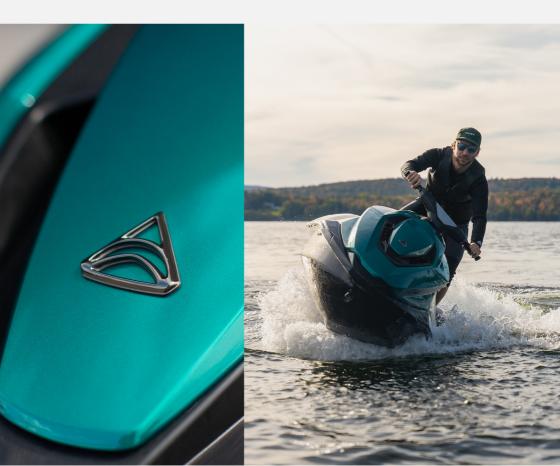


OWNER'S MANUAL

ORCA[™] ELECTRIC PERSONAL WATERCRAFT



Owner's Manual

Foreword

Welcome

Taiga was born to electrify the off-road segment, the most challenging and demanding vehicle category. As a trailblazing off-road EV manufacturer, our product line includes mountain, trail, and utility snowmobiles, as well as personal watercraft models (PWC).

Intellectual Property

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Taiga Motors Inc. is committed to the protection of its intellectual property. The following page is intended to provide virtual patent marking and to serve as notice under 35 USC §287(a). Please refer to taigamotors.com/patents/ for a list of published and granted patents.

Taiga Information

www.taigamotors.com 480 Lafleur Avenue, Montreal, QC H8R 3H9 1-877-77-TAIGA (82442) www.taigamotors.com

Be sure to read and understand the content of this Owner's Manual. The Owner's Manual provides operation and safety information for the operator, passengers, and others. Keep this Owner's Manual aboard the PWC for future reference.

If the PWC is sold or transferred, provide this manual with the PWC. All the information in this manual is based on the latest product data and specifications available at the time of publication.

Updates may be communicated to you from time to time, either by posting updates on our website or by contacting you by email or otherwise. Contact us if you have any questions or concerns. We can also direct you to the latest version of this guide (which you can also find on our website).

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Policies

Your personal information will be processed Privacy in accordance with Taiga's Policy at www.taigamotors.com/legal/. Certain features and functionalities will be made available alongside a mobile application or other digital services.

Respect and Responsibilities

This personal watercraft is for an enjoyable riding experience for you, your family, and friends. Please ride safely and show respect to others on the water and to wildlife. Avoid riding near swimmers, divers, boaters, shorelines, and wildlife.

Follow all boating rules and regulations for the state or regions in which waters you are riding. Always wear an approved life jacket or personal flotation device (PFD).

A WARNING!

▲ California Proposition 65

Lithium-ion batteries and products that contain lithiumion batteries can expose you to chemicals including cobalt lithium nickel oxide, and nickel, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

A WARNING!

∧ California Perchlorate Advisory

Certain components such as lithium batteries may contain perchlorate material. Special handling may apply for service or end of life disposal. See www.dtsc.ca.gov.

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INOTICE

IMPORTANT!

Read this Owner's Manual before operating or performing any maintenance on the watercraft.

1 Quick Reference Guide

- Section 2 Introduction
- Section 3 Safety
- Section 4 General Information
- Section 5 Features and Controls
- Section 6.1 Charging
- Section 7 Operation
- Section 9 Service and Care
- Section 10 Troubleshooting Guide
- Section 13 Technical Information

2 Introduction

2.1 Read Before Operating

Be sure to read and understand the content of this Owner's Manual. The Owner's Manual provides operation and safety information for the operator, passengers, and others. Store this Owner's Manual aboard your personal watercraft (PWC) in a waterproof bag. Keep this Owner's Manual for future reference, and if the PWC is sold or transferred, provide this manual with the PWC.

The illustrations in this Owner's Manual use the text "left" (port) and "right" (starboard) to reference the position while driving. Within the marine industry, the front of the water-craft is the "bow", and the rear is the "stern".

2.2 Ride Safely

This Owner's Manual is not a course on boating safety. It is recommended that a boating safety course is taken for all operators. This may be mandatory depending on age and state or region. For additional information contact:

Transport Canada (tc.canada.ca), the United Sates Coast Guard Auxiliary, www.cgaux.org, or the United States Power Squadrons, 888-FOR-USPS, www.usps.org.

Operator Age Recommendation

Taiga recommends the operator be a minimum of 16 years old. Check the operator age and/or training requirements applicable in your state or region.

2.3 Modifications and Accessories

Do not make modifications to your PWC or use accessories that are not approved by Taiga. They may increase the risk of accidents, injuries, or damage to the PWC. Alterations may render the watercraft's use illegal.

2.4 PWC Identification (Serial Number)

The Hull Identification Number (HIN) is on the side of the hull at the rear of the PWC.

HIN: _____

2.5 PWC Design Classification

The definition of a personal watercraft (PWC) varies from state to state and from province to province, but they are generally recognized as a vessel which uses an inboard motor powering a water jet pump as its primary source of motive power, and which is designed to be operated by a person sitting, standing, or kneeling on the vessel, rather than the conventional manner of sitting or standing in the vessel.

Check your local boating laws and regulations before riding the PWC. In some cases, your PWC must be registered with the state or province and must be operated while obeying applicable nautical rules.

Contact Us

Taiga Motors Inc. 480 Lafleur Avenue, Montreal, Quebec, H8R 3H9. www.taigamotors.com/contact

Customer Feedback

Taiga appreciates your feedback on your PWC. Please include the hull identification number when sending any correspondence.

Change of Address

If your address or contact information has changed since the purchase of your PWC, please send Taiga the old and updated information. Include the hull identification number when sending any correspondence.

Change of Ownership

If you have become the new owner of this PWC, please provide the updated ownership information to Taiga. Include the hull identification number with any correspondence.

Security System

The Lanyard Key is coded and contains an electronic circuit with an electronic serial number for the PWC. When placed on the key post, the PWC reads the Lanyard Key code and will allow the PWC to power on. Contact Taiga for additional Lanyard Key(s).

Lost Lanyard Keys

Additional Lanyard Keys may be ordered separately. Contact Taiga for additional PWC Lanyard Key(s).

3 Safety

A WARNING!

IMPORTANT

All operators must read and understand the contents of this Owner's Manual before boarding the PWC.

A WARNING!

IMPORTANT

Read and study all the warnings and instructions in this Owner's Manual before operating the PWC. Read and study the warnings and instructions from the labels on the PWC.

FAILURE TO FOLLOW THE WARNINGS AND INSTRUCTIONS CAN RESULT IN SERI-OUS INJURY OR DEATH.

3.1 Safety Signal Words and Symbols

The following signal words and symbols appear throughout this manual and on your PWC. Become familiar with their meanings before reading the manual and operating the PWC.

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

A WARNING!

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

ACAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in injury.

NOTICE is used to provide advice on recommended practices.

Ø

This symbol is used within a graphic to alert the user not to do something.

3.2 Active Technologies

The lithium-ion battery pack must be kept at a specific temperature for optimal performance. All Taiga electric PWCs are equipped with an advanced thermal management system for optimal performance.

WARNING!

The vehicle's thermal management system contains pressurized coolant. Do not remove the cap or add fluid. Puncturing or opening the battery pack may result in serious injuries.

3.3 Lifejacket or Personal Flotation Device

Both the operator and passenger must wear an approved lifejacket or personal flotation device (PFD) at all times complying with applicable laws and regulations.

3.4 Protective Wear

Normal swimwear does not adequately protect against the water pressure a rider may experience. Severe internal injury may result from water forced in body orifices when falling at high speed or getting too close to the jet thrust. The following protective wear is recommended for all riders:

3.4.1 Neoprene Apparel or Suit

All riders must wear neoprene wet/dry suits or shorts that protect against the force of high-pressure water in the event of a backward fall. Riders without neoprene shorts may suffer severe rectal, vaginal, and internal injuries that can result in permanent damages.

3.4.2 Shoes

Water shoes protect against the force of the water, reduce slipping when getting on/off the PWC, and will help reduce

possible injuries if you walk on sharp underwater objects.

3.4.3 Gloves

Gloves optimized for riding may help you keep a firmer grip on the controls. Gloves also protect your hands from ultraviolet (UV)-rays, wind, and cold water.

3.4.4 Eye Protection

Wear eye protection to protect your eyes from wind, water spray, sun, insects, and other objects. To protect prescription eyewear or sunglasses, wear goggles that fit securely over them.

3.4.5 Helmet

Helmets are not always recommended for riding a PWC. Riders should use their best judgment to evaluate the risks and benefits of wearing a helmet while riding:

Risks - Helmets may get caught in the water and pull on a person's neck and spine. This may result in severe spine or neck injury. Helmets may also reduce vision and hearing.

