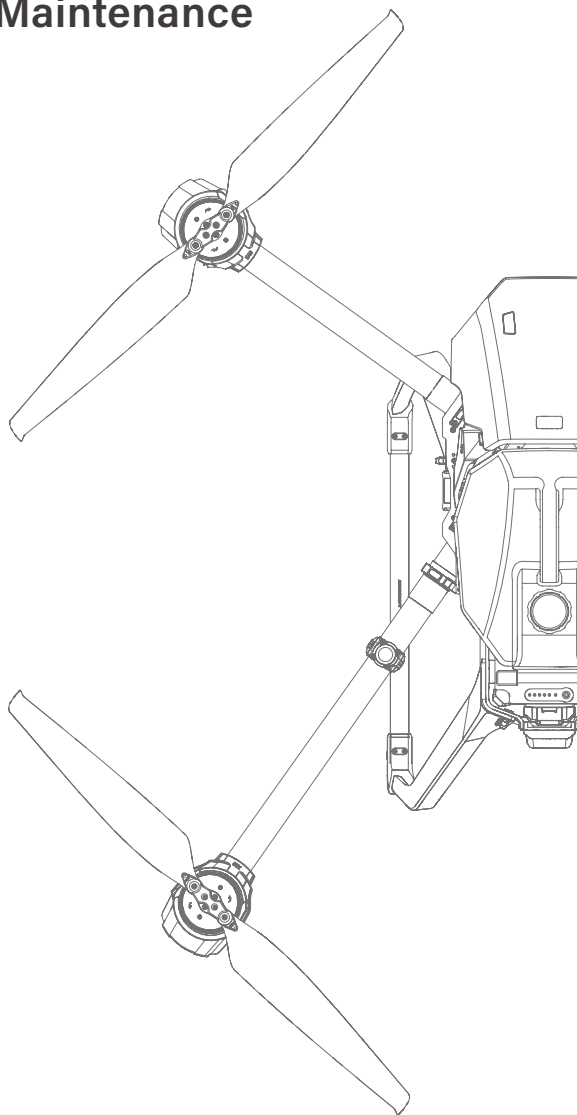


P30 2019

Aircraft & Module Maintenance

Version 2.0 



Dear Customer :

To ensure that your aircraft continues to offer optimal performance and to ensure flight safety, XAG recommends that comprehensive maintenance be performed after every 200 flights or 50 flight hours. This manual is intended to help users maintain their aircraft and maximize its continued reliability.

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MAINTENANCE

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01 / Servicing & Replacing Module

Repair Tips:

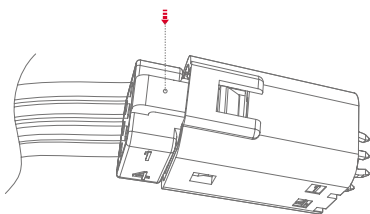
Disassembly Tips:

1. Batteries must be removed from the aircraft during maintenance.
2. All liquid must be drained and cleared from liquid tube during maintenance.

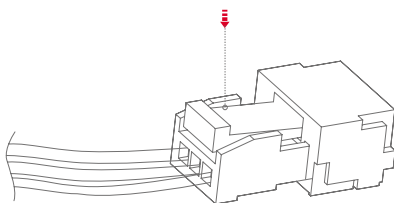
Please refer to the following figure as a guide to disconnect connectors:

1. The following connectors are equipped with anti-loosening buckles, please gently press the buckle before disconnecting the connector.
2. While disconnecting the connector, disconnect the connector and not the wire harness.

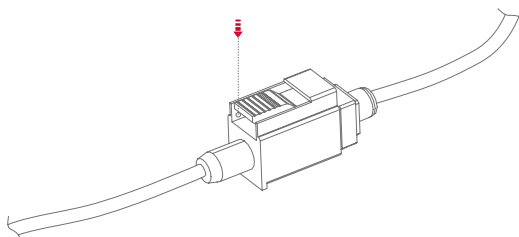
Nozzle Indicator / Nozzle



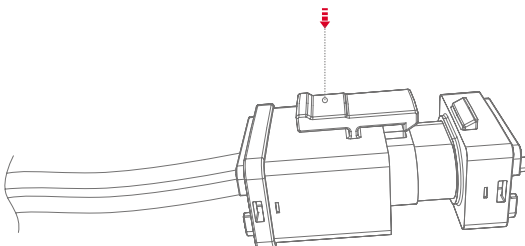
Peristaltic Pump to Motor



Antenna feeder Connector



Payload System Power



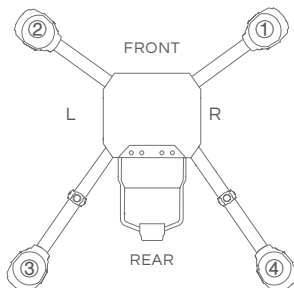
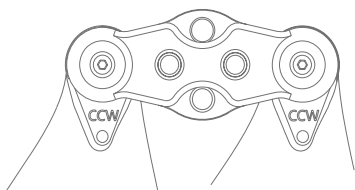
■ Propellers

💡 What do we need in this section:

P30 2018/2019 Propeller-CW	*2	SKU-02-006-00070
P30 2018/2019 Propeller-CCW	*2	SKU-02-006-00071
M4*12*8 Hexagon socket combination screw	*8	SKU-02-004-00227

Use only XAG approved propellers with your P30 2019. There are two types of propeller, CW and CCW as indicated on the Propellers as figure below.

- Motor 1 , & Motor 3 : CCW
- Motor 2 , & Motor 4 : CW



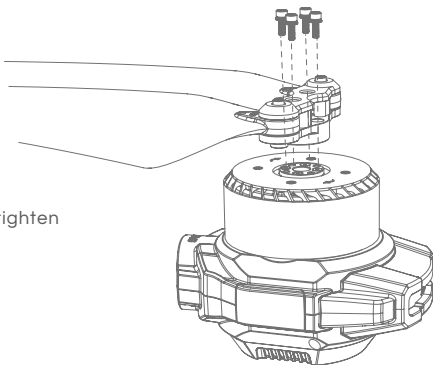
🔧 Disassemble:

Use a 3.0 screwdriver to remove the 4 screws on the fastening paddle clamp, then remove the propeller for replacement.

🔧 The screws using M4*12*8 Hexagon socket combination screw here.

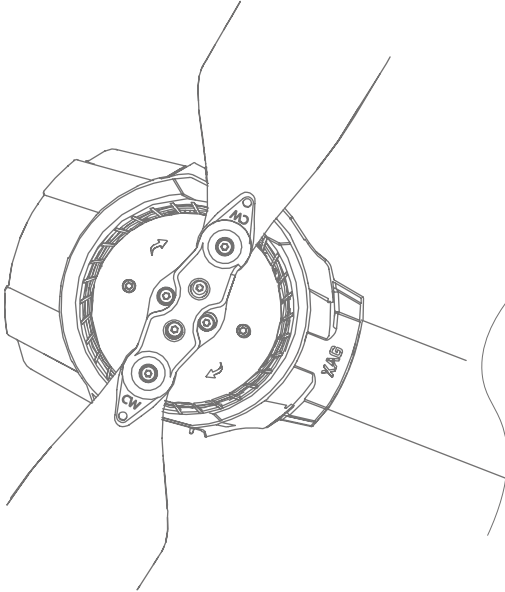
🔧 Assemble:

Reassemble the propeller back in place and tighten the 4 screws on the propeller clamp.



 CHECK :

- Check and ensure the CW and CCW Propellers are installed correctly.
- Gently press the propeller blade up and down to check if there is any backlash.



WARNING:

- Be aware of the sharp edges of the propeller and Handle with care.
- Only use XAG approved propellers. Do not mix propeller types.
- ONLY use original XAG propellers for a better and safer flight experience.
- Check and ensure that screws are tighten and secure.
- Ensure that all screws are in good condition before installing. DO NOT use aged, chipped or damaged screws.
- Check that the propellers and motors are installed correctly and firmly before each flight.
- Ensure that all propellers are in good condition before each flight. DO NOT use aged, chipped or damaged propellers.
- To avoid injury, STAND CLEAR of and DO NOT touch propellers or motors when they are spinning.

■ Nozzles

💡 What do we need in this section:

P20/P30 2019 Nozzle	*1	SKU-05-002-00546
M3*8*6 Hexagon socket combination screw	*6	SKU-02-004-00223
M3*8*10 Screw Dampener	*10	SKU-02-001-02233

🔧 Disassemble:

1. Drain all liquid and residues from the liquid tube and unplug the corresponding liquid tube.

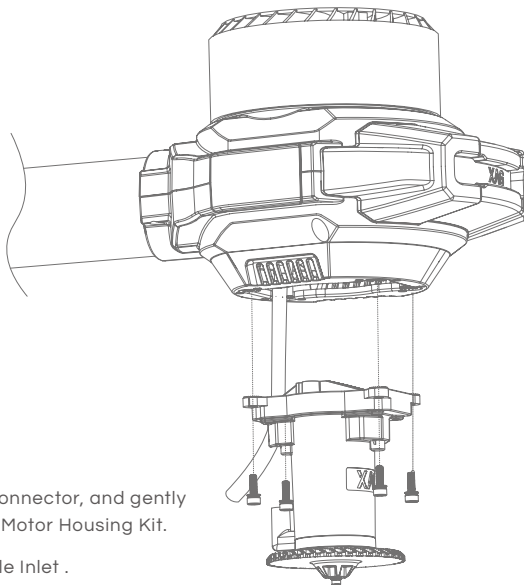
Uses a 2.5 screwdriver to remove the 4 screws securing the Nozzle.

🔧 The screws using M3*8*6 Hexagon socket combination screw here.

2. Disconnect the nozzle connector and remove the nozzle.

🔧 Assemble:

1. Reconnect and secure the nozzle connector, and gently places the connector back into the Motor Housing Kit.
2. Connect the liquid tube to the Nozzle Inlet .
3. Assemble and fixes the Nozzle in the direction as shown in the figure.



🔧 IMPORTANT:

- I. Prevent liquid tube from bending.
- II. Avoid liquid or foreign matter when connecting or disconnecting the nozzle connector .
- III. Ensure the shock-absorbing screws are intact and not damaged, DO NOT install with force.
🔧 The shock-absorbing screws using M3*8 Screw Dampener here.

🔍 CHECK :

- After the reassembly of the nozzle is completed, perform a manual spray test to confirm the corresponding nozzle is working normally.

▪ Landing Skids

💡 What do we need in this section:

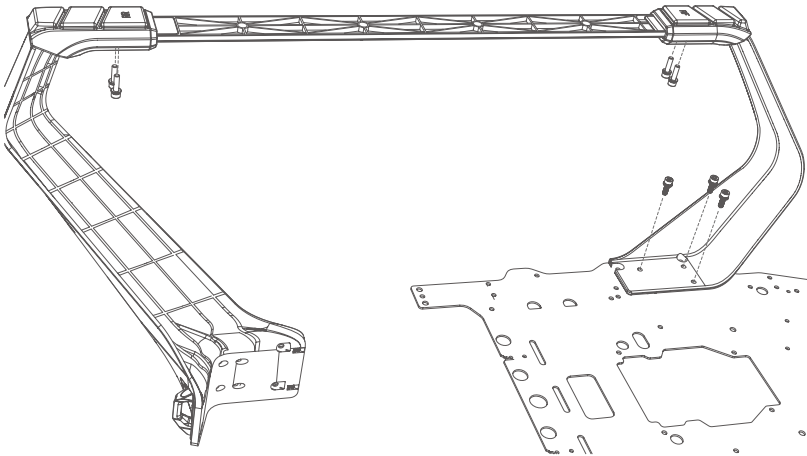
P30 2019 Landing Skid (Rear Left)	*1	SKU-14-002-00070
P30 2019 Hook Down Point	*1	SKU-02-002-03439
P30 2019 Landing Skids Nut Bar	*1	SKU-02-002-04244
P20/P30 2019 Battery Rail	*1	SKU-14-002-00119
M4*16*8 Hexagon socket combination screw	*8	SKU-02-004-00228

🔧 The Landing Skids are total of five SKU codes according to different parts.




