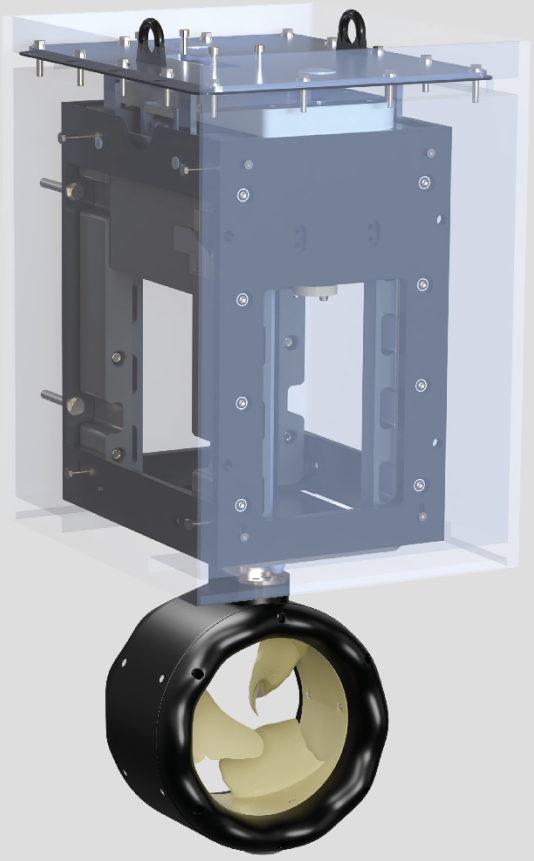
BLUENAV

English version

User guide

BlueSpin 15kW electric motor



BlueSpin Inhull

BlueSpin Outboard

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Version	Date	Changes
0.9	2023-03-01	Document initialization
1.0	2023-09-12	Modification of commissioning steps §5.3 and §6.6
1.1	2024-01-04	Addition of remaining operating time Modification of maneuvering mode
1.2.	2025-04-09	Update of all sections Addition of section §8. Maintenance and §9. Troubleshooting
1.3.	2025-06-03	Update – Software interface

1. WELCOME ABOARD!

BlueNav is committed to providing smooth, reliable and environmental-friendly sailing experiences. Proud of our 100% French manufacturing, we design, develop and produce our solutions in Arcachon.

From our advanced electric propulsion system to our intuitive software solution, our teams create products designed to simplify and optimize your excursions while reaching sustainability objectives.

For optimal use and worry-free navigation, we invite you to read your user guide carefully and follow our recommendations. It will ensure your safety and that of those around you, and also extend the lifespan of your motor.

Should you have any questions, our technical teams (support@bluenav.fr) are at your disposal to help you use and maintain your BlueNav motorization.

2. GENERAL APPLICATIONS

The descriptions, instructions and maintenance operations in this manual apply to the BlueSpin 15kW propulsion system.

Please read this manual carefully before using the product. By using the product, you claim that you have read and understood the entire contents of this manual. BlueNav declines all responsibility for any damage, injury or death caused by operations not described in this manual.

This manual does not teach you how to navigate. Please refer to the current and applicable regulations concerning navigation within the territory where the BlueSpin system is used.

BlueNav claims the right to modify the equipment, specifications and materials of its products at any time and without notice. BlueNav does not have the obligation to modify products sold prior to the date of such modifications.

BlueNav retains all intellectual property and industrial property rights, including copyrights, patents, logos, diagrams, drawings, and any other content relating to its BlueSpin technology.

To facilitate understanding, this manual is available in several languages. However, in the event of differences of interpretation between the various versions, only the French version prevails. BlueNav claims the right of the final interpretation of this manual.

This manual may be updated without prior notice. Please refer to the Documentation section of the www.bluenav.com website for the latest version of the documentation.

In case of doubt, contact Customer Support (see p.20).

3. SAFETY

3.1. Safety instructions levels

Safety instructions are graded on 2 levels. They are classified according to the seriousness of the risks incurred if the instructions are not followed.

Safety instructions are indicated by the following inserts:

DANGER!

Immediate danger with risk of death or serious injury.

WARNING!

Danger with risk of injury or material damage.

BlueNav accepts no liability for damage caused by actions that aren't in accordance with these instructions.

Additional information is indicated by the following insert:

NOTE

Additional useful information: description of an item, specific recommendation, etc.

