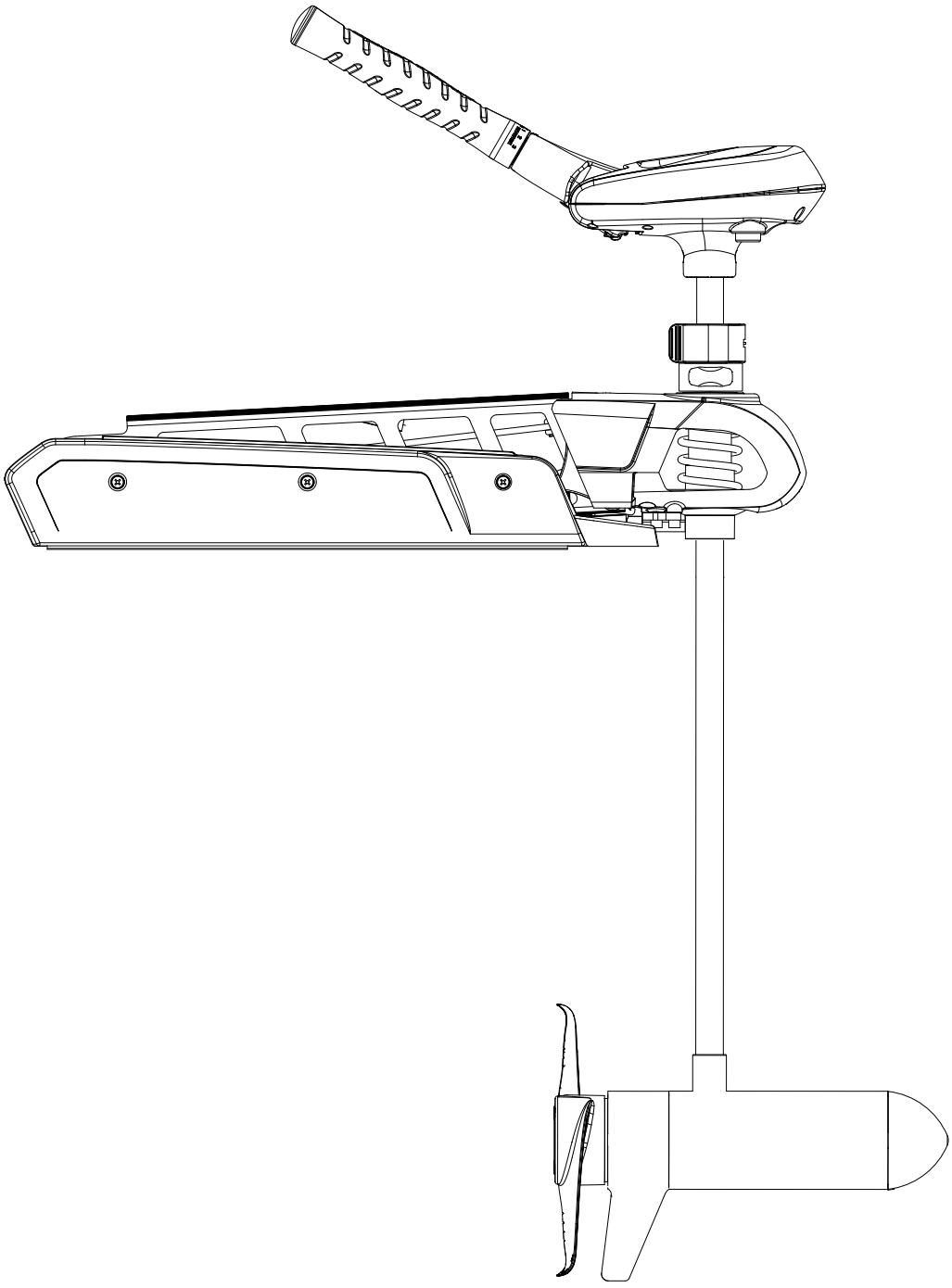
MINN KOTA®



FORTREX®

BOW-MOUNT TROLLING MOTOR

User Manual

INTRODUCTION

THANK YOU

Thank you for choosing Minn Kota. 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 trolling motors on the water. Every aspect of a Minn Kota trolling motor is thought out and rethought until it's good enough to bear our name. Countless hours of research and testing provide you the Minn Kota advantage that can truly take you "Anywhere. Anytime." We don't believe in shortcuts. We are Minn Kota. And we are never done helping you catch more fish.

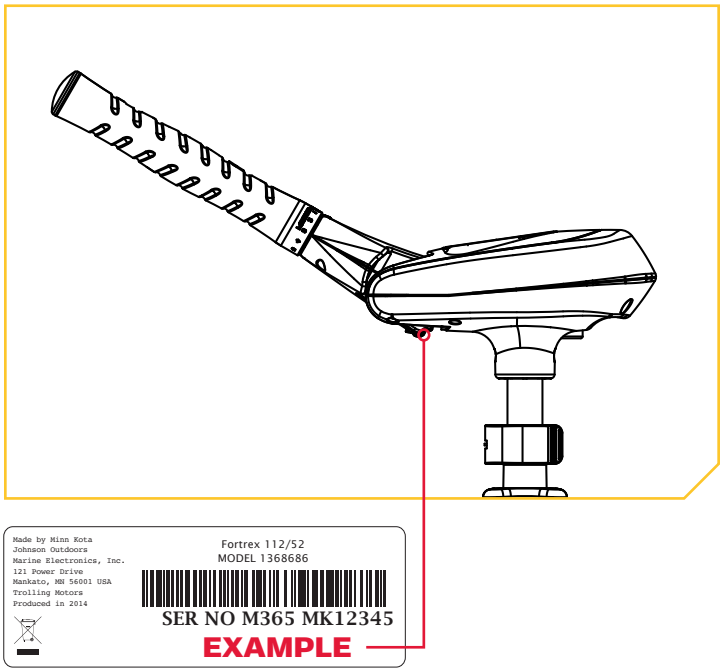
REGISTRATION

Remember to keep your receipt and immediately register your trolling motor. A registration card is included with your motor or you can complete registration on our website at minnkotamotors.com.

SERIAL NUMBER

Your Minn Kota 11-character serial number is very important. It helps to determine the specific model and year of manufacture. When contacting Consumer Service or registering your product, you will need to know your product's serial number. We recommend that you write the serial number down so that you have it available for future reference.

NOTICE: The serial number on your Fortrex is located located under the tiller handle.



MOTOR INFORMATION (For Consumer Reference Only)

Model: _____

Serial Number: _____

Purchase Date: _____

Store Where Purchased: _____

NOTICE: Do not return your Minn Kota motor to your retailer. Your retailer is not authorized to repair or replace this unit. You may obtain service by: calling Minn Kota at (800) 227-6433; returning your motor to the Minn Kota Factory Service Center; sending or taking your motor to any Minn Kota authorized service center. A list of authorized service centers is available on our website, at minnkotamotors.com. Please include proof of purchase, serial number and purchase date for warranty service with any of the above options.

TABLE OF CONTENTS

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 Minn Kota 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 your boat. Learn to operate your Minn Kota 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 lower unit considerable damage to the motor can occur. This damage will not be covered by warranty.

⚠ WARNING

Take care that neither you nor other persons approach the turning propeller too closely, neither with body parts nor with objects. The motor is powerful and may endanger or injure you or others. While the motor is 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 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 Johnson Outdoors approved accessories with your Minn Kota motor. Using non-approved accessories including 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 or unexpected motor operation. Keep all factory installed parts in place including motor and accessory covers, enclosures and guards.

WARRANTY

WARRANTY ON MINN KOTA FRESHWATER TROLLING MOTORS

Johnson Outdoors Marine Electronics, Inc. ("JOME") extends the following limited warranty to the original retail purchaser only. Warranty coverage is not transferable.

Minn Kota Limited Two-Year Warranty on the Entire Product

JOME warrants to the original retail purchaser only that the purchaser's new Minn Kota freshwater trolling motor will be materially free from defects in materials and workmanship appearing within two (2) years after the date of purchase. JOME will (at its option) either repair or replace, free of charge, any parts found by JOME to be defective during the term of this warranty. Such repair, or replacement shall be the sole and exclusive liability of JOME and the sole and exclusive remedy of the purchaser for breach of this warranty.

Minn Kota Limited Lifetime Warranty on Composite Shaft

JOME warrants to the original retail purchaser only that the composite shaft of the purchaser's Minn Kota trolling motor will be materially free from defects in materials and workmanship appearing within the original purchaser's lifetime. JOME will provide a new composite shaft, free of charge, to replace any composite shaft found by JOME to be defective during the term of this warranty. Providing a new composite shaft shall be the sole and exclusive liability of JOME 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 labor to install, any new composite shaft provided by JOME.**

Exclusions & Limitations

This limited warranty does not apply to products that have been used in saltwater or brackish water, 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 misuse, improper or insufficient care 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 to using products, the purchaser shall determine the suitability of the products for the intended use and assumes all related risk and liability. Any assistance JOME provides to or procures for the purchaser outside the terms, limitations or exclusions of this limited warranty will not constitute a waiver of the terms, limitations or exclusions, nor will such assistance extend or revive the warranty. JOME 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 JOME's prior written permission. **JOME'S AGGREGATE LIABILITY WITH RESPECT TO COVERED PRODUCTS IS LIMITED TO AN AMOUNT EQUAL TO THE PURCHASER'S ORIGINAL PURCHASE PRICE PAID FOR SUCH PRODUCT.**

