

Support and E-Warranty Certificate https://www.vevor.com/support

# STEERING TROLLING MOTOR USR MANUAL

MODEL:BHS223

We continue to be committed to provide you tools with competitive price.

"Save Half", "Half Price" or any other similar expressions used by us only represents an estimate of savings you might benefit from buying certain tools with us compared to the major top brands and doses not necessarily mean to cover all categories of tools offered by us. You are kindly reminded to verify carefully when you are placing an order with us if you are actually saving half in comparison with the top major brands.



# STEERING TROLLING MOTOR

MODEL:BHS223



#### **NEED HELP? CONTACT US!**

Have product questions? Need technical support? Please feel free to contact us:

CustomerService@vevor.com

This is the original instruction, please read all manual instructions carefully before operating. VEVOR reserves a clear interpretation of our user manual. The appearance of the product shall be subject to the product you received. Please forgive us that we won't inform you again if there are any technology or software updates on our product.

#### INTRODUCTION

#### THANK YOU

Thank you for choosing MAKOSHARK.We believe that you should spend more time fishing and less time positioning your boat. That's why we build the smartest, toughest, most intuitive troling motors on the water. Every aspect of a MAKOSHARK trolling motor is thought out and rethought untilit's good enough to bear ourname.Countless hours of researchand testing provide you the MAKOSHARK advantage that can truly take you "Anywhere.Anytime."We don't believe inshortcuts.

We are MAKOSHARK. And we are never done helping you catch morefish.

# **MOTOR INFORMATION(For Consumer Reference Only)**

Model	BHS223
Maximum current	30A
No load speed	1800RPM
Maximum thrust	55ib

# **SAFETY CONSIDERATIONS**

Please thoroughly read the user manual. Follow all instructions and heed all safety and cautionary notices. Use of this motor is only permitted for persons that have read and understood these user instructions. Minors may use this motor only under adult supervision.



# WARNING

You are responsible for the safe and prudent operation of your vessel. We have designed your MAKOSHARK product to be an accurate and reliable tool that will enhance boat operation and improve your ability to catch fish. This product does not relieve you from the responsibility for safe operation of your boat. You must avoid hazards to navigation and always maintain a permanent watch so you can respond to situations as they develop. You must always be prepared to regain manual control of yourboat, Learn to operate your MAKOSHARK product in an area free from hazards and obstacles.



#### WARNING

Never run the motor out of the water, as this may result in injuries from the rotating propeller. The motor should be disconnected from the power source when it is not in use or is off the water. When connecting the power-supply cables of the motor to the battery, ensure that they are not kinked or subject to chafe and route them in such a way that persons cannot trip over them. Before using the motor make sure that the insulation of the power cables is not damaged. Disregarding these safety precautions may result in electric shorts of battery(s) and/or motor. Always disconnect motor from battery(s) before cleaning or checking the propeller. Avoid submerging the complete motor as water may enter the lower unit through control head and shaft. If the motor is used while water is present in the lowerunit considerable damage to the motor can occur. This damage will not be covered by warranty.



#### **WARNING**

Take care that neitheryou nor other persons approach the turning propeller too closely,neither with body parts nor with objects.

The motor is powerfuland may endanger or injure you or others. While the motoris running watch out for persons swimming and for floating objects. Persons who lack the ability to run the motor or whose reactions are impaired by alcohol, drugs, medication, or other substances are not permitted to use this motor. This motor is not suitable for use in strong currents. The constant noise

motor. This motor is not suitable for use in strong currents. The constant no pressure level of the motor during use is less than 70dB(A). The overall vibration level does not exceed 2,5 m/sec2.



#### WARNING

When stowing or deploying the motor, keep fingers clear of all hinge and pivot points and all moving parts. In the event of unexpected operation, remove power leads from the battery.



### **WARNING**

It is recommended to only use MAKOSHARK approved accessories with yourMAKOSHARK motor. Using non-approved accessories induding to mount or control your motor may cause damage, unexpected motor operation and injury. Be sure to use the product and approved accessories, including remotes, safely and in the manner directed to avoid accidental orunexpected motor operation. Keep all factory installed parts in place including motor and accessory covers, enclosures and guards.

#### WARRANTY

#### WARRANTY ON MAKOSHARK SALTWATER TROLLING MOTORS

Makoshark extends the following limited warranty to the original retail purchaser only. Warranty coverage is not transferable.

# **MAKOSHARK Limited One-Year Warranty on the Entire Product**

Makoshark warrants to the original retail purchaser only that the purchaser's new MAKOSHARK saltwater trolling motor will be materilly free from defects in materials and workmanship appearing within One(1)years after the date of purchase. Makoshark will(at its option)either repair or replace, free of charge, any parts found by Makoshark to be defective during the term of this warranty. Such repair, or replacement shall be the sole and exclusive liability of Makoshark and the sole and exclusive remedy of the purchaser for breach of this warranty.

#### **MAKOSHARKLimited Lifetime Warranty on Composite Shaft**

Makoshark warrants to the original retail purchaser only that the composite shaft of the purchaser's MAKOSHARK troling motor will be materially free from defects in materials and workmanship appearing within the original purchaser's lifetime. Makoshark will provide a new composite shaft, free of charge, to replace any composite shaft found by Makoshark to be defective during the term of this warranty. Providing a new composite shaft shall be the sole and exclusive liability of Makoshark and the sole and exclusive remedy of the purchaser for breach of this warranty; and purchaser shall be responsible for installing, or for the cost of laborto install, any new composite shaft provided by Makoshark.