3.2. General instructions

The installer (authorized BlueNav technician) has installed and set up the BlueSpin system prior to its use. Do not modify the installation without being authorized by a competent person.

DANGER!

In the event of battery malfunction, turn off the BlueSpin system immediately and call in a qualified technician.
Connect the BlueSpin Power Units to 48V DC batteries only.
When using the BlueSpin system, 48V DC batteries must not be charging.
Ensure that the RIM Drive propellers of the BlueSpin system are properly retracted when navigating at speeds higher than 10 knots.
Before any use, visually check that the BlueSpin system is in good condition: no visible damage, corrosion or objects inserted in the RIM Drive propellers. Report any damage to Customer Support or to an authorized BlueNav partner.
Do not remove or modify safety devices (cut-off switch).
Do not tow the boat without turning the BlueSpin system off.
Do not insert fingers or objects into the RIM Drive propellers.
Do not use the BlueSpin system near swimmers.
Do not touch the Propulsion Unit during or after use. Wait for the motor to cool down. The motor must be turned off.
Comply with applicable safety legislation in the navigation zone.
Take external conditions into account when navigating with the BlueSpin system. The system's maneuverability may be impaired by harsh external conditions, such as strong wind or sea currents, or the presence of waves.
Keep an eye on the battery range. Before using the BlueSpin system, check the navigation area. External influences (wind, sea currents, waves) impact the indicated battery range. The battery range depends on the configuration of the boat. Make sure you have sufficient range or enough fuel if you have a combustion engine. We recommend you carry out a calibration run of the BlueSpin system during the season.

4. SERIAL NUMBER

Components of the BlueSpin system have a 6-character serial number. These numbers identify the model and year of manufacture of the component.

3 serial numbers are located in 3 places on the product:

- On the Propulsion Unit, type 04XXXX ;
- On the Power Unit, type 02XXXX ;
- On the Control and Communication Unit (CCU), type 03XXXX.

In addition to the above serial numbers, the product has a 9-character serial number displayed on its packaging. This number is the serial number of the entire product. Contact the installer to obtain this serial number.

A serial number can be requested for after-sales services (see p.19) or for future accessory purchases. It ensures optimum compatibility with the product purchased.

5. DESCRIPTION OF THE BLUESPIN SYSTEM

The BlueSpin system is an electric propulsion system mainly designed to be used in conjunction with another propulsion system.

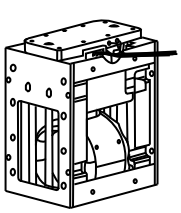
5.1. Number of motors

Depending on the boat, the BlueSpin system can be installed in a single-motor or multi-motor set up.

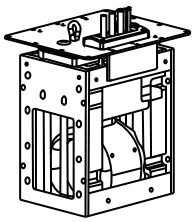
The number of motors does not affect the operating instructions.

5.2. Outboard and Inhull

Le BlueSpin system is available in two models:



1. Outboard



2. Inhull

- BlueSpin Outboard: outboard motor. Depending on the boat, the Outboard Propulsion Unit is mounted on either its front or its lateral sides.
- BlueSpin Inhull: motor installed within a well. The upper part of the Inhull Propulsion Unit is fitted with a sealing plate for cable entry. The plate has lifting eyes for moving the Propulsion Unit (installation or maintenance).

The functionalities of the Inhull model are identical to those of the Outboard model. Only the appearance and integration of the Propulsion Unit change.

5.3. Elements of the BlueSpin system

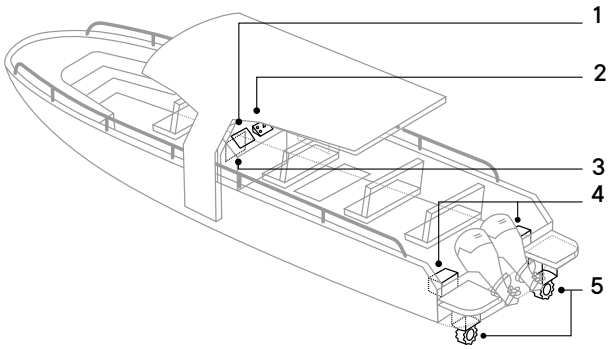
The BlueSpin system consists of the following hardware components:

- One or several Propulsion Units;
- One or several Power Units (count one Power Unit per Propulsion Unit) ;

- A **Control and Communication Unit** (CCU) ;
- A **Command Panel** ;
- A **software interface** (displayed on the MFD on board).

