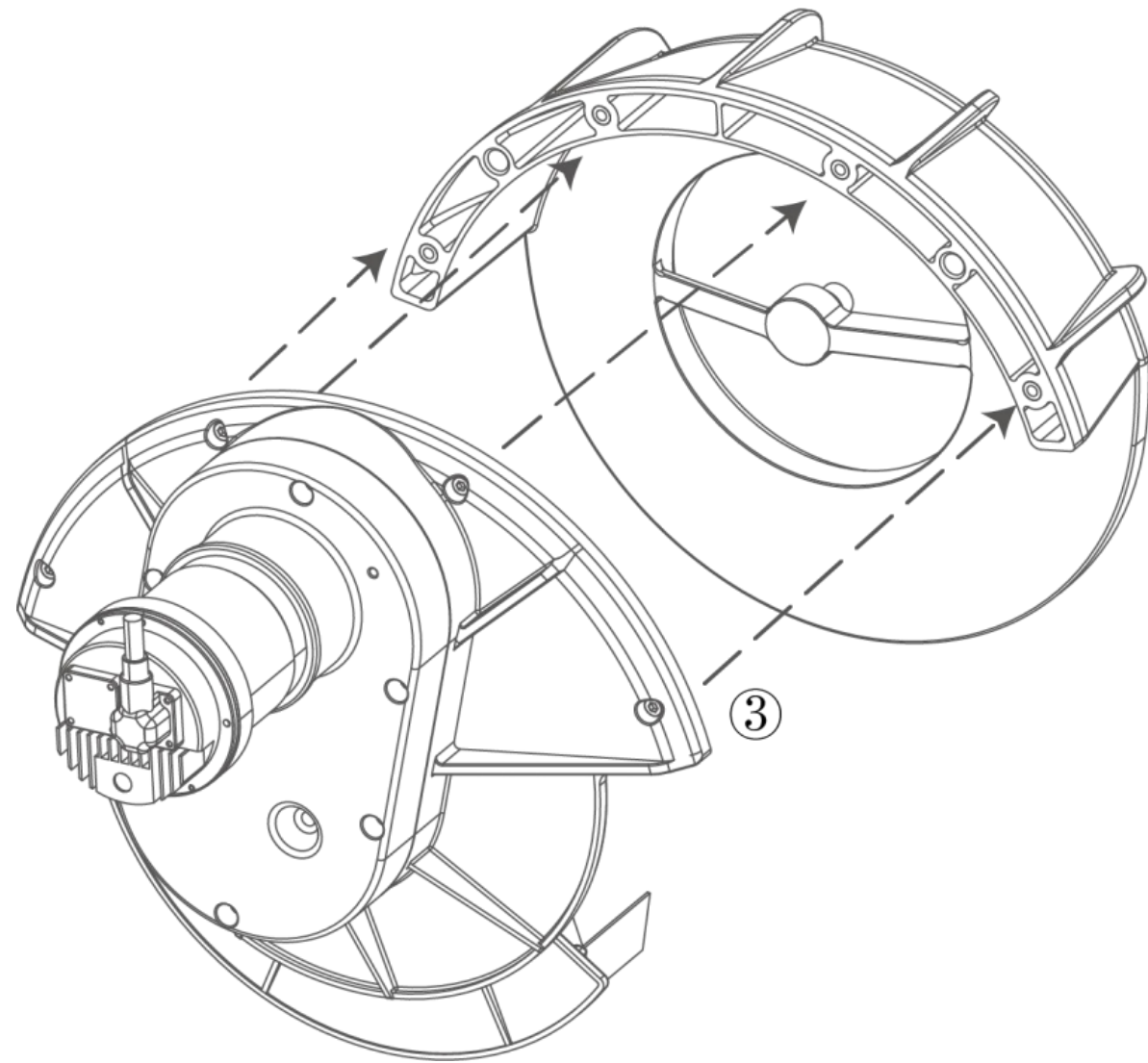
2. Install the spreading disc motor to the RevoCast main frame, and tighten it with screws ② (torque: 18 - 19 kgf.cm). Note: After motor installation, verify that all harnesses have been connected back to their original positions.

