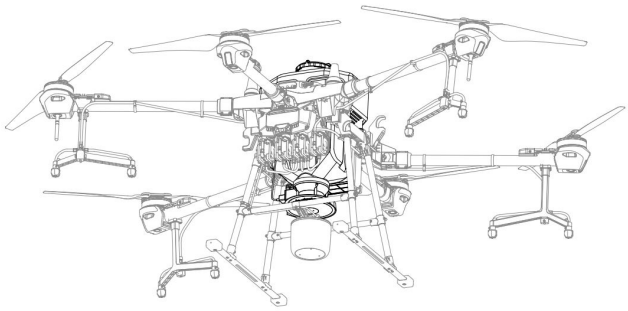
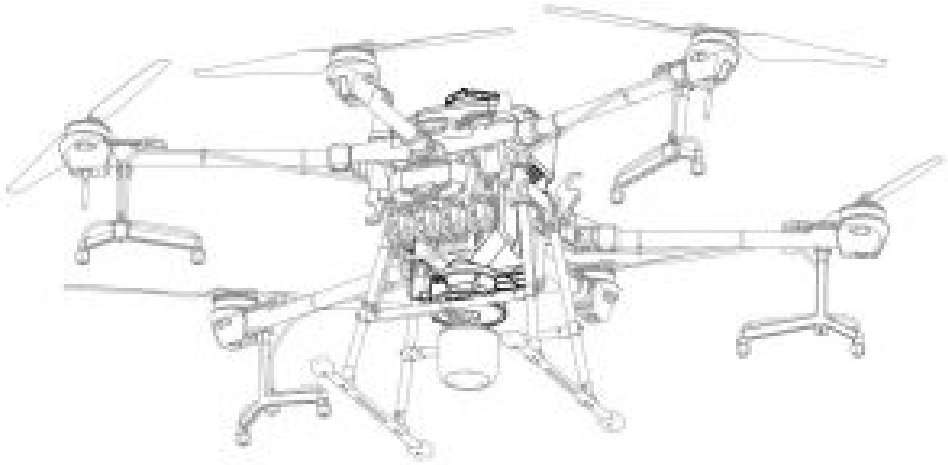


dji T Series Spreading System User Guide

Contents

User Guide



dji T Series Spreading System

Disclaimer

Carefully read this entire document and all safe and lawful practices provided by DJITM before using this product for the first time. Failure to read and follow instructions and warnings may result in serious injury to yourself or others, damage to your DJI product, or damage to other objects in the vicinity. By using this product, you hereby signify that you have read this disclaimer carefully and that you understand and agree to abide by the terms and conditions herein. You agree that you are solely responsible for your own conduct while using this product, and for any consequences thereof. DJI accepts no liability for damage, injury, or any legal responsibility incurred directly or indirectly from the use of this product.

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Warnings

1. The T Series Spreading System (abbreviated as Spreading System) is only compatible with the DJI AGRASTM T series aircraft, and the firmware of the aircraft must be the correct version for supporting the Spreading System. Refer to the Specifications section for more information about compatible aircraft. DO NOT use it with other products or for purposes other than agriculture.
2. The Spreading System is compatible with dry materials of a diameter between 0.5 – 5 mm. DO NOT use with other materials. If used with other materials, the operating performance will be negatively affected and the Spreading System may be damaged. All materials must be used in strict accordance with the instructions for those materials.
3. The max internal spread tank load depends on the takeoff weight of the aircraft. DO NOT overload. Refer to the

Specifications section for more information.

4. When connecting the cables, make sure the connection is correct and secure. Operate with caution to avoid damaging the cables.
5. Make sure that the hopper gate and spinner disk function normally before each use.
6. Operate with caution to avoid injury caused by mechanical parts.
7. When spreading is in progress, maintain a safe distance from the Spreading System to avoid injury.
8. When spreading is in progress, the minimum detection distance of the radar module will be 5 m instead of 1.5 m due to obstruction from the materials being spread. Note that the aircraft cannot sense obstacles that are not within the detection range. The detection performance of the radar module will also decrease. Fly with caution. Refer to the disclaimer and safety guidelines of the corresponding aircraft you are operating for more information on the radar module.
9. DO NOT use liquids to rinse the Spreading System. It is recommended to use dry compressed air as a cleaning agent.