#### **Exclusions&Limitations**

This limited warranty does not apply to products that have been used commercially or for rental purposes. This limited warranty does not cover

normal wear and tear, blemishes that do not affect the operation of the product, or damage caused by accidents, abuse, alteration, modification, shipping damages, negligence of the user or maintenance.

DAMAGE CAUSED BY THE USE OF OTHER REPLACEMENT PARTS NOT MEETING THE DESIGN SPECIFICATIONS OF THE ORIGINAL PARTS WILL NOT BE COVERED BY THIS LIMITED WARRANTY. The cost of normal maintenance or replacement parts which are not in breach of the limited warranty are the responsibility of the purchaser. Prior tousing products, the purchaser shall determine the suitability of the products for the intendeduseandassumes all related risk and liability. Any assistance Makoshark provides to or procures for the purchaser outside the terms, limitations or exclusions of this limited warranty will not constitute awaiver of the terms, limitations or exclusions, nor will such assistance extend or revive the warranty. Makoshark will not reimburse the purchaser for any expenses incurred by the purchaser in repairing, correcting or replacing any defective products or parts, except those incurred with Makosharkspriorwrittenpermission.

Makoshark'S AGGREGATE LIABILITY WITH RESPECTTOCOVERED PRODUCTSIS LIMITED TO ANAMOUNT EQUALTO THEPURCHASERS ORIGINAL PURCHASE PRICEPAIDFORSUCHPRODUCT.

#### **MAKOSHARK Service Information**

To obtain warranty service, the product believed to be defective, and proof of original purchase (including the date of purchase), must be presented to a MAKOSHARK. Any charges incurred for service calls, transportation or shipping/freight to/from the MAKOSHARK Authorized Service Center or factory, labor to haul out remove, re-install or re-rig products removed for warranty service, or any other similar items are the sole and exclusive responsibility of the purchaser. Products purchased outside of China. must be returned prepaid with proof of purchase (including the date of purchase and serial number) to any Authorized MAKOSHARK Service Center in the country of purchase. Warranty service can be arranged by contacting a MAKOSHARK Authorized Service Center Products repaired orreplaced will

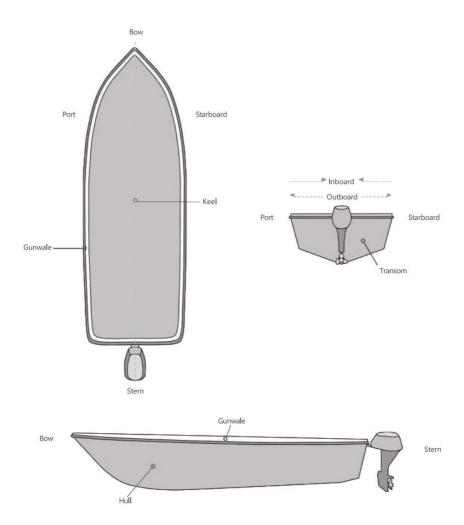
be warranted forthe remainder of theoriginal warranty period lorfor 90 days from the date of repair or replacement, whichever is longer]. For any product that is returned forwarranty service that Makoshark finds tobe not covered by or not inbreach of this limited warranty, there will be a biling for services rendered at the prevailing posted labor rate and for a minimum of at least one hour.

NOTICE:Do not return your MAKOSHARK product to your retailer. Your retailer is not authorized to repair or replace.

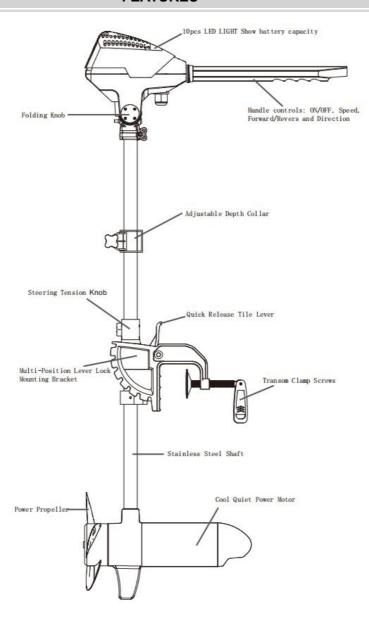
NOTICE: THERE ARE NO EXPRESS WARRANTIES OTHER THAN THESE LMIIED WARRANTES. IN NO EVENT SHALL ANY IMPLED WARRANTES INCLUDNG ANY IMPLED WARRANTES OF MERCHANTABILTY OR FINESS FOR PARTCULARPURPOSE, EXTEND BEYOND THE DURATION OF THE RELEVANT EXPRESS LMITED WARRANTY. IN NO EVENT SHALL Makoshark BELABLE FOR PUNTIVE, INDRECT, INCDENTAL, CONSEQUENTAL OR SPECIAL DAMAGES. With out liniting the foregoing, Makoshark assumes no responsibility for loss ofuse ofproduct, loss of time, inconvenience or other damage.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations and/or exclusions may not apply to you. This warranty gives you specificlegal rights and you may also have otherlegal rights which vary from state to state.

# **KNOW YOUR BOAT**



### **FEATURES**

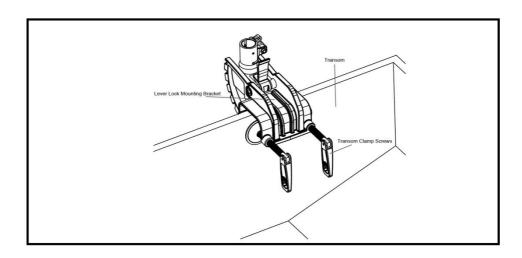


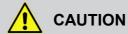
NOTICE: Specifications subject to change without notice. This diagram is for reference only and may differ from youractual motor.