Disassemble:

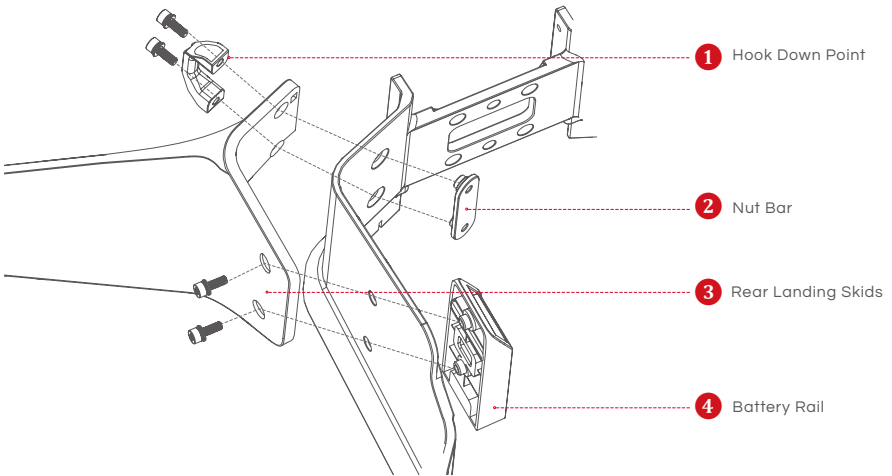
- Use a 3.0 screwdriver to remove the fastening screws between the Landing skids and the Airframe, and take out the hookdown point , nut bars , battery rails , and the landing skids that need to be replaced.
🔧 The screws using M4*16*8 Hexagon socket combination screw here.
- Note: By removing the corresponding screws , the landing skid can be disassembled into three parts: the front landing skid , the centre landing skid , and the rear landing skid . Only the damaged part can be replaced.



 Assemble:

1. First, install the front section of the landing skids and pre-lock the 3 screws on the landing skids to ensure accurate positioning before locking.
 The screws using M4*16*8 Hexagon socket combination screw here.
2. As shown in the figure, use the battery rail, the hook down point and the corresponding screws and nut bars to fix the rear of the Landing Skids on to the fuselage .

1. Hook Down Point
2. Nut Bar
3. Rear Landing Skids
4. Battery Rail



 IMPORTANT:

- I. Pre-Check the orientation before installing the battery rail (Guide section should be facing upward).
- II. Before reassembling the Hook down point, ensure that the nut bars are reassemble in place without protruding.

▪ Motor Housing Protective Pad

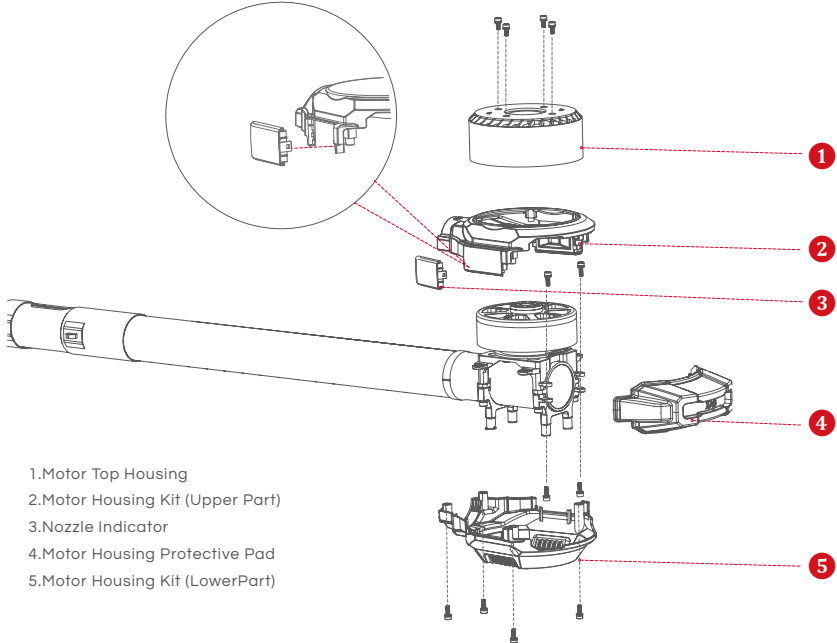
💡 What do we need in this section:

P20/P30 2019 Motor Housing Protective Pad	*1	SKU-14-002-00067
M3*8*6 Hexagon socket combination screw	*6	SKU-02-004-00223
M2*6*5 Hexagon socket combination screw	*5	SKU-02-004-00319




Disassemble:

1. Disassemble the Propeller (Refer to Propeller Section).
2. Use a 2.5 screwdriver to remove the 4 screws on the Motor Top Housing. Then, Use a 1.0 screwdriver to remove the remaining screws securing the Spray Disc and remove the Spray Disc.
3. Use a 2.5 screwdriver to remove the 4 screws securing the Lower part of the Lower part of the Motor Housing Kit , and remove the Motor Case.
4. Disconnect the Nozzle Indicator Connector , then remove the Nozzle indicator on both sides. Use a 2.5 screwdriver to remove the 4 screws securing the upper part of the Motor Housing Kit, and remove the Motor Case.
5. Use a 2.5 screwdriver to remove the 4 screws securing the Motor Housing Protective Pad, then remove the Protective Padding.



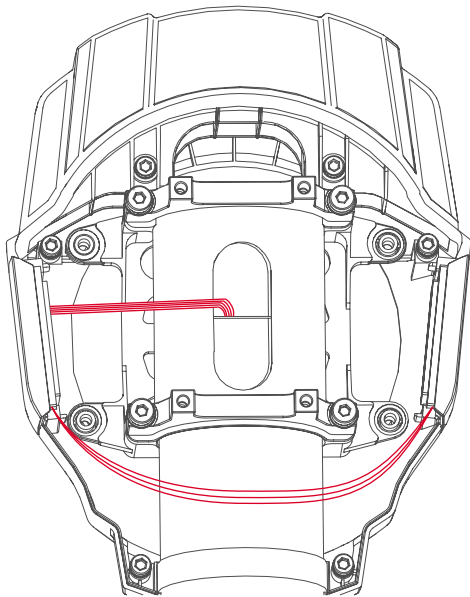
- 1.Motor Top Housing
- 2.Motor Housing Kit (Upper Part)
- 3.Nozzle Indicator
- 4.Motor Housing Protective Pad
- 5.Motor Housing Kit (LowerPart)

 IMPORTANT:

- I. Before reassembling, be aware of the screw model and do not miss or reassemble with wrong screw.
 - II. Avoid liquid or foreign matter when connecting or disconnecting the connectors.
-  The screws using 2.5 screwdriver is the M3*8*6 Hexagon socket combination screw here.
The screws using 1.0 screwdriver is the M2*6*5 Hexagon socket combination screw here.

 Assemble:

1. Reassemble the Motor Housing Protective Pad, upper part of the Motor Housing Kit and Motor Top Housing in order and tighten the screws to re-secure each component.
2. Reassemble the Nozzle Indicator back into original position.
Reconnect and secure the nozzle indicator connector, and gently pushes the connector back into the Airframe Arm.
3. Pass the Nozzle Indicator wiring behind the Motor Mount Arm Clamp.
4. Reassemble the Motor Case (Bottom) and Spray Disc in order and tighten the screws to re-secure each component.



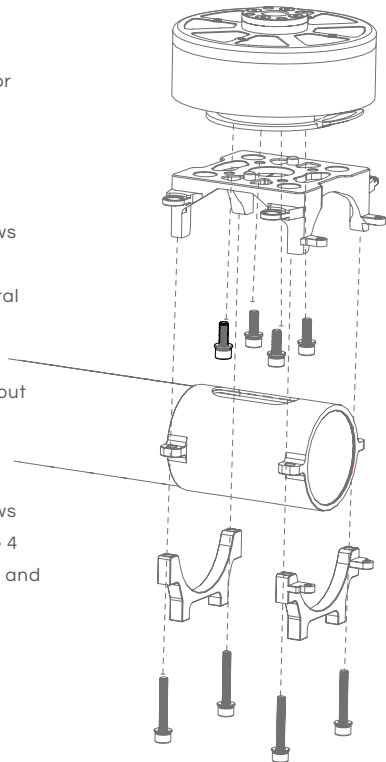
▪ Motors

💡 What do we need in this section:

P30 2019 Motor (Short - Cable)	*1	SKU-02-005-00102
P30 2019 Motor (Long - Cable)	*1	SKU-02-005-00103
M3*8*6 Hexagon socket combination screw	*6	SKU-02-004-00223
M4*12*8 Hexagon socket combination screw	*8	SKU-02-004-00227
M4*25*9 Hexagon socket combination screw	*9	SKU-02-004-00229

🔧 Disassemble:

1. Disassemble the Propeller, Nozzle and Motor Housing Protective Pad (Refer to Propeller, Nozzle and Motor Housing Protective Pad Section).
2. Use a 2.5 screwdriver to remove the 6 screws securing the Central Compartment Cover, and disconnect the connectors on the Central Compartment Cover and gently remove the cover.
Disconnect the motor connector and draw out the three-phase wire of the motor from the Airframe Arm.
3. Use a 3.0 screwdriver to remove the 4 screws securing the Motor Mount, then remove the 4 screws securing the Motor for maintenance and replacement.



- 🔧 The screws using 2.5 screwdriver is the M3*8*6 Hexagon socket combination screw here.
- 🔧 The securing the Motor Mount screws using 3.0 screwdriver is the M4*25*9 Hexagon socket combination screw here.
- 🔧 The securing the Motor for maintenance screws using 3.0 screw driver is the M4*12*8 Hexagon socket combination screw here.

Assemble:

1. Reassemble the Motor, Motor Mount, and Motor Mount Arm Clamp in order and tighten the screws to re-secure each component. Insert the Motor connector through the Airframe Arm and reconnect the connector.
2. Inspect and ensure the antenna cord and feeder protective cover are assembled correctly, then reconnect the connectors on the Central Compartment Cover and tighten the screws to re-secure the cover.
3. Reassemble the Motor Housing Protective Pad, Nozzle and Propeller in order and tighten the screws to re-secure each component.

IMPORTANT:

- I. Ensure there are no loose or missing screws.
- II. Avoid foreign matter scratching the motor wiring.
- III. Avoid liquid or stain when connecting or disconnecting the connectors.
- IV. After reassembling, inspect and ensure the motor is installed correctly and level.

CHECK :

- After the reassembly of the motor is completed, perform motor idletest and observe if the XAG Agri APP reports any error.