Introduction

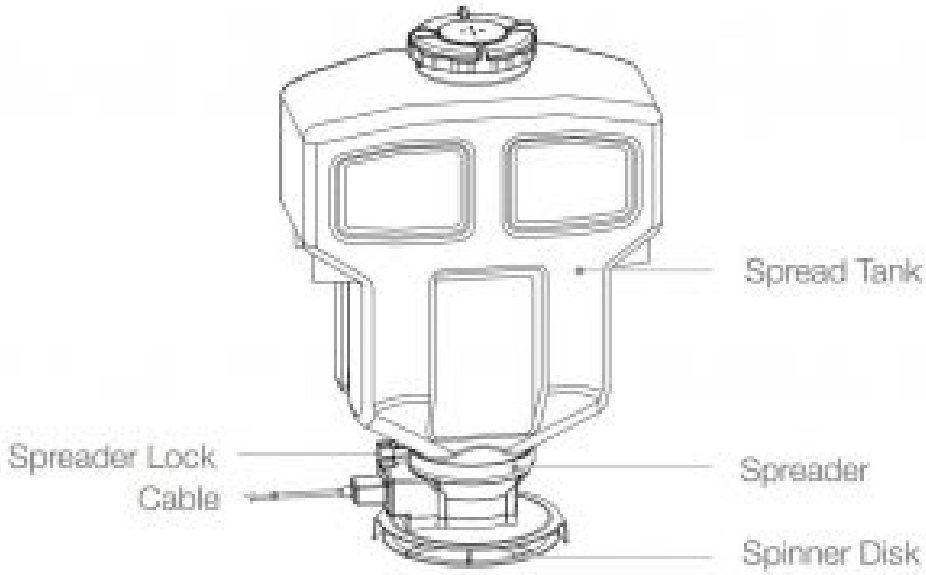
The T Series Spreading System is compatible with Agras T series aircraft and offers efficient, reliable, and stable spreading operations. The material delivery system is precisely controlled by the built-in stirring device and hopper gate, which can prevent material blockages and improve operating accuracy and reliability. Use the app compatible with your aircraft to set parameters such as the hopper outlet size and spinner disk rotating speed. These parameters can be adjusted to meet different requirements. The app provides warning prompts for an empty tank as well as for abnormalities in the rotating speed, temperature, and hopper outlet size. These prompts help ensure system safety.

The Spreading System has two versions, 1.0 and 2.0. They each have a different structure for the spinner disk. Compared with the Spreading System 1.0, the Spreading System 2.0 has a higher material delivery rate and can spread materials 360° around the aircraft. Unless otherwise specified, the descriptions in this document use the Spreading System 1.0 as an example.

In the Box

Users have the option to purchase a fender with a screw pack to use with the Spreading System 2.0.