These elements are installed on board by your installer. The entire BlueSpin system adapts to the boat's pre-existing set up, in accordance with the arrangements made during the commissioning phase of the project.

Here is an example of the BlueSpin system for a twin-motor Outboard set-up:

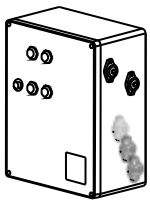


1 Software interface displayed on the MFD
2 Command Panel
3 CCU
4 Power Units, starboard and portside
5 Propulsion Units, starboard and portside

5.4. The Propulsion Unit

The Propulsion Unit ensures the lowering, the retraction and the rotation of the RIM Drive propeller. When in use, the propeller deploys from the underside of the Propulsion Unit. When not in use, the propeller retracts into the Propulsion Unit.

5.5. The Power Unit



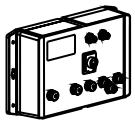
The Power Unit controls the motors contained in the Propulsion Unit.

In a multi-motor configuration, each Power Unit is wired to its corresponding Propulsion Unit.

Each Power Unit is wired to components already on board and not supplied by BlueNav:

- A 48 V battery pack (common to all Power Units if there are several) ;
- A 48V/12V DC-to-DC converter (unique to each Power Unit).

5.6. The Control and Communication Unit (CCU)



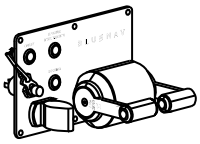
The Control and Communication Unit (CCU) is a control system and a gateway.

It is wired to elements already present on board and not supplied by BlueNav:

- The NMEA 2000® network (see p.21 for PGNs transmitted/received by the CCU) ;
- The MFD ;
- And the 48V/12V DC-to-DC converter of each Power Unit.

It is powered by an on-board 12V source (usually the service battery).

5.7. The Command Panel



The Command Panel is used to turn the system on and activate the commands.

To know more, see p.9.

5.8. The software interface

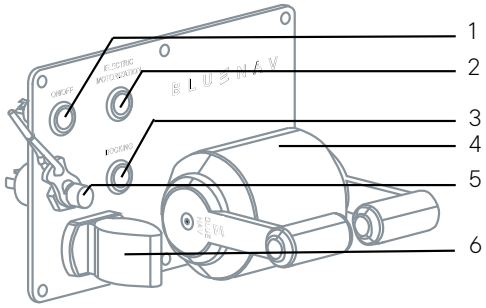
The BlueSpin system features a software interface whose icon is automatically displayed on the MFD on board. The MFD is not supplied by BlueNav.

To open the software interface, click on  .

6. NAVIGATION WITH THE BLUESPIN SYSTEM

6.1. Commands summary

Steer the BlueSpin system by using the commands on the Command Panel, as detailed below:



	Command	Function(s)
1	ON/OFF Button	Turn the system on Turn the system off See 6.3 p.9 and 6.5 p.10
2	ELEC M Button	Lower the propellers Retract the propellers See 6.3 p.9.
3	DOCKING Button	Activate 360° Docking See 6.7 p.10
4	Throttles	Manage the portside/starboard propulsion during navigation (forward/backward) See 6.3 p.9
5	Cut-off switch	Deactivate the propulsion in case of emergency See 6.8 p.10
6	Direction Joystick	Steer during navigation See 6.4 p.10

6.2. Turning the BlueSpin system on

To turn the BlueSpin system on, follow the procedure below.

DANGER!

Never use the BlueSpin system without the supplied cut-off switch. Risk of death or serious injury in the event of captain ejection.

For more information, see p.10.

1. Check that the lanyard is clipped on.
2. Click on the ON/OFF button. Wait for the double beep.
3. Press the ELEC M button for 3 seconds. The propellers lower.
4. A double beep signals that the propellers have reached their position. The system is ready.

6.3. Managing the propulsion

The throttles  control the propulsion power, with a starboard lever and a portside lever. In case of a single-motor setup, there is only one throttle.

When the throttles are pushed forward, the thrust is forward. When the throttles are pulled down, the thrust is in reverse.

The orientation of the thrust is indicated by arrows on the software interface. The power of the thrust is proportional to the inclination of the throttles.

6.4. Steering the BlueSpin system

The direction joystick controls the portside/starboard orientation of the boat.