Minn Kota Service Information

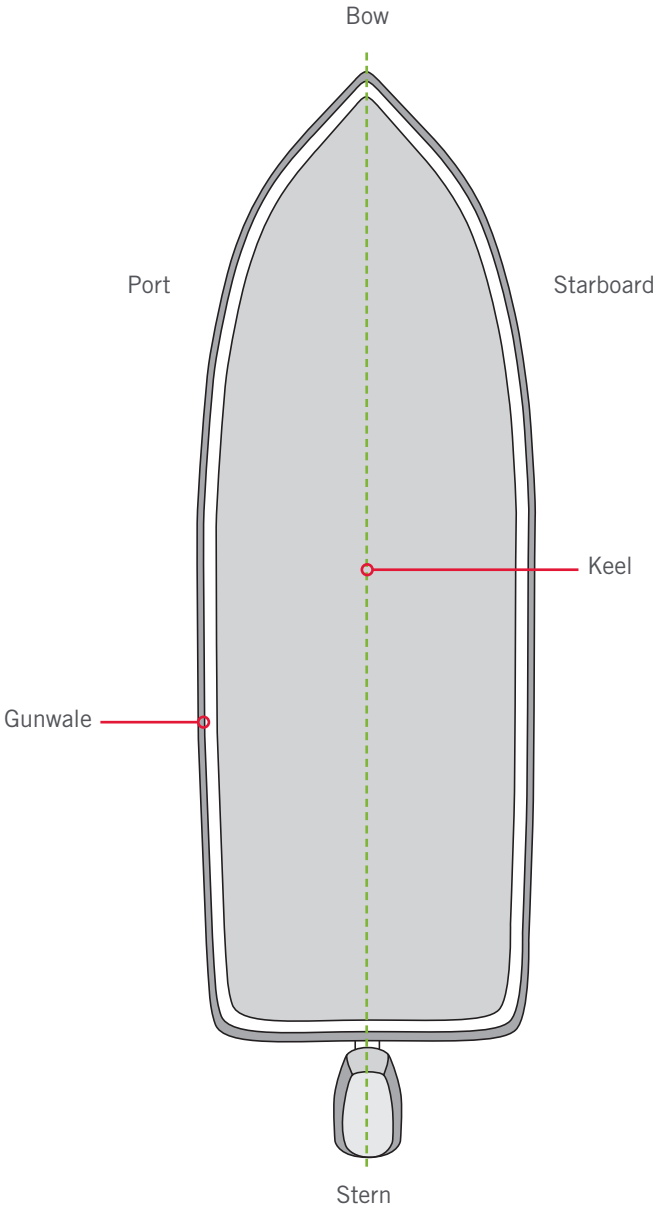
To obtain warranty service in the U.S., the product believed to be defective, and proof of original purchase (including the date of purchase), must be presented to a Minn Kota Authorized Service Center or to Minn Kota's factory service center in Mankato, MN. Any charges incurred for service calls, transportation or shipping/freight to/from the Minn Kota 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 the U.S. must be returned prepaid with proof of purchase (including the date of purchase and serial number) to any Authorized Minn Kota Service Center in the country of purchase. Warranty service can be arranged by contacting a Minn Kota Authorized Service Center or by contacting the factory at 1-800-227-6433 or email service@minnkotamotors.com. **Products repaired or replaced will be warranted for the remainder of the original warranty period [or for 90 days from the date of repair or replacement, whichever is longer]. For any product that is returned for warranty service that JOME finds to be not covered by or not in breach of this limited warranty, there will be a billing for services rendered at the prevailing posted labor rate and for a minimum of at least one hour.**

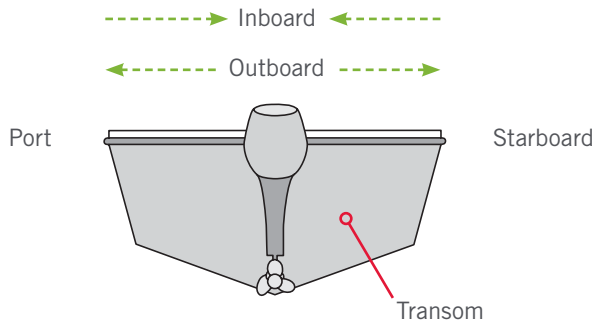
NOTICE: Do not return your Minn Kota product to your retailer. Your retailer is not authorized to repair or replace products.

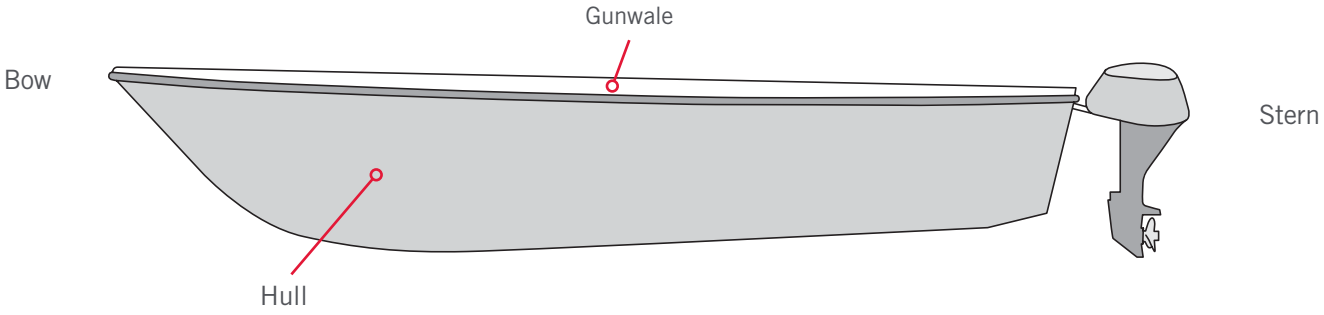
NOTICE: THERE ARE NO EXPRESS WARRANTIES OTHER THAN THESE LIMITED WARRANTIES. IN NO EVENT SHALL ANY IMPLIED WARRANTIES INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE, EXTEND BEYOND THE DURATION OF THE RELEVANT EXPRESS LIMITED WARRANTY. IN NO EVENT SHALL JOME BE LIABLE FOR PUNITIVE, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES. Without limiting the foregoing, JOME assumes no responsibility for loss of use of product, 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 specific legal rights and you may also have other legal rights which vary from state to state.

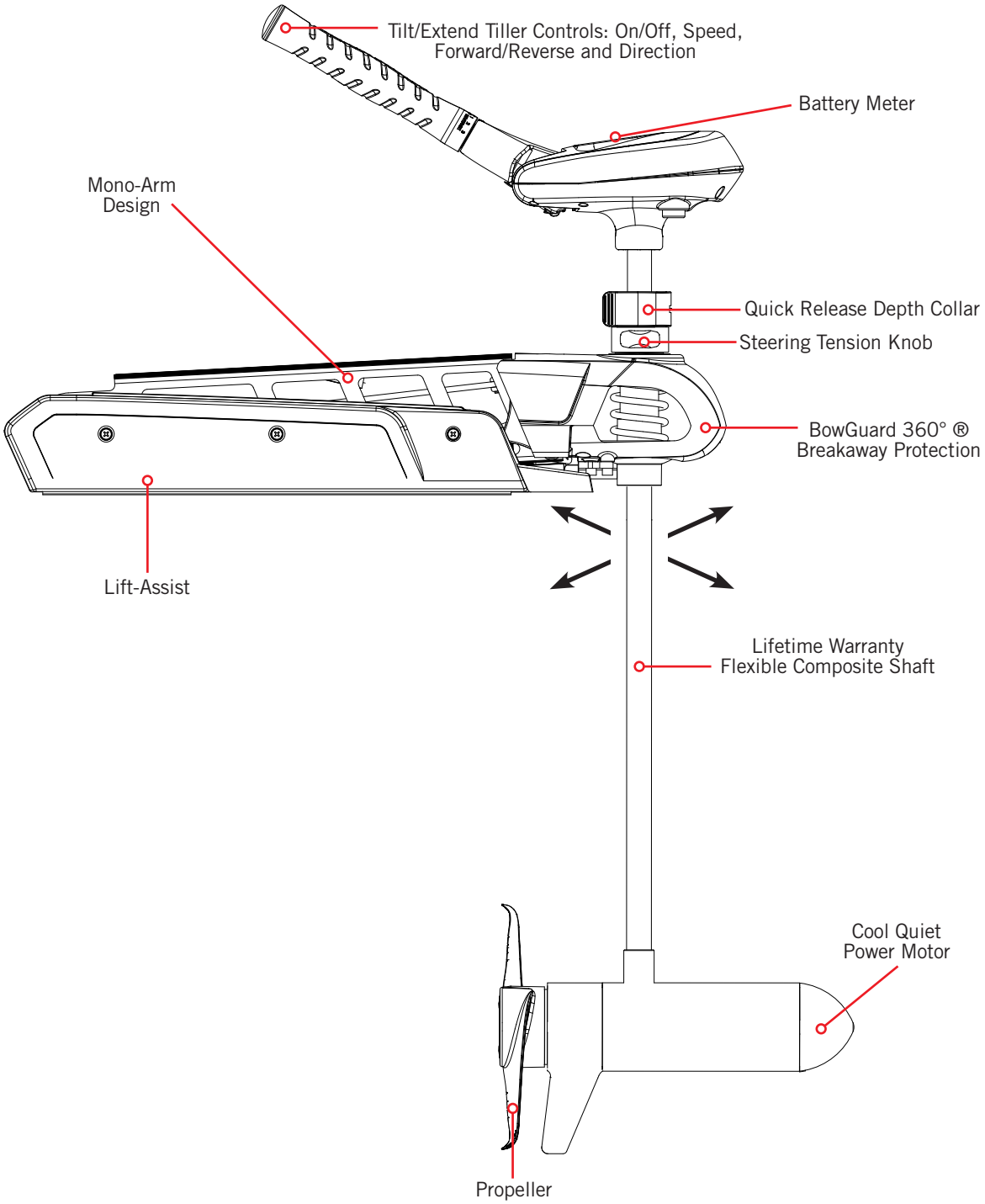
KNOW YOUR BOAT







FEATURES



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

INSTALLATION

MOUNTING CONSIDERATIONS

It is recommended that the motor be mounted as close to the keel or centerline of the boat as possible. Make sure the area under the mounting location is clear to drill holes and install nuts and washers. Make sure the motor rest is positioned far enough beyond the edge of the boat. The motor must not encounter any obstructions as it is lowered into the water or raised into the boat when stowed and deployed. Consider a quick release or adapter bracket with the installation of your motor. To view a list of accessories, please visit minnkotamotors.com.

View accessories available for your trolling motor at minnkotamotors.com.