▪ Airframe Arms

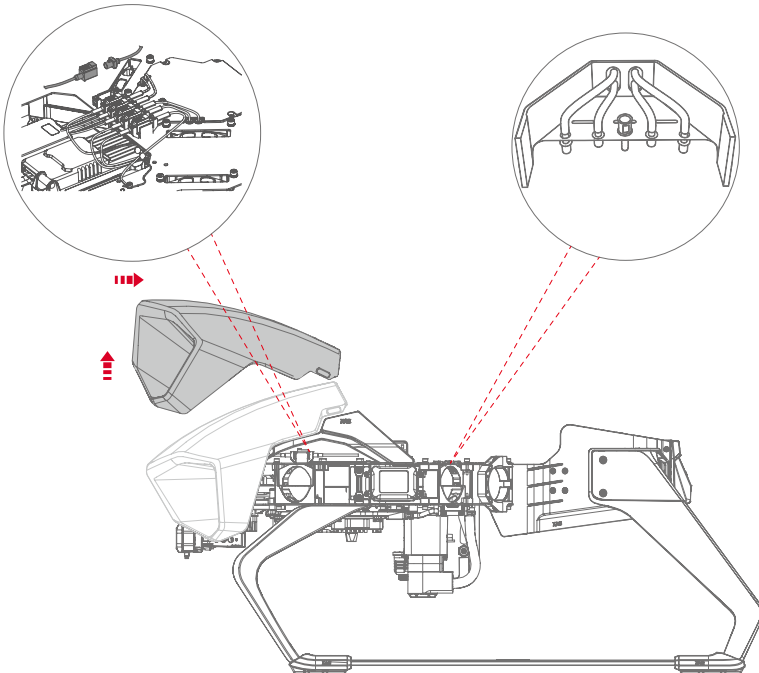
💡 What do we need in this section:

P30 2019 Airframe Arm Slider (Upgraded)	*1	SKU-14-002-00165
P30 2019 Airframe Arm Fastener	*1	SKU-14-002-00167
M3*10*6 Hexagon socket combination screw	*6	SKU-02-004-00224
M4*12*8 Hexagon socket combination screw	*8	SKU-02-004-00226
P30 2019 M3*25*6 Hexagon socket combination screw	*6	SKU-02-004-00474

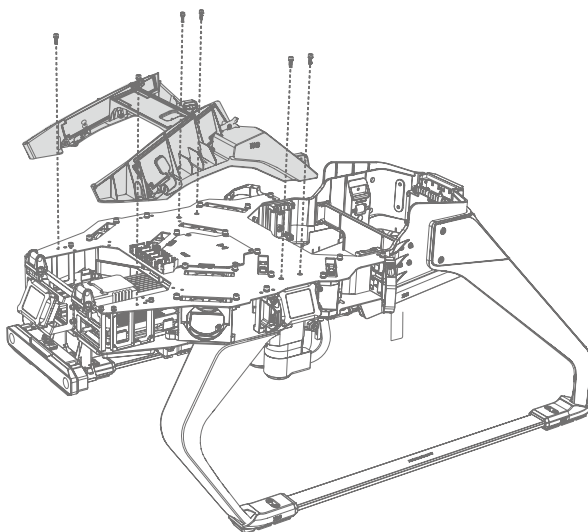


Disassemble:

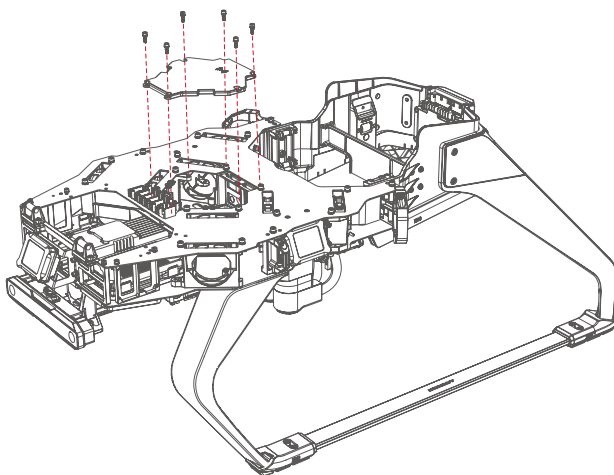
1. Drain all liquid and residues from the liquid tube of the corresponding Airframe Arm. Remove the Airframe hood and unplug the corresponding liquid tube and antenna cord.



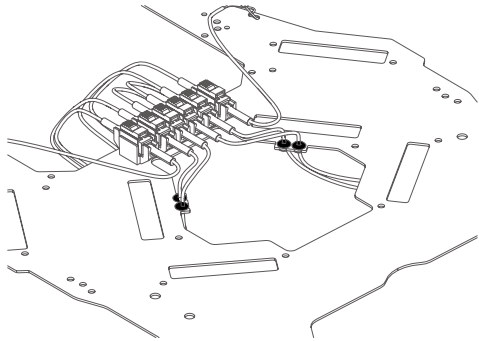
2. Use a 2.5 screwdriver to remove the 6 screws securing the 4G Antenna Mount, and remove the Antenna Mount.
✎ The screws using M3*10*6 Hexagon socket combination screw here.



3. • Use a 2.5 screwdriver to remove the 6 screws securing the Central Compartment Cover, and disconnect the connectors on the Central Compartment Cover and gently remove the cover and the feeder.



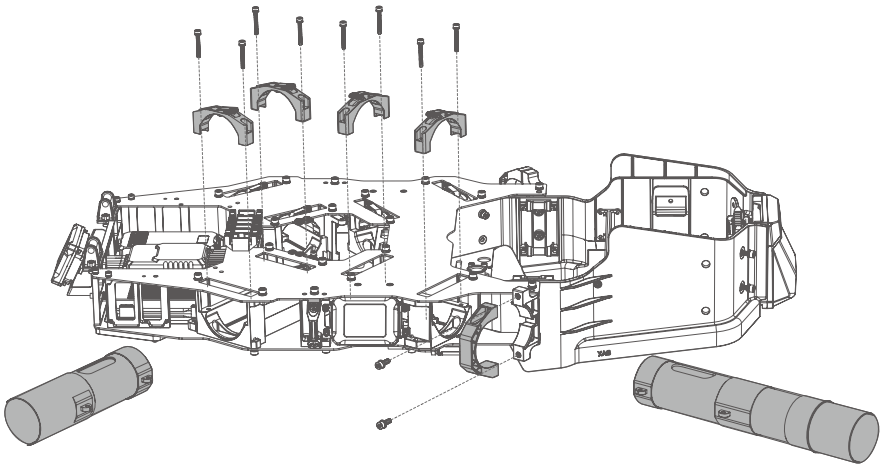
- Disconnect the motor connector and draw out the three-phase wire of the motor from the Airframe Arm.



4. Use a 2.5 screwdriver to remove the 4 screws securing the corresponding Arm Slider.

Note: For Arm 3 and Arm 4: In addition to the Arm Slider, Airframe Arm Fastener located on the side also needs to be disassembled by removing the screws .

 - ✎ The screws using securing the corresponding Arm Slider is the P30 2019 M3*25*6 Hexagon socket combination screw here.
 - ✎ In addition to the Arm Slider the screws using M4*10*8 Hexagon socket combination screw here.



5. Disassemble the Propeller, Nozzle, MotorHousing and Motor.

Gently pull out the corresponding Airframe Arm, and remove the Nozzle Indicator Wiring Harness, Nozzle Wiring Harness and liquid Tube.

Note: For Arm 3 and Arm 4:

RTK Antenna and 2.4G Antenna also needs to be disassembled (Refer to Propeller, Motor, and Antenna section) .

Assemble:

1. Reassemble the Nozzle Indicator Wiring Harness, Nozzle Wiring Harness, liquid Tube, Motor, Motor Housing, Nozzle and Propeller in order.
Note: For Arm 3 and Arm 4:
RTK Antenna and 2.4G Antenna also needs to be reassembled.
2. Insert the corresponding Airframe Arm back into the designated position of the fuselage, then pass the Antenna, Wiring Harness and liquid tube through the Airframe Arm and re-secure the Arm Slider with screws.
Note: For Arm 3 and Arm 4:
In addition to the Arm Slider, Airframe Arm Fastener located on the side also needs to be reassemble and re-secured with screws.
3. Re-connect the Central Compartment corresponding connectors of the Motor, Nozzle and Nozzle Indicators, then reconnect the liquid tube and adjust the length of the liquid tube.
4. Place the Feeder protective padding onto the corresponding position of the Air frame Central Compartment, reconnect the Central Compartment connectors and tighten the screws to re-secure each component.
5. Reassemble the 4G Antenna Mount, and tighten the screws to re-secure the component. Then reconnect the antenna feeder and reassemble the Airframe hood back into the original position.

IMPORTANT:

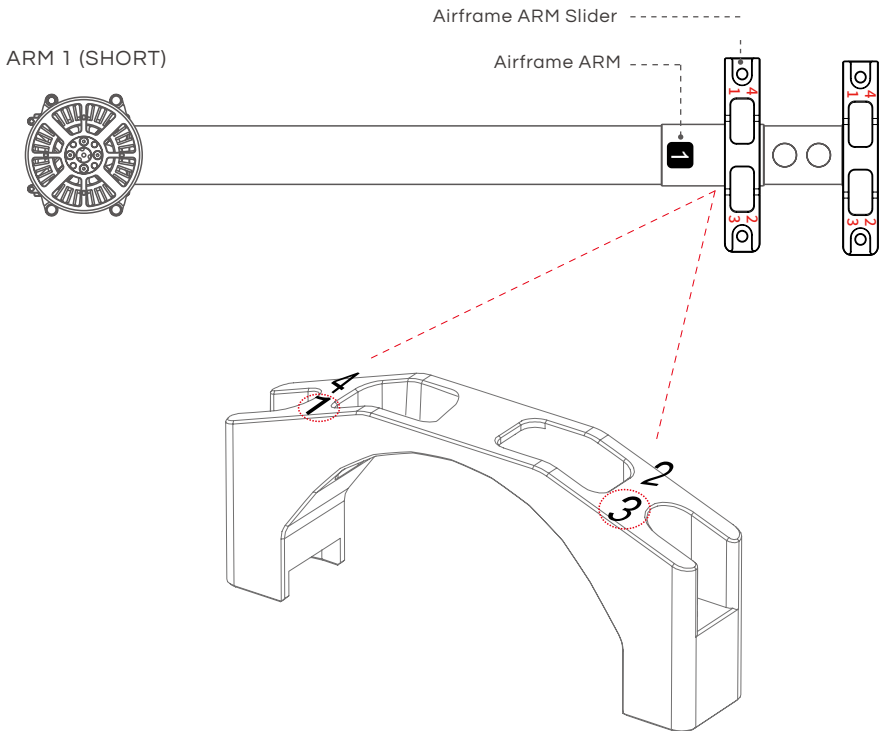
- I. Ensure there are no loose or missing screws.
- II. After reassembly, inspect and ensure the reassembled arm is firmly secured, and all connectors and antennas are connected correctly.
- III. Avoid liquid or foreign matter when connecting or disconnecting the connectors.
- IV. During reassemble process, place the feeder in the Airframe Arm then install onto the Central Compartment and avoid the feeder being damage or scratched during reassembly process.
- V. During reassemble process, be aware and prevent liquid tube from bending and adjust liquid tube length accordingly.
- VI. After reassembly, inspect and ensure the Airframe hood is firmly secured. Unsecured Airframe hood may fall off and causes accidents during flight.

Airframe Arm (New Model)

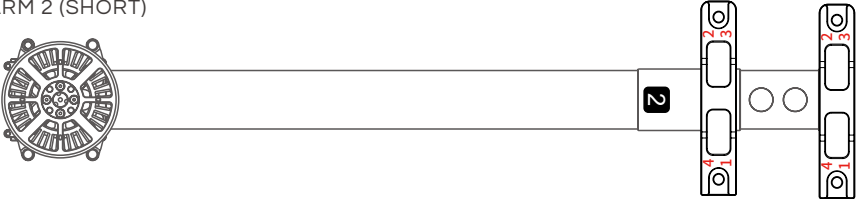
💡 What do we need in this section:

P30 2019 Airframe Arm Slider (Upgraded)	*1	SKU-14-002-00165
P30 2019 Airframe Arm (Short)	*2	SKU-14-002-00162
P30 2019 Airframe Arm (Long)	*2	SKU-14-002-00163

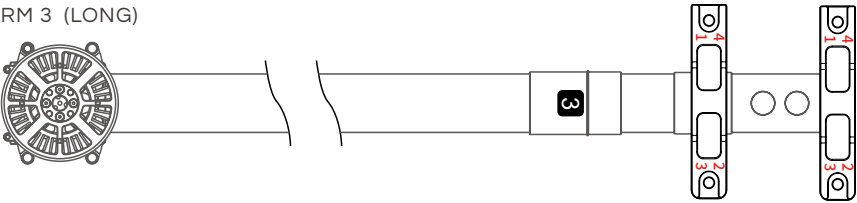
- XAG P-Series 2019 have a newer version of Airframe ARM that should be used in conjunction with Arm Slider.