In classic navigation mode, turning the direction joystick to portside steers the bow of the boat to portside. Conversely, turning the direction joystick to starboard steers the bow of the boat to starboard.

⚠ WARNING!

When steering in Docking mode, the direction joystick is used differently. See 6.7.2 p.10.

6.5. Turning the BlueSpin system off

To turn the system off, press the ON/OFF button. The RIM Drive propellers retract into the Propulsion Unit.

6.6. Retracting the propellers

To retract the RIM Drive propellers while the system is still turned on, press the ELEC M button for 3 seconds.

6.7. 360° Docking mode

The switch to Docking mode, click on the DOCKING button. The Docking mode is designed to facilitate precise maneuvers.

The default mode is 360° Docking, which allows you to rotate the boat on itself. In this mode, the RIM Drive propellers rotate at a ± 45° angle, allowing the boat to turn 360° on the spot.

6.7.1. Activating 360° Docking mode

Click on the DOCKING button of the Command Panel. A single beep signals that the RIM Drive propellers rotate at ±45° angle. A double beep signals that the RIM Drive propellers have reached the desired position.

By default, the 360° Docking is selected on the screen.

6.7.2. Steering in 360° Docking mode

In 360° Docking, the propulsion is controlled using the right throttle only.

The bow of the boat steers in the same direction as the direction joystick.

Example: If the direction joystick is tilted to starboard, the bow of the boat is steered to starboard. The stern of the boat is steered to portside.

	Portside/Starboard steering
	Forward/Backward

6.7.3. Deactivating 360° Docking mode

To deactivate 360° Docking, click a second time on the DOCKING button of the Command Panel.

The RIM Drive propellers return to their original angle.

6.8. Cut-off switch

The captain must attach the lanyard of the cut-off switch to their wrist, ankle or any other body part. It's a safety measure in case of man overboard.

In the event of man overboard and disconnection of the lanyard:

- The propulsion is stopped;
- A continuous sound is heard;
- A warning appears on the MFD.

To restart propulsion, follow the procedure below:

1. Clip the lanyard back on.
2. Return the throttles to a neutral position.

⚠ WARNING!

In case of man overboard, the lanyard may be lost. Have a spare lanyard on board to restart the propulsion.

The spare lanyard must be of the following type: CORDON DE REMPLACEMENT POUR GS11290 - GS11291.

7. SOFTWARE INTERFACE

The software interface (called “Bluenav HMI” on your screen) allows the user to:

- Manage the BlueSpin system;
- Manage electrical navigation;
- Use the features of the BlueSpin system.

The software interface displays the essential data of the BlueSpin system during navigation and in real time.

NOTE

This guide contains information about the 2.9.0 version of the software interface. Go to the BlueNav website (https://bluenav.com/) for the updated version of the documentation.

7.1. Screen compatibility

The software interface is compatible with the following MFDs:

Manufacturer	Series
Navico	B&G Zeus S B&G Zeus 3S B&G Zeus 3S Glass Helm Lowrance HDS Simrad NSSEVO4 Simrad NSSEVO3 Simrad NSOEVO3S Simrad NSO Simrad NSX
Raymarine	Axiom
Garmin	GPSMAP
Furuno	NavNet TZtouch3

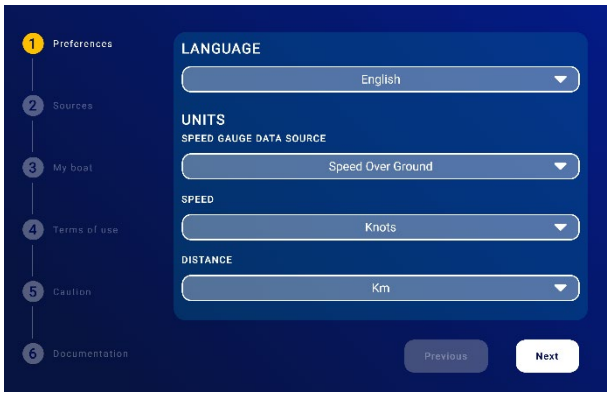
In case of doubt regarding the compatibility of the software interface with an older MFD or one from another manufacturer, contact Customer Support.

7.2. Access to the software interface

The BlueNav software interface (also called “BlueNav HMI”) is a web application hosted on the CCU. It is accessed on the MFD screen by clicking on the icon .

