

Segway Navimow

After-sales APP User Guide



Table Of Contents

1. Safety warnings	3
2. APP installation and login	4
3. RMA repair	5
3.1. Connect to device.....	5
3.2. Owner information verification.....	6
3.3. Charging station replacement	7
3.4. Wheel calibration	8
3.5. Other parts.....	9
4. Full vehicle self-test.....	10
4.1. Connect to the device	10
4.2. Owner information verification.....	11
4.3. Wi-Fi Connection	11
4.4. Full vehicle test.....	11
5. Full vehicle field test	15
5.1. Connect to the device	15
5.2. Owner information verification.....	15
5.3. Full vehicle field test	16

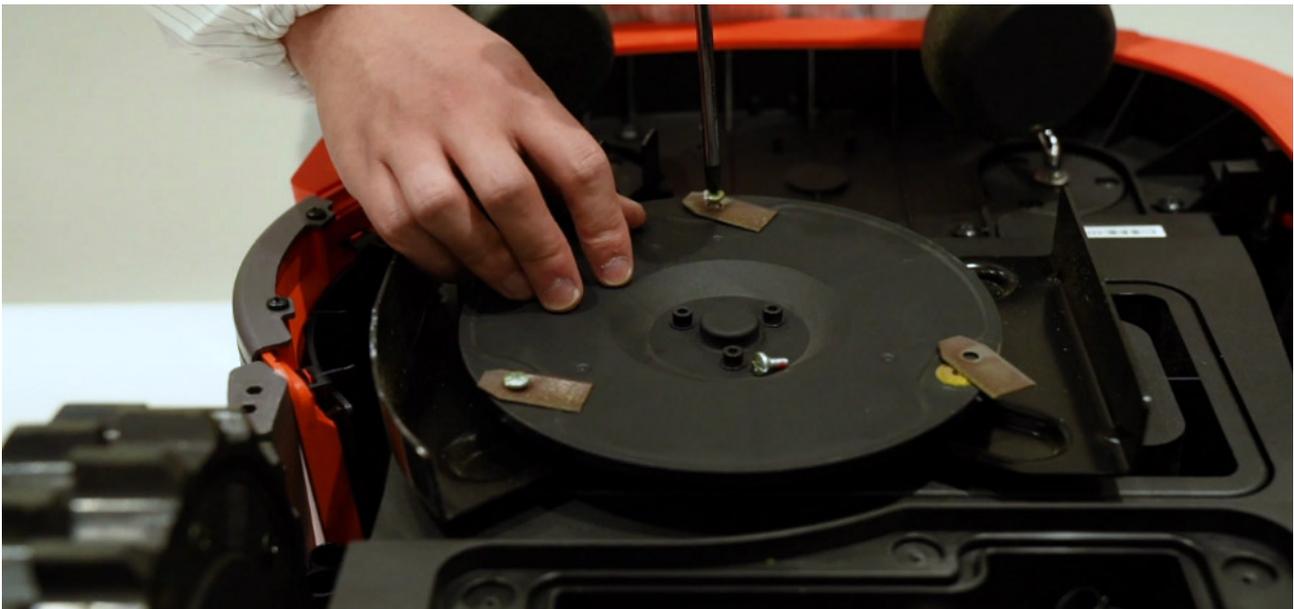
1. Safety warnings

- 1.1 Be sure to operate and repair the Navimow (referred to as the mower in the manual) and the charging station according to the instructions.
- 1.2 Please understand that you can reduce the risk by following the instructions and warnings in this manual, but you cannot eliminate all the risks. The operator or user is responsible for accidents or hazards occurring to other people on their property.
- 1.3 **DO** Not let customers operate the repair process and this APP by themselves as it contains potential safety risks.

When Repairing:

Please disassemble the blades before any RMA repair. Keep the blades uninstalled during the whole RMA repair and self-test process.

Install the blades only when all vehicle tests are completed.



CAUTION: High-speed rotating blades might hurt you during blade testing!