Test: Power on, perform a spreading test, and observe the rotation of the screw feeder to ensure there is no jamming. Observe the rotation of the spreading disc to ensure there is no jamming.

No spreading breakdown information is displayed in the APP.

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Discharge Holder)



S/N	Screw spec.	Material No.	Torque requirement
(2)	M5*12	02-004-00670	18 - 19 kgf.cm
(3)	M4*12*8	02-004-00834	14 - 15 kgf.cm
(4)	M5*12	02-004-00670	18 - 19 kgf.cm
(6)	M5*12	02-004-00670	18 - 19 kgf.cm

Disassembly Procedures

1. Remove screws ② and ④ on the screw feeder motor side, and take out the spreading disc motor from the feeder shell.

Note: Before disassembly, be sure to disconnect the screw feeder motor and spreading disc motor harness from the RevoCast main frame and the cable hub. Otherwise, pulling the wiring harness during the disassembly may damage it.

2. Remove screws ⑥, and remove the feeder shell and screw feeder from the discharge holder at the screw feeder end.

3. Remove screws ③, and remove the discharge holder at the screw feeder end from the discharge holder at the motor end.

Installation Process

1. Install the discharge holder on the screw feeder end to the discharge holder on the motor end, and tighten it with screws ③ (torque: 14 - 15 kgf.cm).

2. Install the screw feeder and feeder shell to the discharge holder on the screw feeder end, and tighten it with screws ⑥ (torque: 18 - 19 kgf.cm).

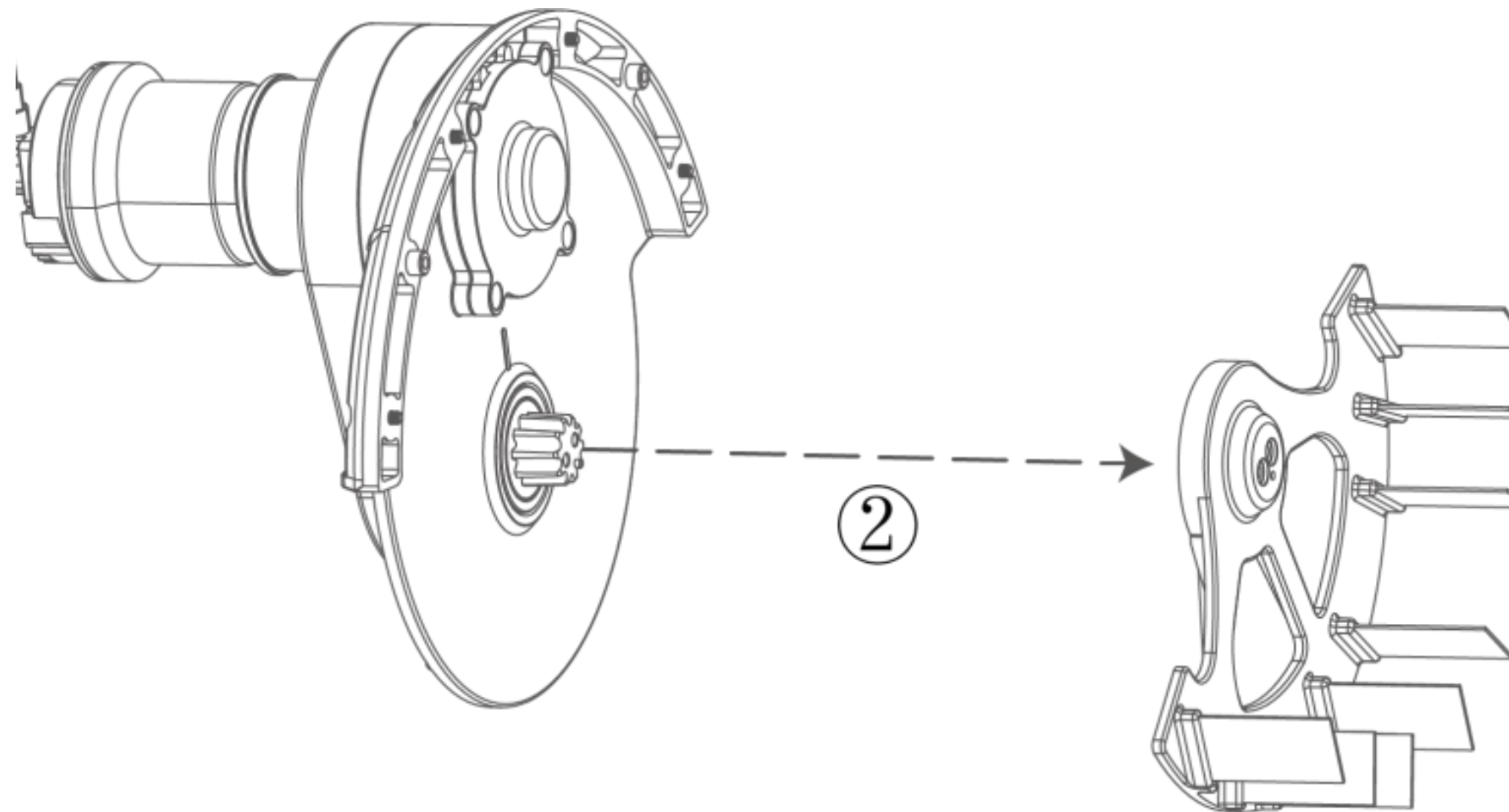
3. Install the spreading disc motor to the RevoCast main frame, and tighten it with screws ② and ④ (torque: 18 - 19 kgf.cm). Note: After motor installation, verify that all harnesses have been connected back to their original positions.