Benefits - A helmet may reduce the risk of suffering head injuries, including if a collision with a hard object occurs, such as another PWC. If you decide to wear a helmet, use one that has been homologated for PWC use.

3.5 Lanyard Key

The Lanyard Key (1) contains an electronic circuit with a code for the PWC. If a Lanyard Key is lost, a new Lanyard Key must be programmed. Contact Taiga for instructions on how to obtain a new key. Taiga recommends having a spare key made for each PWC. If you own more than one Taiga PWC, you can have them programmed to use the same Lanyard Key code. That way, if a key is lost, the other PWC keys can be used.



Figure 1: Lanyard Key

Lanyard Key Use

Always attach (2) the Lanyard Key to the operator's PFD and keep it free from snagging on the handlebars. This will ensure that the Tractive Unit will stop if the operator falls off. If the operator falls off the PWC and the Lanyard Key is not attached as recommended, the PWC Tractive Unit will not immediately stop, and your PWC may continue to move forward. You may not be able to swim back to the PWC or it may cause damages.

After riding, always remove the Lanyard Key from the key post to avoid unauthorized or unintended use. Always detach the Lanyard Key from the key post when re-boarding, when swimmers are boarding or nearby, or when you remove weeds or debris from the jet pump intake grate to prevent the PWC from accidentally starting.

3.6 General Precautions

Operators must be at least 16 years old and, where required by law, have taken an official boater safety course. If you are pregnant or suffer from a health condition, consult your doctor on whether it is safe to ride. Your state (or province) may have additional requirements.

3.7 Avoid Collisions

To avoid collisions:

- Constantly scan the area ahead for people, obstacles, boats or other PWC.
- Avoid sharp turns that make it difficult for others to judge your direction of travel.
- Ride at a safe speed.
- Do not ride closely to other PWC.
- Keep a safe distance from all other boats, people, and objects.
- Ride in safe, open-water areas.
- Thrust is required for steering.
- Do not completely release the throttle to steer. If the throttle is completely released, you will not be capable to steer the PWC, except with the off-throttle steering system that will command a minimum amount of thrust if the handlebar is turned sharply. See Section 3.17 Off-Throttle Steering System

3.8 Protect All Riders

Make sure all riders are fully seated and holding on to the PWC. Do not apply throttle when anyone is within 15 m (50 ft) behind the PWC. If a passenger falls off, immediately release the throttle. Riding with a passenger makes the PWC handle differently and requires practice and more experience.

Make sure the passenger has the proper personal flotation device and knows how to board the PWC from the water. No type of inflatable is to be used by any operator or passenger,

nor should they be towed by the watercraft. Only use an approved PFD.

3.9 Do Not Permit Reckless Operation

Do not ride near others to splash or spray them with water. Do not get close to other PWC, ride fast or unsafely in traffic conditions. Avoid aggressive operation, sharp turns, and unexpected acceleration that can cause riders to be thrown off. Do not jump waves or wakes as jumping can cause back and spinal injuries that may result in paralysis.

3.10 Ride Within Your Limits

Your riding skills will improve with experience. Make sure you feel comfortable with your riding capabilities:

- Operate the PWC at an appropriate speed depending on the conditions and your level of experience.
- Do not jump wakes or waves.

Riding a PWC can be physically demanding. All riders should be in good physical condition. Do not ride with a passenger without first practicing and adequately performing turning and stopping maneuvers.

3.11 Avoid Shallow Water

Make sure to start the engine and board the PWC while you are in water that is at least 0.6 m (2.0 ft.) deep. Otherwise, sand and other debris could be drawn into the jet pump and damage it.

3.12 Do Not Operate in the Dark

Do not operate the PWC after sunset, before sunrise, or in any other conditions of poor visibility. The PWC is not equipped with lights which makes it unsafe and illegal to operate in the dark. Consult state or local regulations for allowed hours of operation.

3.13 Influence of Alcohol or Drugs

A WARNING!

Do not mix alcohol or drug consumption and PWC operation!

Operating under the influence of alcohol or drugs endangers lives. Your passenger, other boaters, and yourself are at risk.

Applicable laws prohibit operating a PWC while under the influence of drugs or alcohol. Failure to follow these warnings could result in death or serious injury. The driver and any passenger must never ride under the influence of or after consuming alcohol or drugs.

Riding on a PWC requires the operator and passenger to be sober, attentive, and alert. Use of alcohol or drugs increases reaction time, impedes judgment, impairs vision, and inhibits your ability to safely ride on a PWC.

3.14 Keep Away from the Intake Grate

WARNING!

Do not get near or allow others to get near the jet pump intake grate while the Tractive Unit is running.

Long hair, straps from personal flotation devices, clothing, etc. can become entangled in the jet impeller and this can cause severe injury or drowning.

Failure to follow these warnings could result in death or serious injury.

3.15 Follow Navigation Rules

Operate the PWC in accordance with all navigational rules and regulations for the waters on which it is being operated. These rules are generally used and enforced internationally, as well as by Transport Canada, the U.S. Coast Guard, and local law enforcement. Any operator of the PWC should know these rules and comply with them at all times, including when encountering other vessels.

Consult Transport Canada, the U.S. Coast Guard Auxiliary, or the relevant authority to learn about the rules governing the waters where you will be riding. You may also obtain this information when registering your PWC.

3.16 Label Placement

Make sure to carefully read and understand all warning labels before operating the PWC. Never allow anyone to use the PWC unless they have read and understand all the warning labels. Missing or damaged labels must be replaced. Please contact Taiga in such situations.

Some labels may vary from model to model. Follow the instructions listed on the labels of your PWC.



Figure 2: Warning - Rider Safety



Figure 3: Warning - Before Riding



Figure 4: Danger - Re-boarding Instructions



Figure 5: Caution - Avoid Jet Pump Contact and Notice - Righting a capsized $\ensuremath{\mathsf{PWC}}$



Figure 6: Warning - Storage Compartment Details



Figure 7: Warning - Keep Clear of Moving Parts



Figure 8: Warning - Do Not Ride If Not Dressed Appropriately



Figure 9: Warning - Warning Sticker at Front



Figure 10: Warning - Ride Plate Can Become Very Hot



Figure 11: Warning - Be Mindful of Jet Pump



Figure 12: Warning - California Proposition 65



Figure 13: Do Not Exceed Capacity







Figure 15: Warning - Motor Can Become Very Hot



Figure 16: Radiocommunication Information 1



Figure 17: Radiocommunication Information 2

3.16.1 For the United States

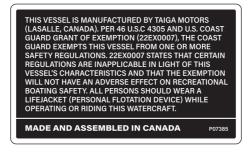


Figure 18: Manufacturer Details

3.16.2 For Orca[™] Performance

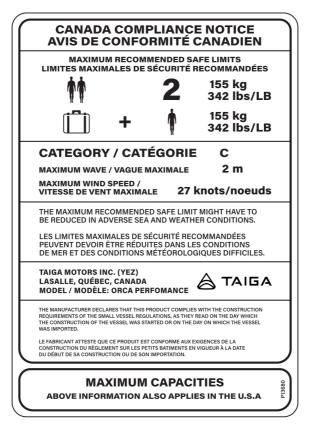


Figure 19: Canada Compliance Notice - Orca Performance



Figure 20: Danger - High Voltage Battery Inside - Orca Performance



Figure 21: Danger - High Voltage Motor Inside - Orca Performance

3.16.3 For Orca[™] Carbon

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| LE FABRICANT ATTESTE QU CONSTRUCTION DU RÈGLE | | TITS BATIMENTS EN | |

Figure 22: Canada Compliance Notice - Orca Carbon



RISQUE DE FEU ET CHOC ÉLECTRIQUE. NE PAS SUIVRE CES INSTRUCTIONS PEUT ENTRAÎNER DES BLESSURES GRAVES ALLANT JUSQU'À LA MORT.

BATTERIE À HAUTE TENSION À L'INTÉRIEUR

- NE PAS MODIFIER OU PERFORER LE BOÎTIER DE LA BATTERIE
- NE RETIREZ PAS LE BOÎTIER ET/OU LES CONNECTEURS
- NE IAMAIS DÉSASSEMBLER LE BLOC-BATTERIE
- NE JETEZ PAS CE BLOC-BATTERIE
- NE PAS EXPOSER LE MODULE À UN IMPACT PHYSIQUE SUSCEPTIBLE DE L'ENDOMMAGER
- TENEZ LE MODULE À L'ABRI DU FEU

LA MAINTENANCE DE LA BATTERIE NE PEUT ÊTRE EFFECTUÉE QUE PAR DES TECHNICIENS DE TAIGA QUALIFIÉS EN VÉHICULES ÉLECTRIQUES. CONTACTEZ TAIGA AVANT D'EFFECTUER L'ENTRETIEN OU

LE REMPLACEMENT DE CETTE UNITÉ OU AFIN D'OBTENIR PLUS D'INFORMATION.