7.3. Commissioning

The BlueNav interface is commissioned by the installer when the BlueSpin system is installed. Once commissioned, no further configuration is required.



The commissioning consists of the following steps;

1. Preferences: choose the language and the measure units.
2. Sources: choose the data sources used by the system.
3. My boat: enter the boat’s characteristics.
4. Terms of use: read and accept the terms of use.
5. Caution: read the warnings.
6. Documentation: link to the documentation.

All settings in commissioning are available in the Parameters page.

7.4. Pages

The software interface displays the 4 following pages:

- General Page;
- Start Page;
- Parameters Page;
- Diagnostic Page (reserved for after-sales operations).

To navigate between pages, click on the lateral navigation bar  .

7.5. Indicators and behavior

The user can interact with the software interface at various levels:

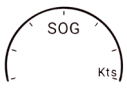
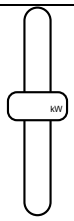
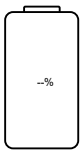
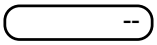
- Grey indicator, text or icon: indicates a state or a feature that cannot be activated. The indicator, text or icon is purely informational.
- White text or icon: indicates a feature that can be activated, usually through a click.
- Orange text or icon: indicates an active feature.

7.6. General page

On start-up, the software interface opens on the General page.

This page displays essential data during navigation. It allows the user to check the status of the BlueSpin system. Depending on the information displayed, the captain adapts their electrical navigation.

The General page displays the following data:

Icon	Description
	Indicates the navigation speed. The speed is displayed as Speed Over Ground (SOG) or Speed Through Water (STW). The type of speed displayed (SOG or STW) and its unit of measurement (km/h or kt) can be changed in the Parameters Page.
	Indicates the propulsion power for each Propulsion Unit of the BlueSpin system.
	The thrust of the motors is displayed in kW or RPM (rotation per minute).
	Indicates the orientation of the thrust of the propellers.
	Indicates the state of charge of the battery pack wired to the BlueSpin system, in percentage (system turned off) or in hours/minutes left (system turned on).
	Indicates the heading in degrees.

At the center of the screen is the boat visual. This visual can be changed in the Parameters page.

The General page also displays grey indicators that light up in case of a system error (see p.17).

7.7. Start page

The start page shows the deployment of the propellers.

⚠ WARNING!

Do not turn the BlueSpin system off when the propellers lower.

In case of an accidental shut down, restart the BlueSpin system.

The Start page also displays grey indicators that light up in case of a system error (see p.17).

7.8. Parameters page

The Settings page lists the parameters that can be modified.

NOTE

All changes made in the Settings page are applied instantly, and do not require a system restart.

7.9. Updates

The software interface updates automatically. When a new update is available, a window opens on the software interface to explain the content of the update.

NOTE

To update the software interface, the user approves it. If the user doesn't approve the update, the update is not installed.

8. MAINTENANCE

To guarantee and increase the lifespan of your equipment, perform the following maintenance operations.

DANGER!

Before carrying out any checks, ensure that the BlueSpin system is turned off. Risks of electric shocks and death.

WARNING!

Never immerse the motor in water for cleaning.

Wear protective equipment appropriate to the nature of the work to be carried out.

Regularly check:

- The general condition of the energy management system;
- The state of charge;
- The battery temperature.

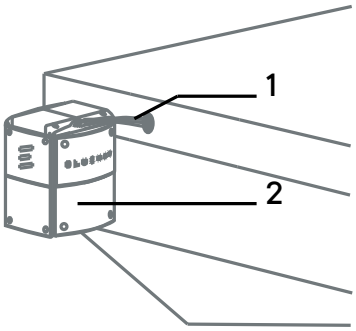
Disassemblies and repairs may be necessary depending on the results of maintenance checks.

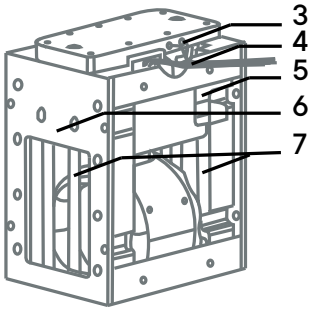
- For the Outboard model, remove the covers.
- For the Inhull model, remove the Propulsion Unit from its well using the lifting eyes.