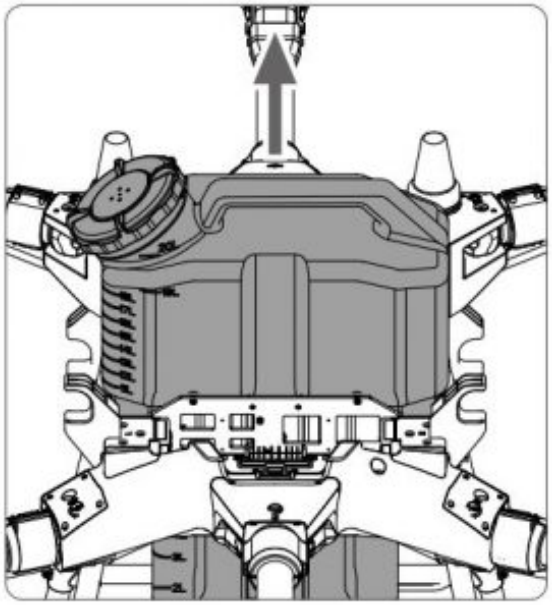
Overview



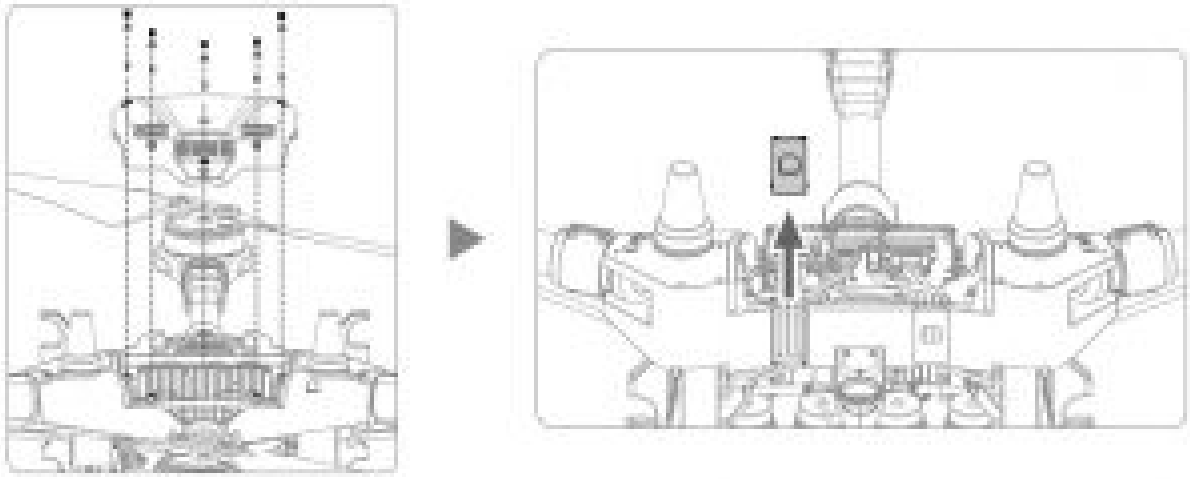
Installation

Make sure to remove the Intelligent Flight Battery from the aircraft before installation. Hex keys for M2.5, M3 and M4 screws are required for installation.

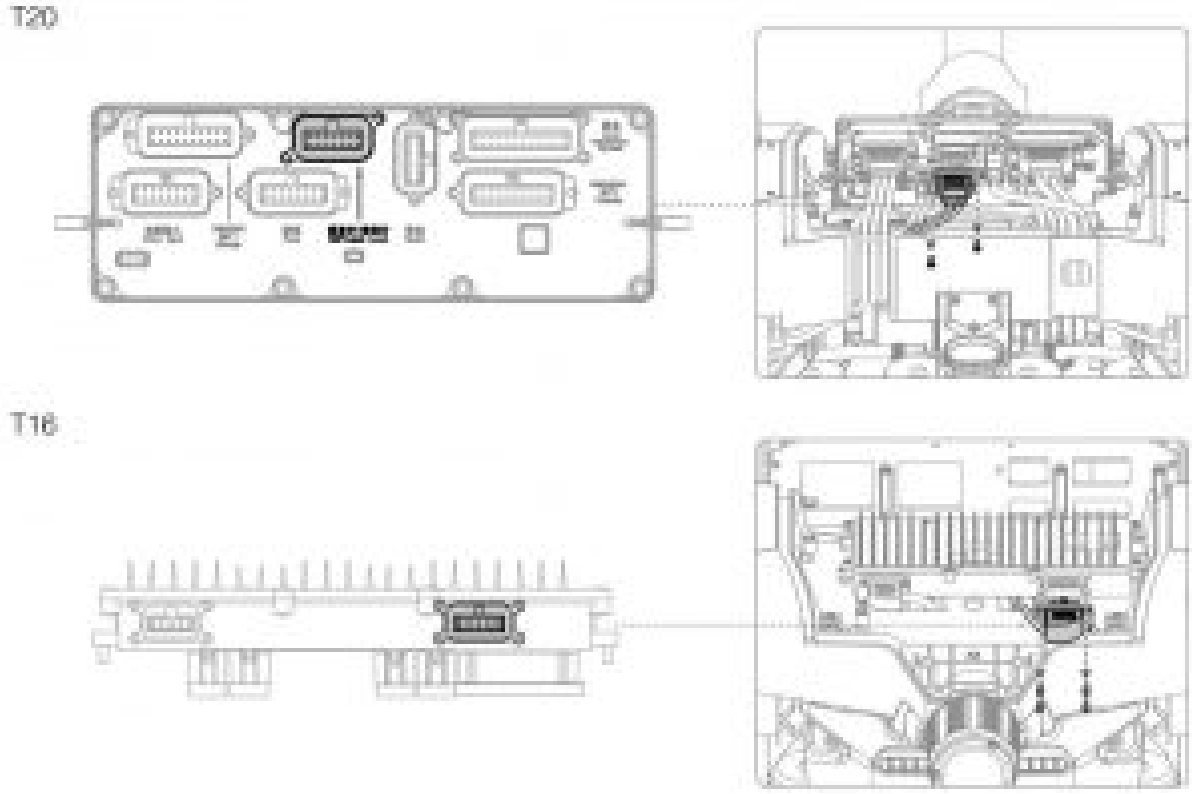
1. Lift and remove the spray tank on the aircraft.