Figure 23: Danger - High Voltage Battery Inside - Orca Carbon

taigamotors.com



Figure 24: Danger - High Voltage Motor Inside - Orca Carbon

3.17 Off-Throttle Steering System

The PWC requires thrust from the jet pump to maneuver. To provide vehicle steering ability when the throttle is released, Orca incorporates an off-throttle steering system. The off-throttle steering system, when detecting a hard over steering movement with the throttle released, will command a minimum amount of thrust to allow the craft to steer for obstacle avoidance. If the user applies the throttle, applies pressure to the Reverse lever, or returns the steering towards the straight direction the off-throttle steering thrust request will end.

The availability of the off-throttle steering system depends on the speed of the craft to prevent inadvertent actuation during low-speed maneuvers, such as docking. Off-throttle steering requires the vehicle to be powered on. Therefore, an off-throttle steering request will be disabled by pressing the Start/Stop button to return to idle, or by removing the Lanyard Key from its post.

3.18 **PWC Inspection**

3.18.1 Pre-launch Inspection

Always inspect your PWC before launching it:

- Check the hull for any visible damage.
- Check that the jet pump intake grate is clean.
- Check that the drain plugs are installed and tight.
- Check that the compartments are closed.
- Turn on the PWC and check the battery charge level. A minimum State of Charge (SoC) of 50% is recommended prior to riding.
- Check that the steering is operational.

ACAUTION

Maintaining the battery pack at very low SoC (below 10%) may damage the battery. Ensure that the vehicle is plugged in during extended periods in the cold. See **Section 9.14 - Storing the PWC** for more details.

3.19 Electric Vehicle Supply Equipment (EVSE)

A WARNING!

Read and understand all safety warnings and operating instructions for the EVSE used to charge the PWC.

Ensure you install the EVSE in a safe location where there is sufficient power supply for its operation. Features and options of individual EVSE may vary depending on the model and type installed.

Make sure the electrical outlet is properly grounded to reduce the risk of electrical shock.

Do not use extension cords, grounding adapters, or other electrical devices between the EVSE power cord and the electrical outlet.

Do not use the EVSE if any of its components are damaged, if an error code shows, or if it is not operating properly. Failure to follow these warnings could result in death or serious injury.

NOTE: Orca, electric Personal Watercraft (PWC), use the Society of Automotive Engineers (SAE) standard J1772 charging connector for Level 1 and Level 2 EVSE. When available, the CCS1 Combo connector is used for Level 3 DCFC charging.

For additional information on EVSE and charging the PWC, see **Section 6** - **Electric Vehicle Supply Equipment** (EVSE).

3.19.1 Charging

A WARNING!

Only use an approved charging cable with an SAE J1772-level connector or, if available, a CCS1 Combo connector. Only use an approved 120V (Level 1), 240V (Level 2), or DCFC (Level 3) EVSE.

Do not modify the charging cable or use an electrical grounding adapter.

Do not use a charging cable that has visible damage or has exposed wiring.

Do not allow the charging connector to become submerged in water.

Failure to follow these warnings could result in death or serious injury.

Avoid connecting additional devices to the EVSE circuit to avoid overloading it. The charging session will stop if the charging cable is disconnected.

Contact Taiga if a "Charging Limited" pop-up appears on screen.

3.20 Emergency Procedures

In the event of a fire or any other emergency, remove the Lanyard Key and maintain a safe distance from the vehicle. Immediately contact the appropriate emergency responders.

3.21 Overturn/Excess Water

The PWC will maintain flotation even when overturned and/or flooded with water. The battery compartment is partially water-resistant which protects the batteries from water entering the compartment during normal operation. However, this does not protect the batteries if the PWC is submerged for an extended period of time.

For Orca Carbon, the PWC contains an automatic bilge pump which, once in the upright riding position, will expel accumulated water within the hull through the bilge system.

4 General Information

Get familiar with Orca. For safety and enjoyment of the personal watercraft (PWC), it is important to:

- Read and understand the Owner's Manual.
- Read and understand all the warning labels on the PWC.
- Become familiar with the controls, operation, and safety features of the PWC.
- Practice the required skills and techniques necessary to ensure safe operation.
- Check with local laws for any riding restrictions or limitations that may apply.

4.1 Regular Maintenance Recommendations

See **Section 9.1 - Service Schedule Procedures** for daily and periodic maintenance required to ensure proper

operation.



4.2 Component Locations

Figure 25: a. Component Locations

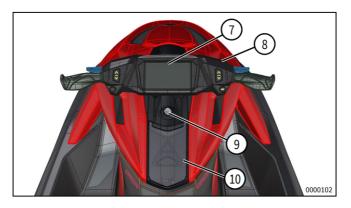
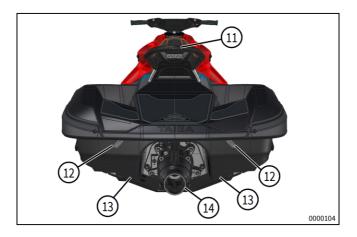


Figure 26: b. Component Locations





- 1. Seat
- 2. Front Storage
- 3. Bow Tow Hook
- 4. Hull
- 5. Sponson
- 6. Grab Bar
- 7. Display

- 8. Handlebar and Controls
- 9. Lanyard Key Post
- 10. Charge Port and Center Console Storage
- 11. Stern Hook
- 12. Stern Tie-down Hooks
- 13. Bilge Drain Plugs
- 14. Jet Pump

4.3 Rider Capacity and Load Limits

4.3.1 Rider Capacity

A WARNING!

Do not exceed the rider capacity and load limits which could adversely affect stability and operation of the Orca electric PWC. Failure to follow this warning could result in death or injury.

Maximum capacity : 2 persons.

4.3.2 Load Limits

A WARNING!

Do not exceed the rider capacity and load limits which could adversely affect stability and operation of the Orca electric PWC. Failure to follow this caution could result in death or injury.

The 2-person load limit is 155 kg (342 lb).

4.4 Weather Conditions

Check local weather reports before operating the PWC. Verify the weather forecast for the anticipated riding period to safely complete the ride. Avoid operating the PWC in severe weather conditions that produce hazardous wave conditions and high wind speeds. Severe weather affecting currents and tides can expose a rider to dangerous underwater objects or obstacles. Avoid operating the PWC in adverse weather conditions or when the visibility is poor. Pay close attention to changing weather conditions. This will ensure a safer riding experience.

A WARNING!

Prolonged exposure to severe weather and wind chill could lead to hypothermia. Crossing dangerous waves could result in serious injury. Failure to follow these warnings could result in death or serious injury.

4.5 Launching

- 1. Before launching the PWC, follow and perform prelaunch inspection tasks to make sure the PWC is in proper working condition. Pre-launch checks can reveal potential problems which should be corrected prior to launching the PWC.
- 2. Remove the Lanyard Key from the key post.

- 3. Attach a bow line to the bow tow hook of the PWC to secure it when removed from the trailer.
- 4. Make sure the PWC is in at least 0.6 m (2 ft.) of water before starting the Tractive Unit.
- 5. Remove the tie-down straps.
- 6. Grasp the bow line and slowly release the trailer winch to move the PWC off the trailer.
- 7. Once the PWC is off the trailer, remove the trailer winch line from the bow tow hook and secure the PWC to the dock.
- 8. Check the jet pump to make sure it is free of debris that may be present after launching. Rock the back of the PWC up and down several times to remove any dirt or debris.

Always make sure the bilge drain plugs are properly secured before launching the PWC in water.

4.6 Towing the PWC in Water



Figure 28: Bow Tow Hook

If the Orca PWC is disabled, attach a PWC rated tow rope to its bow tow hook (1). The PWC rated tow rope provides proper shock protection. The rope should be of sufficient length to prevent impact between the tow vessel and the PWC.

NOTE: A PWC being towed cannot be steered.

Tow the PWC at a safe speed of approximately 10 to 15 km/h (6 to 9 mph) using only the bow tow hook. It is recommended to use a bungee tow rope to reduce the increased shock load on the PWC. Do not use the handlebar or any other part of the PWC for towing.

4.7 Towing with the PWC

ACAUTION

Do not tow anything with the PWC.

The stern tie-down hooks are not intended to be used for towing. Failure to follow this caution could result in injury or could damage the PWC.