# **INSTALLATION**

#### **Motor Installation**

- a. Find a transom area of the boat that is free from obstructions.
- b. Open the Transom Clamp Screws on the bracket enough so that it will fit over the top of the boat transom.
- c. Place the Lever Lock Mounting Bracket over the top of the boat transom so that the bracket is resting on top of the transom.
- d. Verify that there are no obstacles that the control box,handle,or prop might hit while in use that would restrict steering or cause damage to the motor.
- e.Tighten down the Transom Clamp Screws to the transom by hand only.Do not use any tools to tighten the clamp screws as this may damage the bracket or your boat.



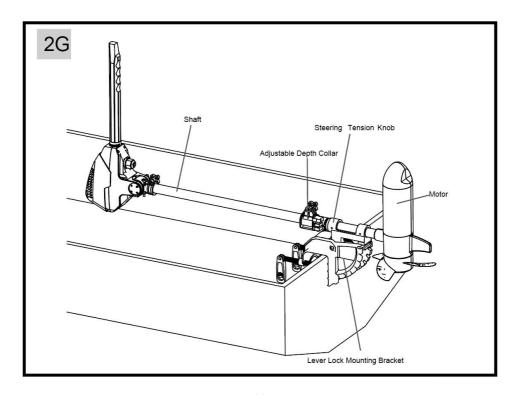


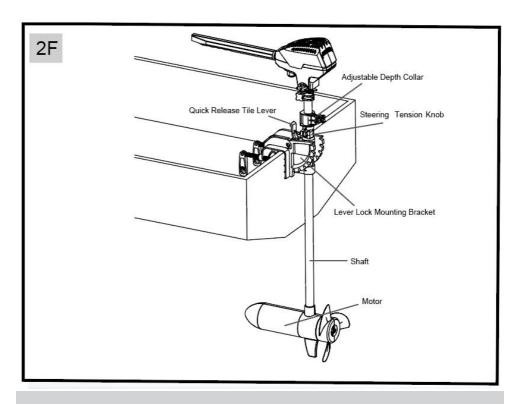
Over-tightening the Transom Clamp Screws can damage the bracket. Damage to the bracket will prevent the motor from being securely mounted to the transom. Prevent damage to the bracket by not over-tightening it. Only tighten by hand.

#### **INSTALLATION**

f.We recommend the tilt angle of the motorto be adjusted so that the motor shaft is perpendicular to the water surface when the motor is in use.

g.For transport, always tilt the motor into the boat, such that the motor and prop assembly are completely out of the waterand the motor is positioned up close to the Lever Lock Mounting Bracket.





NOTICE: This motor weighs approximately 30 lbs.We recommend having a second person help with the installation.



# **WARNING**

When the motoris being transported, on water orland, it is important to place the motor completely out of water. The motor should be positioned up close to the Lever Lock Mounting Bracket Always secure the Steering Tension Knob and slide the Adjustable Depth Collar down to the top of the Steering Tension Knob for added security during transport. This provides a secure stow and holds the motor in place during transportation when it is subject to high levels of shock and vibration. Failure to secure the motor may result in injury or damage to the unit.

#### **BATTERY&WIRING INSTALLATION**

#### **BOAT RIGGING&PRODUCT INSTALLATION**

For safety and compliance reasons, we recommend that you follow Boat and Yacht Council (ABYC) standards when rigging your boat. Altering boat wiring should be completed by a qualified marine technician. The following specifications are for general guidelines only:



# **CAUTION**

These guidelines apply to general rigging to support your MAKOSHARK motor. Powering multiple motors or additional electrical devices from the same power circuit may impact the recommended conductor gauge and circuit breaker size. If you are using wire longer than that provided with your unit follow the conductor gauge and circuit breaker sizing table below. If your wire extension length is more than 25 feet, we recommend that you contact a qualified marine technician.



# **CAUTION**

An over-current protection device (circuit breaker or fuse) must be used. Coast Guard requirements dictate that each ungrounded current-carrying conductor must be protected by a manually reset, trip-free circuit breaker or fuse. The type (voltage and current rating) of the fuse or circuit breaker must be sized accordingly to the trolling motor used. The table below gives recommended guidelines for circuit breaker sizing.

#### CONDUCTOR GAUGE AND CIRCUIT BREAKER SIZING TABLE

This conductor and circuit breaker sizing table is only valid for the following assumptions:

- 1. No more than 2 conductors are bundled together inside of a sheath or conduit outside of engine spaces.
- 2. Each conductor has 105°Ctemp rated insulation.

3. No more than 5%voltage drop allowed at full motor power based on published product power requirements.

Motor	Max		Wire Extension Length				
Thrust/Model	Amp	Circuit Breaker	5 feet	10 feet	15 feet	20 feet	25 feet
Thrusviviodei	Draw						
30 lb.	30	50 Amp@12VDC	10AWG	10AWG	8 AWG	6 AWG	4AWG
40 lb,45 lb.	42		10AWG	8AWG	6AWG	4AWG	4AWG
50 lb,55 lb.	50	60 Amp@12VDC	8 AWG	6 AWG	4 AWG	4 AWG	2 AWG
70 lb.	42	50 Amp@24VDC	10AWG	10AWG	8AWG	8AWG	6AWG
80 lb.	56	60 Amp@24VDC	8AWG	8AWG	8AWG	6AWG	6 AWG
101 lb.	46	50 Amp@36VDC	8AWG	8AWG	8AWG	8 AWG	8 AWG
Engine Mount	50	60 Amp@36VDC	8 AWG	8 AWG	8 AWG	8AWG	8 AWG
101		00 Amp@30VDC					
112 lb.	52	60Amp@36VDC	8AWG	8AWG	8AWG	8AWG	8AWG
Engine Mount	116	(2),,(20,4,, @2,4),(D.C	6 AWG	6AWG	4AWG	2 AWG	2 AWG
160		(2)x60Amp@24VDC					
E-Drive	40	50 Amp@48VDC	10AWG	10AWG	10AWG	10AWG	10AWG

NOTICE:Wire Extension Length refers to the distance from the batteries to the trolling motor leads. Consult website for available thrust options.