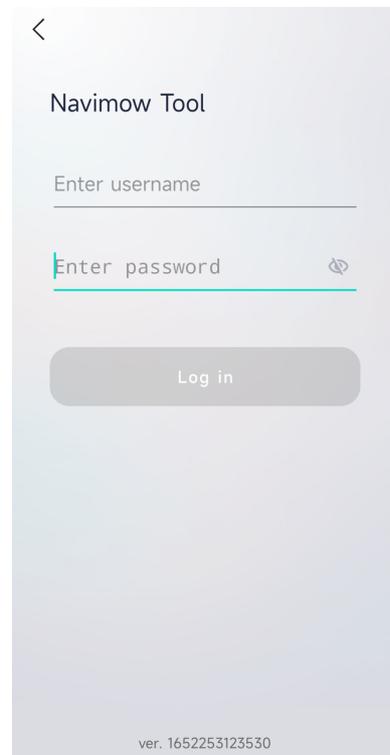
Please use a device to lift the mower during wheel calibration or hub motor test. Manually lifting the mower with the wrong posture could injure the operator's back.

2. APP installation and log in

Please consult the Navimow after-sales service team to fill out the form required for using the After-sales Application account.

Install the APP via the .APK file/scanning the QR code, and log in with the account & password combination provided.

*Please note that this app applies only to Android phones.



Software log in page

Note:

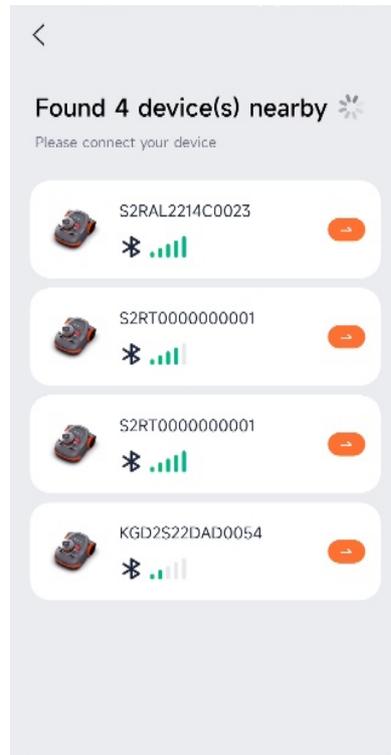
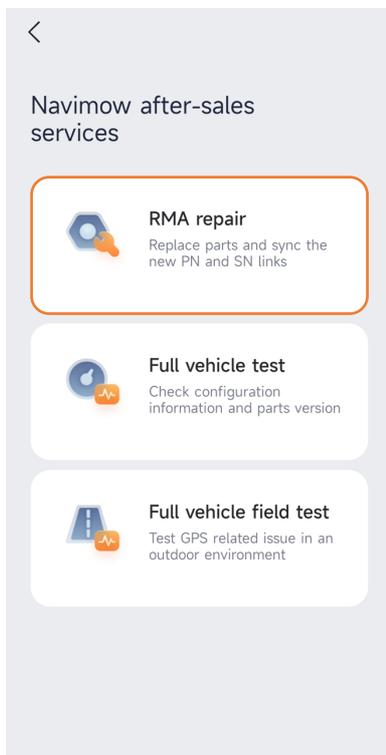
Before repairing: For your customer’s convenience, please inform them to bring both the charging station and mower when a repair is needed to avoid the situation where they will have to come a second time.

3. RMA repair

RMA repair is used to replace new parts with problematical ones and sync the new PN and SN links.