TOOLS AND RESOURCES REQUIRED

- #2 Phillips Screwdriver
- (2) #3 Phillips Screwdriver
- 1/4" Allen Wrench
- Drill
- 9/32" Drill Bit
- 7/16" Box End Wrench
- A person to help with installation
- Torque Wrench
- File or Sandpaper
- Hack Saw
- Marker or Pencil
- 1/8" Flat Screwdriver
- 1/8" Allen Wrench
- Loctite
- Tape Measure or Ruler

INSTALLATION

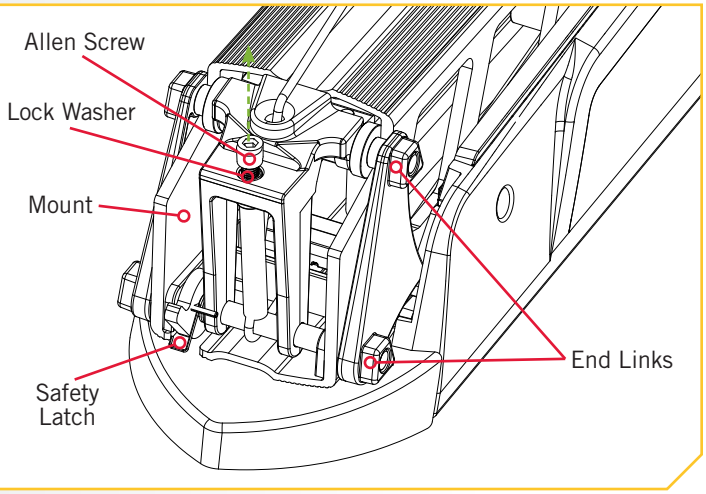
Assembly of Motor to Mount

1

a. Place the Mount on an elevated, level surface such as a workbench or the tailgate of a pickup.

a. Remove the 5/16" Allen Screw and Lock Washer from the Mount using an Allen wrench.

NOTICE: This motor weighs approximately 55 lbs. We recommend having a second person help with the installation.

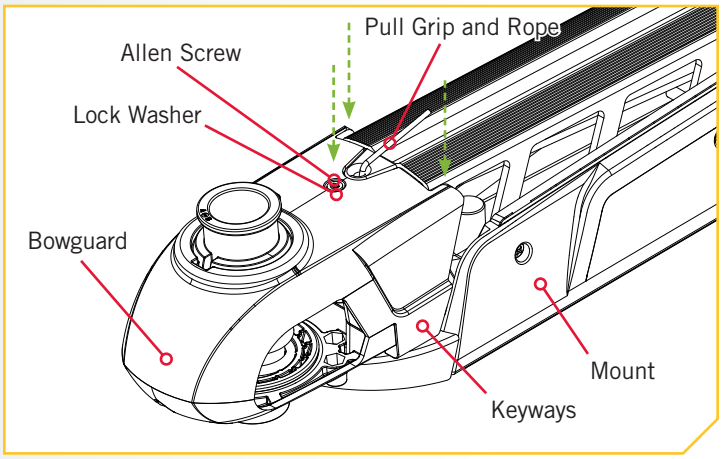


2

c. Align the Keyways on the inside of the Bowguard with the End Links on the Mount. Lower the motor assembly straight down until seated.

d. Install the 5/16” Allen Screw and the Lock Washer and tighten to 10-12 ft/lbs.

e. Stow the motor into the flat position by pulling the Pull Grip and Rope to disengage the latch bar, allowing the motor to fold into the flat position.



⚠ WARNING

Carefully lower the Bowguard into place to avoid creating a pinch point between the Bowguard and Mount.

NOTICE: The 5/16” Allen Screw must be tight when installed and periodically tightened to 10-12 ft/lbs. This will allow the motor to be stowed properly. Tighten the Allen Screw when the Mount is in the deployed position.

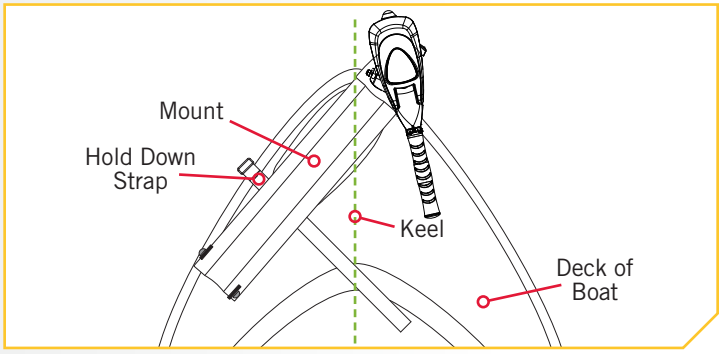
Installing the Bow-mount

During installation, it is recommended to mount the motor to the boat before installing the Gas Spring Pin. The Gas Spring Pin is installed in the Gas Spring Cylinder. The Gas Spring Cylinder is located on the inside of the Outer Arm, which is a part of the Mount. At this point in the installation, the Gas Spring Cylinder is not fully installed and may move around inside the Mount when stowing and deploying the motor. The Gas Spring Cylinder can become damaged while deploying the motor and the damage will prevent the Lift-Assist feature from operating correctly once fully assembled. Make sure that the Gas Spring Cylinder does not get damaged in the Mount.

1

a. Review the mounting considerations at the beginning of the Installation section for proper placement. Place the Mount as close to the centerline or keel of the boat as possible, with the motor in the stowed position, on the deck of the boat. Check placement with the motor in the stowed and deployed positions.

b. Place the Hold-Down Strap under the base of the Mount Plate so that it is below the Mount when placed.



⚠ CAUTION

The Gas Spring Cylinder can become damaged in the Mount while stowing or deploying the motor because it is not yet fully installed. Damage will prevent the Lift-Assist feature from operating correctly once fully assembled. Make sure that the Gas Spring Cylinder does not get damaged by keeping it inside the Outer Arm of the Mount.

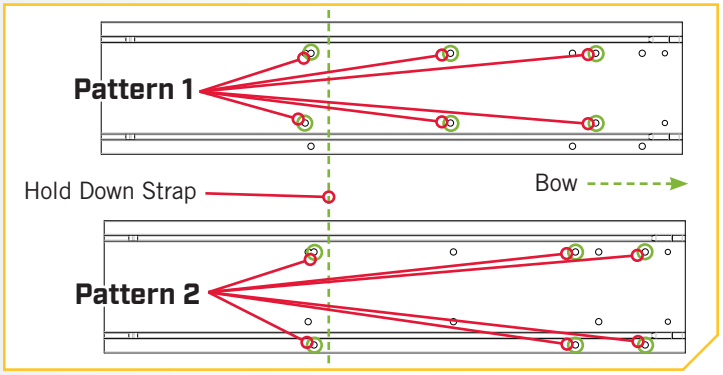
2

c. Once in position, determine which bolt pattern to use. Mark at least 4 of the holes (2 on each side) in the Bow Plate and drill through with a 9/32" Drill Bit. Either pattern may be used when installing the motor. Pattern 1 is the Minn Kota 3" bolt pattern standard motors and Pattern 2 is the alternate 4" bolt pattern commonly used.

NOTICE: If Pattern 2 is used, the right side plate must be removed to access the mounting holes in the base of the Mount.

d. Install the Hold Down Strap between the Motor and deck of boat between second and third set of Mounting Holes. The hook and loop side of the strap should face down and the metal loop should be outboard.

e. Mount the Plate to the bow through the drilled holes using the provided (1/4-20 x 3-1/2") bolts, nuts and washers.



⚠ WARNING

For installation, do not remove the shaft/motor from the Bowguard. The Bowguard spring is under tension and must always remain secured.

⚠ 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 Quick Release Depth Collar down to the top of the Steering Tension Knob for added security during transport and then secure the Hold Down Strap. 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.

NOTICE: To prevent seizing of the stainless steel hardware, do not use high speed installation tools. Wetting the screws or applying an anti-seize may help prevent seizing. If possible, secure all sets of mounting bolts, nuts and washers.

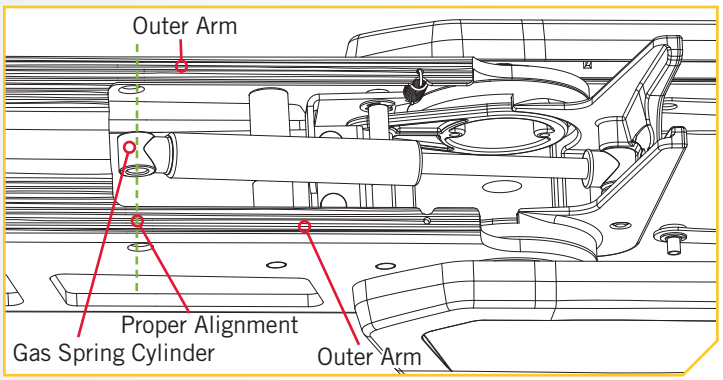
Installing the Gas Spring Pin

1

a. Position the motor to the stowed position with the Pull Grip and Rope to disengage the latch bar, allowing the motor to fold into a flat position.

b. Once in the stowed or flat position, the Gas Spring Pin and Spacers can be installed.

c. Locate the upper Gas Spring Pin and Spacers in the bag assembly. Align the end of the Gas Spring with the holes in the Outer Arm.



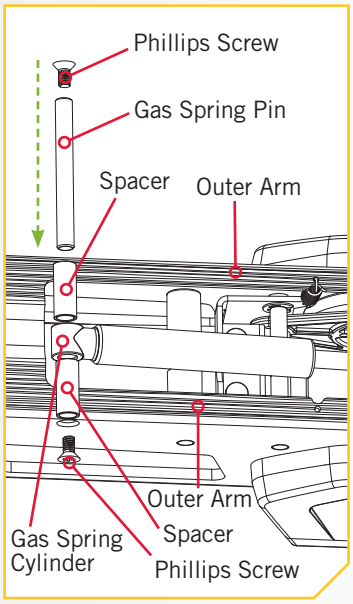
2

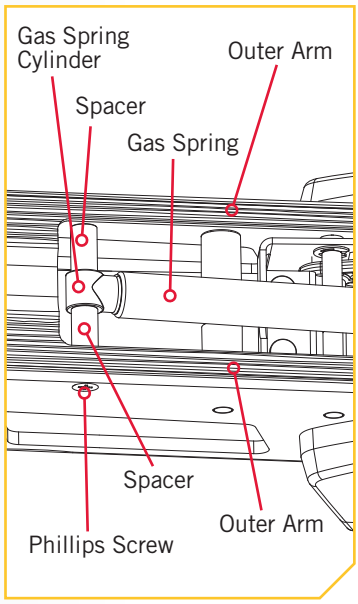
d. Install the Gas Spring Pin through the Outer Arm, then through a Spacer, the end of the Gas Spring Cylinder and another Spacer.

e. Install one Phillips Screw on each end of the Gas Spring Pin and secure with two #3 Phillips screwdrivers.