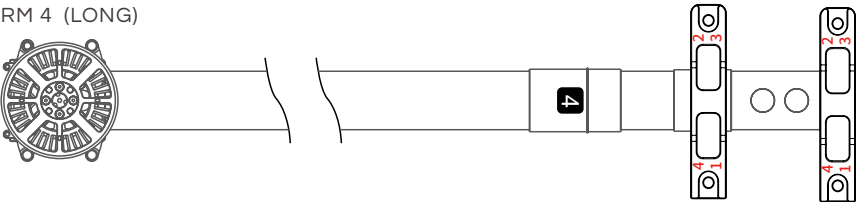
ARM 2 (SHORT)



ARM 3 (LONG)



ARM 4 (LONG)



 CHECK :

- Please refer to the direction between the “Number” and “Motor” on the ARM and the ARM Slider.

▪ Peristaltic Pumps

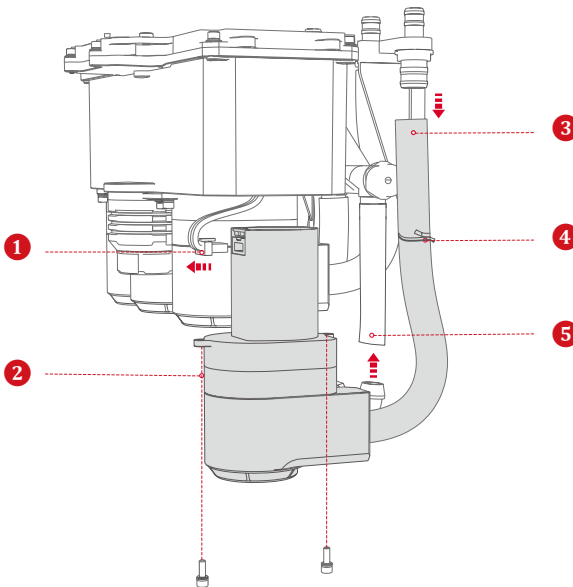
💡 What do we need in this section:

M2.5*8*4.5 Hexagon socket combination screw	*5	SKU-02-004-00429
P20/P30 2019 Peristaltic Pump	*1	SKU-05-002-00580
P20/P30 2019 Peristaltic Pump Seal	*1	SKU-02-001-03429



Disassemble:

1. Drain all liquid and residues from the liquid tube, then uses a 2.5 screwdriver to remove the 2 screws securing the Peristaltic Pump. Remove the Tube Clip on the Outlet Tube and disconnect the Outlet Tube.
🔧 The screws using M2.5*8*4.5 Hexagon socket combination screw here.
2. Reassemble the Peristaltic Pump to its original position, then firmly connect the Outlet and Inlet tube. Once it is secured, tighten the Tube Clip and tighten the screws to re-secure the Peristaltic Pump.

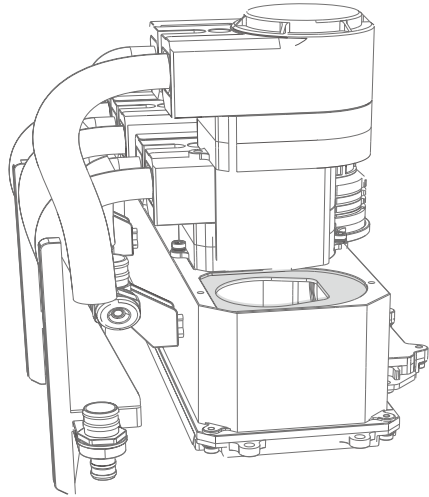


Tighten the Tube Clip

1. Peristaltic Pump Connector
2. Peristaltic Pump
3. Outlet Tube
4. Liquid Tube Clip
5. Inlet Tube

 Assemble:

1. Place the sealing in place, then reconnect the Peristaltic Pump connector.
2. Reassemble the Peristaltic Pump to its original position, then firmly connect the Outlet and Inlet tube. Once it is secured, tighten the Tube Clip and tighten the screws to re-secure the Peristaltic Pump.



 IMPORTANT:

- I. Avoid liquid or foreign matter when connecting or disconnecting the connectors.
- II. Inspect and ensure the tube is connected correctly, and the Tube Clip is firmly secured.
- III. Avoid liquid or foreign matter during disassembling and reassembling of Pump Housing.

 CHECK :

- After the reassembly of the Peristaltic Pump is completed, perform a manual test of spray test to confirm the corresponding pump is working normally.

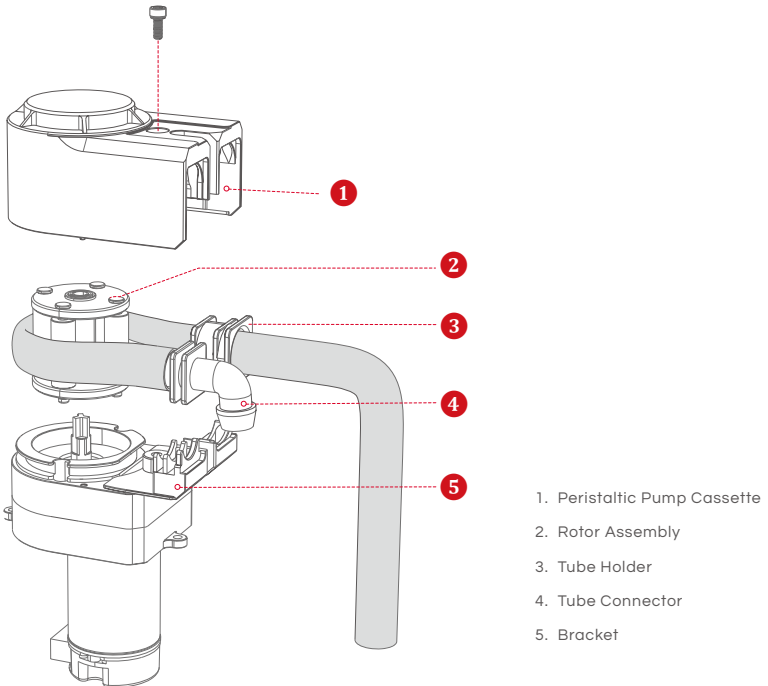
▪ Peristaltic Pump Tubes

💡 What do we need in this section:

P20/P30 2019 Peristaltic Pump Tube	*1	SKU-14-002-00068
M3*12*6 Hexagon socket combination screw	*6	SKU-02-004-00225

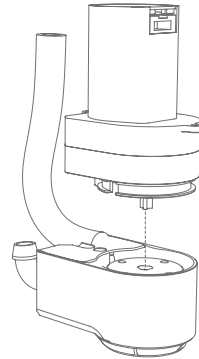
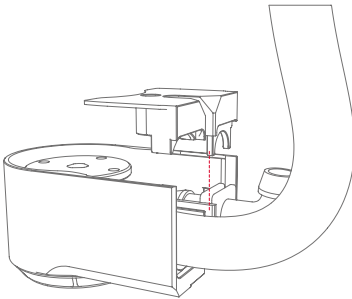
🔧 Disassemble:

1. Disassemble the Peristaltic Pump from the Airframe (Refer to Peristaltic Pump Section), then use a 2.5 screwdriver to remove the 1 screw securing the Peristaltic Pump cover and open the Pump.
🔧 The screws using M3*12*6 Hexagon socket combination screw here.
2. Take out the Bracket, Liquid Tube, Rotor Assembly and unplug the filter head, protective Tube, and Protective tube dust glue.



 Assemble:

1. Install the Tube Connector, Tube Holder and Anti-Dust Seal on the Peristaltic Pump Tube in order. Apply grease on the Peristaltic Pump Rotor and the interior of the Peristaltic Pump Cassette.
2. Bend the Peristaltic Pump Tube and entangle it on the Rotor Assembly, place them into the Peristaltic Pump Cassette and make sure the tube is at the center of the rotor.
3. Place the Tube Holder, Tube Connector and Bracket to their original place as shown in figure below.
4. Put the pump motor back on Peristaltic Pump Cassette and fasten the screw.
5. Reassemble the Peristaltic Pump to the pump housing.



 IMPORTANT:

- I. Make sure grease is correctly applied, and avoid foreign matters.
- II. Inspect and ensure the parts are correctly installed and there is no obvious gap.

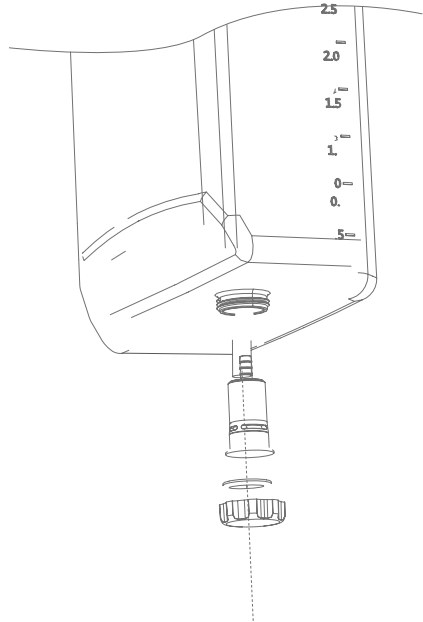
▪ Liquid Tank Filter

💡 What do we need in this section:

Liquid Tank Filter	*1	SKU-14-001-00080
Filter Tower	*1	SKU-14-001-00080
LiquidTank Sealing Ring (Bottom)	*1	SKU-14-001-00080

🔧 Disassemble:

1. Remove the sealing cap at the bottom of the Liquid Tank.
2. Pull out the liquid tank filter and cut off the cable tie on the head of the tube connector .
3. Unplug the filter from the liquid tube and remove the sealing ring .



🔧 Assemble:

- Attach the Sealing ring to the new Filter and place the new Filter back into the original position, then tighten the tube connector with cable tie.
- Please remove excess cable tie and replace the sealing cap.

🔧 IMPORTANT:

- After replacing the Liquid Tank Filter, inspect and check for leakages.

▪ Liquid Tank Nozzle

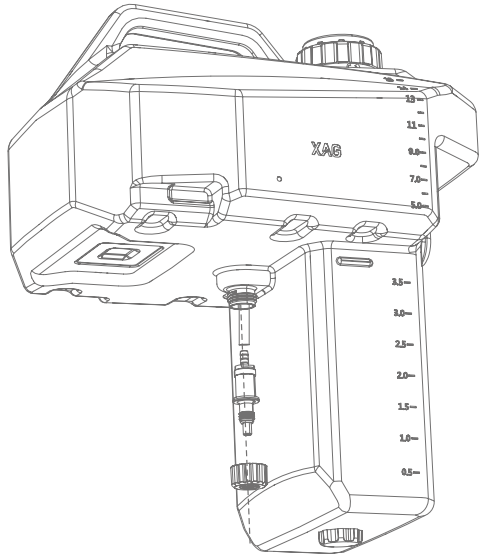
💡 What do we need in this section:

Liquid Tank Nozzle	*1	SKU-14-001-00080
Liquid Tube	*1	SKU-14-001-00080
Liquid Tank Nozzle Sealing Ring	*1	SKU-14-001-00080



Disassemble:

- Remove the Liquid Tank nozzle.
- Pull out the Liquid Tank nozzle and cut off the cable tie on the nozzle.
- Unplug the Liquid Tank nozzle from the Liquid Tube and remove the Sealing ring.