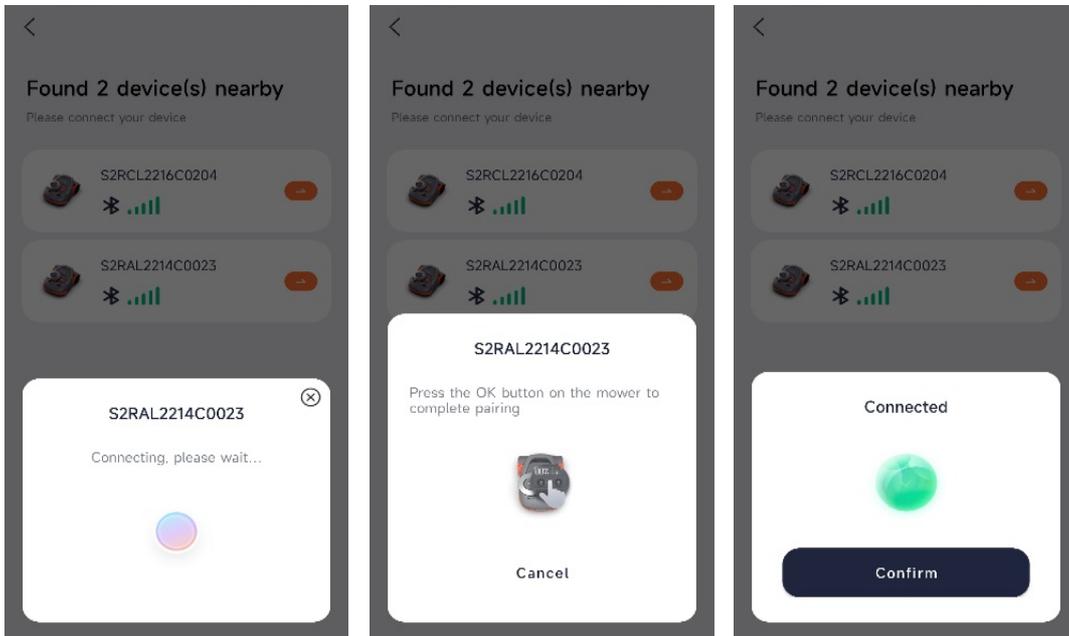
3.1. Connecting to device

Turn on the Bluetooth of your phone and Tap “RMA repair” after successful login.



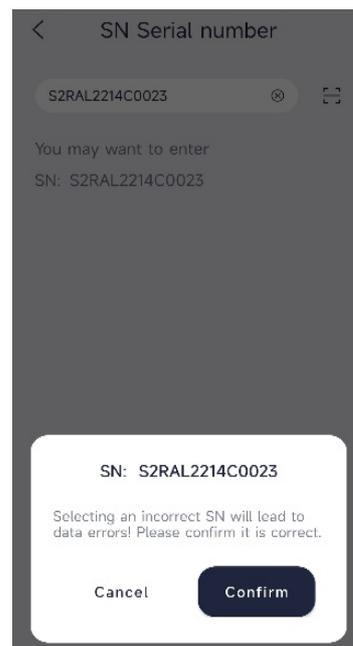
When searching devices nearby: If you need to change a brand-new ECU, you will find the PN number of the ECU; If you need to replace non-ECU parts, you will find the SN number of the mower; find the item that you need to change and continue to the next steps.

Press the “OK” button on the mower to finish the pairing.

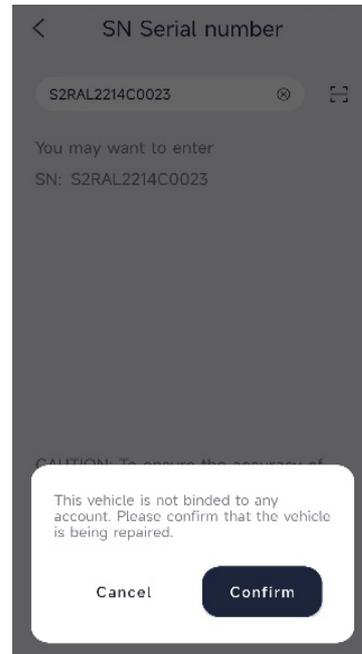
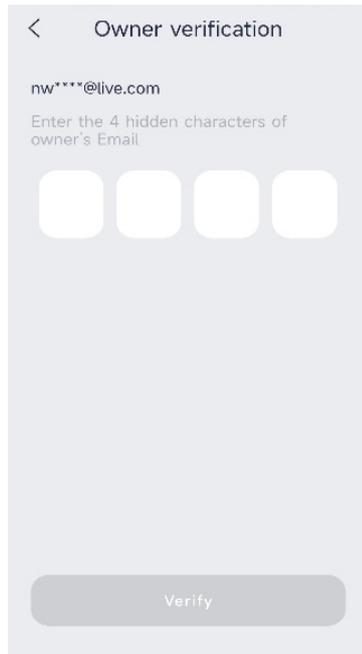


3.2. Owner information verification

Input or scan the mower’s serial number. The serial number is located at the bottom of the mower. Refer to the illustration below to find the serial number. Be aware that incorrect SN will lead to data errors. Please confirm that the SN entered is correct. Click “Next” and “confirm”.



On the owner verification page, you will be asked to input four hidden characters of the owner's email or four hidden digits of the owner's phone number. If the mower has no owner yet, you will need to confirm that the vehicle is being repaired.



After the owner information verification has been passed, please continue the following steps for charging station replacement and wheel calibration if you wish to change the charging station and wheels.