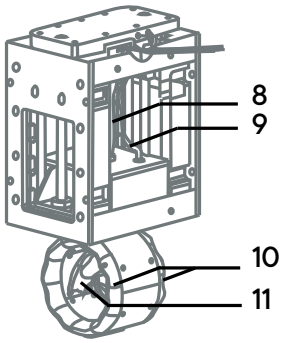
The maintenance operations are cumulative: operations to be carried out every 100h or 1 year include the operations to be carried out at a lower frequency.

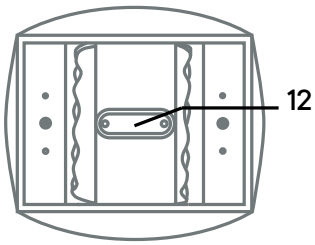
Some maintenance operations refer to a detailed procedure. Follow this procedure to ensure the functionality of the product.

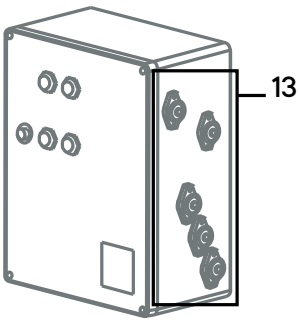
Every maintenance operation refers to a product part that is numbered on the illustrations on the right:











Frequency	Product part	Operation
Every use	Command Panel (see p.8)	Check that the commands are working: ON/OFF button, ELEC M button, DOCKING button, direction joystick and throttles.
	(2) Covers (Outboard only)	Visual check.
Every 25h (every 3 months) for salt water / Every 50h (every 6 months) for freshwater	**(6)** Trapezoidal screws	Check that shells and other foreign objects are absent. Clean if necessary. Lubricate. See p.16.
	(4) Cable harness of the Propulsion Unit	Visual check.
	Power Unit, CCU (see 5.6 and 5.5 p.8)	Check the absence of moisture or condensation. If there is moisture or condensation, eliminate the source.
	(13) Bulkhead connectors	Check the tightening torque (20 N·m) and good condition of cables.
	(9), (10) Blades, inlets and outlets of the RIM Drive propeller	Check condition. Check the tightening torque and presence of all screws. Clean rust and shells.
Every 100h / 1 year	**(11)** Sacrificial anode of the RIM Drive propeller Sacrificial anode of the chassis	Replace the anodes. See p.16.
	(7), (8) Hose between the giration box and the jonction box	Visual check.
	(6) Chassis	Check that the chassis is securely fastened to the hull (screws are correctly tightened).
	(3) Cable glands of the motor	Visual check.
	(1) Cable entry (Outboard only)	Check watertightness. If necessary, seal again with a sealing product.
	(5) Translation sensor	Check that the surface is clean and free of foreign objects.
Every 300h / 3 years	BlueSpin system as a whole	BlueNav or an authorized service center (distributor) carries out a complete revision of the system.

In case of a malfunctioning system, contact Customer Support (see p.20) or an authorized distributor. Spare parts can be provided.

8.1. Annual boat haul out

If the boat is stored out of water for some time, rinse the propellers with clean water. Spray the mechanical parts of the motor with misting oil.

Store in a clean place, away from humidity and extreme temperatures.

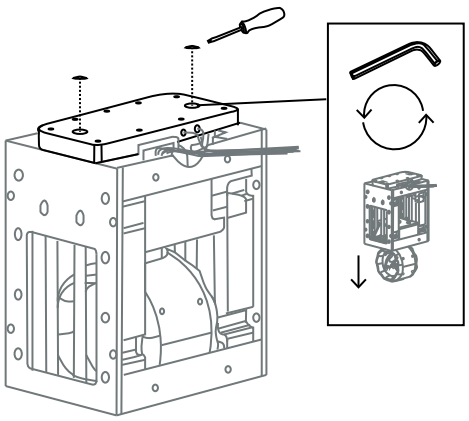
8.2. Lubrication of the trapezoidal screws (manual lowering of the propellers)

Trapezoidal screws must be lubricated along their entire length with universal marine grease to prevent the jam of the translation mechanism.

To access the top part of the screw, lower the propellers manually. Two methods are possible.