Maximum Amp Draw values only occur intermittently during select conditions and should not be used as continuous amp load ratings.

#### **ELECTING THE CORRECT BATTERIES**

#### SELECTING THE CORRECT BATTERIES

The motor will operate with any lead acid, deep cycle marine 12 volt battery/batteries. For best results, use a deep cycle, marine battery with at least a 60 amp-hour rating. Maintain battery at full charge. Proper care will ensure having battery power when you need it and will significantly

improve the battery life.Failure to recharge lead-acid batteries(within 12-24 hours) is the leading cause of premature battery failure. Use a multi-stage charger to avoid overcharging. We offer a wide selection of chargers to fit your charging needs. If you are using a crank battery to start a gasoline outboard, we recommend that you use a separate deep cycle marine battery/batteries for your MAKOSHARK trolling motor. For more information on battery selection and rigging, please check with related departments.



### **WARNING**

Never connect the(+)and the(-) terminals of the same battery together. Take care that no metal object can fall onto the battery and short the terminals. This would immediately lead to a short and extreme fire danger.



# **CAUTION**

Referto "Conductor Gauge and Circuit BreakerSizing Table" in the previous section to find the appropriate circuit breaker or fuse for your motor. For motors requiring a 60-amp breaker,the MAKOSHARK MKR-1960-amp circuit breaker is recommended.



# **CAUTION**

Please read the following information before connecting your motor to your batteries in orderto avoid damaging your motor and/or voiding your warranty.

#### **ADDITIONAL CONSIDERATIONS**

# **Using DC or Alternator Chargers**

Your MAKOSHARK trollng motor may be designed with an internal bonding

wire to reduce sonar interference. Most alternator charging systems do not account for this bonding wire, and connect the negative posts of the trolling motor batteries to the negative posts of the crank/starting battery. These external connections can damage connected electronics and the electrical system of your trolling motor, voiding your warranty. Review your charger's manual carefully or consult the manufacturer prior to use to ensure your charger is compatible.

MAKOSHARK recommends using MAKOSHARK brand chargers to recharge the batteries connected to your MAKOSHARK trolling motor, as they have been engineered to work with motors that include a bonding wire.

# **Additional Accessories Connected to Trolling Motor Batteries**

Significant damage to your MAKOSHARK motor, your boat electronics, and your boat can occurif incorrect connections are made between your trolling motorbatteries and other battery systems. MAKOSHARK recommends using an exclusive battery system for your trolling motor.

Where possible, accessories should be connected to a separate battery system. Radios and sonar units should not be connected to any trolling motorbattery systems as interference from the trolling motor is unavoidable. If connecting any additional accessories to any trolling motor battery system, or making connections between the trolling motor batteries and other battery systems on the boat, be sure to carefully observe the information below.

#### **CONNECTING THE BATTERIES**

The negative(-)connection must be connected to the negativeterminal of the same battery that the trolling motor negative lead connects to.In the diagrams below this battery is labeled"Low Side"Battery. Connecting to any other trolling motor battery will input positive voltage into the "ground" of that accessory, which cancause excess corrosion. Any damage caused by incorrect connections between battery systems will not be covered under warranty.

# **Automatic Jump Start Systems and Selector Switches**

Automatic jump start systems and selector switches tie the negatives of the connected batteries together. Connecting these systems to the "High Side" Battery or "Middle" Battery in the diagrams below and will cause significant damage to your trolling motor and electronics. The only trolling motor battery that is safe toconnect to one of these systems is the "Low Side" Battery.

#### **CONNECTING THE BATTERIES**

# 12/24 Volt Systems

- 1. Make sure that the motor is switched off(speed selector on "OFF" or "O").
- 2. Connect positive(+)red lead to positive(+)battery terminal.
- 3. Connect negative(-)black lead to negative(-)battery terminal.



### **WARNING**

For safety reasons do not switch the motor on until the propeller is in the water. If installing a leadwire plug, observe proper polarity and follow instructions in your boat owner's manual.

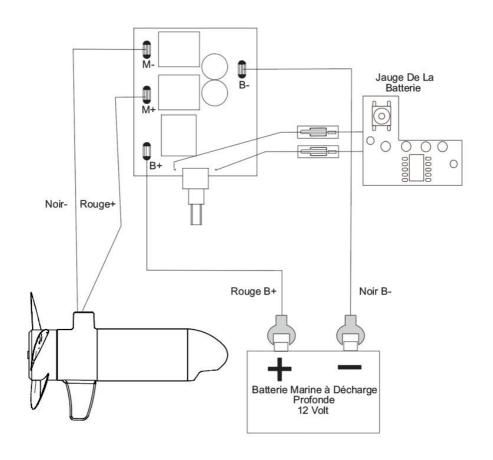


#### **WARNING**

- For safety reasons, disconnect the motor from the battery or batteries when the motor is not in use or while the battery/batteries are being charged.
  - Improper wiring of 24/36 volt systems could cause battery explosion.
- Keep leadwire wing nut connections tight and solid to battery terminals.
  - Locate battery in a ventilated compartment.

# **MOTOR WIRING DIAGRAM**

#### **MAKOSHARK TRANSOM**



# **USING & ADJUSTING THE MOTOR**

#### STOWING THE MOTOR



# **WARNING**

When stowing or deploying the motor, keep fingers clear of all

hingeand pivot points and all moving parts. Practice proper ergonomics when stowing and deploying the motor to prevent injury.