Test: Power on, perform a spreading test, and observe screw feeder motor rotation to ensure no jamming occurs. Observe the rotation of the spreading disc to ensure there is no jamming.

No spreading breakdown information is displayed in the APP.

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Spreading Disc)



S/N	Screw spec.	Material No.	Torque requirement
(2)	M4*12*8	02-004-00834	14 - 15 kgf.cm
(3)	M5*10*10	02-004-00747	18 - 19 kgf.cm

Disassembly Procedures

1. Remove screws ③, and remove the discharge holder on the screw feeder end from the discharge holder on the motor end.
 2. Remove screws ②, and remove the spreading disc from the discharge holder on the motor end.
- Note: Before disassembly, be sure to disconnect the spreading disc motor harness from the RevoCast main frame and the cable hub. Otherwise, pulling the wiring harness during the disassembly may damage it.

Installation Process

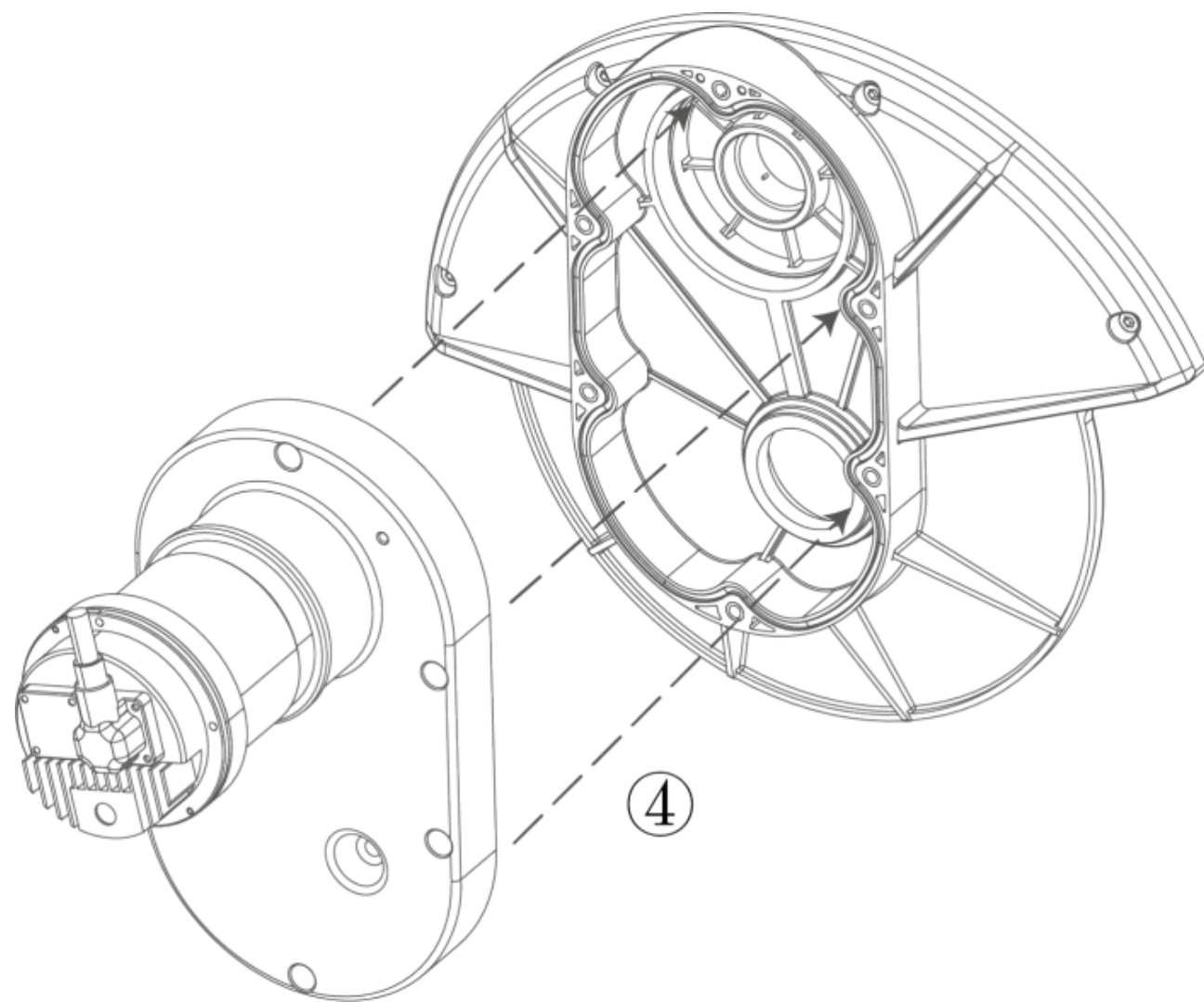
1. Install the spreading disc to the discharge holder on the motor end, and tighten it with screws ② (torque: 14 - 15 kgf.cm).
2. Install the discharge holder on the screw feeder end to the discharge holder on the motor end, and tighten it with screws ③ (torque: 14 - 15 kgf.cm). Note: After motor installation, verify that all harnesses have been connected back to their original positions.

Test: Power on, perform a spreading test, and observe screw feeder motor rotation to ensure no jamming occurs. Observe the rotation of the spreading disc to ensure there is no jamming.

No spreading breakdown information is displayed in the APP.

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Discharge Holder on the Motor End)



S/N	Screw spec.	Material No.	Torque requirement
(2)	M4*12*8	02-004-00834	14 - 15 kgf.cm
(3)	M4*12*8	02-004-00834	14 - 15 kgf.cm
(4)	M4*12*8	02-004-00834	15 - 16 kgf.cm

Disassembly Procedures

Note: Before disassembly, be sure to disconnect the spreading disc motor harness from the RevoCast main frame and the cable hub. Otherwise, pulling the wiring harness during the disassembly may damage it.