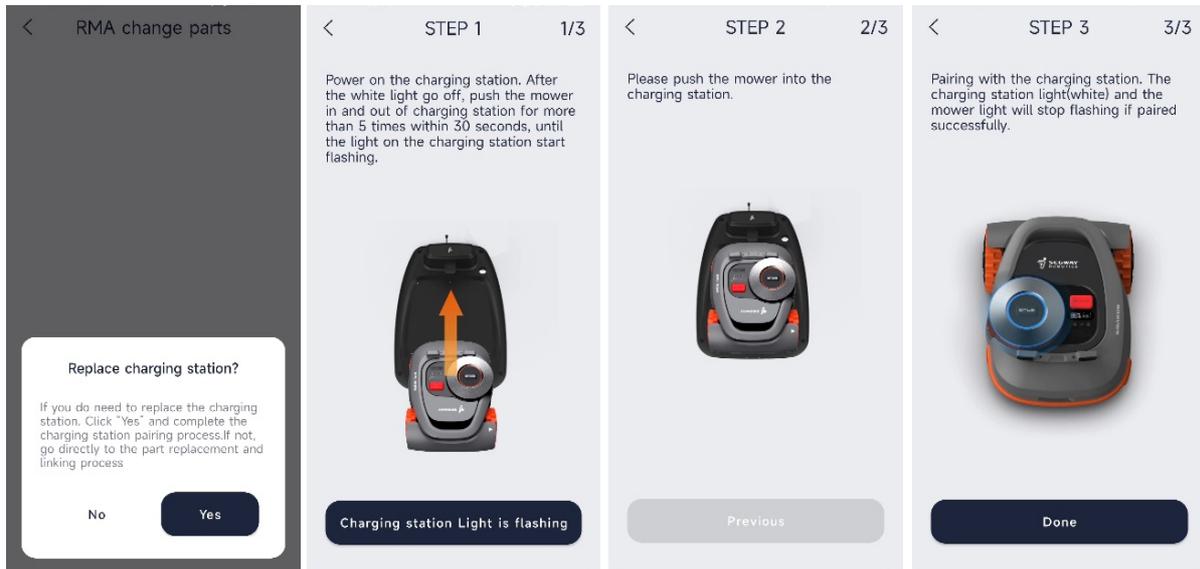
3.3. Charging station replacement

Replace the charging station.

Step 1: Power on the charging station. After the white light goes off and the charging station starts to flash yellow, push the mower in and then pull it out of the charging station. Repeat this pushing in and pulling out operation more than five times within 30 seconds until the charging station starts to flash white.

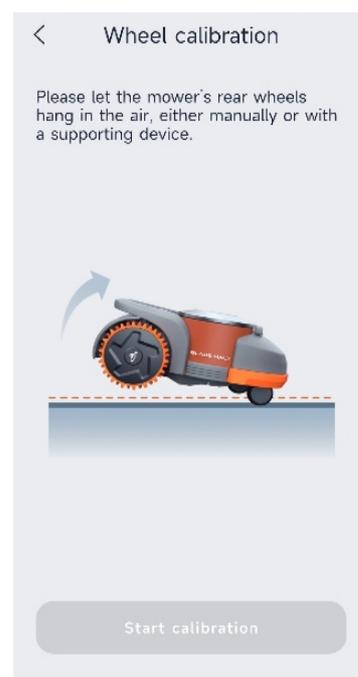
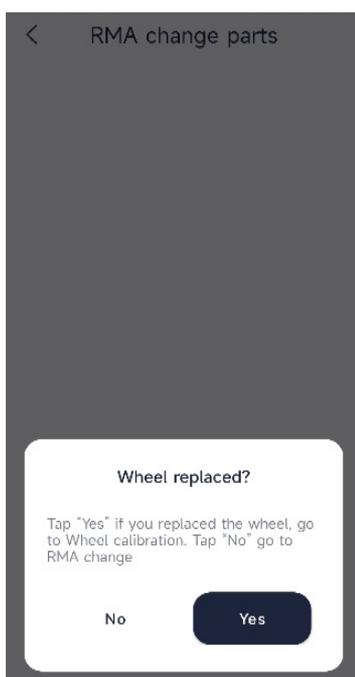
Step 2: Push the mower into the charging station;

Step 3: The pairing process starts. The mower will flash white as well as the charging station. Afterwards, the charging station light will turn on green, and the mower ambient light will turn on yellow once the pairing is successful. Click "Done" to finish this step.



3.4. Wheel calibration

If you have replaced the wheel or the driver board, please click “YES” to go to wheel calibration. Lift the mower’s rear wheels manually or with a supporting device, and then click “start calibration”. The right wheel will rotate towards the back, and the left wheel will rotate towards the front. After about 15 seconds, it will come up with a message saying “calibration successful”.