# **WARNING**

Moving the motor creates a variety of pinch points. The motor headwill create a pinch point if the Steering Tension Knob is loosened and the motor head slides to the top of the Adjustable Depth Collar. Grasp the Shaft and prevent it from sliding all the way down to prevent the pinch point. When adjusting the Mounting Bracket by engaging the Quick Release Tilt Lever, watch for pinch points on the Lever Lock Mounting Bracket and between the Shaft and Mounting Bracket. Grasp the motor away from the area that may come in contact with another area of the motor to prevent injury. Watch for pinch pointson the Tiller when moving the motor or using the telescoping handle.

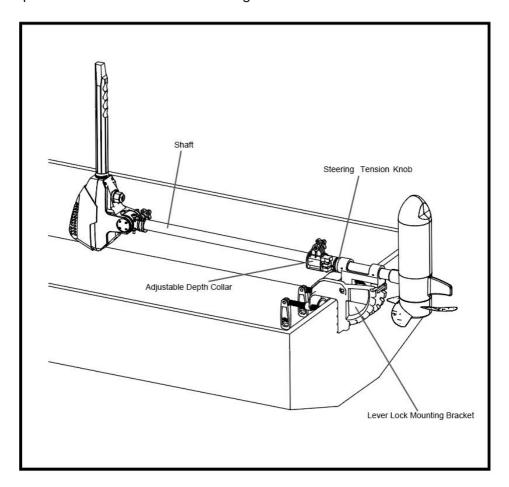


# **WARNING**

When the motor is being transported, on water or land, it is important to place the motor completely out of water. The motor should be positioned up close to the Lever Lock Mounting Bracket. Always secure the Steering Tension Knob and slide the Adjustable Depth Collar down to the top of the Steering Tension Knob for added security during transport. This provides a secure stow and holds the motor in place during transportation when it is subject to high levels of shock and vibration. Failure to secure the motor may result in injury or damage to the unit.

- a. Adjust depth so that the motor is fully raised.
- b. Press and hold the Quick Release Tilt Lever.
- c. Tilt motor into the boat.

d. Fortransport always tilt the motorinto the boat such that the motor and prop assembly are completely out of the water and the motor is positioned up close to the Lever Lock Mounting Bracket.



#### ADJUSTING THE DEPTH OF THE MOTOR

#### ADDITIONAL ADJUSTMENTS

# Adjusting the Depth of the Motor

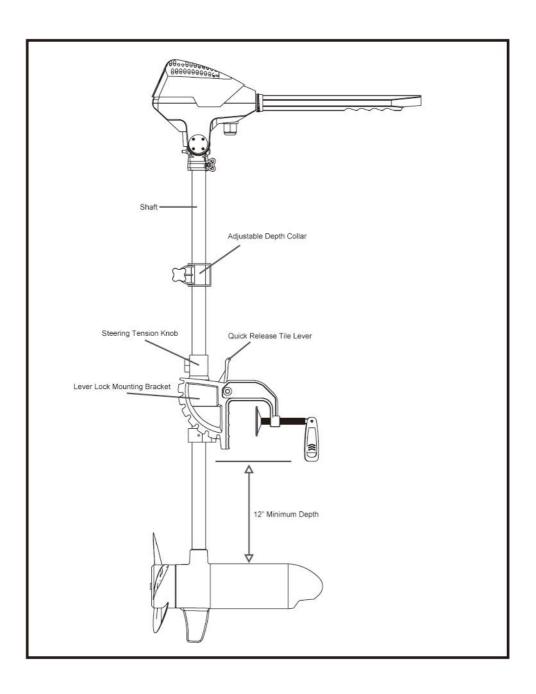
When setting the depth be sure the top of the motoris submerged at least 12"to avoid churning or agitation of surface water. The propeller must be completely submerged.

- Firmly grasp the composite Shaft and hold it steady.
- b. Loosen the Steering Tension Knob and the Adjustable Depth Collar until the Shaft slides freely.
- c. Raise or lower the motor to the desired depth.
- d. Tighten Adjustable Depth Collar to secure the motor in place.



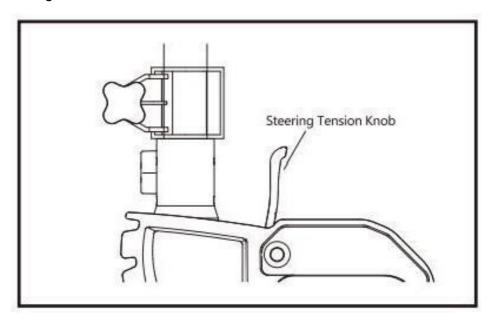
# **WARNING**

The motor head will create a pinch point if the Steering
Tension Knob is loosened and the motor head slides to the top of
the Adjustable Depth Collar. Grasp the Shaft and
prevent it from sliding all the way down to prevent the pinch point
Grasp the motor away from the area that may come in contact
with another area of the motor to prevent injury.



#### Adjusting the Steering

Adjust the Steering Tension Knob to provide enough tension to allow the motorto turn freely, yet remain in any position without being held or tighten the knob to place the motor in a preset position to leave your hands free for fishing.



#### ADJUSTING THE STEERING

# **Controlling Speed&Direction with the Tiller**

These motors are equipped with a handle, which offers variable forward and reverse speeds. The speed control may be operated in either direction, forward or reverse. Turn the tiller handle counterclockwise from (OFF) to increase reverse speed and clockwise from (OFF) to increase forward speed. Thrust decreases as you approach (OFF) from either direction.