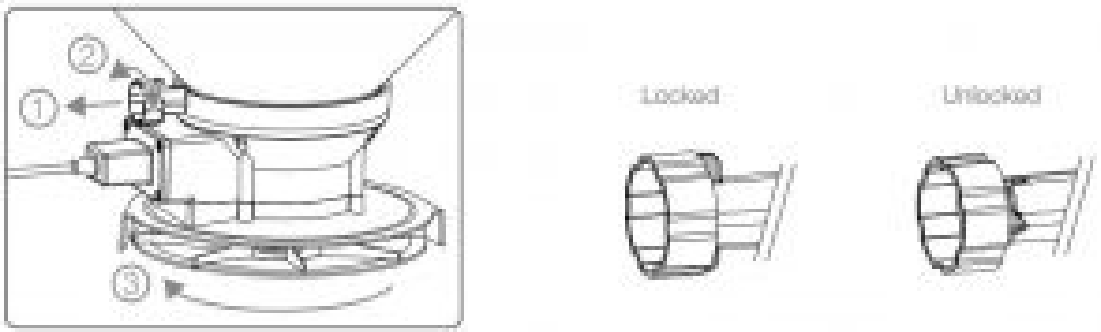
2. Remove all of the rubber stoppers and five M3×8 screws on the upper cover on the front of the aircraft, and then remove the upper cover. For the T20 aircraft, the cable strainer protector on the left must also be removed.



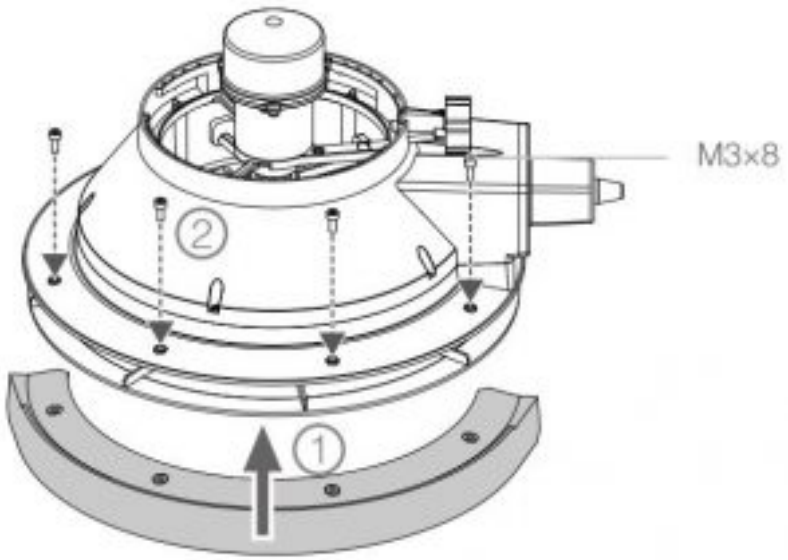
3. Locate the EMF/Liquid Level port on the spray control board. Remove the M2.5×8 screws on the cable connector, and then unplug the cable and place it in the space near the aircraft frame. The location and structure of the spray control board are different on the T20 and T16. Refer to the figures below for more information.



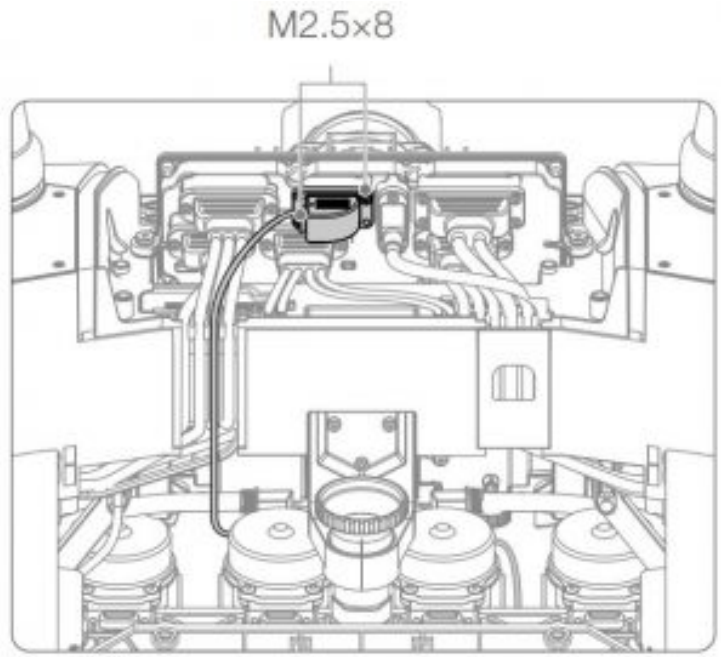
4. Detach the spread tank and the spreader: Pull the spreader lock knob out, rotate it 90°, and release. Next, rotate the spreader to detach it.



5. For the Spreading System 2.0, there is the option to mount the fender to the spreader. If mounted, the fender will prevent materials from being spread to the rear of the aircraft.