Assemble:

- Attach the Sealing ring to the new Liquid Tank Nozzle and reassemble the nozzle back into the original position, then tighten the filter tower with cable tie.
- Remove excess cable tie and replace the sealing cap.



CHECK :

- After the reassembly of the Liquid Tank nozzle is completed, fill the tank with water and observe and ensure there are no leakage.
- If there is leakage, please reassemble the liquid tank nozzle again.
If there isn't leakage, please gently press the pointer of the nozzle to check if water can discharge from the nozzle, which means it is now working normally.



IMPORTANT:

- Inspect and ensure the sealing ring are installed and correctly.

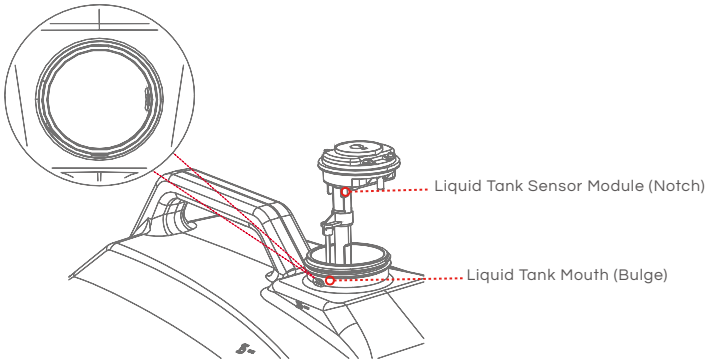
▪ Liquid Tank Battery

💡 What do we need in this section:

Liquid Tank Sensor Module	*1	SKU-05-002-00594
P20/30 2019 Liquid Tank Sensor Module	*1	SKU-05-002-00594
M2*8*4 Hexagon socket combination screw	*4	SKU-02-004-00352

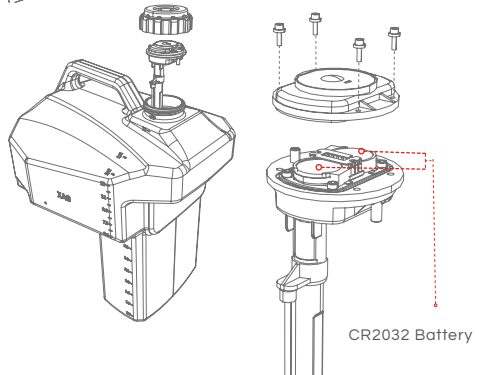
🔧 Disassemble:

1. Remove the Liquid Tank Cover , and take out the Liquid Tank Sensor Module .
2. Use a 1.0 screwdriver to remove the 4 screws securing the top cover of the sensor and remove the cover. Then remove the CR2032 battery from each side.
🔧 The screws using M2*8*4 Hexagon socket combination screw.



🔧 Assemble:

1. Replace the new CR2032 Battery from each side and reassemble the top cover, then tighten with screws.
2. Align the notch on the Sensor Module with the bulge on the mouth of the Liquid Tank mouth, and screw on the Tank cap.



🔧 IMPORTANT:

1. Avoid liquid or foreign matter attaching to the battery, and ensure the positive and negative terminals are installed correctly.
2. Ensure the Float of the Liquid Tank Sensor Module is not stuck or obstructed with the Tank liquid Tube.

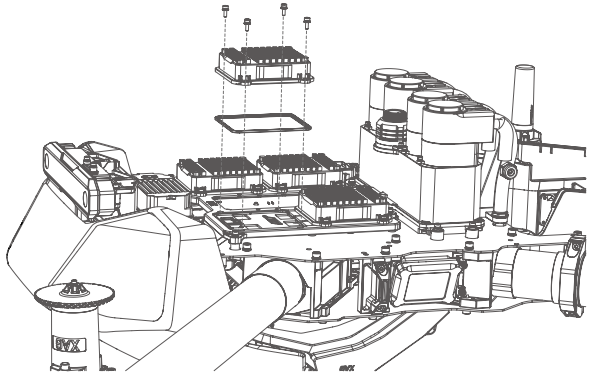
▪ Electronic Speed Controller (ESCs)

💡 What do we need in this section:

M2.5*8*4.5 Hexagon socket combination screw	*5	SKU-02-004-00429
P20/P30 2019 ESC	*1	SKU-05-002-00581
P20/P30 2019 ESC Waterproof rubber ring	*1	SKU-02-001-03370

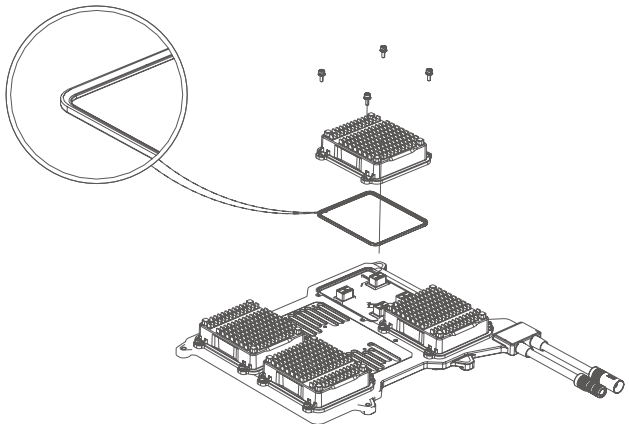
🔧 Disassemble:

- Use a 2.0 screwdriver to remove the 4 screws on the ESC, then remove the ESC and Waterproof rubber ring for inspection or replacement.
🔧 The screws using M2.5*8*4.5 Hexagon socket combination screw here.



🔩 Assemble:

- Reassemble the Rubber Ring to its original position (indent towards the ESC), and then reassemble the ESC back to its original position and tighten the screws to secure the component.



🔪 IMPORTANT:

- I. Ensure there are no liquid or foreign matter attached during the disassembly and assembly process of these components.
- II. Ensure the integrity and placement of the Waterproof rubber ring during the assembly of the ESC (indent towards the ESC).

▪ ESC Board

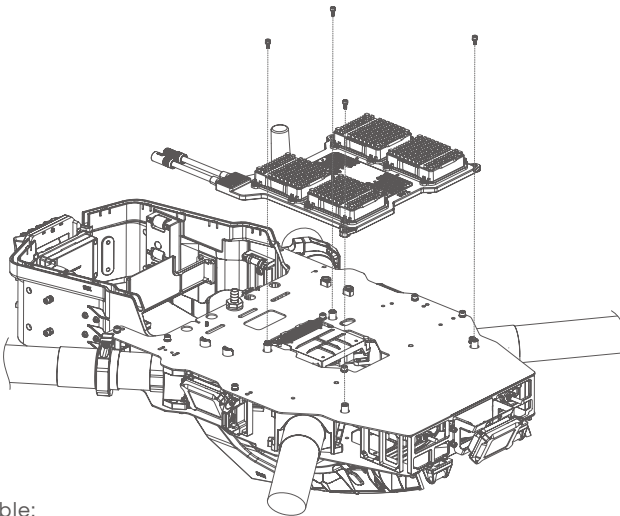
💡 What do we need in this section:

M3*8*6 Hexagon socket combination screw	*6	SKU-02-004-00223
P20/P30 2019 ESC Board	*1	SKU-05-002-00667



Disassemble:

1. Disassemble the Central Compartment Cover (Refer to Airframe ARM Section), then disconnect the six (6) connectors on the ESC Board (Refer to the "P Series Aircraft Module Wiring Guidelines" on the back of the Airframe Hood).
2. Disassemble the four (4) ESCs (Refer to ESC Section), then disconnect the connection of the ESC Board.
3. Disconnect the power cords from main power supply and use a 2.5 screwdriver to remove the 4 screws on the ESC Board, then remove the ESC board for replacement.
🔧 The screws using M3*8*6 Hexagon socket combination screw here.



Assemble:

1. Reassemble the ESC and ESC Board back into the original position, then tighten each component with screws and reconnect the power cords for the ESC Board.
2. Reconnect the Connectors on the ESC Board (Refer to the "P Series Aircraft Module Wiring Guidelines" on the back of the Airframe Hood).
3. Reassemble the Central Compartment Cover into the original position and tighten with the components with screws.

 CHECK :

- After the reassembling the ESC Board, perform motor idle test and observe if the XAG Agri APP reports any error.

 IMPORTANT:

- I. Avoid liquid or foreign matter when connecting or disconnecting the connectors.
- II. The notches on three-phase motorcable connectors must be aligned with the bulge on sockets before being inserted.
- III. Do not use excessive force while installing the screws and ensure the Vibration damping screws are intact and not damaged.

 WARNING:

- Ensure that all screws are in good condition before installing. DO NOT use aged, chipped or damaged screws.

– Antennas

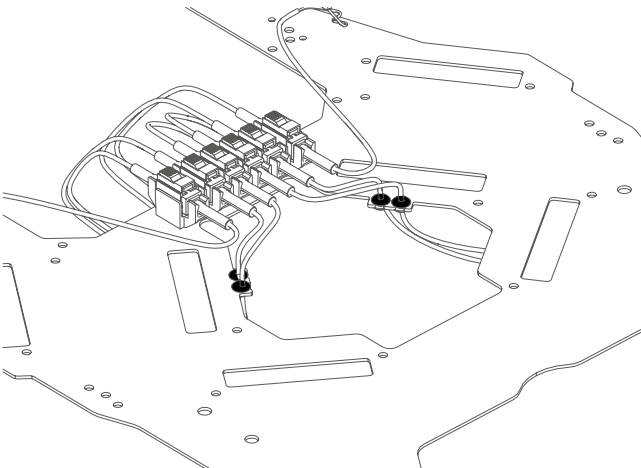
■ RTK Antenna


💡 What do we need in this section:

P20/P30 2019 GPS Antenna (L)	*1	SKU-01-003-00175
P20/P30 2019 GPS Antenna (R)	*1	SKU-01-003-00176
M3*12*6 Hexagon socket combination screw	*6	SKU-02-004-00225
M3*8*6 Hexagon socket combination screw	*6	SKU-02-004-00223

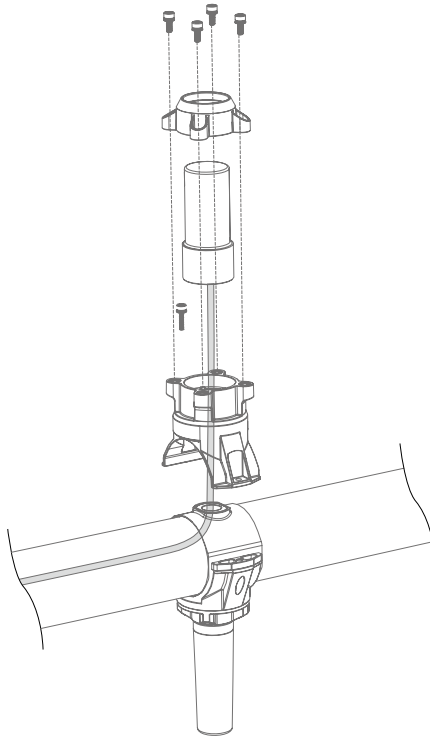
🔗 Disassemble:

1. Remove the Airframe Hood, and disconnect the corresponding RTK Antenna connector.
2. Remove the Central Compartment Cover (Refer to Airframe ARM Section), then remove the RTK Antenna feeder protective sleeve and the RTK Antenna feeder from the Air frame Central Compartment.
3. Use a 2.5 screwdriver to remove the two (2) screws from the Antenna Mount, and remove the feeder from the Airframe Arm.
🔧 The screws using M3*12*6 Hexagon socket combination screw here.
4. Use a 2.5 screwdriver to remove the four (4) screws from the Antenna Cover, and remove the antenna for replacement.
🔧 The screws using M3*8*6 Hexagon socket combination screw here.