4.8 Lifting the PWC

ACAUTION

Do not attempt to lift the Orca PWC without assistance or an appropriate lifting device. Failure to follow this caution could result in injury or could damage the PWC. If it is necessary to lift and support the PWC, use an appropriate lifting device and PWC-rated lifting straps. Secure the evenly spaced PWC-rated lifting straps around the sides of the hull to properly balance and support the PWC.

4.9 Transporting the PWC

INOTICE

Adjust the trailer bunk boards to evenly support the maximum length of the hull to prevent possible damage to the PWC. Secure the PWC to the trailer using the bow tow hook and the stern tie-down hooks. If a PWC cover is used (which is recommended), make sure it is securely placed over the PWC. Do not exceed the tow vehicle maximum weight capacity or tongue weight capacity. Make sure to know and follow all applicable towing laws and regulations.

Use the proper trailer:

- Only use a trailer designed to transport a PWC.
- Make sure the towing vehicle meets towing and tongue weight capacities.
- Follow all trailer safety precautions and operating instructions.

To avoid damage to the PWC, do not secure it to a trailer using any other part than the bow tow hook and the stern tie-down hooks.



Figure 29: Transporting the PWC

Secure the PWC only at the bow tow hook (1) and stern tie-down hooks (2). Make sure no movement is allowed between the PWC and the trailer:

- Use padding where the ropes/straps contact the body of the PWC.
- Do not wrap ropes/straps over the seat or handles. Ropes may damage these items.
- Do not wrap ropes/straps over the jet pump nozzle or intake grate to secure the PWC.

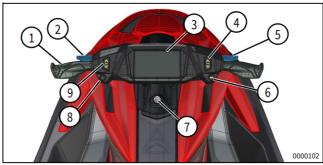
4.10 Aquatic Invasive Species

To prevent the transport of invasive aquatic plants and animals between bodies of water:

- Check your PWC and any equipment for invasive species.
- Clean off any visible mud, plants, or animals.

- Remove bilge plugs and allow water to drain.
- Dry the PWC, trailer and all equipment before use in another body of water.
- Check and follow any local regulation that may apply.

5 **Features and Controls**



5.1

Controls

Figure 30: Control Image

- 1. Handlebar
- 2. Reverse Lever
- 3. Display
- 4. Mode Select
- 5. Throttle Lever

- 6. Start/Stop Button
- 7. Lanyard Key Post
- 8. OK Button
- 9. Trim Adjust

5.1.1 Handlebar

Use the handlebar to steer the PWC left or right. Turning the handlebar to the left will turn the rear of the PWC to the right. As a result, the PWC will turn to the left. Turning the handlebar to the right will turn the rear of the PWC to the left. As a result, the PWC will turn to the right. The turning radius will increase and decrease depending on the handlebar angle.

5.1.2 Throttle Lever

The throttle lever is used to accelerate. Squeeze the throttle lever to increase speed. Release the throttle lever to decrease speed.

5.1.3 Mode Select

Use the navigation switch (up/down arrow) of the Mode Select button to toggle between the operating modes.

5.1.4 Trim Adjust

Use the Trim Adjust navigation switch (up/down arrow) to adjust the trim level of the PWC.

5.1.5 Operating Modes

Each operating mode progressively increases the power available and throttle response. Range, Sport, and Wild modes are user selectable:

- Wild mode has the highest power output and throttle response with the lowest run time among the normal operating modes.
- Sport mode has a lower power output and throttle response with a higher operating time than Wild mode.
- Range mode has the lowest throttle response and power output with the highest run time among the three user-selectable operating modes.

Range mode is optimized for the lowest normal operating power consumption and reduced acceleration.

WARNING!

Each mode operates differently and results in different response and battery usage. Always use a mode that is appropriate for your environment (e.g. Range mode for no-wake zones). Sport and Wild mode offer increased acceleration capabilities. Monitor battery usage to ensure your safe return to dock.

5.1.6 Start/Stop Button

Press and release the start/stop button to start or stop the Orca electric PWC Tractive Unit.

The Lanyard Key must be installed on the Lanyard Key post to allow the PWC to operate. When the Tractive Unit is operating, the PWC will automatically shut off when the Lanyard Key is removed. Secure the Lanyard Key to the operator's personal flotation device (PFD) when operating the PWC.

5.2 Display

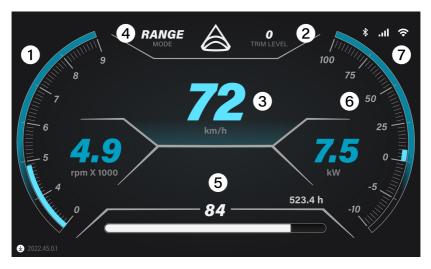


Figure 31: Display

The 7-inch high-definition color display provides the following information:

- (1) Tachometer Gauge
- (2) Trim Angle
- (3) PWC Speed (km/h)
- (4) Drive Mode
- (5) Battery State of Charge Bar (%)
- (6) Power Output Gauge (kW)
- (7) Power Output (kW)

The PWC display will switch from the driving mode to an idle mode (sleep mode) after a period of time if it does not detect a handlebar control input. Removing the Lanyard Key will also put the PWC into idle mode.

5.2.1 Over-the-Air Updates

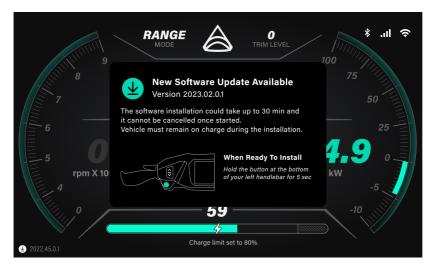
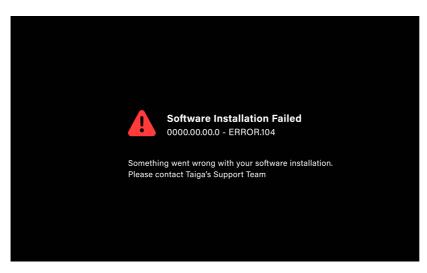


Figure 32: New Software Update Screen

When a new software update becomes available, on-screen instructions will appear on the bottom-left part of the screen. Follow the prompts on screen to ensure the update is successfully installed. The vehicle needs to be powered and connected to an LTE and/or Wi-Fi network as to receive updates.

It is your sole responsibility to periodically verify if new updates are available for the vehicle and proceed to installation. Failure to connect a vehicle and timely install updates may decrease or hinder the vehicle's performance and may compromise the users' safety.



5.2.2 Over-the-Air Updates - Error

Figure 33: Software Installation Failed Screen

For any questions on an error message displayed contact Taiga: www.taigamotors.com/contact or your Taiga Service Provider (TSP).

5.3 Lanyard Key



Figure 34: Lanyard Key

Secure the Lanyard Key clip (2) to the operator's PFD when operating the PWC.

The PWC will automatically shut off when the Lanyard Key is removed from its post.

If the operator falls off the PWC with the Lanyard Key attached to its PFD while riding, the key will be pulled off from its post and the Tractive Unit will automatically shut off.

5.4 Break-in Period

The PWC does not require a break-in period and is ready to ride when charged as required.

5.5 Storage Compartments

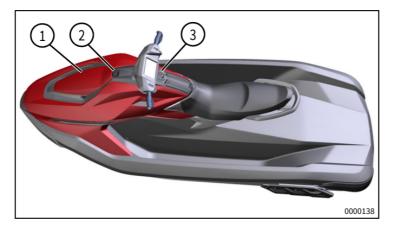


Figure 35: Storage Compartments

5.5.1 Front Storage

Pull the latch (2) on the front storage compartment door (1) to access the compartment. Never carry loose, fragile, or sharp-edged objects inside the storage compartment. The maximum load inside the compartment is 4.5kg (10 lb.). Always close the compartment before riding. This compartment is not watertight. The Front Storage Compartment houses placement and fasteners for a standard 5-BC fire extinguisher.

5.5.2 Fire Extinguisher

All vessels, including PWC, are required to have a type B fire extinguisher on board. For Orca, the specified fire extinguisher is rated 5-BC. Approved types of fire extinguisher are identified by the following marking on the label - "Marine Type USCG Approved" - followed by the type and size symbols and the approval number. Orca houses placement and fasteners in the Front Storage Compartment for a standard 5-BC fire extinguisher. Be sure to familiarize yourself with the operation of a fire extinguisher and ensure the fire extinguisher on board is in working condition and fully charged before riding.

5.5.3 Center Console Compartment

The center console compartment (3) is located under the charge port cover. This compartment is not watertight. Never carry loose, fragile, or sharp-edged objects inside the storage compartment. Always close the compartment before riding.

5.6 Bilge System

5.6.1 Orca Performance Bilge System

Orca Performance is equipped with a bilge system using a jet pump vacuum suction tube. The jet pump vacuum system drains water from the bilge by the suction created by jet pump thrust while moving forward. Water is then drawn from the bilge compartment through a drain hose, and out of the PWC. This system only functions when the PWC is operating in forward motion.