NOTICE: Spacers are placed on each side of the Gas Spring on the inside of the Outer Arm. Phillips Screws have a pre-applied thread locker. Do not apply additional thread-locker to them as it may prevent future removal.

f. Tighten Phillips Screws until the heads are flush with the Outer Arm.





⚠ WARNING

The gas assist lift mechanism in this unit is under high spring pressure when the motor is in the deployed position. Do not remove the Bowguard from the mount without disconnecting one end of the gas spring. Failure to do this can create a condition where accidental pulling of the Pull Grip and Rope may cause the mount to spring open rapidly, striking anyone or anything in the direct path.

Placing the Bow-mount Stabilizer

The Bow-mount Stabilizer Bracket is used to stabilize the Bowguard and reduce bouncing when the motor is stowed and transported. Attention to detail is needed for successful installation of the stabilizer. We recommend to have the stabilizer bracket installed by a qualified marine installer.

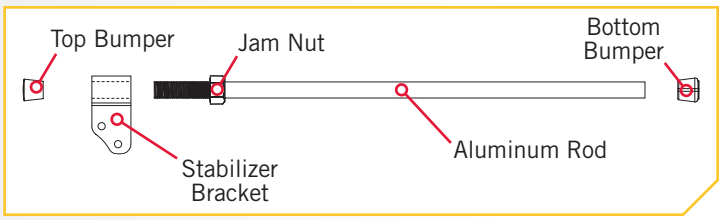
⚠ CAUTION

Adjusting the Aluminum Rod too tightly removes the end play needed for proper latch pin engagement and doing so could prevent the mount from fully latching in the stowed position. Improper latching may cause damage. If installed correctly, the tip of the Aluminum Rod should lift off of the boat deck about 1/4" without the mount unlatching. Cutting the Aluminum Rod too short will cause inadequate support of the mount. Lack of mount support may cause damage.

1

a. Place the motor in the stowed position.

b. Unthread the Aluminum Rod from the Stabilizer Bracket by removing the Top Bumper and unscrewing the bracket. Also remove the Bottom Bumper. Keep the Jam Nut in place.

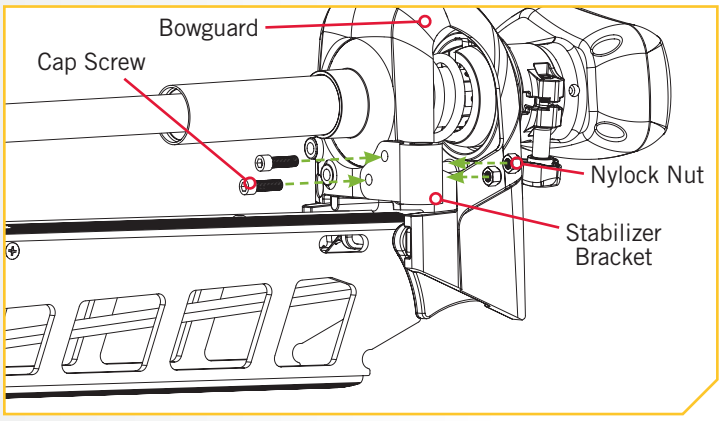


2

c. Determine the desired orientation of the Stabilizer Kit to attach it to the bottom of the Bowguard/ Steering Module.

NOTICE: The kit can be installed on the left or right side of the Bowguard.

d. Put the 5/16” Cap Screws through the Stabilizer Bracket and the mounting holes on the Bowguard. Secure the 5/16” Cap Screws with the 5/16-18 Nylock Nut. The Nylock Nuts fit into a hex pocket on the inside of the Bowguard behind the spring. Secure with a 1/4” Allen Wrench. Tighten to 10 ft lbs.



3

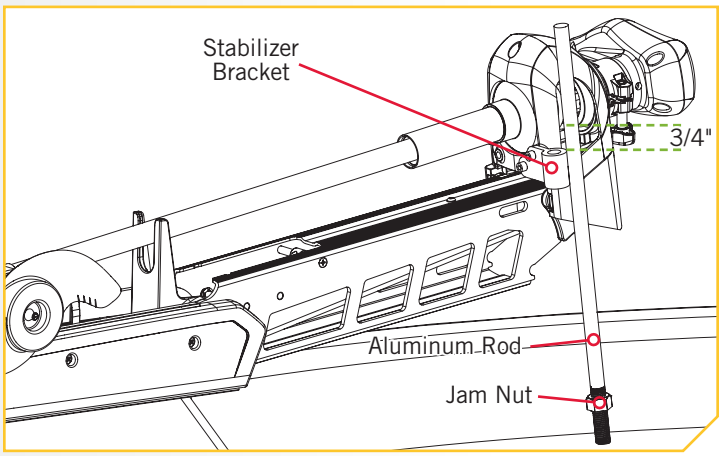
e. Measure the proper length of the Aluminum Rod by standing it, with the threaded end down, onto the deck surface so that it sits vertically right next to the Stabilizer Bracket.

f. Mark the Aluminum Rod with a pencil or marker 3/4" past the top of the Stabilizer Bracket.

⚠ CAUTION

Cutting the Aluminum Rod too short will cause inadequate support of the mount. Lack of mount support may cause damage.

g. Cut the Aluminum Rod with a Hack Saw at the mark. Round the cut edge of the rod with a file or sandpaper to remove any sharp edges.

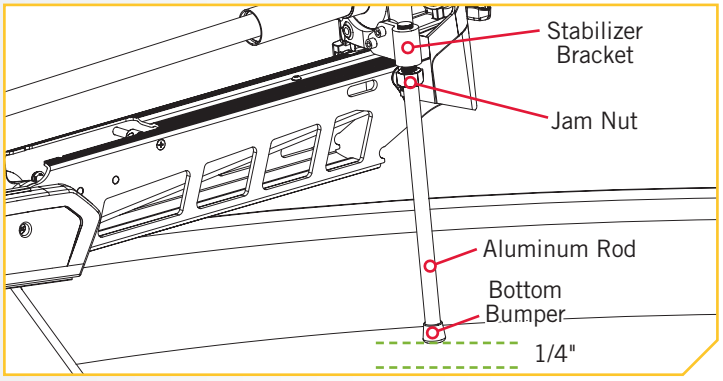


4

h. Replace the Bottom Bumper on the Aluminum Rod, opposite from the threads.

i. Thread the Aluminum Rod into the Stabilizer Bracket with the Bottom Bumper towards the boat deck.

j. Adjust the Aluminum Rod up or down in the Stabilizer Bracket so that the Bottom Bumper just touches the support surface. The Aluminum Rod should have the ability to lift off the boat deck about 1/4” without the mount unlatching.



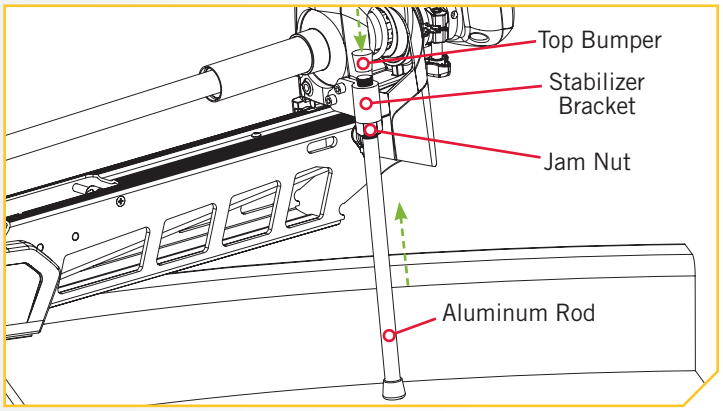
⚠ CAUTION

Adjusting the Aluminum Rod too tightly removes the end play needed for proper latch pin engagement and doing so could prevent the mount from fully latching in the stowed position. Improper latching may cause damage. If installed correctly, the tip of the Aluminum Rod should lift off of the boat deck about 1/4” without the mount unlatching.

5

k. Once in the correct position, tighten the Jam Nut upwards against the Stabilizer Bracket. This will prevent the Aluminum Rod from turning.

l. Install the Top Bumper if there are threads exposed on the Aluminum Rod above the Stabilizer Bracket.



BATTERY & WIRING INSTALLATION

BOAT RIGGING & PRODUCT INSTALLATION

For safety and compliance reasons, we recommend that you follow American 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 Minn Kota 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° C temp rated insulation.
3. No more than 5% voltage drop allowed at full motor power based on published product power requirements.

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

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.

Reference

United States Code of Federal Regulations: 33 CFR 183 – Boats and Associated Equipment ABYC E-11: AC and DC Electrical Systems on Boats

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 105 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 Minn Kota trolling motor. For more information on battery selection and rigging, please visit minnkotamotors.com.

⚠ 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

Refer to "Conductor Gauge and Circuit Breaker Sizing Table" in the previous section to find the appropriate circuit breaker or fuse for your motor. For motors requiring a 60-amp breaker, the Minn Kota MKR-19 60-amp circuit breaker is recommended.

⚠ CAUTION

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

ADDITIONAL CONSIDERATIONS

Using DC or Alternator Chargers

Your Minn Kota trolling 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.

Minn Kota recommends using Minn Kota brand chargers to recharge the batteries connected to your Minn Kota 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 Minn Kota motor, your boat electronics, and your boat can occur if incorrect connections are made between your trolling motor batteries and other battery systems. Minn Kota 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 motor battery 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 negative terminal 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 can cause excess corrosion. Any damage caused by incorrect connections between battery systems will not be covered under warranty.