 Assemble:

1. Insert the Antenna feeder through the holes on the Antenna Mount, and reassemble the antenna cover back into the original position and tighten the components with screws.
2. Insert the feeder through the ARM, then use a 2.5 screwdriver to tighten and secure the Antenna mount with screws.
3. Clip the RTK feeder protective sleeve and the RTK feeder in the slot on the Air frame Central Compartment.
4. Insert and reconnect the connectors on the Central Compartment Cover and place them back into the original position, and adjust the length of the feeder accordingly.



 CHECK :

- Connect the Aircraft to a pilot phone and open XAG Agri APP, then observe if the heading accuracy is within 2° and there are more than 16 Satellites.

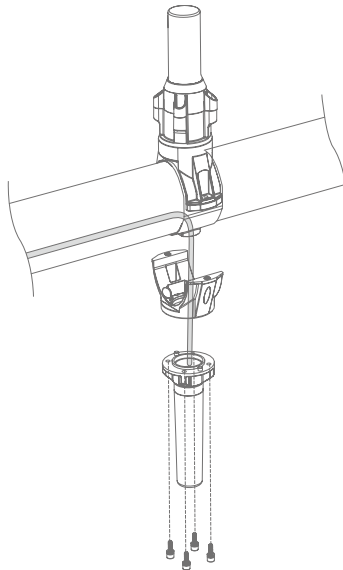
▪ Dual Frequency Antenna

💡 What do we need in this section:

P20/P30 2019 Dual Frequency Antenna (L)	*1	SKU-01-003-00177
P20/P30 2019 Dual Frequency Antenna (R)	*1	SKU-01-003-00178
M3*12*6 Hexagon socket combination screw	*6	SKU-02-004-00225
M3*8*6 Hexagon socket combination screw	*6	SKU-02-004-00223

🔧 Disassemble:

1. Remove the Airframe Hood, and disconnect the corresponding Dual Frequency cable connector.
2. Remove the Central Compartment Cover (Refer to Airframe ARM Section), then remove the Dual Frequency Antenna feeder protective sleeve and the Dual Frequency Antenna feeder from the Air frame Central Compartment Cover.
3. Use a 2.5 screwdriver to remove the two (2) screws from the Antenna Mount, and remove the feeder from the Airframe Arm.
🔧 The screws using M3*12*6 Hexagon socket combination screw here.
4. Use a 2.5 screwdriver to remove the four (4) screws from the Antenna Cover, and remove the antenna for replacement.
🔧 The screws using M3*8*6 Hexagon socket combination screw here.





Assemble:

1. Insert the Antenna through the holes on the Antenna Mount, and reassemble the antenna cover back into the original position and tighten the components with screws.
2. Insert the feeder through the ARM, then use a 2.5 screwdriver to tighten and secure the Antenna mount with screws.
3. Clip the Dual Frequency Antenna feeder protective sleeve and the RTK feeder in the slot on the Air frame Central Compartment cover.
4. Insert and reconnect the connectors on the Central Compartment Cover and place them back into the original position and adjust the length of the feeder accordingly.



CHECK :

- Connect the UAV/RPAS to the RTK Base Station in an open outdoor area, observe and confirm that the UAV/RPAS are communicating normally with the station.

▪ 4G Antenna

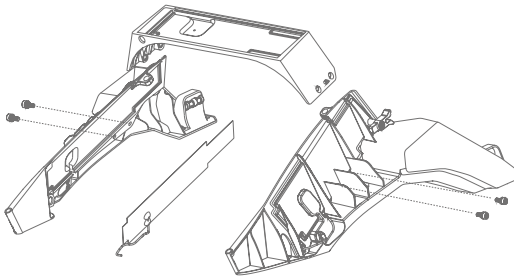
💡 What do we need in this section:

P30 2019 4G Antenna (L)	*1	SKU-14-002-00061
P30 2019 4G Antenna (R)	*1	SKU-14-002-00062
M3*10*6 Hexagon socket combination screw	*6	SKU-02-004-00224



Disassemble:

1. Remove the Airframe Hood, then disconnect the feeder connectors connecting the Comm Module and 4G Antenna.
2. Use a 2.5 screwdriver to remove the screws securing the 4G Antenna Mount, and remove the mount.
🔧 The screws using M3*10*6 Hexagon socket combination screw here.
3. Remove the 4G Antenna.



Assemble:

1. Reinstall the 4G Antenna to the corresponding Antenna Mount.
2. Reinstall the 4G Antenna Mount back to its original position, then uses a 2.5 screwdriver to tighten and secure the components with screws.
3. Reconnect the connectors connecting the Comm module and 4G Antenna, and reassemble the Airframe Hood.



CHECK :

- Connect the UAV/ RPAS to a pilot phone and open XAG Agri APP, then observe and confirm that the 4G reception is normal.



IMPORTANT:

- I. Ensure the Antenna feeder connector is connected correctly and firmly.
- II. During reassembly process, be aware and prevent Antenna feeder from bending or pressured.

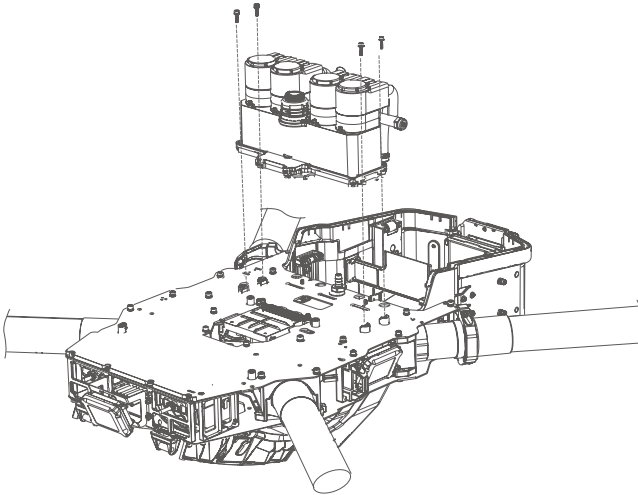
▪ Pump Controller Board

💡 What do we need in this section:

P20/P30 2019 Pump Controller Board	*1	SKU-05-001-00556
M3*12*6 Hexagon socket combination screw	*6	SKU-02-004-00225
M2.5*8*4.5 Hexagon socket combination screw	*9	SKU-02-004-00429
M2.5*6*4.5 Hexagon socket combination screw	*5	SKU-02-004-00428

🔧 Disassemble:

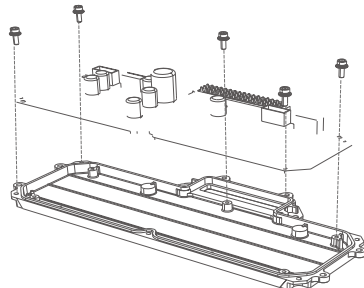
1. Drain all liquid and residues from the liquid tube, then use a 2.5 screwdriver to remove the six (6) screws securing the Peristaltic Pump Housing.
🔧 The screws using M3*12*6 Hexagon socket combination screw here.



2. Use a 2.0 screwdriver to remove the nine (9) screws securing the Peristaltic Pump Housing Top Cover, then disconnect the connectors of the Peristaltic Pump and the connector of the Searchlight.

Remove the Peristaltic Pump Housing Top Cover, then use a 2.0 screwdriver to remove the five (5) screws securing the Pump Controller Board and remove the board for replacement.

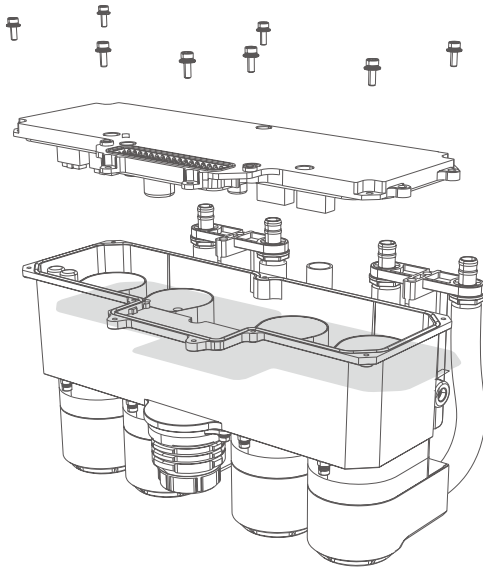
🔧 The screws using M2.5*6*4.5 Hexagon socket combination screw here.





Assemble:

1. Reassemble the new Pump Controller board back into the original position and secure the component with screws, then reconnect the connectors connecting the Peristaltic Pump and the Searchlight.
2. Reassemble the Peristaltic Pump Housing Top Cover and Peristaltic Pump Housing back into the original position and secure each component with screws.
3. Reconnect the outlet tube for the Peristaltic Pump Housing.



CHECK :

- After the reassembly of the Pump Controller Board is completed, perform a spray test of all the pumps to confirm the corresponding pump is working normally.



IMPORTANT:

- I. After the reassembly of the Pump Controller Board is completed, perform a spray test of all the pumps to confirm the corresponding pump is working normally.
- II. During reassembly, be aware of the sequence of the connectors (M1, M2, M3, M4) when reconnecting.
- III. During reassembly, be aware and ensure the sealing of the Peristaltic Pump Housing and its top cover is installed correctly.

▪ RTK Module

💡 What do we need in this section:

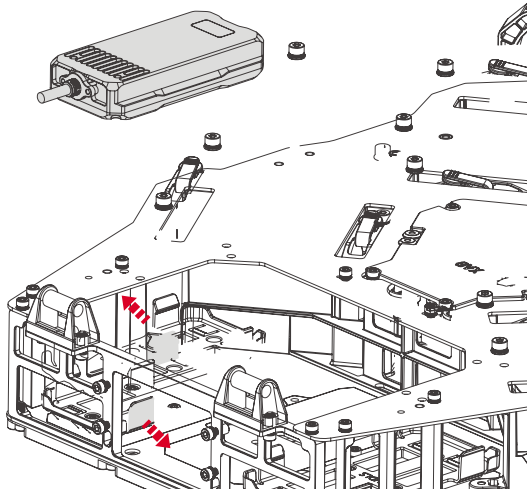
P20/P30 2019 RTK Module

*1

SKU-05-002-00586

📎 Disassemble:

- Remove the Airframe Hood, then disconnect the connectors for RTK Module and RTK Antenna.
- Open the Buckles on the RTK Module Mount, and remove the RTK Module .



🔧 Assemble:

- Reassemble the new RTK Module back into its original position and reconnect the connectors connecting the RTK Module and RTK Antenna, then reassemble the Airframe Hood.

🔍 CHECK :

- Connect the UAV/ RPAS to the Pilot Phone and the RTK Base Station in an open outdoor area, then observe if the heading accuracy is within 2° and there are more than 16 Satellites.

🔥 IMPORTANT:

- Installation of the feeder connector must be correct and clamped.

▪ Comm Module

💡 What do we need in this section:

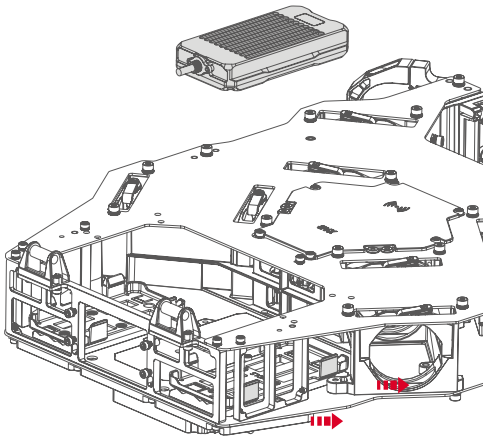
P20/30 2019 Comm Module

*1

SKU-05-002-00585

🔗 Disassemble:

- Remove the Airframe Hood, then disconnect the connectors for RTK Module, 2.4G and 4G Antenna.
- Open the Buckles on the Comm Module Mount and remove the Comm Module .