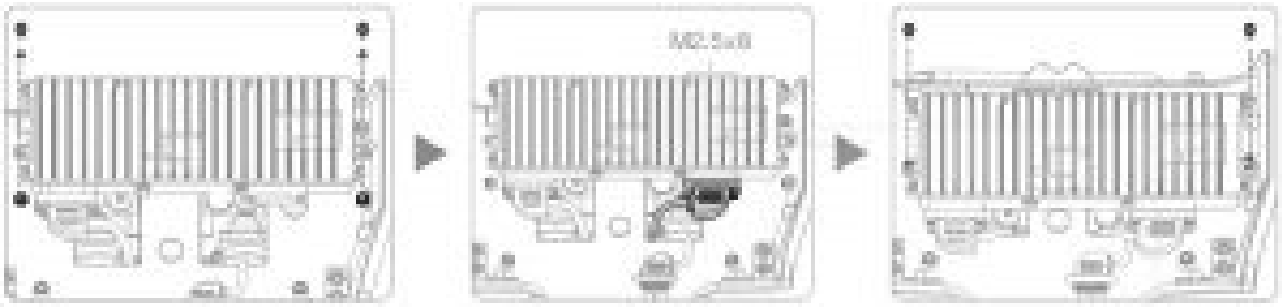


6. Connect the Spreading System cable:
T20
Pass the cable through the space between the delivery pumps and spread tank mounting position. Secure the cable to the cable strainer on the left of the aircraft, connect it to the EMF/Liquid Level port, and tighten the two M2.5×8 screws.