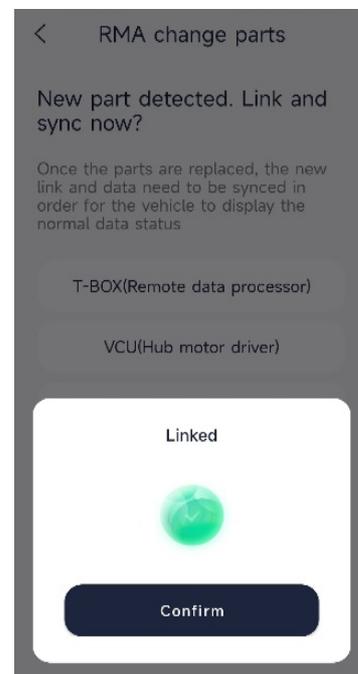
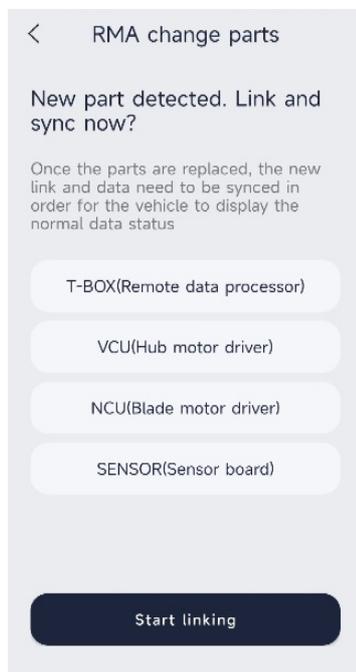
3.5. Other parts

Replace the faulty parts with the new ones. Please replacing the faulty parts in advance to avoid interrupting the APP operation.

The APP will detect new parts that have a part number if there are any. Once the parts are replaced, the new link and data need to be synced for the vehicle to display the normal data status. Please keep in mind that a new PN and SN link sync would be necessary for mower maintenance.

For those parts that do not have a part number, you can replace them directly and continue to proceed the following steps without link and sync.

Finish this step by clicking "Start linking" and "Confirm".



Notes: Components that contain Part Number are:

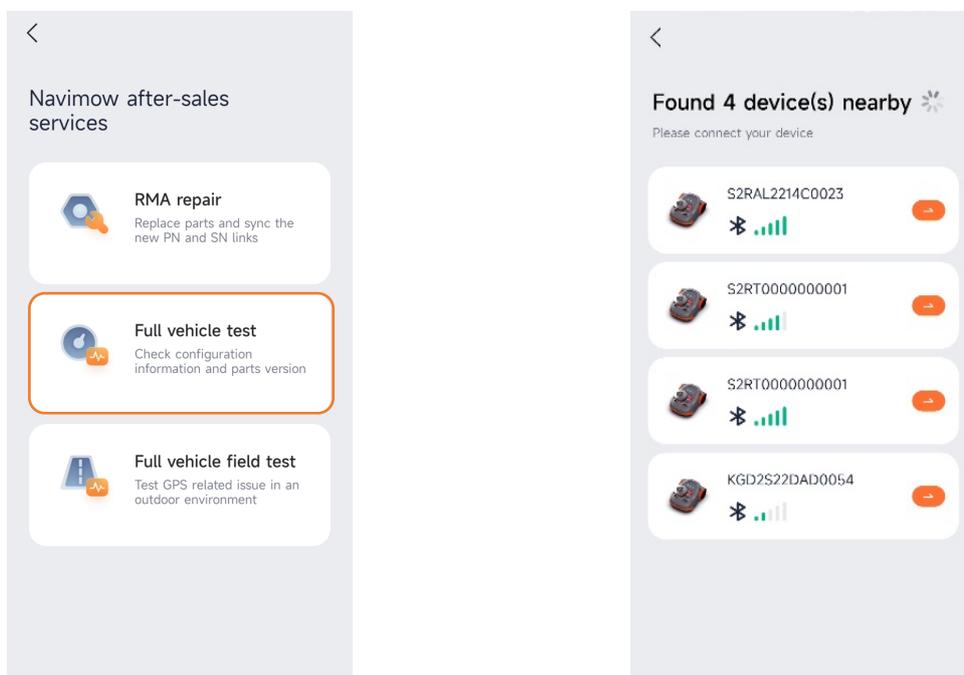
- VCU Hub motor driver (Located on the driver board)
- NCU Blade motor driver (Located on the driver board)
- CGS Charging station
- SESR Sensor board (in the bumper assembly)
- T-box Remote data processor
- ECU Electronic control unit
- BLE Bluetooth

4. Full vehicle self-test

Self-test is intended to check configuration information, parts version as well as to verify the binding between the mower SN and parts PN.