🔗 Assemble:

- Reassemble the new Comm Module back into its original position and reconnect the connectors connecting the Dual Frequency Antenna, 4G Antenna and Comm Module, then reassemble the Airframe Hood.

🔍 CHECK :

- After reassembly, connect the UAV/RPAS to a pilot phone and open XAG Agri APP, then observe and confirm that the 4G reception is normal (if SIM Card is installed).

🔗 IMPORTANT:

- Installation of the feeder connector must be correct and clamped.

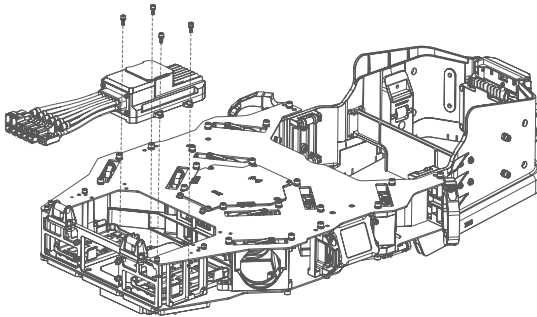
▪ Flight Controller (FC)

💡 What do we need in this section:

P20/P30 2019 Flight Controller (FC)	*1	SKU-05-002-00595
M3*8*6 Hexagon socket combination screw	*6	SKU-02-004-00223

🔧 Disassemble:

- Remove the Airframe Hood, then disconnect the connectors for the Flight Controller. Use a 2.5 screwdriver to remove the four (4) screws securing the FC and remove the FC Module for replacement.
🔧 The screws using M3*8*6 Hexagon socket combination screw here.



🔩 Assemble:

1. Pass the Flight Controller feeder through the front fuselage Strengthener, and replace the Flight Controller back into the original position and secure the components with screws.
2. Reconnect the Flight Controller connectors (Refer to the connection guide in the interior of the Airframe Hood) and reorganize the feeder with cable tie and reassemble the Airframe Hood.

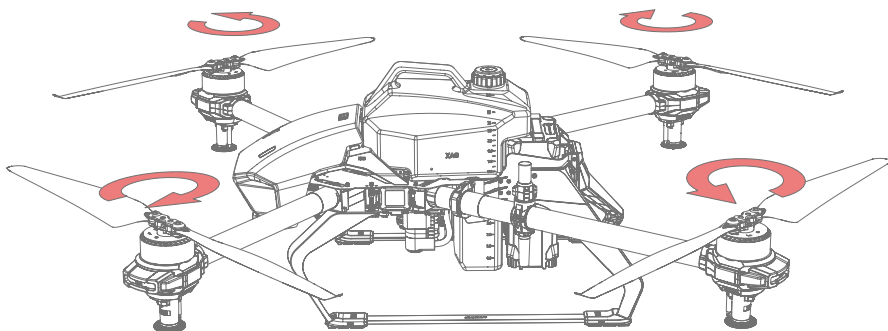
🔍 CHECK :

- After the assembly is completed, inspect and ensure there are no loose or missing screws, and ensure the cables are connected correctly.

🔒 IMPORTANT:

- I. Ensure the Flight controller is installed horizontally and secured.
- II. Before reassembly, ensure there are no foreign objects under the Flight Controller and the reassembly area.
- III. Ensure all unused connectors are covered with waterproof rubber plug.

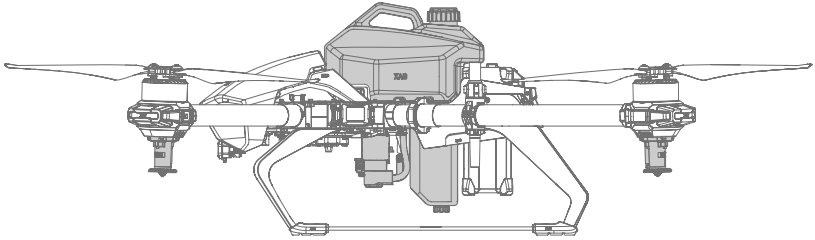
▪ XAG Pre-Flight Checklist



- 01 Inspect and ensure the propellers are in good condition (DO NOT use aged, chipped or damaged propellers).
- 02 Inspect and ensure cleanliness and ensure no stain is attaching on to the Propellers.
- 03 Inspect and ensure the screws securing the Propeller are tighten and not loose.
- 04 Inspect the integrity of the Airframe.
- 05 Inspect and observe the screws securing the nozzle and the Landing Skids are tighten and the module is not loose.
- 06 Inspect and ensure cleanliness and no stain is attaching to the XCOPE and Terrain Module.
- 07 Conduct Spray System self-check without error.
- 08 Perform Motor Test to ensure the motor is operating normally and propeller is rotating in the correct direction.
Clockwise (CW): Motor 2 & Motor 4
Counter-Clockwise (CCW): Motor 1 & Motor 3
- 09 Normal Communication
 - ✓ UAV/ RPAS enters RTK mode,
 - ✓ UAV/ RPAS Heading Accuracy within 2°
 - ✓ Number of Satellites >16

▪ After-Flight Maintenance

Pesticides are corrosive which may causes erosion within the equipment and shorten service lifespan, it is recommended to thorough cleaning after each operation.



- 01 Refill the Liquid Tank with soap water or soap powder water, and engage all nozzle to drain and clean out remaining residues within the spray system.
- 02 Refill the Liquid Tank with clean water, and engage all nozzle to drain and clean out remaining soap water within the spray system.
- 03 Place an empty Liquid Tank, and engage all nozzle to drain and clean out remaining residues within the spray system to avoid residues leakage during transportation and possibly damaging other items.
- 04 Wringing a wet rag, then wipe and clean the exterior of the aircraft to remove any stains and foreign object.
- 05 Wash and clean the surface of the Liquid Refiller to remove any stains and foreign object.

IMPORTANT:

- During transportation of the equipment or the aircraft is going to be idle for a long period, liquids and residues must be drained from the aircraft.

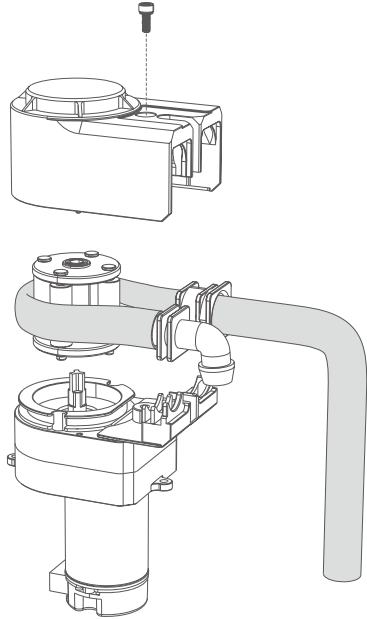
WARNING:

- Aircraft with residues remaining within the spray system during transportation or long idle may cause liquid damage to critical module.

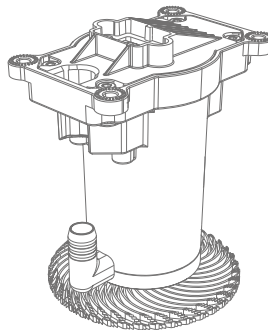
- Maintenance of Major System

▪ Spray System

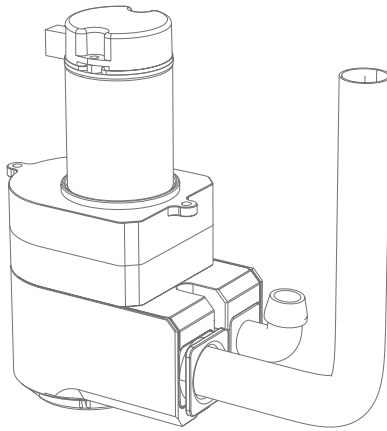
- » Recommendation (Every 100 hectares)
Inspection of Peristaltic Pump Tube
(Inlet and outlet) If the tubing has dried
up and lost its elasticity,
- » Replacement of Peristaltic Pump Tube
is required.



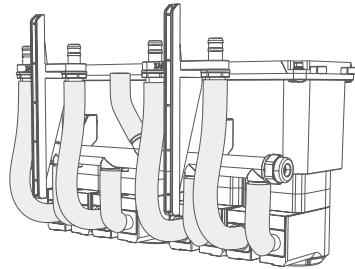
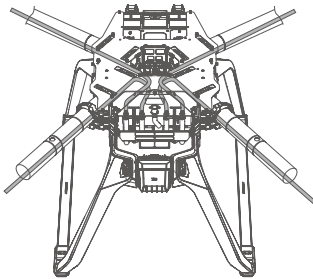
-
- » Recommendation (Every 200 hectares or Warning indication of nozzle speed abnormal).
 - » Replacement of Nozzle.



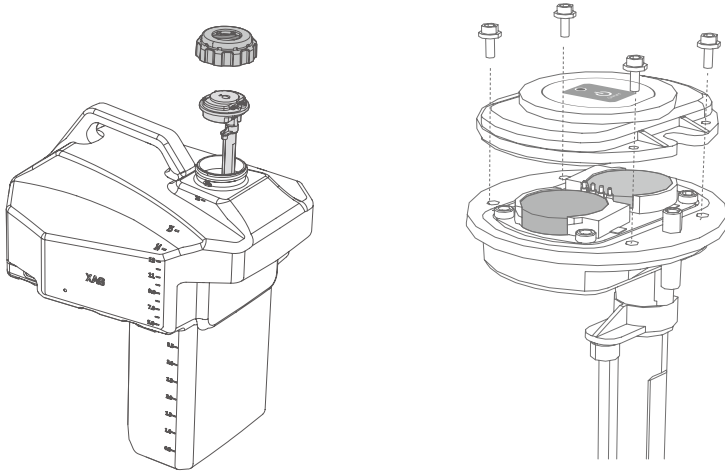
- » Recommendation (Every 1200 hectares).
- » Replacement of Peristaltic Pump.



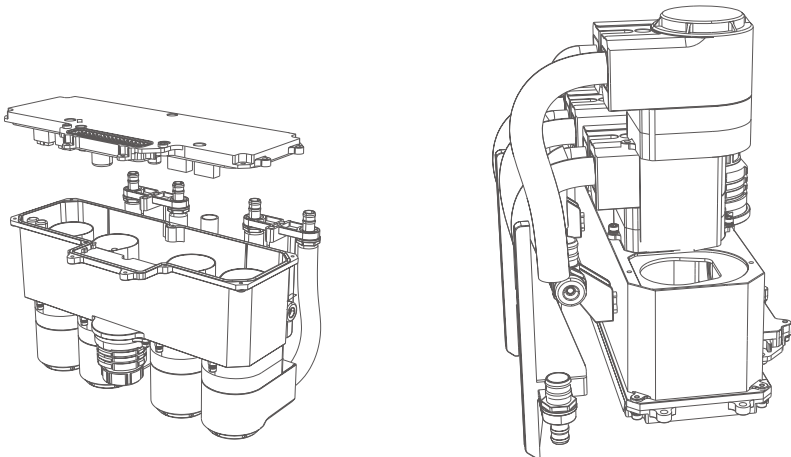
-
- » Recommendation (Every 2 years or 3000 hectares).
 - » Replacement of All Liquid tubes.



- » Recommendation (Every 300 Hours).
- » Replacement of Liquid Tank Sensor battery.

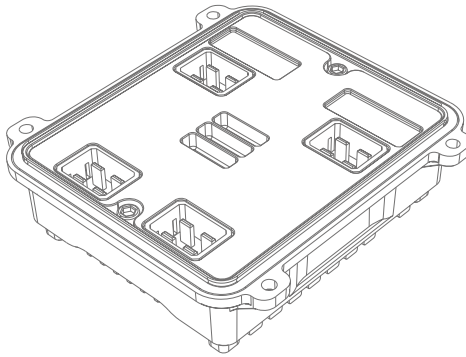


-
- » Ensure the integrity of the Waterproof rubber ring for Pump Housing and Peristaltic Pump, avoid liquid or foreign matter from entering.