5.6.2 Orca Carbon Bilge System

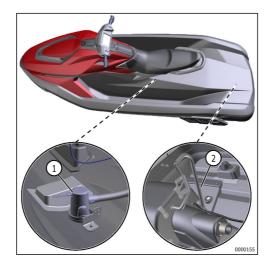


Figure 36: Orca Carbon Bilge Pump and Jet Pump

Orca Carbon is equipped with an electric bilge pump (1) and a bilge system using a jet pump vacuum suction tube (2). Electric bilge pump operation is controlled automatically by a float switch. The jet pump vacuum system drains water from the bilge from suction created by jet pump thrust while moving forward. Water is then drawn from the bilge compartment through a drain hose, and out of the PWC. This system only functions when the PWC is operating in forward motion.

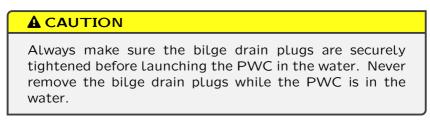
The jet pump vacuum system is intended to draw out water from the bilge at lower operating speeds. To maintain flotation, the electric bilge pump will automatically pump water out of the hull.

5.6.3 Bilge Drain Plugs



Figure 37: Bilge Drain Plugs

Remove the bilge drain plugs (1) located at the stern when the PWC is out of the water. This will manually drain any water that may be present in the hull and will help reduce condensation that may be present.



5.7 Grab Bar



Figure 38: Grab Bar

The grab bar (1) may be used by the passenger during operation of the PWC.

ACAUTION

The grab bar is not intended to be used for towing or to lift the PWC. Failure to follow this caution could result in injury or can damage the PWC.

6 Electric Vehicle Supply Equipment (EVSE)

The Personal Watercraft (PWC) uses the Society of Automotive Engineers (SAE) standard J1772 charging connector, and, when available, the CCS1 Combo connector.

A WARNING!

Read and understand all safety warnings and operating instructions for the EVSE used to charge the PWC.

Ensure you install the EVSE in a safe location where there is sufficient power supply for its operation.

Features and options of individual EVSE may vary depending on the model and type installed.

Make sure the electrical outlet is properly grounded to reduce the risk of electrical shock.

Do not use extension cords, grounding adapters, or other electrical devices between the EVSE power cord and the electrical outlet.

Do not use the EVSE if any component of it is damaged, if a fault code is present, or if it is not operating properly.

Failure to follow these warnings could result in death or serious injury.

A WARNING!

Hazardous voltage electricity is present. Installation of EVSE must be performed by an authorized electrician.

Follow all applicable laws and regulations for the installation and operation of the PWC and EVSE.

Failure to follow these warnings could result in death or serious injury.

6.1 Charging

Level 1 charging operates from a 120-volt AC.

Level 2 charging operates on 240-volt AC.

Level 3 Direct Current Fast Charging (DCFC) operates on 50-1000-volts DC.

DC Fast charging is accessible on Taiga vehicles equipped with DCFC hardware using any SAE J1772 compatible chargers equipped with a CCS1 charging connector.

* Disclaimer: Charging times may vary depending on certain conditions, including but not limited to, charger's performance, ambient temperature, and battery pack health.

Peak DCFC can only be sustained when the battery is in ideal conditions. If the battery is depleted or the temperature is non-optimal, the vehicle will automatically reduce the charging rate.

For optimal preservation of battery health, it is recommended to limit DCFC charging sessions below 100% State of Charge.

A WARNING!

Only use an approved charging cable with a SAE J1772 connector, or a CCS1 Combo connector when applicable.

Make sure to follow all safety and operating instructions for the EVSE used to charge the PWC.

Do not modify the charging cable or use an electrical grounding adapter.

Do not use a charging cable that has visible damage or has exposed wiring or allow it to become submerged.

Failure to follow these warnings could result in death or serious injury.

The PWC motor and battery pack can be submerged for a limited amount of time. The battery pack is protected from damage during normal use. However, should the PWC remain submerged for an extended period of time, the battery is not fully protected and may be damaged.

6.2 Charging Cable Connectors



Figure 39: SAE J1772

The Orca electric PWC uses a Society of Automotive Engineers (SAE) standard J1772 charging cable connectors.



Figure 40: J1772/CCS1 Combo Connector

When applicable, the PWC can also use a CCS1 Combo connector for Level 3 DCFC. The CCS1 connector combines the AC plug of the J1772 connector with a DC power option.

6.3 Charging Procedure

A WARNING!

Read and understand all operating instructions and safety warnings for the installed EVSE.

Make sure the location to install the EVSE has the required power to safely operate it.

Features and options of individual EVSE may vary depending on the model and type installed.

Inspect the EVSE connector and housing for visible damage before connecting a charging cable.

Failure to follow these warnings could result in death or serious injury.

Avoid connecting additional devices to EVSE circuits to avoid overloading them.

The charging session will stop if the charging cable is disconnected. Follow the EVSE instructions when using a mobile device with EVSE applications if available.

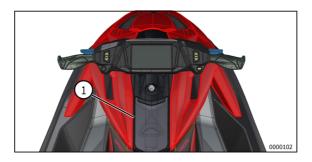


Figure 41: Charger Port



Figure 42: Charging Cable Connector

- 1. Press the Start/Stop button to set the PWC in an idle state.
- 2. Open the charging port cover (1) and connect the charging cable connector (2) to the PWC.

Electric vehicle supply equipment (EVSE) may be used to charge the PWC when equipped with an approved SAE J1772 charging connector or, when applicable, a CCS1 Combo connector.

3. Disconnect the charging cable connector from the PWC when the desired charge level is reached. Charging will automatically stop once the PWC reaches 100% State of Charge. This will end the charging session.

Charging progress is monitored on the display. A battery pack icon will appear on the display while charging.

4. Store the charging cable as needed.

Where the feature is available by mobile application, a maximum SoC limit can be set to the level of charging desired by the operator.

The charge current rate can be adjusted for scenarios where a reduced charging current may be beneficial. Keeping the battery of your vehicle fully charged for an extended period can reduce your vehicle's battery capacity over time.

Without the use of this feature the PWC will automatically draw the maximum power available. Be mindful of the maximum available current as it limits what power is available (which can, among others, result in circuit breakers being tripped).

A WARNING!

Lower the charge rate to prevent overloading a shared power source or to reduce your power consumption. Failure to do so may result in fire hazards or damage to property.

7 Operation

7.1 Practice Exercises

It is suggested to practice and get familiar with all the features and controls of the Orca electric PWC before attempting more challenging rides on open water. Practicing basic skills will allow the operator to gain confidence for becoming a proficient and safe rider.

7.1.1 Practice Exercise Location

Find an appropriate area to practice general riding exercises. This will give a new rider, or an infrequent rider, the opportunity to acquire or improve safe riding skills. A safe practice exercise location includes the following:

- No boaters or PWC in the area.
- No obstacles such as swimmers or underwater debris.
- No waves or wind is ideal.
- A large enough area with little to no currents to practice handling maneuvers.
- Make sure the water is at least 0.6 m (2 ft.) deep.

Thrust is required for directional control. Releasing the throttle lever results in loss of directional control.

7.1.2 Accelerating

Practice operating the throttle lever smoothly and gradually increase the pressure. This will enable a rider to safely accelerate and to avoid a loss of control.

7.1.3 Stopping

Practice stopping the PWC to become familiar with how the PWC responds. In open water, currents and wind will affect how the PWC stops and coasts. Practice releasing the throttle lever while riding at different speeds to learn how the PWC responds and how quickly it slows down.

7.1.4 Turning

Practice moving the handlebar left or right while traveling at different speeds to learn how speed and momentum affect the turning radius. Turning at various speeds and rate of turn also affects the role of roll of the PWC. Start out at slow speeds. Gradually increase the speed when controlled and predictable turns are achieved. Practice executing figure-8 riding when your experience performing left and right turns is acceptable.

7.2 Obstacle Avoidance Maneuvering

Avoiding obstacles is important. Find a safe location to practice obstacle avoidance. Choose a spot in the water to visualize an object, or use a soft floating object, and practice maneuvering around it. Start at a slow speed. As you gain experience and confidence, increase the PWC speed. See **Section 8 - Travel** for additional operating information.

7.3 Boarding

Avoid the following when boarding the PWC:

- If a passenger is boarding, never activate the Tractive Unit until the passenger has boarded and is properly seated.
- Do not jump on to the watercraft from the dock.