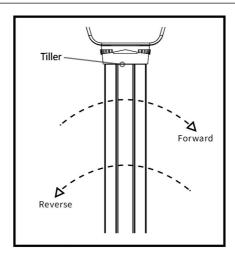
# **WARNING**

When the motor is not in use, always turn the Tiller handle to "OFF". If the handle is set or accidentally engaged or bumped and is not positioned to "OFF" the prop will turn on unexpectedly. The prop may also turn on unexpectedly if the control board or5 position switch fails. Prevent injury from a turning propeller and always know how to quickly disengage the poweror correct the Tillerto turn the prop off.



#### **WARNING**

The Riptide Transom is not intended to be a primary propulsion motor. Heavy use of the motor can cause elevated motortemperatures, which can be increased by an excessively hot operating environment. Use care when handling the control head to avoid burns or injuries from excessive heat. In the event that the motor or speed control would break, always be prepared to take manual control of the boat.





# **WARNING**

Be alert forunexpected boat movement when operating the Riptide Transom. The boat may encounter sharp turns and jolts if the steering is changed sharply or if broad changes in speed are made while operating. Maintain balance and observe safe motor operation

#### THE STEERING ADJUSTING

#### Adjusting the Bracket

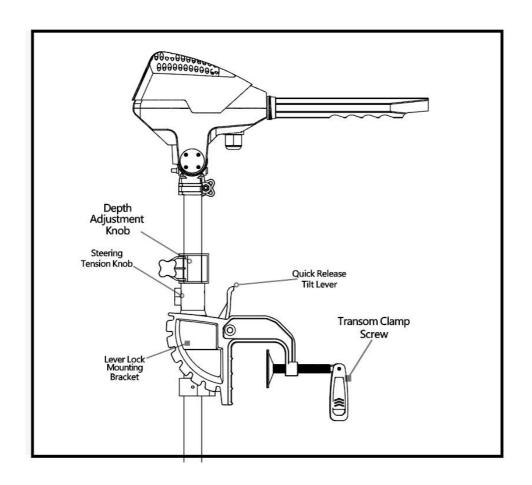
You can lock your motor in a vertical position, angle itfor shallow water or tilt it completely out of the water.

- a. Firmly grasp the control head or composite shaft.
- b. Press the Quick Release Tilt Lever toward the shaft and hold to release the detent lock or T-bar to adjust the position of the mounting bracket.
- c. Tilt to any of the positions on the Lever Lock Mounting Bracket.
- d. Release the Quick Release Tilt Lever.



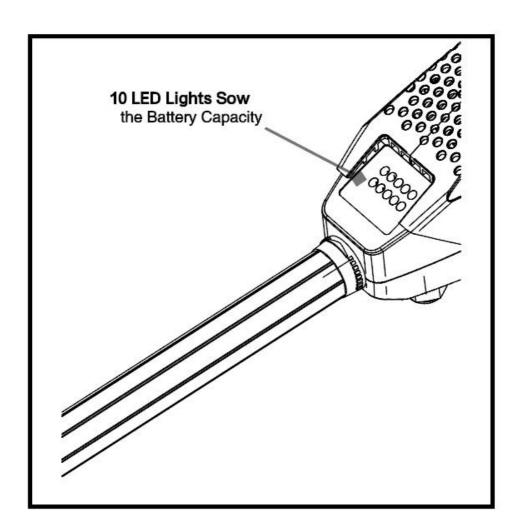
# **WARNING**

When adjusting the Lever Lock Mounting Bracket by engaging the Quick Release Tilt Lever, watch for pinch points on the Lever Lock Mounting Bracket and between the Shaft and mounting bracket. Grasp the motor away from the area that may come in contact with another area of the motor to prevent injury.



#### LED LIGHTS SHOW THE BATTERY CAPACITY

- The LED light provides an accurate display of the remaining charge in the battery.
- 2-3 lights will have deep warning, and then i will have around 10mins to come back(Refer to battery 24V 60AH)



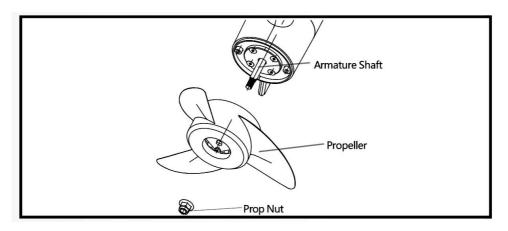
#### **SERVICE& MAINTENANCE**

# PROPELLER REPLACEMENT TOOLS AND RESOURCES REQUIRED

- · 1/2"Open End Wrench
- · Flat Blade Screwdriver

#### INSTALLATION

- a. Disconnect the motor from all sources of power prior to changing the propeller.
- b. Hold the propeller and loosen the Prop Nut with a pliers or a wrench.
- c. Remove the Prop Nut and Prop Washer.





# **CAUTION**

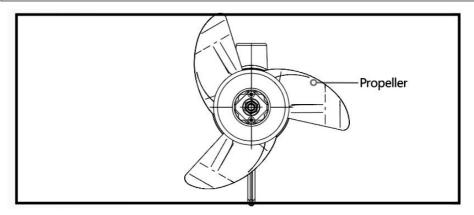
Disconnect the motorfrom the battery before beginning any prop work or maintenance.

d. Turn the old prop to horizontal and pull it straight off.



# **CAUTION**

If the prop does not readily slide off, take care to not bend the Armature Shaft while removing the prop by pulling the prop evenly offthe Armature Shaft.