▪ Propulsion System

- » Recommendation (Every 100 hectares) , Maintenance and Cleaning should be conducted
 - Motor Housing
 - Propeller
 - Motor
- » Ensure the integrity of the ESC Waterproof rubber ring, which prevent liquid or foreign matter from entering.

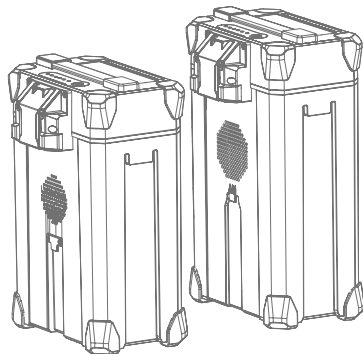


-
- » Recommendation (Every 200 Charge Cycles), Replacement of Battery Cells.

 **IMPORTANT:**

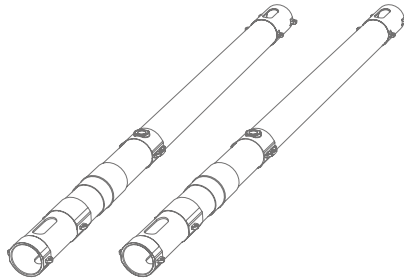
Battery requires regular maintenance for normal usage and lifespans.

- Batteries must be recharged every 3 months.
- For the purpose of storage, batteries should only be charged to 80%, and cell pressure should be within 50mv different.
- Prevent usage in High Temperature, Overcharge, and Over discharge.

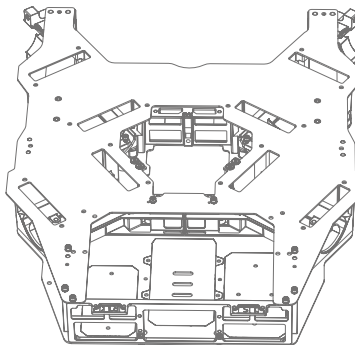


▪ Airframe Structure

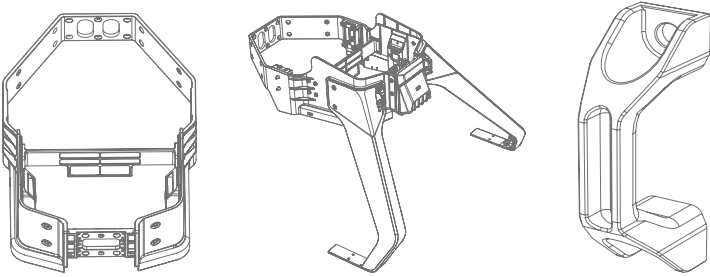
- Recommendation (Every 300 hectares).
- The focus of the maintenance of the Airframe structure is to ensure there are no attachments, and the structures are tightly connected and not loose, so there are no vibrations generated during flights safeguarding safe flight of the UAV/RPAS.
- ✓ Inspect and ensure the parts are tightly connected and firmly secured, any loose parts should be fastened immediately.
- ✓ Inspect and ensure the Airframe ARM for cracks, bends and deformations.
- ✓ Inspect and ensure the positions of the Airframe ARM and the internal Aluminum alloy tube are consistent
- ✓ Inspect and ensure the attachments on the Airframe structure are firmly secured



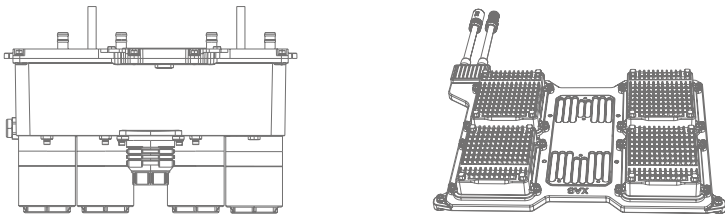
-
- ✓ Inspect and ensure the screws on the Airframe structure is tighten and has no cracks or deformation.
 - ✓ Inspect and ensure the aluminum alloy of the Airframe structure have no deformation or distortion.



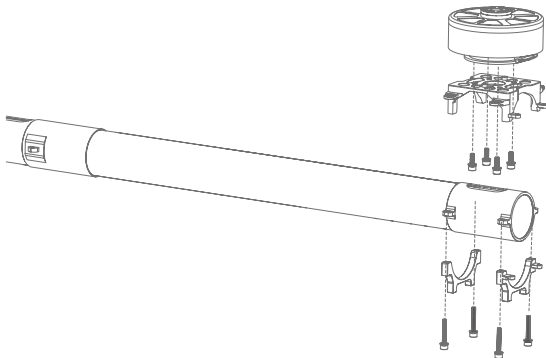
- ✓ Inspect and ensure the Landing Skid, Anti-Loosening Joint, and the Suspension fixture of the Landing skid are firmly secured.



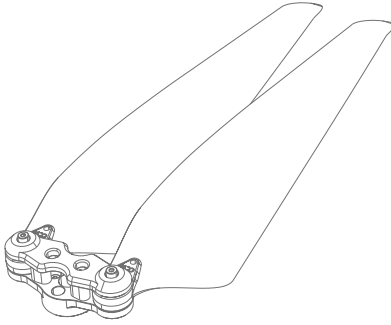
- ✓ Inspect and ensure the ESC and Pump Housing have no cracks or deformation, and ensure the component is firmly secured.



- ✓ Inspect and ensure the Motor and Motor Mount are firmly secured to the Airframe ARM.



- ✓ Inspect and ensure the Propeller and Propeller Spinner have no deformation or cracks.



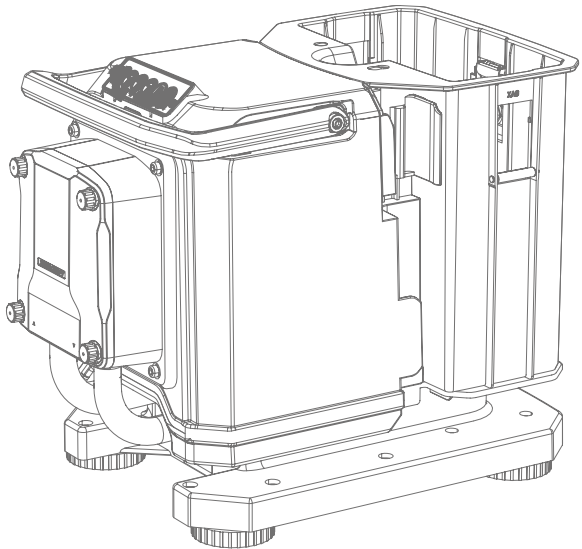
▪ Liquid Refiller

- » Recommendation (Every 200 Operating Hours), Replacement of Liquid Refiller Moto.
- » Recommendation (Every 10 Operating Hours), Replacement of Liquid Refiller Peristaltic Pump Tube.

IMPORTANT:

Battery requires regular maintenance for normal usage and lifespans:

- Batteries must be recharged every 3 months.
- For the purpose of storage, batteries should only be charged to 80%.
- Prevent usage in High Temperature, Overcharge, and Over discharge.

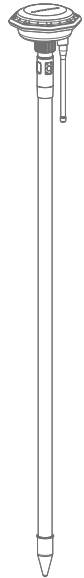
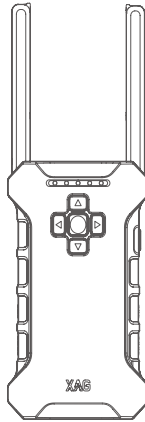
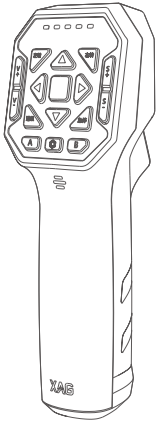


▪ ACS1, ACB1, RTK Rover

 IMPORTANT:

Devices requires regular maintenance for normal usage and lifespans:

- Batteries must be recharged every 3 months.
- For the purpose of storage, batteries should only be charged to 80%.
- Prevent usage in High Temperature, Overcharge, and Over discharge.



■ DISCLAIMER

1. Please read this document carefully before using this product. This statement has an important impact on the safe use of this product and your legitimate rights and interests. Once you use this product, you are deemed to have read, understood, approved and accepted all the terms and contents of this document.
2. This product is not a toy. The use of this aircraft has certain safety risks. It is not suitable for individuals under 18 years of age or who have not obtained a XAG Operator License approved by XAG and by the local regulator authority. Keep this product out of the reach of children, and pay special attention when operating in the presence of children.
3. This product is a multi-rotor aircraft of XAG P-Series Unmanned Aerial System and it is only applicable to the agricultural field. User should carefully read and go through the Product's User Manual before operating this UAV/RPAS.
4. XAG Unmanned aerial system should be used for legitimate purposes and user agrees and accepts these terms and any related policies or guidelines that may be developed by XAG. The user has read, understood and accepts that this product will automatically upload and save relevant flight records and data to the XAG server during use. If the flight records and data cannot be uploaded and saved due to the user's reasons, which makes XAG unable to analyze the flight records and data, XAG will not bear any responsibility.
5. To the fullest extent permitted by law, under no circumstances does XAG provide any express or implied guarantee on this product, including but not limited to implied guarantees of merchantability, fitness for a particular purpose, or non-infringement.
6. To the maximum extent permitted by law, XAG is not responsible for any losses caused by the user's failure to use the product in accordance with this document and the Product Manual. No liability is assumed for any indirect, consequential, punitive, incidental, special or penal damages, including losses incurred as a result of your purchase, use or inability to use the product (even if the possibility of such losses has been Inform the same).
7. To the maximum extent permitted by law, under no circumstances will XAG legal liability or amount due to all damages, losses and litigations exceed your payment to XAG.
8. In any case, the purchaser or user shall abide by the relevant laws and regulations of the country and region where the product is used, and XAG shall not bear any responsibility arising from the violation of the relevant laws and regulations by the purchaser or user.
9. The laws of some countries may prohibit exemption clauses, so your related rights in different countries may vary. However, this does not mean that the contents of this statement are necessarily invalid.
10. To the extent permitted by law, XAG has the right of final interpretation and modification of the above terms. XAG has the right to update, revise or terminate these Terms through XAG official website, "Product Manual / User Manual", and online APP without prior notice.



WARNING:

- User needs to read the complete Product Manual and obtain a UAV/RPA system operation license approved by XAG (or the current laws, regulations and policies). Failure to do so may cause serious injury to yourself or others, or result in product damage and property damage. Strong safety awareness is required to operate this product. This product is not suitable for children. Do not use components not provided or recommended by XAG. Be sure to strictly follow the instructions of XAG to install and use the product.



FLIGHT SAFETY:

- Familiar with flight environment
- Avoid obstacles and population
- CONDUCT Flight safety assessment
- DO NOT FLY over or above people or in a populous area.
- DO NOT FLY when you are fatigue, or under influence of alcohol or drugs.
- DO NOT FLY in any No Fly Zones
- KEEY AWAY from heat sources to avoid damage to electronics
- DO NOT conduct solo fight during training, and it is recommended to be supervised by experienced pilot
- DO NOT exceed the maximum take-off weight of the UAV/RPAS
- Ensure that all propellers are in good condition before each flight.
- DO NOT use aged, chipped or damaged propellers.
- STAND CLEAR of and DO NOT touch propellers or motors when they are spinning
- CONDUCT Pre-flight checklist before every flight
- STRICTLY FORBIDDEN to conduct obstacle avoidance tests on humans or animals (regardless of static or dynamic) and any objects as obstacles, and it is strictly forbidden for humans, animals or objects to directly obstruct, interfere or impact the aircraft.



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