1. Remove screws ③, and remove the discharge holder on the screw feeder end from the discharge holder on the motor end.
2. Remove screws ②, and remove the spreading disc from the discharge holder on the motor end.
3. Remove screws ④, and remove the discharge holder on the motor end.

Installation Process

1. Install the discharge holder on the motor end to the connecting rod holder on the spreading disc motor end, and tighten it with screws ④ (torque: 15 - 16 kgf.cm).
2. Install the spreading disc to the discharge holder on the motor end, and tighten it with screws ② (torque: 14 - 15 kgf.cm).
3. Install the discharge holder on the screw feeder end to the discharge holder on the motor end, and tighten it with screws ③ (torque: 14 - 15 kgf.cm).

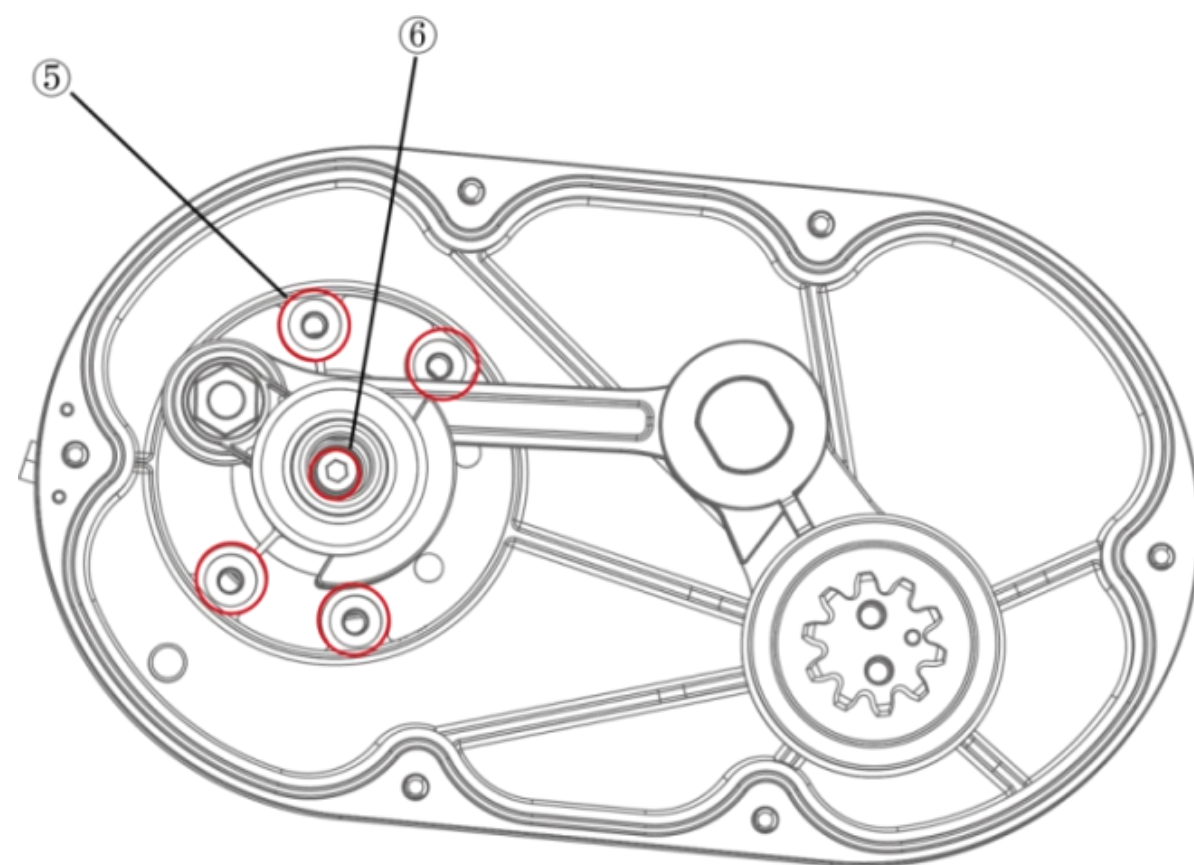
Note: After motor installation, verify that all harnesses have been connected back to their original positions.