8.2.1. From the top of the chassis

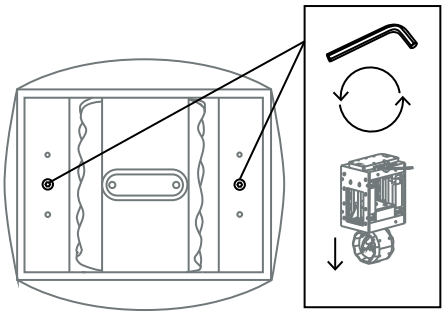
1. Remove the superior cover of the Outboad Propulsion Unit OR unscrew and lift the Inhull Propulsion Unit out of its well.
2. Using a flat screwdriver, unscrew one of the two caps on the top of the junction box. A hexagonal screw head is reachable under the chosen cap.
3. Using an 8mm Allen wrench, turn the screw anti clockwise to lower the propeller. See diagram below.



Once the trapezoidal screws are fully lubricated, retract the propeller by using the Allen wrench to turn the screw clockwise. Screw the cap back on the junction box.

8.2.2. From the bottom of the chassis

Using an 8mm Allen wrench, turn the screw anti clockwise to lower the propeller. See diagram below.



Once the trapezoidal screws are fully lubricated, retract the propeller by using the Allen wrench to turn the screw clockwise.

8.3. Replacement of the sacrificial anodes

The sacrificial anodes are placed under the RIM Drive propeller (**7**) and on the chassis (location differs depending on the Outboard/Inhull model). They must be changed on a regular basis.

Sacrificial anodes protect the various parts of the Propulsion Unit from galvanic corrosion by receiving damage in their place. When their degradation is at an advanced stage, they are replaced.

1. Unscrew the sacrificial anode.
2. Replace the old sacrificial anode and its M5x16 screws, if corroded. Apply anti-corrosion lubricant to the threads of the new screws. Tightening torque is 2.5 N·m.

9. TROUBLESHOOTING

This chapter describes the likely causes of malfunction of the BlueSpin system.

When an error is detected on the BlueSpin system, a red or orange indicator flashes on the software interface (General page or Start page). Click on the indicator to display the error code and the recommended action to solve the problem.

The list of error codes and their meaning is available in the table below.

If the error code is not available in the table below, note the error code and contact Customer Support. If the problems are not solved after carrying out the recommended actions, contact Customer Support. See p.20.

Error code	Recommended action
2000 – Control board initialization failure	Restart the BlueSpin system by pressing the ON/OFF button of the Command Panel.
2001 – Control board memory read error	Contact BlueNav.
1000 – Power board initialization failure	Restart the BlueSpin system by pressing the ON/OFF button of the Command Panel.
1001 – Control board / Power board communication failure	Check the good condition of the CAN PROPULSION network (cables, connectors, terminations, general network architecture). For more information about the CAN PROPULSION network, see the installer guide of the BlueSpin system delivered with the product.
1003 – Power board memory read error	Contact BlueNav.
1005 – BlueSpin battery voltage level too low	Measure voltage, recharge and check 48V batteries (connections, discharge).
1009 – Throttle set point transmission error	Check throttles / CCU wiring.
1100 – Gyration initialization failure	Contact BlueNav.
1102 – Out-of-limits gyration angle	Contact BlueNav.
1200 – Translation initialization failure	Contact BlueNav. Specify any abnormal sound.
1300 – Battery voltage detection delay exceeded	Vérifier le bon état des batteries 48V.
1301 – Drive and power board communication error	Contact BlueNav.
1302 – Power contactor failure	Contact BlueNav.
1306 – Drive and power board communication error	Contact BlueNav.
5002 – No internet connexion available	Check 4G connectivity.
5003 – Power board / CCU communication error	Restart on-board 12V power supply. Restart 48V power supply (batteries).
5005 – Combustion engine detected	Retract RIM Drive propeller (ELEC M button) and stop combustion engine.
5007 – Data latency error	Disconnect devices from the NMEA network backbone to reduce messages sent over the network. Contact BlueNav for

	remote diagnosis of network load.
500A – Control board / CCU communication error	Switch CCU 12V power supply off and on again.
500B – siliXcon error	Check that no objects are inside the RIM Drive propeller / Replace the TEMP1 temperature sensor cable on the Propulsion Unit (connected to the Power Unit) with the spare TEMP2 temperature sensor cable (spare cable coming from the Propulsion Unit). For more information, see the installer guide of the BlueSpin system delivered with the product.
500C – Power board critical error	Restart the BlueSpin system by pressing the ON/OFF button of the Command Panel.