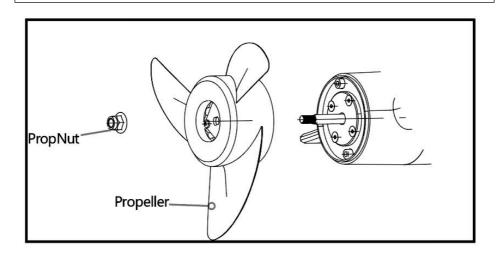


- e. Put on the new Propeller.
- f. Install the Prop Nut.
- g. Tighten the Prop Nut 1/4 turn past snug at 25-35 inch-lbs.



# **CAUTION**

Do notover tighten as this can damagethe prop.



#### **GENERAL MAINTENANCE**

#### **GENERAL MAINTENANCE**

- ·After every use, the entire motor should be rinsed with freshwater, then wiped down with a cloth dampened with an aqueous based silicone spray. Do notspray water into the ventilation openings in the head of the motor.
- •The composite shaft requires periodic deaning and lubrication for proper retraction and deployment. A coating of an aqueous based silicone spray willimprove operation.
- •The propeller must be inspected and cleaned of weeds and fishing line after every use. Fishing line and weeds can get behind the prop, damage the seals and allow water to enter the motor.
- ·Verify the prop nut is secure each time the motor is used.
- ·To prevent accidental damage during transportation orstorage, disconnect the battery whenever the motor is off of the water. For prolonged storage, lightly coat all metal parts with an aqueous based silicone spray.
- ·For maximum batterylife,recharge the battery(s)as soon as possible after use. For maximum motor performance, restore battery to full charge prior to use.
- ·Keep battery terminals clean with fine sandpaper or emery cloth(flooded lead acid only).
- •The propelleris designed to provide optimum operation with very high efficiency. To maintain this top performance, the leading edge of the blades must be kept smooth. If they are rough or nicked from use, restore to smooth by sanding with fine sandpaper.

#### **TROUBLESHOOTING**

- 1. Motor fails to run or lacks power:
- ·Check battery connections forproper polarity.
- ·Make sure terminals are clean and corrosion free. Use fine sandpaper or

emery cloth to clean terminals.

- ·Check battery water level.Add water if needed.
- 2. Motorloses power after a short running time:
- ·Check battery charge. If low, restore to full charge.
- 3. Motor is difficult to steer:
- ·Loosen the steering tension knob on the bracket
- ·Lubricate the composite shaft.
- 4. You experience prop vibration during normal operation:
- ·Remove and rotate the prop 180°. See removalinstructions in the Propeller Replacement section.

NOTICE: For all other malfunctions, visit an Authorized Service Center. You can search for an Authorized Service Centerin your area by visiting our Authorized Service page

# **SERVICE& MAINTENANCE**

#### **ENVIRONMENTAL COMPLIANCE STATEMENT**

It is the intention of Makoshark to be a responsible corporate citizen, operating in compliance with known and applicable environmental regulations, and a good neighbor in the communities where we make or sell our products.

#### **WEEE DIRECTIVE**

EU Directive 2002/96/EC"Waste of Electrical and Electronic Equipment Directive(WEEE)"impacts most distributors, sellers, and manufacturers of consumer electronics in the European Union. The WEEE Directive requires the producer of consumer electronics to take responsibility for the management of waste from their products to achieve environmentally responsible disposal during the product life cycle. WEEE compliance may

not be required in yourlocation for electrical&electronic equipment(EEE), nor may it be required for EEE designed and intended as fixed or temporary installation in transportation vehidles such as automobiles, aircraft and boats. In some European Union member states, these vehicles are considered outside of the scope of the Directive, and EEE for those applications can be considered excluded from the WEEE Directive requirement.

This symbol(WEEE wheelie bin)on product indicates the product must not be disposed of with other household refuse. It must be disposed of and collected for recydling and recovery of waste EEE. Johnson Outdoors Inc. will mark all EEE products in accordance with the WEEE Directive. It is our goal to comply in the collection, treatment, recovery, and environmentally sound disposal of those products; however, these requirements do vary within European Union member states. For more information about where you should dispose of yourwaste equipment for recycling and recovery and/or your European Union member state requirements, please contact your dealer or distributor from which your product was purchased.



#### **DISPOSAL**

MAKOSHARK motors are not subject to the disposal regulations EAG-VO(electric devices directive)that implements the WEEE directive. Nevertheless never dispose of your MAKOSHARK motor in a garbage bin but at the proper place of collection of your local town council.

Never dispose of battery in a garbage bin. Comply with the disposal directions of the manufacturer or his representative and dispose of them at the proper place of collection of yourlocal town council.

#### **FCC COMPLIANCE**

This device complies with Part 15 of the FCC rules Operation is subject to the following two conditions:

- 1. This device may not cause harmful interference.
- 2. This device must accept any interference that may be received, including interference that may cause undesired operation. Changes or modifications not expressly approved by MAKOSHARK could void the user's authority to operate this equipment.

#### **COMPLIANCE STATEMENTS**

NOTICE: This equipment 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. This equipment 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 occurin a particular installation. If this equipment does cause harmful interference to radio ortelevision 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 the dealer or an experienced radio/TV technician for help.

#### INDUSTRY CANADA COMPLIANCE

This product meets the applicable Industry Canada technical specifications. Operation is subject to the following two conditions: (1)this device may not cause interference, and (2)this device must accept any interference, including interference that may cause undesired operation of the device.

Changes or modifications not expressly approved by Johnson Outdoors Marine Electronics,Inc.could void the user's authority to operate this equipment.