7.3.1 Boarding From a Dock

- 1. Hold on to the handlebar and carefully place one foot in the PWC's foot well that is the closest to the dock.
- 2. Position your body weight over the watercraft while placing your other foot into the foot well opposite to the dock.
- 3. Sit down.
- 4. Secure the Lanyard Key to the PFD. See Section 5.3
 Lanyard Key for additional information.

7.3.2 Boarding While in the Water

Boarding the watercraft in water can be done from either side: port (left) or starboard (right) side.

- 1. Swim, or walk in shallow water, to the port or starboard side of the PWC.
- 2. Grab the side of the PWC and pull yourself up until you can place your knees on the side of the craft.
- 3. Once on your knees, continue to pull yourself up and stand on your feet.
- 4. Straddle the watercraft and position yourself in the seat.
- 5. Attach the Lanyard Key to its key post.

Inexperienced riders should practice boarding the watercraft in shallow water before venturing into deep water. Refer to the following boarding instruction label at the stern of the PWC for boarding instructions:



Figure 43: Danger - Boarding Instruction Label

7.3.3 Boarding With a Passenger

A WARNING!

The Tractive Unit must be off, and the Lanyard Key removed from the PWC to prevent injury to a passenger boarding it.

Do not engage the throttle to maintain the PWC position while boarding, or while the passenger is boarding.

Do not allow a passenger to board while the Tractive Unit is on.

The operator always boards first and helps steady the watercraft. The passenger boards the watercraft in the same manner as the operator.

Try to balance the watercraft as the passenger boards.

Make sure the passenger is sitting securely on the seat with feet in the foot wells before starting the jet pump.

Failure to follow these warnings could result in death or serious injury.

8 Travel

8.1 Forward Travel

- 1. Make sure the Lanyard Key is safely connected to the key post and the operator's PFD.
- 2. On the control display, select the operating mode to correspond with the type of activity you will be doing.
- 3. Squeeze the throttle back slowly to provide a slight forward thrust. Thrust will also allow steering.
- 4. After clearing no wake zones and reaching open water, increase the speed gradually.
- 5. As your speed increases, the bow will raise up. The craft will then become more level with the water. This is the watercraft planing speed.
- 6. Once the watercraft is planing, the throttle can be reduced, and the watercraft will continue planing.

Be aware of impeller cavitation. An indication of impeller cavitation is a reduction in thrust with an increase in throttle speed. See **Section 9.5.1 - Cavitation**.

8.2 Steering

Thrust is required for directional control.

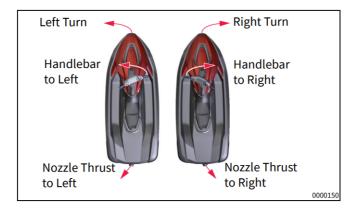


Figure 44: Steering

The handlebar controls the direction of the jet pump nozzle on the rear of the watercraft by applying thrust in the direction opposite to the turning direction:

- Turning the handlebar to the left turns the front of the PWC to the left.
- Turning the handlebar to the right turns the front of the PWC to the right.

The amount of steering force applied depends on the amount of thrust provided by the jet pump. When no thrust is applied, only the off-throttle steering capabilities can steer the PWC by activating the jet pump once the handlebar is turned with a hard oversteering movement. In normal operation, use the throttle lever to control the turn radius and steer the watercraft:

- High thrust = tighter turn radius
- Low thrust = larger turn radius
- No thrust = no turning (except for limited Off-Throttle Steering)

Lean into a turn to maintain the balance of the watercraft. This becomes more natural with practice at different turning speeds.

8.3 Stopping

Allow adequate space for stopping. Some reports show that 70% to 80% of all PWC accidents are the result of a collision with another vehicle, floating object, or swimmer.

Make sure to allow adequate clearance between the PWC and other objects based on your speed. This watercraft does not have a braking system. It relies on the energy required to push the watercraft through the water to slow forward motion. Release the throttle handle and the watercraft will slow down due to the drag of the water in front of it. Without the throttle being applied, the watercraft will continue to go straight even if the handlebars are turned. Apply the least throttle necessary if turning is required. Experienced riders may also use the throttle to steer the watercraft into left and right turns to slow the watercraft prior to releasing the throttle lever.

8.4 Docking and Beaching

The distance to stop and reach the beach or dock will vary depending on the weight, speed, water surface condition, direction, wind, and current. Make sure you are familiar with how the PWC handles in the water before attempting docking or beaching. It is always best to err on the side of caution when it comes to speed.

8.4.1 Docking

- 1. Make sure that the dock area is clear.
- 2. Approach the dock at a safe speed that will provide an adequate stopping distance.
- 3. Reduce the throttle to the minimum level for steering.
- 4. Approach the dock at a slight angle so the watercraft gently comes alongside the dock.

- 5. Remove the Lanyard Key from its post.
- 6. Exit the watercraft when it is at the dock.
- 7. Secure the watercraft to the dock with a bowline.

8.4.2 Beaching

Do not operate the PWC in less than 0.6 m (2.0 ft.) of water. Stones, sand, and other debris may be sucked into the jet pump inlet and may damage the watercraft. Beaching the watercraft is not recommended.

In circumstances where beaching is required:

- 1. Make sure the beaching area is clear and that beaching is permitted and safe.
- 2. Approach the beach at a safe speed that will provide an adequate stopping distance.
- 3. When the water level is approximately 1 m (3.3 ft.) deep, release the throttle and stop the Tractive Unit. Remove the Lanyard Key to prevent the jet pump from running.
- 4. Exit the watercraft from the back, or side (preferred).
- Push or pull the watercraft onto the beaching area. DO NOT run the watercraft onto the beach landing area. Only beach enough of the bow to secure the watercraft.
- 6. If possible, secure the watercraft using a bowline on the forward mooring hook.

When Launching the watercraft after beaching:

- 1. Push or pull the watercraft into at least 0.6 m (2.0 ft.) of water before reboarding.
- 2. Ensure that the Lanyard Key is removed from its post and verify that the intake grate is clear of debris before engaging the Tractive Unit.

- 3. Pull up and push down and rock from side to side on the back (stern) to dislodge any sand, stones, or other debris that may have made their way into the jet pump intake grate.
- 4. Board the watercraft and operate it normally. See **Sec**tion 5.1.5 - **Operating Modes** for additional operating information shown on the display.
- 5. You are responsible for making sure your battery is sufficiently charged for the ride. Always check battery levels before riding. Taiga does not provide towing or roadside assistance services.

8.5 Righting a Capsized PWC

The PWC's design makes it difficult to turn over (capsize). If the PWC has capsized:

- 1. Position yourself with both feet on the bumper rail.
- 2. Reach across and place your hands on the opposite side. Grab the PWC, lean back, and use your body weight to pull the PWC. Roll the PWC.

Refer to the following re-boarding label at the stern of the PWC for re-boarding steps:



Figure 45: Caution - Avoid Jet Pump Contact and Notice - Righting a Capsized PWC

8.6 Shallow Water

Make sure to engage the Tractive Unit and board the electric Orca PWC while you are in water that is at least 0.6 m (2.0 ft.) deep. Otherwise, sand and other debris could be drawn into the jet pump and damage it.

8.7 Wave Jumping

Do not use the PWC for wave jumping. Jumping can cause back and spinal injuries that may result in paralysis.

8.8 At the End of the Day

At the end of each day of use, the watercraft should be removed from the water and rinsed. This is especially important when operating in salt or brackish waters. See **Section 4.10 - Aquatic Invasive Species**



Figure 46: Bilge Drain Plugs

- 1. Flush the jet pump.
- 2. Flush the bilge system; see **Section 9.12 Bilge System Flushing**.
- 3. Remove the bilge drain plugs (1) to remove any accumulated water. Excessive water accumulation indicates

a leak that may need to be corrected before reusing the PWC.

- 4. Make sure the O-rings on the bilge drain plugs are not damaged. Install and tighten the bilge drain plugs.
- 5. Check the battery State of Charge (SoC) and charge as necessary.
- 6. Refer to **Section 4.10 Aquatic Invasive Species** for additional instructions on managing aquatic invasive species.

9 Service and Care

9.1 Service Schedule Procedures

| Frequency | Service |
|-----------|---------------------------------------|
| Daily | Flush bilge system. See Section 9.12 |
| | Visual inspection before each use. |
| Monthly | Inspect the anodes. See Section 9.13. |
| Yearly | Inspect jet pump bearings and seals. |
| | See Section 9.9 |

A WARNING!

Do not perform any service or repair, or make any modifications to the PWC, that are not detailed in the Service Schedule.

Any service, repair, or modification to the PWC that is outside of the Service Schedule, and not authorized by Taiga, may result in serious injury or death. It will also void any warranty coverage.

Failure to perform routine maintenance tasks may make the PWC unsafe to operate.

Use only genuine Taiga parts whenever a component requires replacement.