10. WARRANTY

All product components are covered by a warranty from the date of purchase.

This warranty is valid for a period of:

- 24 months for pleasure-boating;
- 12 months for professional use.

During this period, BlueNav warrants that the product is free from material and manufacturing defects. In this respect, BlueNav warrants the operation of the motor, but cannot take responsibility for a lack of use.

Using the warranty enables BlueNav to obtain a technical solution to a motor malfunction. It also compensates the user for direct expenses incurred in repairing a material or manufacturing defect. The amount of compensation offered by BlueNav may not exceed the amount of the disputed order, excluding VAT.

BlueNav claims the right to decide if defective parts are repairable or replaceable.

During the warranty period and to maintain its validity, all repair, overhaul and recovery services must be performed by service centers authorized by BlueNav.

10.1. Scope of warranty

The warranty covers direct damage only. Compensation for indirect or consequential damage is totally excluded, such as:

- Costs of getting the boat out of the water;
- Towing costs;
- Transportation costs;
- Communication costs;
- Loss of business or income: loss of orders, customers, sales campaigns;
- Damage to brand image;
- Action by third parties...

BlueNav is entitled to refuse a warranty claim if:

- The owner has not contacted BlueNav before sending the product for repair.
- The product has been handled or used improperly.
- The instructions or guidelines in the user and installation manuals have not been followed.
- The product has been modified without written authorization from BlueNav.
- Damage is due to causes external to the product.
- The serial numbers of the product components covered by the warranty must be legible and unaltered.
- Unofficial parts (peripherals, accessories, consumables) not supplied by BlueNav have been used on the product.
- Previous repairs have not been carried out by BlueNav or an authorized BlueNav technician.

In the event of integration of the product without prior commissioning by an authorized BlueNav technician, the warranty does not apply.

10.2. Warranty claim

To make a warranty claim, please contact Customer service at support@bluenav.com, providing the following information:

- The serial number of the product component concerned (see p.7);
- Purchase invoice.

11. ENVIRONMENTAL PROTECTION

The BlueSpin system is manufactured in compliance with the Directive 2012/19/EU on waste electrical and electronic equipment (WEEE). WEEE must not be disposed of with domestic waste to avoid the spread of pollutants that could damage the environment.

This logo indicates that this product must not be disposed of with domestic waste. It must be handed in to an appropriate collection point for the recycling of electrical and electronic equipment.

For further information, please contact the local authority, the waste disposal center or the installer of the product.

12. CONTACT

For any technical question or support, contact Customer Support at: support@bluenav.com.

For any business question, contact the Sales Department at: contact@bluenav.com.

13. APPENDIX 1. LIST OF PGN TRANSMITTED OR RECEIVED BY THE CCU

All data transmitted on a NMEA 2000® network is divided into groups. Each group is identified by a PGN (Parameter Group Number) that describes the type of data contained.

The CCU of the BlueSpin system receives and transmits PGNs on the on-board NMEA 2000® network, as listed below.

⚠ WARNING!

The lists of PGNs are likely to change depending on the new features added to the software interface. Please do not hesitate to contact our teams for further information.

13.1. Necessary PGN

PGN	Description	Transmitted	Received
60928	Iso Address Claim	X	
59392	Iso Acknowledge	X	
59904	Iso Request	X	X
126208	NMEA - Acknowledge group function		X
126996	Product Information	X	X
127498	Engine Parameters Static	X	
127488	Engine Parameters Rapid	X	X
127489	Engine Parameters Dynamic	X	X
127493	Transmission Parameters Dynamic	X	
127245	Rudder	X	X
127250	Vessel Heading		X
127251	Rate of Turn		X
127506	DC Detailed Status		X
127508	Battery Status		X
128259	Speed, Water Referenced		X
129026	COG & SOG, Rapid Update		X
129025	Position, Rapid Update		X
129029	GNSS Position Data		X
129283	Cross Track Error		X
129284	Navigation Data		X
129542	GNSS Pseudorange Noise Statistics		X

13.2. Optional PGN

PGN	Description	Transmitted	Received
128002	Electric Drive Status (Rapid Update)	X	
127490	Electric Drive Status (Dynamic)	X	
127494	Electric Drive Information	X	
127495	Electric Energy Storage Information		X
127491	Electric Energy Storage Status (Dynamic)		X
128003	Electric Energy Storage Status (Rapid Update)		X