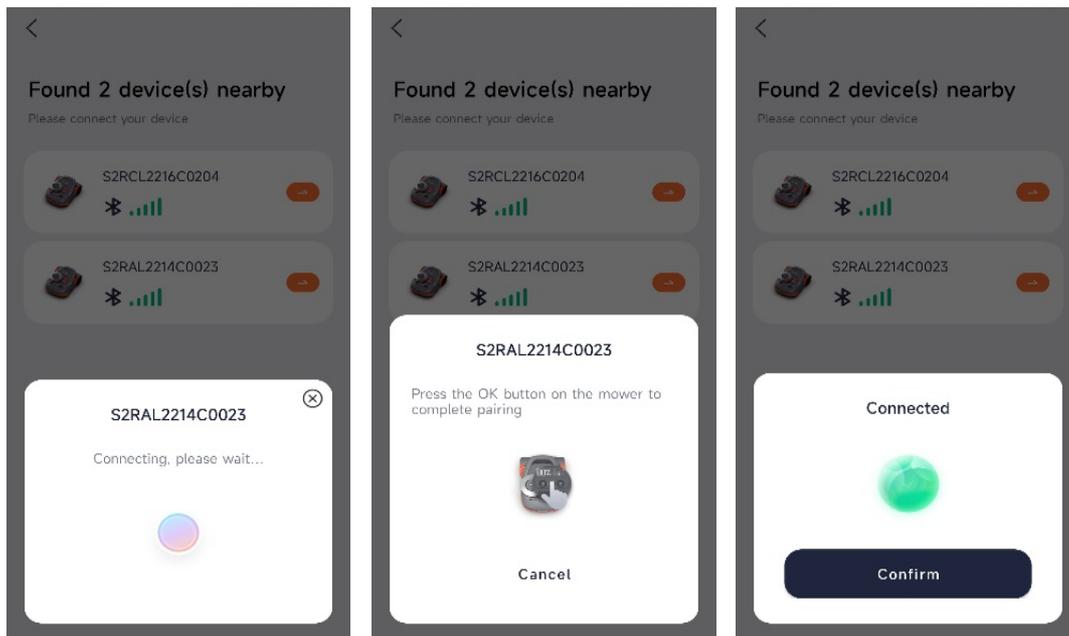
4.1. Connect to the device

Turn on the Bluetooth of your phone and Tap “Full vehicle test”.



When searching the devices nearby: If you need to change a brand-new ECU, you will find the PN number of the ECU; If you need to replace non-ECU parts, you will find the SN number of the mower; find the item that you need to change and continue to the next steps.

Press the “OK” button on the mower to finish the pairing.



4.2. Owner information verification

If the owner’s information has been verified earlier the same day, you do not need to do it again in this step. Otherwise please follow the verification process demonstrated in “RMA repair”.

4.3. Wi-Fi Connection

If your mower model is H500E, you must connect to an available Wi-Fi signal for the full vehicle test.

4.4. Full vehicle test

Charging station light: Reconnect the charging station to the power outlet. The white logo light will stay on for a while. Click “confirm” to continue.

VIN: Vehicle Identification Number, same as the mower Serial Number;

Enter test mode: Enter vehicle test;

Network type: Check whether or not the mower network is 4G or Wi-Fi.