9.2 Cleaning

INOTICE

ONLY use mild detergent and water or cleaners specifically made for the item you are cleaning such as a marine vinyl cleaner. Failing to rinse the PWC after use in saltwater will damage components.

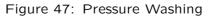
Never clean any item on the PWC using the following cleaning compounds. Avoid cleaners that can damage paint finishes, decals, plastic, and vinyl components:

- Strong detergents
- Degreasing products
- Abrasive cleaners
- Petroleum-based solvents such as mineral spirits and paint thinners

- Chlorinated solvents
- Alcohol
- Ammonia
- Strong solvents like acetone or toluene

9.3 Pressure Washing





INOTICE

NEVER use a high-pressure power washer to clean the PWC. High pressure water may damage components. Only use standard garden-hose water pressure and sprayers.

9.4 Charging Port

Do not use any liquids or harsh chemicals to clean around the charging port (1).

Only use a non-conductive brush or suitable cleaning tool to remove any debris from around the charging port area. Keep the electrical connection free of debris and liquids that could cause damage to the charging pins or could cause a charging malfunction.

9.5 Jet Pump Intake and Ride Plate

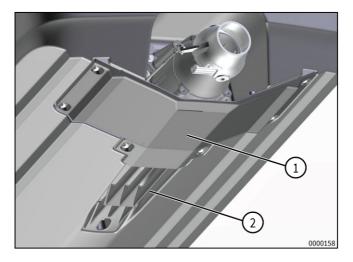


Figure 48: Intake Grate and Ride Plate

Make sure the ride plate (1) and intake grate (2) are not damaged and are secure.

9.5.1 Cavitation

Weeds or other debris caught in the jet intake or impeller can result in cavitation. Cavitation happens when water vapor bubbles are created. It provokes a loss of thrust that can damage the jet pump. A sign of impeller cavitation is a reduction in thrust along with an increase in impeller speed. If cavitation occurs, reduce your speed, and return to shore to check the jet pump intake and impeller.

9.5.2 Cleaning and Inspection

A WARNING!

The Lanyard Key must always be removed prior to inspecting the intake grate. Accidental running of the Tractive Unit during inspection may result in serious injury or death.

On shore, turn the PWC on its side. Remove weeds and debris from the jet pump intake, impeller, jet pump housing, and thrust nozzle.

9.6 Hull

NEVER use a high-pressure power washer to clean the PWC. High pressure water may damage components. Only use standard garden-hose water pressure and sprayer to remove any debris caught on the jet pump intake grate.

Use a mild detergent soap and water applied with a sponge or soft bristle brush to clean the hull and other body components. Rinse with water. After cleaning, the application of a marine wax may help protect the finish and make future cleaning easier. Do not use power buffers, hand polish only.

9.7 Seat

WARNING!

Use a non-slip vinyl protector on the seat and other riding surfaces. Vinyl protectors that create a slippery surface may cause riders to fall off the PWC, resulting in injury.

Only use cleaners that are made for marine vinyl on the seat and other vinyl-covered areas. Do not use common

household cleaners that may damage the protective coating of marine vinyl. When you are not using the PWC, protect vinyl and rubber surfaces from harmful UV light using a PWC cover. Make sure the cover is vented for air flow.

9.8 Controls and Displays

Clean the display surface using a clean microfiber towel and LCD screen cleaner. A few items to avoid:

- Do not use paper towel or other cloths that might scratch the display screen.
- Do not use common household cleaners like window cleaner.
- Do not press hard on the screen while cleaning, use a light pressure.
- Clean rubber control handles with a mild detergent and water.
- Protect them using a marine protectant for rubber and vinyl.

9.9 Jet Pump Bearings and Seals – Periodic Inspection

WARNING!

The Lanyard Key must always be removed prior to inspection of the jet pump. Accidental running of the Tractive Unit during inspection may result in death or serious injury.

Visually inspect the jet pump bearings for corrosion and the seals that could cause premature failure. Replace any component found to be defective. These inspections should also be performed before long-term storage to ensure proper operation.

9.10 Battery Pack

The lithium-ion battery pack is a sealed unit integrated into the PWC for efficiency and durability. It requires no regular maintenance and it can only be serviced by Taiga or an authorized representative.

9.11 Thermal Management System

The PWC's thermal management system utilizes a selfcontained closed-loop liquid cooling circuit. This will ensure proper operation throughout the operating range. The battery thermal management system operates automatically and requires no user maintenance.

9.12 Bilge System Flushing

Do not use a high-pressure washer to clean the bilge. Only use a low-pressure garden hose or similar. Highpressure water can damage mechanical and electrical systems.

Flushing of the bilge system with low-pressure water should be performed according to the service and care schedule. Depending on the environment where you use the PWC, the bilge system may require more frequent flushing to prevent its blocking. Flush the bilge system after operating in salt water.

Flushing the bilge system also helps remove unwanted marine organisms and may be required by law when travelling to and from bodies of water.

- Water from the bilge drains out the right rear side of the PWC.
- Both drain plugs for the bilge are at the rear of the PWC.

• The bilge pump for Orca Carbon uses the jet pump vacuum when the Tractive Unit is running. The bilge pump runs when there is water in the bilge.



Figure 49: Bilge Drain Plugs

To flush the bilge system:

- Remove the two bilge drain plugs (1).
- Use a garden-hose to fill the bilge with clean water at one of the drain ports to allow water to drain out the opposite port.
- Repeat for the drain port on the other side.
- Allow bilge to drain and install the drain plugs. Tighten the plugs.

9.13 Anodes

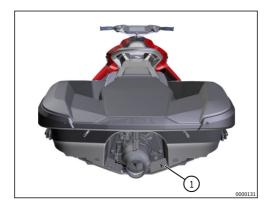


Figure 50: Anode

Sacrificial anodes protect the metal parts of the jet pump system from corrosion. This is especially important when the PWC is used in salt or brackish waters. The anodes corrode rather than the metal parts, it is normal for them to wear away. Inspect the anodes and replace them as needed. Contact Taiga: www.taigamotors.com/contact

9.14 Storing the PWC

Do not leave the PWC on the water for storage. Do not store the PWC in direct sunlight.

Prepare the PWC for storage by following normal cleaning procedures. After each day of use, or if the PWC is stored for an extended period, flush the bilge in accordance with the instructions in this Owner's Manual. See **Section 9.12**

- Bilge System Flushing

Remove and store the hull drain plugs. This allows the interior motor/pump compartment to dry out. If possible, store the PWC indoors. In any situation, use a cover to

ptotect the PWC. Keep the PWC out of direct sunlight. Make sure you maintain your PWC cover like any other part of your PWC. If temperatures are below 0°C (32°F), storing the PWC indoors is recommended.

Storing the PWC for an extended period requires a State of Charge (SoC) between 60-80%. Monthly checks are recommended during an extended storage period to ensure optimal SoC.

10 Troubleshooting Guide

To troubleshoot the PWC if you identify any issue, use the following list:

- Check for fault codes.
- If a fault code is present, first address the corresponding issue.
- If you cannot find the cause, contact Taiga using the dedicated form at www.taigamotors.com/contact or an authorized Taiga Service Provider. Please include the hull identification number when sending any correspondence.

10.1 Fault Indication

The display screen will display fault messages and indications as a "pop-up" message. The display will show messages and fault codes, some of which may prevent the craft from operating for the safety of the vehicle and the rider.

10.2 Vehicle Will Not Go Into Drive

If the PWC cannot go into drive, check for the following:

- no charging connector is plugged into the PWC;
- no pop-up message is shown on the display;
- the Lanyard Key is present (or valid), and firmly installed on the key post.

If a key is detected but is invalid, an "Invalid Key" message is displayed. Contact Taiga for assistance in pairing the key to your PWC.

- 1. Confirm that both throttles have been fully returned to the idle position.
- 2. Retry pressing the Start/Stop button.
- 3. If still unable to enable drive, restart vehicle by pressing and holding the Start/Stop button for 3-5 seconds, then releasing the button, the craft will shut down. After 10s, pressing the Start/Stop button will wake the craft as normal.
- 4. Retry pressing Start/Stop button.
- 5. If still unable to enable drive, contact Taiga for support.

10.3 Vehicle Enables in Drive But Does Not Accelerate/No Thrust

Verify that no faults are indicated on the display. If by squeezing the throttle, the motor RPM increases but there is no thrust:

- 1. Power down the craft by pressing and holding the Start/Stop button for 3-5 seconds.
- 2. Remove the Lanyard Key from its key post.

- 3. Inspect the intake grate for obstruction.
- 4. Visually inspect the jet drive impeller from the exhaust side.
- 5. Look for evidence of the impeller being blocked or bent in a way that would prevent it from moving.
- 6. If still unable to drive, contact Taiga or your Taiga Service Provider (TSP) for support.