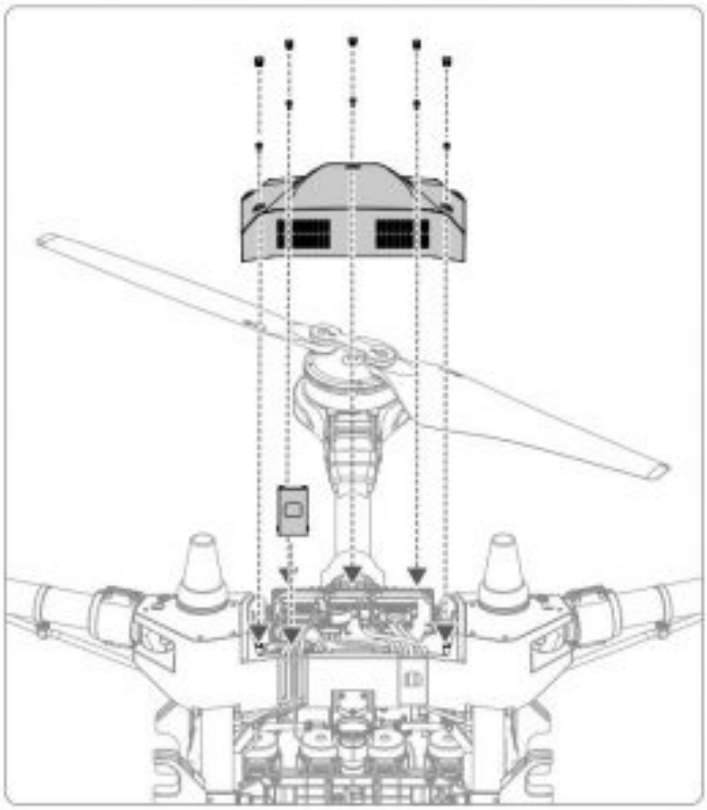


T16

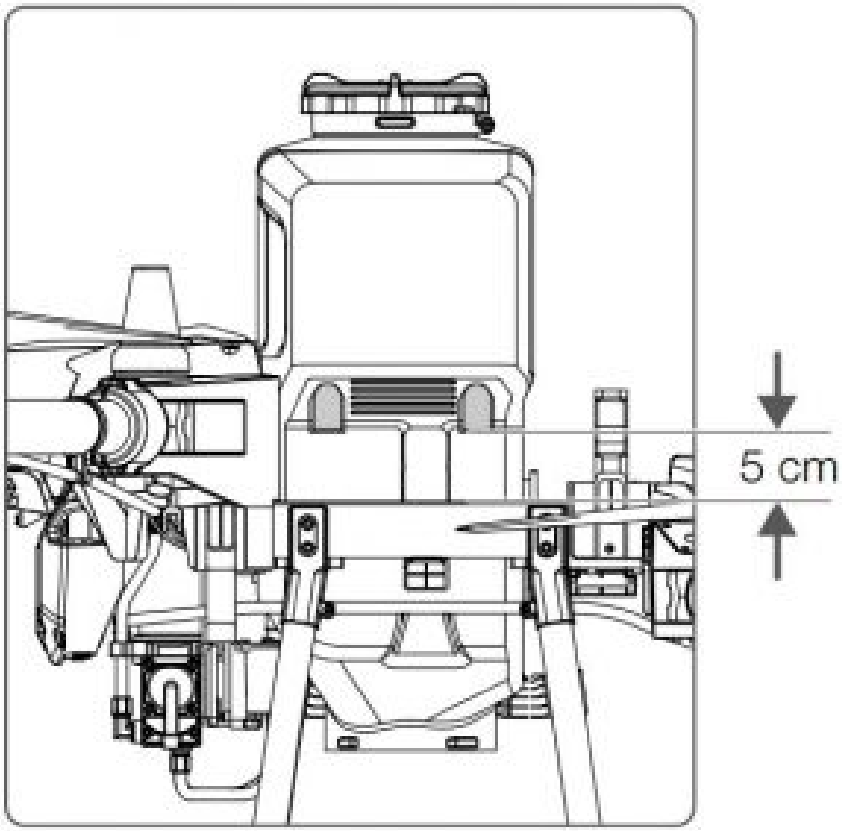
- Remove the M3×8 screws on both sides of the spray control board. Lift the board gently to make a space between the board and the mounting position. DO NOT pull the cables connected on the board.
- Pass the cable through the space between the delivery pumps and spread tank mounting position, then through the space under the spray control board. Connect the cable to the EMF/Liquid Level port and tighten the four M2.5×8 screws.
- Remount the M3×8 screws on both sides of the spray control board.



7. Remount the cable strainer protector (for T20 only) and the upper cover of the aircraft. Tighten the five M3×8 screws and attach all of the rubber stoppers

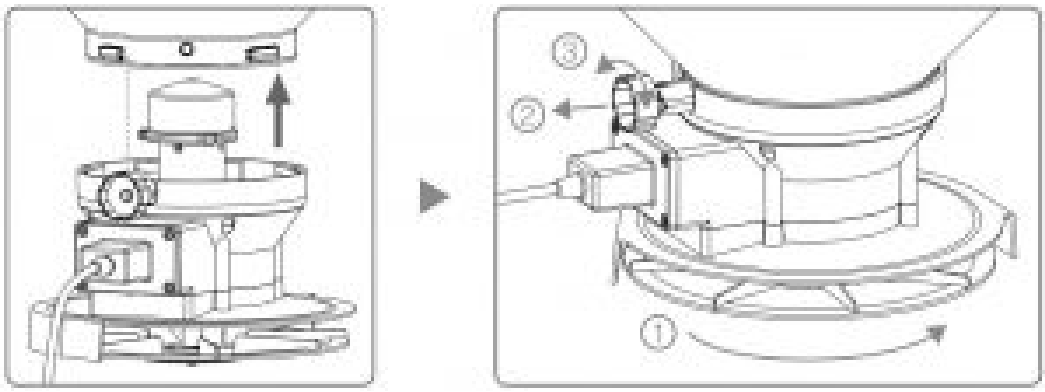


8. Insert the spread tank in the aircraft. DO NOT insert it to the bottom of the aircraft frame. Make sure that the middle of the tank is approximately 5 cm from the middle frame of the aircraft, as shown in the figure below.



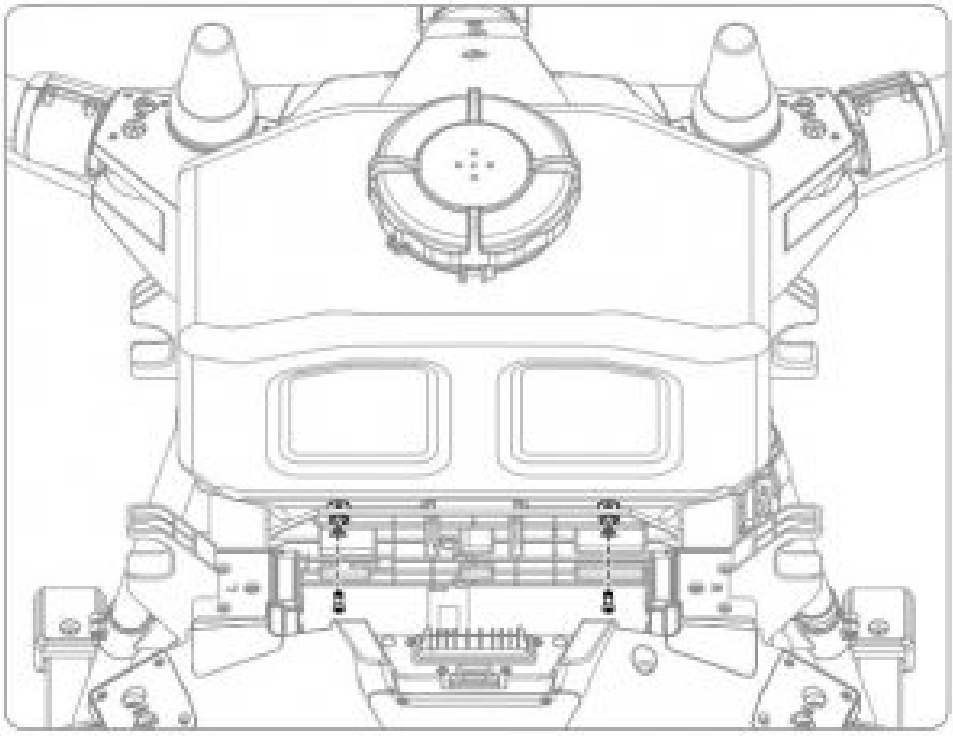
9. Mounting the spreader:

- Face the rear of the aircraft and check the spreader lock knob is in an unlocked position. Insert the spreader with the knob located to the left of the circular indentation on the spread tank.
- Rotate the spreader to mount it to the spread tank. To lock the spreader, pull the spreader lock knob out, rotate it 90°, and release. Make sure that the spreader is locked in position.



- Secure the Spreading System cable to the landing gear using the Velcro on the cable.

10. Insert the spread tank to the bottom of the aircraft frame and make sure it is in position. Insert and tighten two M4×12 screws to the rear of the tank.



Operate with caution to avoid injury caused by mechanical parts.

Usage

1. Rotate the cover to open, add compatible materials, and tighten the cover.
2. Power on the remote controller, and then power on the aircraft.
3. Enter Operation View in the app. The following descriptions use the DJI Agras app as an example.
4. Tap the hopper outlet size display on the left of the screen to set the hopper outlet size, spinner disk rotating speed, flying speed, line spacing, height relative to the vegetation, and banked turning. Adjustable parameters vary depending on the operation mode. Adjust the settings so that they are suitable for the materials you are using and test to make sure the performance is as expected.
   For the Spreading System 1.0, when measuring between 7.5 to 9 kg/ha of materials spread, it is recommended to:
   • Adjust the hopper outlet size so that the material delivery rate is 1 kg/min.
   • Adjust the spinner disk rotating speed so that the spreading range is 4 to 6 meters.
   • Set the flying speed to 4 m/s (flying speed setting is unavailable in Manual Operation Mode).
   For the Spreading System 2.0, when measuring 45 kg/ha of materials spread, it is recommended to:
   • Adjust the hopper outlet size so that the material delivery rate is 8 kg/min.
   • Adjust the spinner disk rotating speed so that the spreading range is 5 to 7 meters.
   • Set the flying speed to 5 m/s (flying speed setting is unavailable in Manual Operation Mode).
5. Enter the operation mode required for spreading. The operations of the Spreading System vary depending on the operation mode.

Route Operation Mode
After starting an operation, the aircraft ascends to an altitude of 4 meters and the spinner disk spins. When the

aircraft reaches the route starting point, the hopper gate opens according to the set value and the aircraft flies along the route and spreads material automatically. Spreading cannot be started or stopped manually.

The operation resumption function can be used during operation. Once the operation is paused, the hopper gate closes automatically to stop spreading while the spinner disk is still spinning. After operation is resumed, the aircraft returns to the breakpoint or projection point and continues spreading.

A-B Route Operation Mode
After the aircraft enters A-B Route Operation Mode, the spinner disk spins. When the aircraft reaches the first turning point, the hopper gate opens according to the set value and the aircraft flies along the route and spreads material automatically. Spreading cannot be started or stopped manually.

The operation resumption function can be used during operation. Once the operation is paused, the hopper gate closes automatically to stop spreading while the spinner disk is still spinning. After operation is resumed, the aircraft returns to the break point or projection point and continues spreading.

Manual Plus Operation Mode
Switch to M+ after the aircraft takes off. Press the Spray button on the remote controller to start the spinner disk. The hopper gate opens according to the set value and the aircraft spreads material automatically once it has begun flying.

Manual Operation Mode
Switch to M after the aircraft takes off. Use the Spray button on the remote controller to start or stop spreading. In all operation modes except Manual Operation Mode:

- When the aircraft flies forward or backward, the hopper gate opens automatically to start spreading.
- When the aircraft flies left or right, the hopper gate closes automatically to stop spreading while the spinner disk continues to spin.