***Wi-Fi disconnection reason:** what is the reason behind Wi-Fi disconnection?

***Wi-Fi Signal Strength:** Check if the Wi-Fi Signal is strong enough.

- IoT server index:** Check whether or not the IoT is under the Frankfurt server.
- SN:** Check the mower Serial Number.
- SN prefix:** Prefix letters of the Serial Number.
- Sensor firmware:** Check the Sensor firmware version.
- VCU firmware:** Check the VCU firmware version.
- Main Control:** Check the firmware version of the Main control board.
- NCU firmware:** Check the NCU firmware version.
- Bluetooth firmware:** Check the Bluetooth firmware version.
- Charging station firmware:** Check the firmware version of the charging station.
- IoT firmware:** Check the IoT firmware version.
- Power range:** Check whether or not the mower's remaining power is between 20% and 100%.
- Battery parallel count:** Check the battery parallel number;
- Error code:** Check if there is an existing error code on the mower.
- Speaker test:** Play tone to test the speaker.
- Speaker result:** if you hear a tone, tap "CONFIRM" to continue.
- Display test:** Test if the display is blinking.
- Display result:** Tap "CONFIRM" if the display blinks.
- Ambient light test:** Test if the ambient light is normal.
- Ambient light result:** Tap "CONFIRM" if the ambient light pulsates while the colour is changing.
- Put the mower down: Check if the mower is on the ground.
- Lift the mower from the front:** Lift the universal wheel at the front;
- Put mower down:** Put down the mower.
- Not charging yet:** Check if the mower is not in the charging station.
- Push into charging station:** Push the mower into the charging station.
- 868_RX signal strength:** Test if the 868 signal reception strength is between -25 and -1.
- 868_TX signal strength:** Test if the 868 transportation signal strength is between -25 and -1.
- Patrol line sensor:** Ensure the mower has been put into the charging station straightly and properly. Tap "CONFIRM" to continue.
- Calibrate line sensor:** Start line sensor calibration.
- Calibration result:** Showing whether or not the calibration is succeeded;
- Pull out mower:** Pull the mower out of the charging station.
- STOP key is released:** Make sure the "STOP" key is released.
- HOLD the STOP key:** Press the "STOP" key.
- Release the STOP key:** Release the "STOP" key.
- **Left sonic 1650:** Put a relatively large area barrel (like a wall) at the left side of the mower farther than 1650mm to test the ultrasonic sensor.
- **Right sonic 1650:** Put a relatively large area barrel (like a wall) at the right side of the mower farther than 1650mm to test the ultrasonic sensor.
- **Left sonic 800:** Put a relatively large area barrel (like a wall) at the left side of the mower with a distance between 700mm and 800mm to test the ultrasonic sensor.
- **Right sonic 800:** Put a relatively large area barrel (like a wall) at the right side of the mower with a distance between 700mm and 80mm to test the ultrasonic sensor.
- **Left sonic 500:** Put a relatively large area barrel (like a wall) at the left side of the mower with a distance between 400mm and 500mm to test the ultrasonic sensor.

****Right sonic 500:** Put a relatively large area barrel (like a wall) at the right side of the mower with a distance between 400mm and 500mm to test the ultrasonic sensor.

Bumper released: Release all the bumper sensors.

Left bumper test: Press the left bumper sensor.

Bumper released: Release all bumper sensors.

Front left bumper test: Press the front left bumper sensor.

Bumper released: Release all the bumper sensors.

Front right bumper test: Press the front right bumper sensor.

Bumper released: Release all the bumper sensors.

Right bumper test: Press the right bumper sensor.

Bumper released: Release all the bumper sensors.

Sensor PN type: Check the sensor PN type.

Sensor PN: Check the sensor Part Number.

Sensor PN random: Check the sensor PN random code.

Sensor CPUID: Check the sensor CPUID number.

Sensor check: Check if the sensor can be connected to the cloud network.

VCU PN type: Check the VCU PN type.

VCU PN: Check the VCU Part Number.

VCU PN random: Check the VCU PN random code.

VCU CPUID: Check the VCU CPUID number.

VCU check: Check if VCU can be connected to the cloud network.

Main control PN type: Check the ECU PN type.

Main control PN: Check the ECU Part Number.

Main control PN random: Check the ECU random code.

Main control CPUID: Check the ECU CPUID number.

Main control check: Check if ECU can be connected to the cloud network.

NCU PN type: Check the NCU PN type.

NCU PN: Check the NCU Part Number.

NCU PN random: Check the NCU PN random code.

NCU CPUID: Check the NCU CPUID number.

NCU check: Check if NCU can be connected to the cloud network.

Charging station PN: Check the Charging station Part Number.

Charging station CPUID: Check the Charging station CPUID number.

Charging station PN random: Check the Charging station PN random code.

Charging station PN type: Check Charging station PN type.

Charging station check: Check if the charging station can be connected to the cloud network.

GPRS network type: Check the GPRS network type.

GPRS server connection: Check whether or not the GPRS server is valid.

MQTT online: Check whether or not the MQTT protocol is online.

IoT PN type: Check the IoT PN type.

IoT PN: Check the IoT Part Number.

IoT CPUID: Check the IoT CPUID number.

IoT PN random: Check the IoT PN random code.

IoT check: Check if IoT can be connected to the cloud network.