Automatic Jump Start Systems and Selector Switches

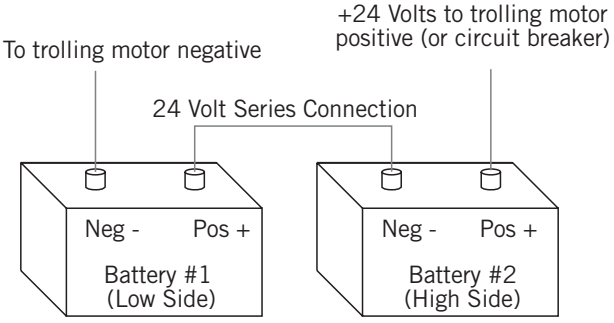
Automatic jump start systems and selector switches tie the negatives of the connected batteries together. Connecting these systems to the “High Side” Battery or “Middle” Battery in the diagrams below and will cause significant damage to your trolling motor and electronics. The only trolling motor battery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

CONNECTING THE BATTERIES IN SERIES (IF REQUIRED FOR YOUR MOTOR)

24 Volt Systems

Two 12 volt batteries are required. The batteries must be wired in series, only as directed in wiring diagram, to provide 24 volts.

1. Make sure that the motor is switched off (speed selector on “OFF”).
2. Connect a connector cable to the positive (+) terminal of battery 1 and to the negative (–) terminal of battery 2.
3. Connect positive (+) red motor lead to positive (+) terminal on battery 2.
4. Connect negative (–) black motor lead to negative (–) terminal of battery 1.



Two 12-volt batteries connected in series for 24 volts

⚠ 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.

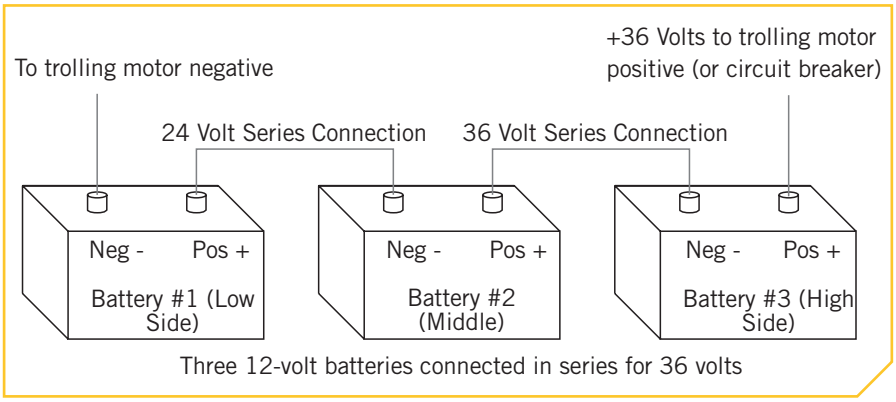
WARNING

- 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.

36 Volt Systems

Three 12 volt batteries are required. The batteries must be wired in series, only as directed in wiring diagram, to provide 36 volts.

1. Make sure that the motor is switched off (speed selector on “OFF”).
2. Connect a connector cable to the positive (+) terminal of battery 1 and to the negative (–) terminal of battery 2 and another connector cable from the positive (+) terminal of battery 2 to the negative (–) terminal of battery of battery 3.
3. Connect positive (+) red motor lead to positive (+) terminal on battery 3.
4. Connect negative (–) black motor lead to negative (–) terminal of battery 1.



Three 12-volt batteries connected in series for 36 volts

⚠ 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.

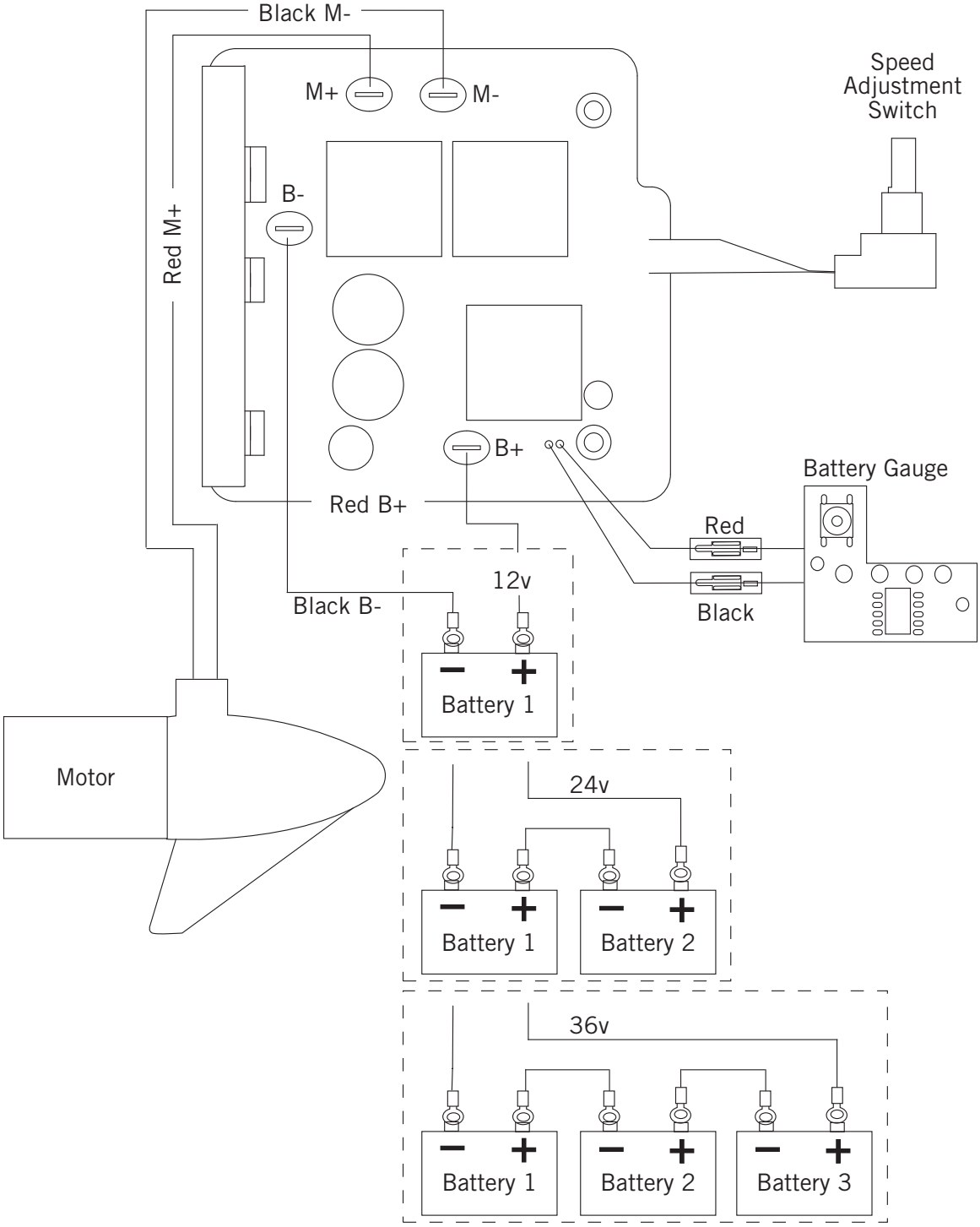
⚠ WARNING

- 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

FORTREX

The following Motor Wiring Diagram applies to all Fortrex Hand Control models.

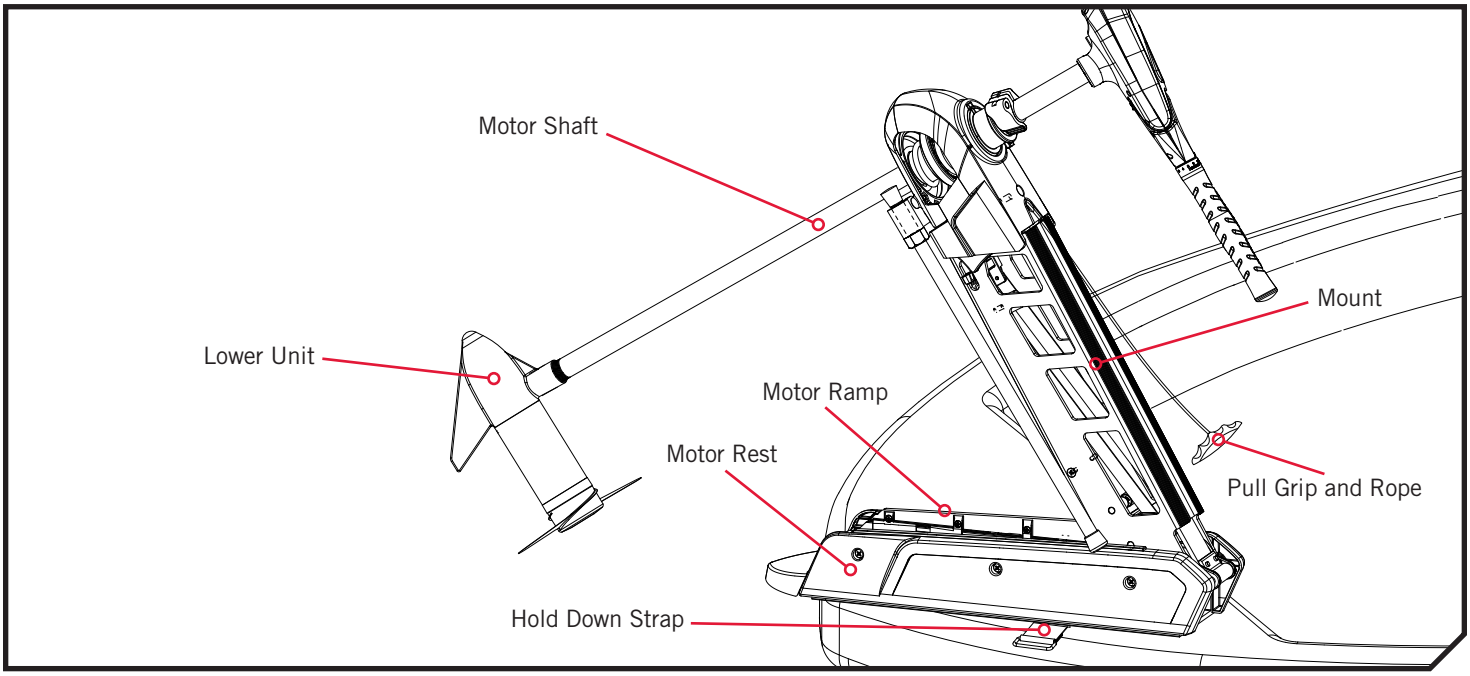


NOTICE: This is a multi-voltage diagram. Double-check your motor's voltage for proper connections. Over-Current Protection Devices are not shown in this illustration.