Test: Power on, perform a spreading test, and observe screw feeder motor rotation to ensure no jamming occurs. Observe the rotation of the spreading disc to ensure there is no jamming.

No spreading breakdown information is displayed in the APP.

Chapter III Agricultural Drone Fit and Remove Procedures –

General Fit and Remove Procedures (Connecting Rod Holder on the Spreading Disc Motor End)



Disassembly Procedures

Note: Before disassembly, be sure to disconnect the screw feeder motor and spreading disc motor harness from the RevoCast main frame and the cable hub. Otherwise, pulling the wiring harness during the disassembly may damage it. 1. Remove screws ③, and remove the discharge holder on the screw feeder end from the discharge holder on the motor end.

2. Remove screws ②, and remove the spreading disc from the discharge holder on the motor end.

3. Remove screws ④, and remove the discharge holder on the motor end.

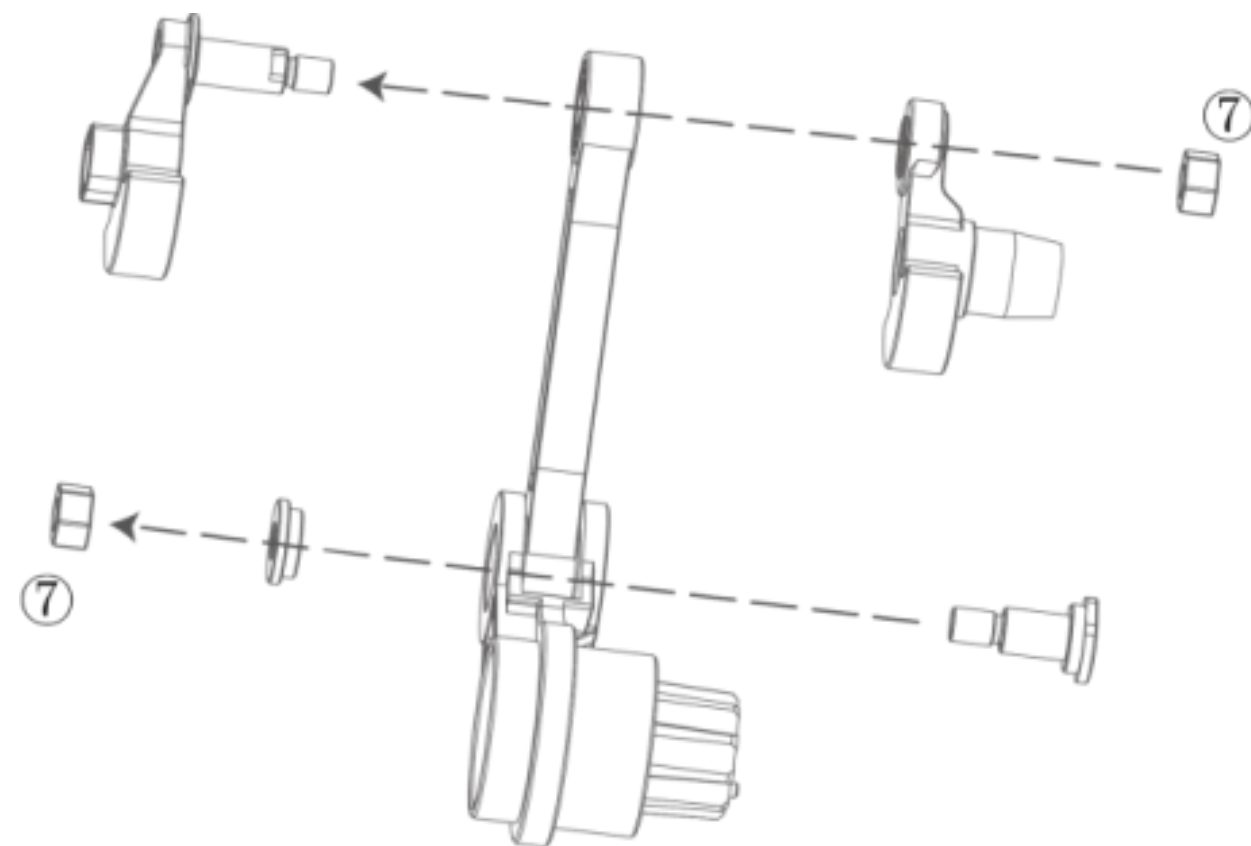
4. Remove screws ⑤ and ⑥, and remove the spreading disc motor.