#### **ENVIRONMENTAL RATINGS**

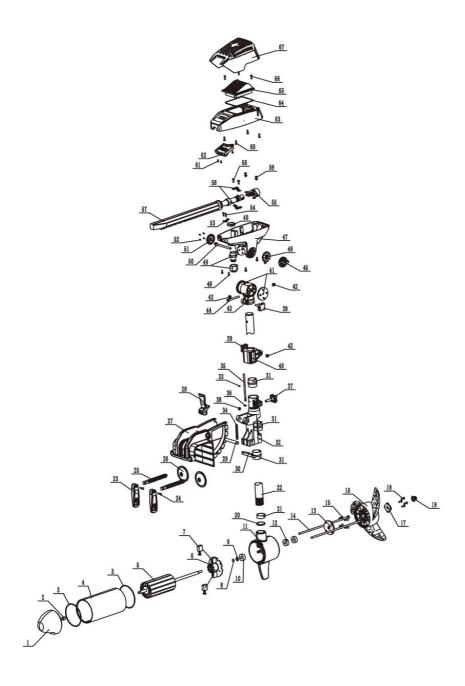
Ambient operating temperature range:-10C to 50C Ambient operating humidity range:5%to 95% Maximum operating altitude:10,000 feet

# PARTS DIAGRAM& PARTSLIST

# MAKOSHARKTRANSOMBE-CS230/250-55/86 LBS THRUST-24VOLT-30/34SHAFT

This page provides MAKOSHARK@WEEE compliance disassembly instructions. For more information about where you should dispose of your waste equipment for recyding and recovery and/or your European Union member state requirements, please contact your dealer or distributor from which your product was purchased. Tools required, but not limited to: flat head screw driver, Phillips screw driver, socket set, pliers, wire cutters.

# Makoshark Transom BE-CS230/250 Parts Diagram



# **PARTS DIAGRAM & PARTS LIST**

# **MAKOSHARK Transom BE-CS230/250 Parts List**

Item	Part #	Description	Quantity
1	LZ006	MOTOR FRONT COVER	1
2		BEARING	1
3		O-RING	2
4	SZ007	HOUSING ASSEMBLY	1
5		MOTOR ROTOR ASSEMBLY	1
6		CARBON BRUSH HOLDER	1
7		CARBON BRUSH ASSEMBLY	2
8		RETAINING RING	1
9		WASHER-TEFLON	1
10		WASHER-STEEL THRUST	1
11	LZ008	MOTOR END COVER	1
12		OIL SEAL	2
13	LZ009	PRESSING PLATE OF OIL SEAL	1
14		THRU BOLT	2
15		HEXAGON SOCKET SCREW	4
16	PC010	PROPELLER	1
17	SC011	PRESSING PLATE OF PROPELLER	1
18		SELF-TAPPING SCREW	4
19		HEXAGON FLANGE LOCKING NUT	1
20	PC049	RUBBER GASKET	1
21	PC050	TUBE WASHER	1
22	SZ040	COMPOSITE TUBE	1
23	PC029	HANDLE	2
24		RIVET	2
25	SC030	SCREW-CLAMP	2
26	SC031	WASHER-CLAMP SCREW	2
27	LZ037	BRACKET	1
28	PC039	TILT LEVER	1
29	SZ038	TILT LEVER PIN	1
30	LZ034	SPRING BOLT	1
31	PC033	HINGE BUSHING	3
32	LZ032	HINGE	1
33		E-CLIP SPRING	1
34	SC035	SPRING	1

Item	Part #	Description	Quantity	
35	SZ036	HINGE PIN	1	
36		HINGE PIN GASKET	1	
37	PC043	TENSION KNOB SCREW	1	
38		HEXAGON NUT	1	
39	PC042	COLLAR SCREW	2	
40	PC041	DEPTH COLLAR	1	
41	PC044	FOLDING POSITION HOLING PLATE	2	
42		HEXAGON NUT	2	
43		FOLDING SUPPORT BRACKET	1	
44		HEXAGON SOCKET SCREW	1	
45	PC046	LOCKING KNOB	1	
46	PC045	KNOB TRIM PLATE	1	
47	PC026	CONTROL BOX BOTTOM CASE	1	
48		SELF-TAPPING SCREW	6	
49		PG9 WATERPROOF CONNECTOR	1	
50		HEXAGON SCREW	1	
51	PC047	BOLT TRIM PLATE	1	
52		SCREW	4	
53	PC027	LIMIT CLAMP SPRING	1	
54		SELF-TAPPING SCREW	2	
55		POTENTIONMETER ASSEMBLY	1	
56		SELF-TAPPING SCREW	2	
57		HANDLE ASSEMBLY	1	
58	SC028	FIXED BUCKLE	1	
59		SELF-TAPPING SCREW	2	
60		SELF-TAPPING SCREW	4	
61		SELF-TAPPING SCREW	3	
62		LED DISPLAY ASSEMBLY	1	
63	PC023	CONTROL BOX COVER	1	
64		SEAL RING	1	
65		HEAT SINK ASSEMBLY	1	
66		SELF-TAPPING SCREW	4	
67	PC025	HEAT SINK COVER	1	

**Importer: WAITCHX** 

Address: 250 bis boulevard Saint-Germain 75007 Paris

Importer: FREE MOOD LTD

Address: 2 Holywell Lane, London, England, EC2A 3ET

**Manufacturer:** Wenling Whachinebrothers Machinery Ltd **Address:** Building #7,Incubation Zone, East District,Wenling

City, Zhejiang Province 317511, China

#### Made In China

UK REP

EUREP UK LTD UNIT 2264, 100 OCK STREET, ABINGDON OXFORDSHIRE ENGLAND OX14 5DH

EC REP

EUREP GmbH Unterlettenweg 1a, 85051 Ingolstadt, Germany



Support and E-Warranty Certificate https://www.vevor.com/support