USING & ADJUSTING THE MOTOR

MOUNT FEATURES

Become familiar with the features of the motor to maximize the capabilities this product offers.



- The motor Mount is designed to fold back and lock the motor flat on the deck when not in use and to provide secure stowage for transport.
- The Pull Grip and Rope releases the lock bar, which automatically engages when the unit is lowered or raised into position. The Pull Grip and Rope should be used to both lower and raise the unit.
- The Motor Rest positions the Lower Unit as it comes in contact with the nose of the mount and guides it onto the Motor Rest.
- The Yoke captures the Motor Shaft and keeps the Lower Unit centered on the Motor Rest.
- The Hold Down Strap must be used to place pressure on the motor shaft to hold the lower unit tightly against the motor rest when stowed.
- The Pull Grip and Rope can be stored by placing the Pull Grip into the rope stow slot on the control box of the motor.

⚠ WARNING

The Fortrex is not intended to be a primary propulsion motor. Heavy use of the motor can cause elevated motor temperatures, which can be increased by an excessively hot operating environment. Use care when handling the Control Head and Foot Pedal 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

When tilting motor, keep fingers clear of all hinge and pivot points and all moving parts.

⚠ WARNING

The prop may turn on unexpectedly if the control board fails. Prevent injury from a turning propeller and always know how to quickly disengage the power.

⚠ WARNING

Be alert for unexpected boat movement when operating the Fortrex. 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.

STOWING AND DEPLOYING THE MOTOR

⚠ WARNING

When stowing or deploying the motor, keep fingers clear of all hinge and 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 Control Head will create a pinch point if the Depth Adjustment Knob is loosened and the Control Head slides to the top of the Mount. 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.

⚠ 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 Mount. Always secure the Depth Adjustment Knob and slide the collar down to the top of the Mount for added security during transport and then secure the Hold Down Strap. 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.

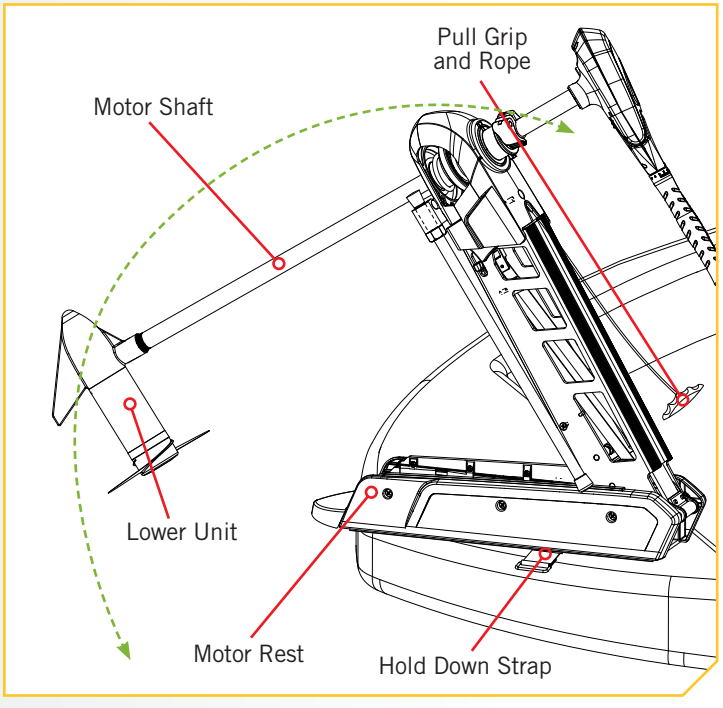
1

a. To Deploy the Motor, simply pull back and lift the motor off of the mount with the Pull Grip and Rope. Lower the motor into the water using the Pull Grip and Rope. The motor will lock into the deployed position automatically.

b. To Stow the Motor, pull back and lift the motor out of the water with the Pull Grip and Rope. Lower the motor Lower Unit onto the Motor Rest using the Pull Grip and Rope. The motor will lock into the stowed position automatically. Wrap the Hold Down Strap over top of the Motor Shaft to secure the motor.

⚠ WARNING

Avoid contact with the Bowguard while stowing, deploying or operating. The Shaft and mechanisims within the Bowguard can create pinch points. Avoid contact to avoid injury. Always use the Pull Grip and Cable to stow and deploy the motor to prevent injury.



ADDITIONAL ADJUSTMENTS

Adjusting the Depth of the Motor

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

1

a. Firmly grasp the Motor Shaft and hold it steady.

b. Loosen the Steering Tension Knob.

c. Open the Lever Arm to loosen the Quick Release Depth Collar.

d. Vertically adjust the height of the motor to the desired position.

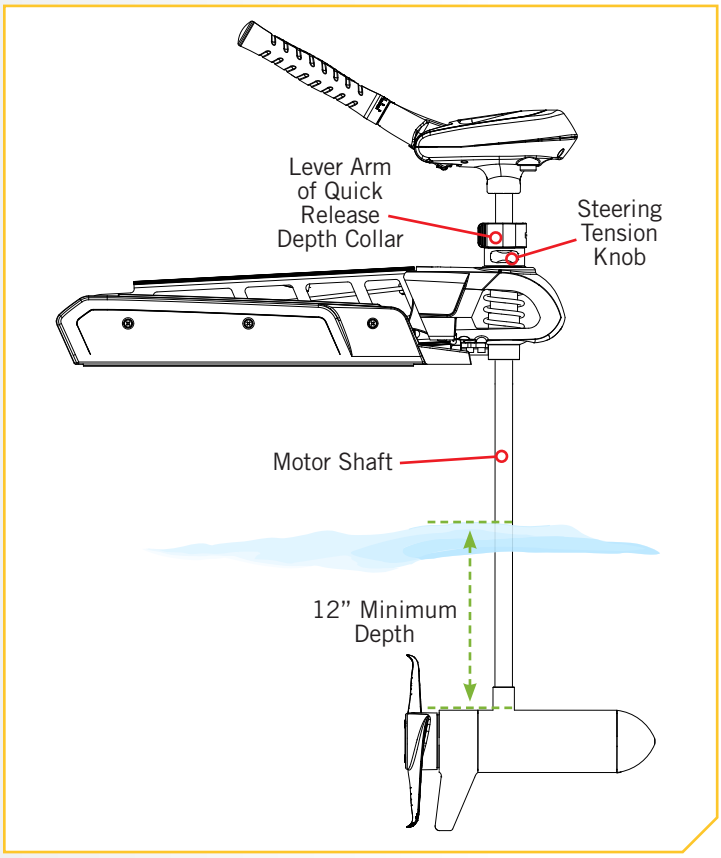
e. Bring the Depth Collar to the top of the Steering Tension Knob, and close the Lever Arm to lock the Depth Collar into position.

f. Tighten the Steering Tension Knob to achieve the desired steering resistance.

NOTICE: Be sure the top of the motor is submerged at least 12" below the surface of the water to avoid churning or agitation of surface water.

⚠ WARNING

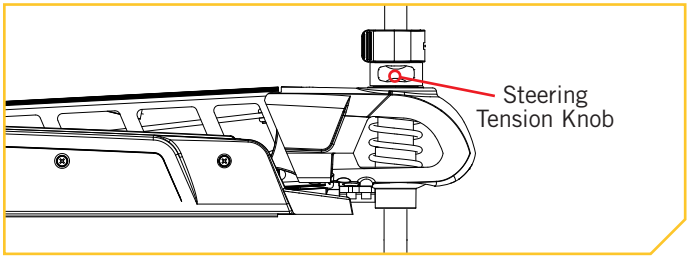
The motor head will create a pinch point if the Steering Tension Knob is loosened and the motor head slides to the top of the Quick Release Depth Collar. Grasp the Shaft and prevent it from sliding all the way down to prevent the pinch point. Grasp the motor away from the area that may come in contact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



NOTICE: The tension of the Quick Release Depth Collar can be adjusted with a screw driver to obtain the proper feel.

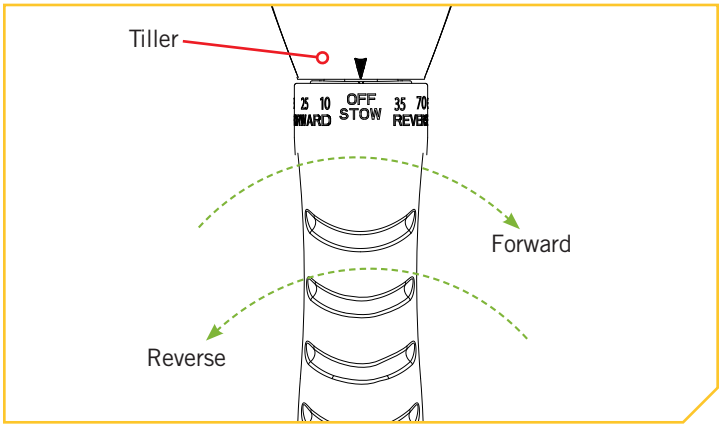
Adjusting the Steering

Adjust the Steering Tension Knob to provide enough tension to allow the motor to 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.



Controlling Speed & Direction with the Tiller

This motor 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. Speed 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 bummped and is not positioned to "OFF" the prop will turn on unexpectedly. The prop may also turn on unexpectedly if the control board or 5 position switch fails. Prevent injury from a turning propeller and always know how to quickly disengage the power or correct the Tiller to turn the prop off.

⚠ WARNING

The Fortrex is not intended to be a primary propulsion motor. Heavy use of the motor can cause elevated motor temperatures, 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 for unexpected boat movement when operating the Fortrex. 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.