10.4 Abnormal Noise from Propulsion System

- Weeds or Debris Obstruction Around Propulsion Impeller: Clean. Refer to Maintenance Procedures.
- Damaged Impeller Shaft: Contact Taiga: www.taigamotors.com/contact or your Taiga Service Provider (TSP)
- Water Intrusion in Jet Pump Causing Bearing Seizure: Contact Taiga: www.taigamotors.com/contact or your Taiga Service Provider (TSP)
- Water Located In Bilge, Bilge System Malfunction: Contact Taiga: www.taigamotors.com/contact or your Taiga Service Provider (TSP)
- Worn Impeller Shaft Seal: Contact Taiga: www.taigamotors.com/contact or your Taiga Service Provider (TSP)
- Difficult or Erratic Steering: Contact Taiga: www.taigamotors.com/contact or your Taiga Service Provider (TSP)
- Steering Cable Damage: Contact Taiga: www.taigamotors.com/contact or your Taiga Service Provider (TSP)

11 EMC

11.1 Radio Emitters

The Orca PWC contains the following equipment:

- FCC ID: MCQ-CCIMX8MN / IC: 1846A-CCIMX8MN
- FCC ID: MCQ-XB3M1 / IC: 1846A-XB3M1
- FCC ID: 2A8MUA11638 / IC:28910-A11638

11.2 Compliance Statements - FCC-2A8MUA11638 / IC: 28910- A11638

The following compliance-related information applies to the PWC's radio-emitting Key Module ("Module"):

11.2.1 Canada - Compliance Statement

The Module complies with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- 1. This device may not cause interference.
- 2. This device must accept any interference, including interference that may cause undesired operation of the device.

Le Module est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- 1. L'appareil ne doit pas produire de brouillage;
- 2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

11.2.2 United States - Compliance Statement

The Module has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. The Module generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If the Module does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult Taiga or an experienced radio/TV technician for help.

The Module 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
- this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by Taiga could void the user's authority to operate the equipment.

11.3 Radiation Exposure Statement

The Module complies with FCC and ISED radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. In order to avoid the possibility of exceeding the FCC and ISED radio frequency exposure limits, this equipment should be operated with a minimum separation distance of 20 cm (8 inches) between the equipment and a person's body. Users must follow the specific operating instructions for satisfying RF exposure compliance.

Le Module est conforme aux normes de la FCC et d'Innovation, Sciences et Développement économique Canada concernant les limites d'exposition dans un environnement non-contrôlé. Le Module ne peut être colloqué avec d'autres antennes ou transmetteurs, ou encore opéré conjointement avec ceux-ci. Afin d'éviter que les limites d'exposition prescrites par la FCC et l'ISDE ne soient dépassées, cet appareil doit être utilisé avec une distance minimale de séparation de 20 cm entre l'appareil et le corps d'une personne. Les utilisateurs doivent suivre les instructions d'utilisation spécifiques pour satisfaire les exigences en matière d'exposition aux radiofréquences.

Responsible Party

For Canada - Taiga Motors Inc. For the United States of America - Taiga Motors America Inc. 2695 Dollard Avenue Montreal, QC H8N 2J8, Canada legal@taigamotors.ca

12 Open Source Software

Certain of the vehicle's functionalities are powered by software developed by Taiga. In some cases, Taiga makes use of software known as open source software. License information is made available online at www.taigamotors.com/legal. Certain licenses for open source software, such as the GNU General Public License, confer certain rights to users, including the right to access such software's source code.

This constitutes an offer in writing from Taiga to make any such source code available to the vehicle's owner to the sole extent required under the applicable software license. Taiga will make such source code available upon written request on a commonly used media (e.g. USB key, drive) and ship it for a nominal cost in accordance with the corresponding licenses. This offer is valid for three years following purchase of the vehicle. Any third party software made available by Taiga is made available "as is", without any warranty of any kind. Taiga disclaims all liability arising out of your use, misuse or inability to use such third party software.

All open source inquiries can be made by email to legal@taigamotors.ca or by mail at the following address: Taiga Motors Inc. (Legal Department / Open Source) 480 Avenue Lafleur Montreal, Quebec H8R 3H9

13 Technical Information

ORCA[™] CARBON

TECHNICAL DETAILS

| HULL | CARBON FIBRE COMPOSITE |
|------------------|----------------------------|
| POWER | UP TO 120 kW |
| | UP TO 160 hp |
| DRIVE TRAIN | DIRECT DRIVEN JET PUMP |
| BATTERY | LITHIUM ION |
| RANGE | UP TO 45 km (28 mi) |
| CRAFT WEIGHT | 335 kg (738.5 lb.) |
| DRIVE MODES | THREE SELECTABLE MODES |
| SEATING CAPACITY | 2 |
| STORAGE | CENTRE CONSOLE COMPARTMENT |
| | FRONT STORAGE COMPARTMENT |

SOFTWARE

| DISPLAY | 7" HD SCREEN |
|-----------------|------------------------|
| CONTROL SYSTEMS | ADJUSTABLE TRIM |
| | IMPELLER REVERSE |
| | ELECTRONIC LANYARD KEY |
| | OTA CONNECTIVITY |
| | |

| DIMENSIONS | |
|---------------------|--|
| LENGTH | 2905 mm (9.53 ft.) |
| HEIGHT | 1040 mm (3.41 ft.) |
| WIDTH | 1156 mm (3.79 ft.) |
| CHARGING | |
| CONNECTOR PORTS | SAE J1772/CCS1 COMBO COUPLER |
| ON-BOARD CHARGING | UP TO 6.6 kW (UPCOMING - LEVEL 3 CHARGING) |
| CONFIGURATION | BLACK GRAB BAB |
| CONFIGURATION | |
| | BLACK GLOSSY CFC HULL |
| | |
| BODY COLOUR CHOICES | CLEAR GLOSSY CFC TOP DECK |
| BODY COLOUR CHOICES | |
| BODY COLOUR CHOICES | |
| BODY COLOUR CHOICES | GLACIER WHITE, MIDNIGHT BLACK, |
| BODY COLOUR CHOICES | GLACIER WHITE, MIDNIGHT BLACK, OCEAN BLUE, GLOSSY RED, |
| BODY COLOUR CHOICES | GLACIER WHITE, MIDNIGHT BLACK, OCEAN BLUE, GLOSSY RED, SILVER BLUE, SUNSET ORANGE, |

FOR ADDITIONAL DETAILS VISIT TAIGAMOTORS.COM



Figure 51: Orca Carbon Specifications

SPECIFICATION SHEET



TECHNICAL SPECIFICATIONS

| HULL | SHEET MOLDED COMPOSITE (SMC) |
|------------------|---|
| POWER | UP TO 120 kW |
| | UP TO 160 hp |
| DRIVE TRAIN | DIRECT DRIVE JET PUMP |
| BATTERY | LITHIUM-ION |
| RANGE | UP TO 40 km |
| CRAFT WEIGHT | 355 kg |
| DRIVE MODES | THREE SELECTABLE MODES IMPELLER REVERSE |
| SEATING CAPACITY | 2 |
| STORAGE | CONSOLE COMPARTMENT (0.5L) FRONT COMPARTMENT (33.5L) |
| ADJUSTABLE TRIM | 7 LEVELS |
| DIMENSIONS | |
| LENGTH | 2905 mm (9.53 ft) |
| HEIGHT | 1040 mm (3.41 ft) |

1156 mm (3.79 ft)

SOFTWARE

| DISPLAY | 7" HD SCREEN |
|-------------------------------|--|
| CONNECTIVITY | LTE, WI-FI, BLUETOOTH® |
| HARDWARE | |
| INCLUDED CHARGING HARDWARE | J1772 (LEVEL 1 AND LEVEL 2) |
| OPTIONAL CHARGING HARDWARE | J1772/CCS1 COMBO COUPLER (LEVEL 1, 2 AND 3) |
| ON-BOARD CHARGER | UP TO 6.6 kW |

DESIGN

| INCLUDED COLOUR | GLACIER WHITE |
|-----------------|----------------------------|
| PREMIUM COLOURS | MIDNIGHT BLACK, OCEAN BLUE |
| | GLOSSY RED, RACING GREEN |

Specifications are given for informational purpose only based on taiga's testing. Metrics (such as weight, range, speed, acceleration and battery life) may vary based on the environment terrain, weather conditions, local regulations and Final build of the ordered product.

FOR ADDITIONAL DETAILS VISIT TAIGAMOTORS.COM

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Figure 52: Orca Performance Specifications

WIDTH

KEEP THIS OWNER'S MANUAL WITH THE PERSONAL WATERCRAFT AT ALL TIMES.