Spreading System Calibration

When to Calibrate
The Spreading System has been calibrated before delivery. There is no need to calibrate before using for the first time. Calibration is required in any of the following cases:

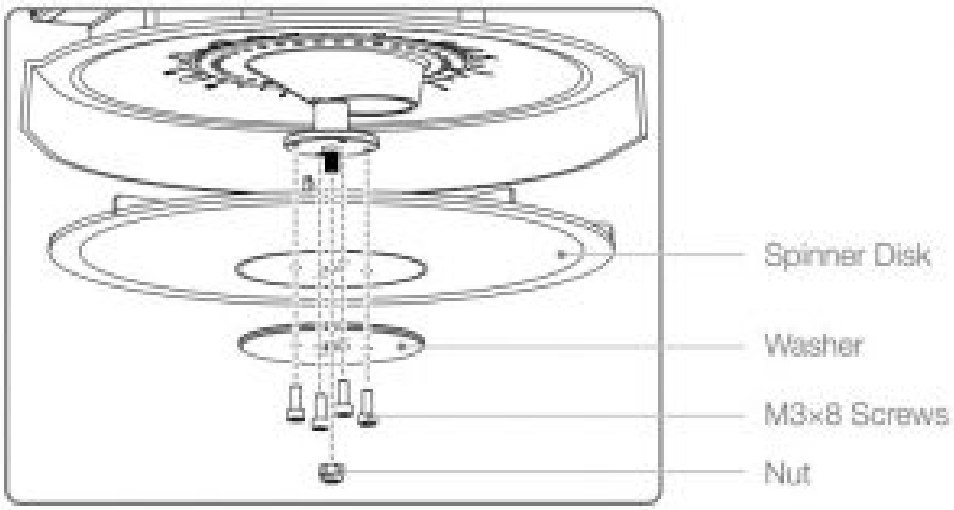
- The hopper gate cannot fully open or close.
- The material delivery rate is different from the desired value.
- The app incorrectly displays empty tank warnings.

Calibration Procedure

In the app, enter Operation View. Tap  then tap Calibration in Spreading System Settings. Wait until the app indicates calibration is complete. If calibration fails, try again.

Maintenance

1. Clean the residue inside the spread tank and spreader regularly. It is recommended to use dry compressed air and a clean, soft dry cloth. DO NOT rinse with liquids.
2. The spinner disk is a consumable part. If obvious signs of wear are noticeable, follow the steps below to replace the spinner disk.
   a. Make sure that the aircraft is powered off, and then unplug the Spreading System cable.
   b. Detach the spreader.
   c. Remove the nut, washer, four M3×8 screws, and spinner disk at the bottom of the spreader. Mount a new spinner disk and secure it using the washers, M3×8 screws, and nut.



d. Remount the spreader to the spread tank. Make sure that the spreader is locked in position

⚠ Operate with caution to avoid injury caused by mechanical parts.

Specifications

Items	Spreading System 1.0	Spreading System 2.0
Compatible Aircraft*	Agras T16, T20	
Spreader Weight	1.8 kg	2.1 kg (excluding fender)
Max Hopper Outlet Area	8.6 cm^2	32.3 cm^2
Compatible Material Diameter	0.5 - 5 mm	
Spread Tank Volume	20 L	
Spread Tank Internal Load	Using with the T16: 16 kg Using with the T20: 20 kg (note: the internal load of Japan version of T20 is 16 kg)	
Spreading Range	Varies according to material diameter, spinner disk rotating speed, hopper outlet size, and flying altitude. For best operating performance, it is recommended to adjust the corresponding variables to achieve a spreading range of 4 - 6 meters (for Spreading System 1.0) or 5 - 7 meters (for Spreading System 2.0).	

* The firmware of the aircraft must be the correct version for supporting the Spreading System. Check the release

notes of the corresponding aircraft on the official DJI website.

The content is subject to change without prior notice.

Download the latest version from
http://www.dji.com/t20

Compliance Information

FCC Compliance Notice

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CE

EU Compliance Statement: SZ DJI TECHNOLOGY CO., LTD. hereby declares that this device is in compliance with the essential requirements and other relevant provisions of the Directive 2014/30/EU.

A copy of the EU Declaration of Conformity is available online at www.dji.com/eurocompliance
EU contact address: DJI GmbH, Industriestrasse 12, 97618, Niederlauer, Germany

Environmentally friendly disposal

Old electrical appliances must not be disposed of together with the residual waste, but have to be disposed of separately. The disposal at the communal collecting point via private persons is for free. The owner of old appliances is responsible to bring the appliances to these collecting points or to similar collection points. With this little personal effort, you contribute to recycle valuable raw materials and the treatment of toxic substances.

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http://www.dji.com/support

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by sending a message to DocSupport@dji.com.

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