Adjusting the Tilt/Extend Tiller

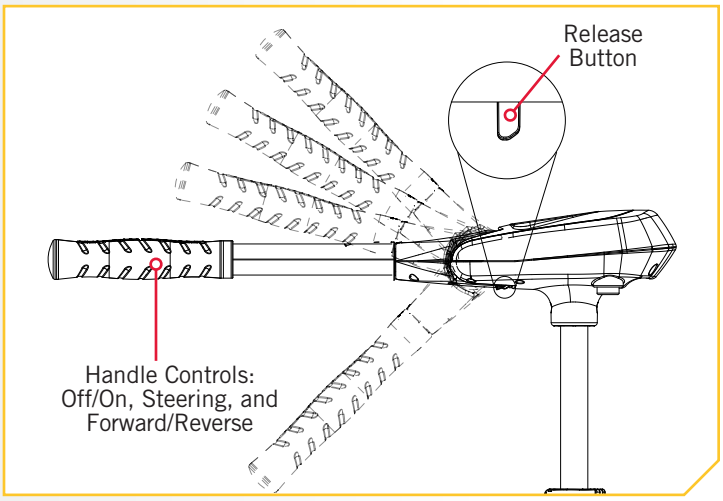
Your trolling motor features 7 usable handle tilt positions: 45°, 30°, and 15° up and down from the 0° (horizontal) position. To use the down positions, you must first press the release button located on the left underside of the pivot handle.

Your trolling motor handle also features a unique stow position, that is useful for limiting the amount of space required for storage or travel.

1

a. First press the release button located on the left underside of the pivot handle, then push the handle down until you feel the handle "lock in" to the stowed position. This will be almost parallel to the motor shaft.

b. To extend the handle, pull the handle towards you to the desired position. The handle will extend a full 6 inches. To retract, push the handle in until it meets the face of the motor control head.



⚠ WARNING

The Fortrex is not intended to be a primary propulsion motor. Heavy use of the motor can cause elevated motor temperatures, 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

The position of the Tilt/Extend Tiller may create a pinch point between it and the Control Head. Grasp the motor away from the area that may come in contact with another area of the motor to prevent injury.

⚠ CAUTION

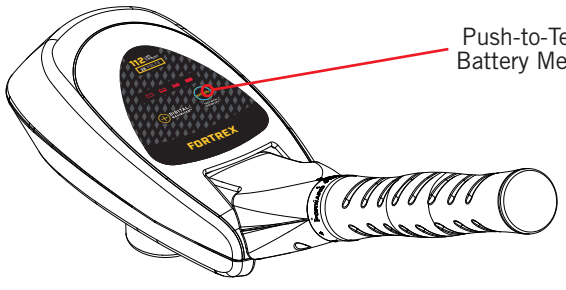
Before attempting to put the handle in the stowed position, the speed selector must be in the OFF/STOW position. Failure to do so will damage the internal mechanism.

PUSH-TO-TEST BATTERY METER

This motor is equipped with a "push-to-test" battery meter. The LED light provides an accurate display of the remaining charge in the battery. It is only accurate when the motor is off.

The meter reads as:

- One light indicates recharge.
- Two lights indicate low charge.
- Three lights indicate good charge.
- Four lights indicate full charge.



SERVICE & MAINTENANCE

PROPELLER REPLACEMENT

TOOLS AND RESOURCES REQUIRED ❯

- 1/2" Open End Wrench (70 lbs thrust or lower)
- 9/16" Open End Wrench (80 lbs thrust or higher)
- Screwdriver

INSTALLATION ❯

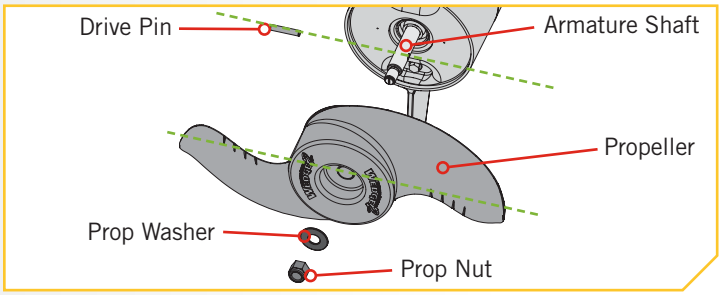
1

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.

NOTICE: If the Drive Pin is sheared or broken, you will need to hold the shaft stationary with a flat blade screwdriver pressed into the slot on the end of the shaft while you loosen the Prop Nut.



⚠ CAUTION

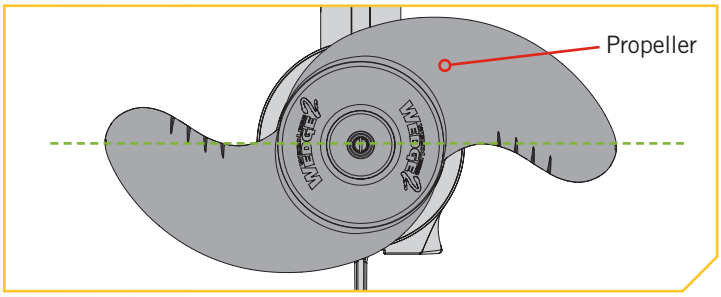
Disconnect the motor from the battery before beginning any prop work or maintenance.

2

d. Turn the old prop to horizontal and pull it straight off. If drive pin falls out, push it back in.

⚠ 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 off the Armature Shaft.



3

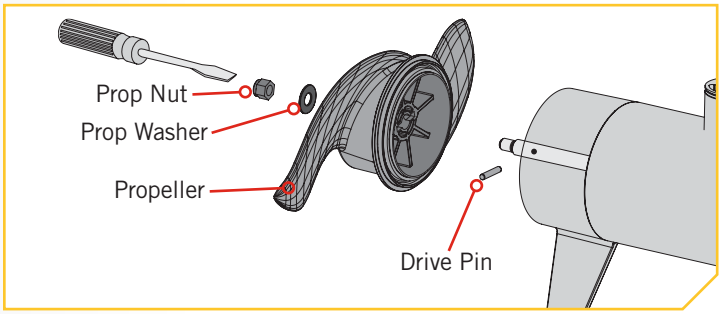
e. Align the new Propeller with the Drive Pin.

f. Install the Prop Washer and Prop Nut.

g. Tighten the Prop Nut 1/4 turn past snug at 25-35 inch-lbs.

⚠ CAUTION

Do not over tighten as this can damage the prop.



REMOVAL OF THE BOWGUARD

TOOLS AND RESOURCES REQUIRED

- (2) #3 Phillips screwdrivers
- 1/4" Allen Wrench
- Torque Wrench
- Needle Nose Pliers

INSTALLATION

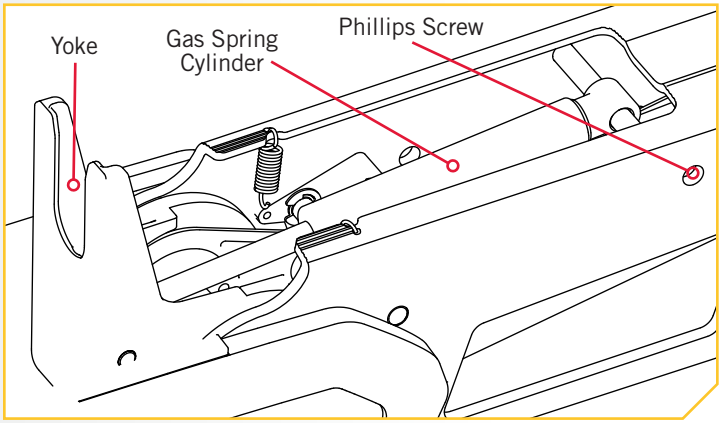
Disconnect the Gas Spring

1

a. In order to remove the Bowguard, the Gas Spring needs to be disconnected. Place the motor in the stowed position.

⚠ WARNING

Moving parts can cut or crush. The gas assist lift mechanism is under pressure. Disconnect gas spring before removing motor from mount. Do not engage the pull grip and rope until gas spring is disconnected.



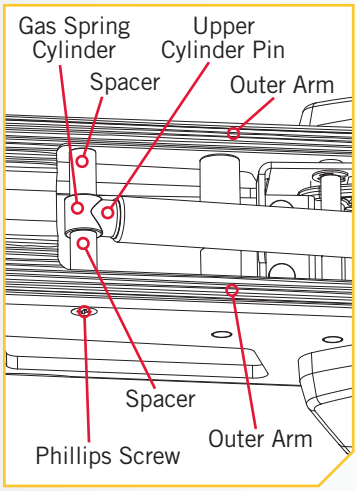
2

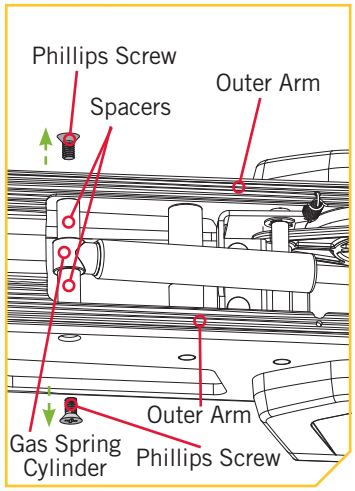
b. To disconnect the Gas Spring, locate the Upper Cylinder Pin. Two Phillips Screws hold the Upper Cylinder for the Gas Spring in place. Using two #3 Phillips screwdrivers, hold the screw at one end of the Upper Cylinder Pin in place.

c. Remove the screw at the opposite end of the pin with the other #3 Phillips screwdriver.

⚠ WARNING

The gas assist lift mechanism in this unit is under high spring pressure when the motor is in the deployed position. Do not remove the Steering Module assembly from the mount without disconnecting one end of the gas spring. Failure to do this can create a condition where accidental pulling of the pull grip and rope may cause the mount to spring open rapidly, striking anyone or anything in the direct path.



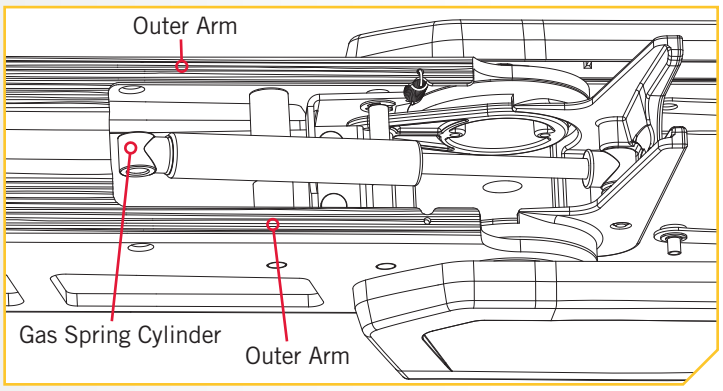


NOTICE: Use a #3 Philips screwdriver to remove the screws. They have a pre-applied thread locker. Not using the recommended tool can cause damage and prevent them from being removed.