5. Pull the middle connecting rod firmly to separate it from the connecting rod holder on the motor end.

Note: If it cannot be moved by pulling with force, flip over the connecting rod holder on the spreading disc motor end, and gently tap it with a rubber hammer to make it detach.

S/N	Screw spec.	Material No.	Torque requirement
(2)	M4*12*8	02-004-00834	14 - 15 kgf.cm
(3)	M4*12*8	02-004-00834	14 - 15 kgf.cm
(4)	M4*12*8	02-004-00834	14 - 15 kgf.cm
(5)	M4*12*8	02-004-00834	14 - 15 kgf.cm

Chapter III Agricultural Drone Fit and Remove Procedures – General Fit and Remove Procedures (Connecting Rod Holder on the Spreading Disc Motor End)



Disassembly Procedures

Note: Before disassembly, be sure to disconnect the screw feeder motor and spreading disc motor harness from the RevoCast main frame and the cable hub. Otherwise, pulling the wiring harness during the disassembly may damage it. 1. Remove screws ③, and remove the discharge holder on the screw feeder end from the discharge holder on the motor end.

2. Remove screws ②, and remove the spreading disc from the discharge holder on the motor end.

3. Remove screws ④, and remove the discharge holder on the motor end.

4. Remove screws ⑤ and ⑥, and remove the spreading disc motor.

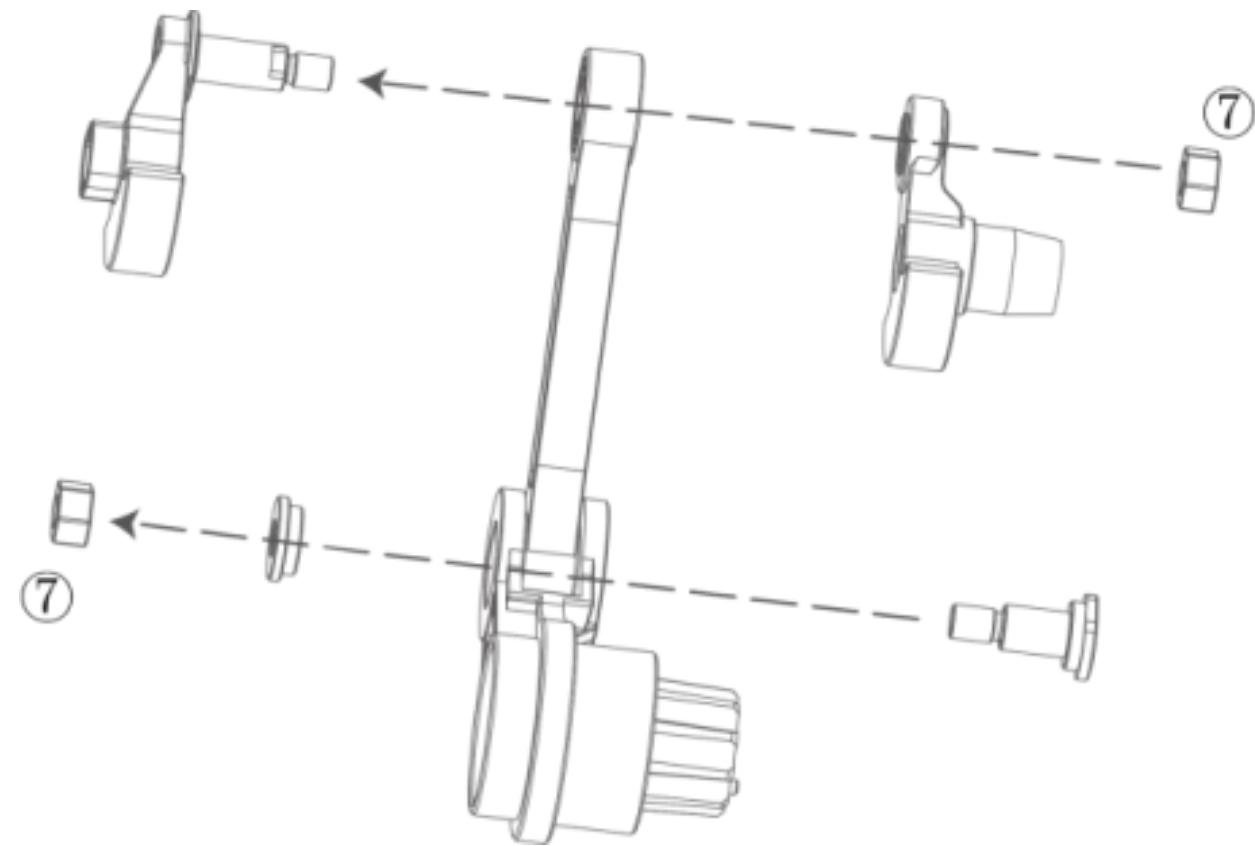
5. Pull the middle connecting rod firmly to separate it from the connecting rod holder on the motor end.