- Error code:** Check if there is an existing error code on the mower;
- Lift the rear wheels:** Make sure the rear wheels are away from the ground to prevent abnormalities during the test. Put the mower down after the wheels stop rotating. Tap "CONFIRM" to continue.
- Enter VCU test mode:** Enter the VCU test mode.
- Enter hub motor test mode:** Enter the hub motor test mode.
- Hub motor test results:** Wait until the hub motor stops rotating and shows test results.
- Remove blades:** Ensure blades are removed to prevent abnormalities during the test for the operator's safety! Tap "CONFIRM" to continue.
- Enter NCU test mode:** Enter NCU test mode.
- Enter blade motor test mode:** Enter blade motor test mode.
- Blade motor test results:** Wait until the blade motor stops rotating and shows test results.
Enter NCU test mode: Enter NCU test mode.
- Enter cutting height motor test mode:** Enter the cutting height motor test mode.
- Cutting height motor test result:** Wait until the cutting height motor stops rotating and shows test results;
- BladeHalt sensor not triggered:** Check if the BladeHalt sensor is not triggered.
- BladeHalt sensor triggered:** Trigger the BladeHalt sensor by close touch.
- BladeHalt sensor reset:** Reset the BladeHalt sensor.
- Button MOW not triggered:** Check if the button "MOW" is not pressed.
- Button MOW triggered:** Press the "MOW" button to activate mowing.
- Button MOW reset:** Reset the "MOW" button.
- Button OK not triggered:** Check if the button "OK" is not pressed.
- Button OK triggered:** Press the "OK" button to trigger it.
- Button OK reset:** Reset the "OK" button.
- Button PARK not triggered:** Check if the button "PARK" is not pressed.
- Button PARK triggered:** Press the "PARK" button to trigger it.
- Button PARK reset:** Reset the "PARK" button.
- Rain sensor not triggered:** Check if the rain sensor is not triggered.
- Rain sensor triggered:** Make the rain sensor wet to trigger it;
- Rain sensor reset:** Reset the rain sensor.
- All tests passed?** Tap "confirm" to continue.
- Finish full vehicle test:** Finish the full vehicle test.
- Restore the device:** Send the restore command for factory reset.
- Power off:** Send powering off command to turn off the mower. Make sure the mower is not in the charging station. Otherwise, it will stay on.
- Exit testing mode:** Exit the testing mode.
- Report check result:** Send the check result report.

Note: * items are only displayed on model H500E;

**items are only displayed on model H3000E.

In the test result area, if the word "failed" in red color blinks, it means a manual operation on the mower needs to be done for completing current test item. If the part/item does not pass the test, the word "failed" in red color will be displayed stably.

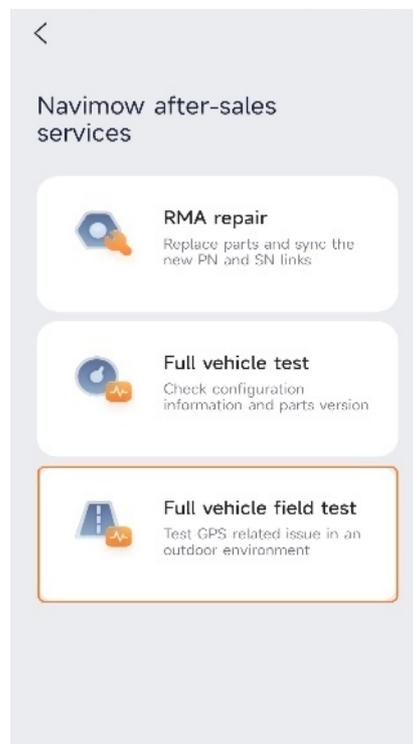
5. Full vehicle field test

The full vehicle field test tests the mowing environment GPS signal. Please complete the full vehicle test first and pass all test items before continuing to this step.

Remember to place the mower on the lawn to be mowed to test the environment GPS signal.

5.1. Connect to the device

Turn on the Bluetooth of your phone and Tap “Full vehicle field test”.



Connect to the device according to the procedure demonstrated previously.

5.2. Owner information verification

If the owner’s information has been verified earlier the same day, you will not need to do it again in this step. Otherwise please follow the verification process demonstrated previously.

5.3. Full vehicle field test

SN: Check the mower Serial Number.

Main control PN: Check the ECU Part Number.

Charging station PN: Check the Charging station Part Number.

868_RX signal strength: Test if the 868 signal reception strength is above -45.

GPS signal strength: Check if GPS signal strength is capable (value is 100).

868_TX signal strength: Test if the 868 transportation signal strength is above -45.