Note: If it cannot be moved by pulling with force, flip over the connecting rod holder on the spreading disc motor end, and gently tap it with a rubber hammer to make it detach.

6. Remove screws ⑦, and remove the eccentric connecting rod.

S/N	Screw spec.	Material No.	Torque requirement
(2)	M4*12*8	02-004-00834	14 - 15 kgf.cm
(3)	M4*12*8	02-004-00834	14 - 15 kgf.cm
(4)	M4*12*8	02-004-00834	14 - 15 kgf.cm
(5)	M4*12*8	02-004-00834	14 - 15 kgf.cm

Chapter III Agricultural Drone Fit and Remove Procedures – General Fit and Remove Procedures (Connecting Rod Holder on the Spreading Disc Motor End)



Installation Process

1. Install the eccentric connecting rod to the opposite eccentric connecting rod, and tighten it with screws ⑦ (torque: kfg.cm).
2. Install the entire unit of the middle connecting rod to the connecting rod holder on the motor end, and use screws ⑤ (torque: kfg.cm) and ⑥ (torque: kfg.cm) to secure the spreading disc motor.
3. Install the discharge holder on the motor end to the connecting rod holder on the spreading disc motor end, and tighten it with screws ④ (torque: kfg.cm).
4. Install the spreading disc to the discharge holder on the motor end, and tighten it with screws ② (torque: kgf.cm).
5. Install the discharge holder on the screw feeder end to the discharge holder on the motor end, and tighten it with screws ③ (torque: kgf.cm).

Note: After motor installation, verify that all harnesses have been connected back to their original positions.

Test:

Power on, perform a spreading test, and observe the rotation of the screw feeder to ensure there is no jamming. Observe the rotation of the spreading disc to ensure there is no jamming.

No spreading breakdown information is displayed in the APP.

S/N	Screw spec.	Material No.	Torque requirement
(2)	M4*12*8	02-004-00834	14 - 15 kgf.cm
(3)	M4*12*8	02-004-00834	14 - 15 kgf.cm
(4)	M4*12*8	02-004-00834	14 - 15 kgf.cm
(5)	M4*12*8	02-004-00834	14 - 15 kgf.cm

THE END