3

d. Once the screws are removed, the pin and spacers can be removed from the Upper Cylinder.

e. Now it is safe to remove the motor from the bow mount when the motor is in the deployed position.



Remove Motor From Mount

1

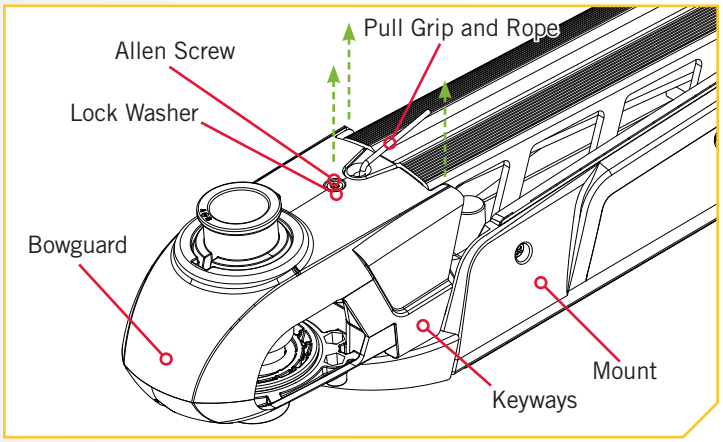
a. With the gas spring disconnected, place the motor in the deployed position.

b. Remove the 5/16" Allen Screw with a 1/4" Allen Wrench. The 5/16" Allen Screw is located on the opposite end of the mount from the hinge that opens and closes when the mount is stowed and deployed.

c. Once the Allen Screw and Lock Washer are removed, lift the Bowguard straight up until it is free from the mount.

⚠ WARNING

Moving parts can cut or crush. The gas assist lift mechanism is under pressure. Disconnect gas spring before removing motor from mount. Do not engage the pull grip and rope until gas spring is disconnected.



NOTICE: To re-assemble the motor, first refer to the "Assembly of Motor to Mount" section of this Manual. Once re-assembled, follow the directions for "Installing the Gas Spring Pin" section of this Manual to re-engage the Lift Assist.

GENERAL MAINTENANCE

- After use, the entire motor should be rinsed with freshwater. This series of motors is not equipped for saltwater exposure.
- The composite shaft requires periodic cleaning and lubrication for proper retraction and deployment. A coating of an aqueous based silicone spray will improve operation.
- The propeller must be inspected and cleaned from 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 or storage, 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 battery life 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.
- The propeller is designed to provide weed free 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.
- Inspect the Pull Grip and Rope and Hold Down Strap before each use and replace if they shows signs of wear.
- The rail covers on the motor rest are intended to be a wear item and may need to be a replaced periodically.

TROUBLESHOOTING

1. Motor fails to run or lacks power:
   - Check battery connections for proper 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. Motor loses 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 removal instructions in the Propeller Replacement section.
5. Experiencing interference with your fishfinder:
   - You may, in some applications, experience interference in your depth finder display. We recommend that you use a seperate deep cycle marine battery for your trolling motor and that you power the depth finder from the starting/cranking battery. If problems still persist, call our service department at 1-800-227-6433.

NOTICE: For all other malfunctions, visit an Authorized Service Center. You can search for an Authorized Service Center in your area by visiting our Authorized Service page, found on-line at minnkotamotors.com, or by calling our customer service number at 800-227-6433.

FOR FURTHER TROUBLESHOOTING AND REPAIR

We offer several options to help you troubleshoot and/or repair your product. Please read through the options listed below.

Buy Parts Online

You can buy parts on-line directly from our website at minnkotamotors.com. Orders confirmed by 12 Noon Central Time, with Overnight Shipping selected, should ship the same business day if the parts are in stock. All other orders should ship within the next 3 business days, depending on the shipment method chosen, and if the parts are in stock.

Frequently Asked Questions

We have FAQs available on our website to help answer all of your Minn Kota questions. Visit minnkotamotors.com and click on "Frequently Asked Questions" to find an answer to your question.

Call Us (for U.S. and Canada)

Our consumer service representatives are available Monday – Friday between 7:00 a.m. – 4:30 p.m. CST at 800-227-6433. If you are calling to order parts, please have the 11-character serial number from your product, specific part numbers, and credit card information available. This will help expedite your call and allow us to provide you with the best consumer service possible. You can reference the parts list located in your manual to identify the specific part numbers.

Email Us

You can email our consumer service department with questions regarding your Minn Kota products. To email your question, visit minnkotamotors.com and click on "Support".

Authorized Service Centers

Minn Kota has over 800 authorized service providers in the United States and Canada where you can purchase parts or get your products repaired. Please visit our Authorized Service Center page on our website to locate a service provider in your area.

Scan to visit Minn Kota service online.

COMPLIANCE STATEMENTS

ENVIRONMENTAL COMPLIANCE STATEMENT

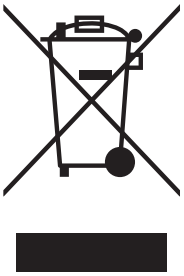
It is the intention of JOME to be a responsible corporate citizen, operating in compliance with known and applicable environmental regulations, and a good neighbor in the communities where we make or sell our products.

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 your location for electrical & electronic equipment (EEE), nor may it be required for EEE designed and intended as fixed or temporary installation in transportation vehicles 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 recycling 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 your waste 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

Minn Kota motors are not subject to the disposal regulations EAG-VO (electric devices directive) that implements the WEEE directive. Nevertheless never dispose of your Minn Kota 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 your local 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 Johnson Outdoors Marine Electronics, Inc. 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 occur in a particular installation. **If this equipment 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 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

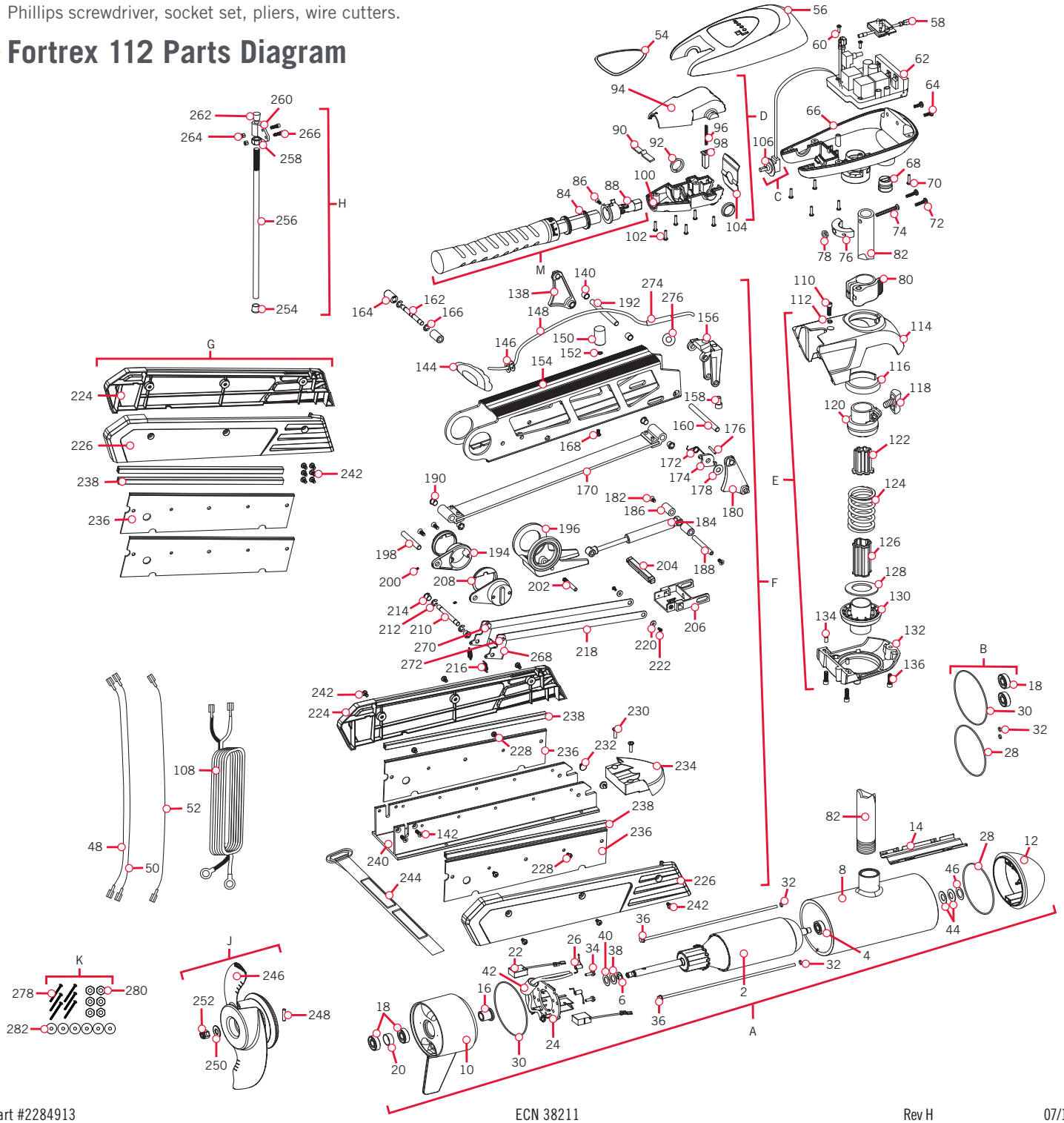
Ambient operating temperature range: -10C to 50C
Ambient operating humidity range: 5% to 95%
Maximum operating altitude: 10,000 feet

PARTS DIAGRAM & PARTS LIST

FORTREX 112 - 112 LBS THRUST - 36 VOLT - 52" SHAFT

The parts diagram and parts list provides Minn Kota® WEEE compliance disassembly instructions. For more information about where you should dispose of your waste 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. Tools required, but not limited to: flat head screwdriver, Phillips screwdriver, socket set, pliers, wire cutters.

Fortrex 112 Parts Diagram



Fortrex 112 Parts List

Assembly	Part #	Description	Quantity
A	2317081	36V MOTOR 52" FW	1
B	2881450	SEAL AND O-RING KIT	
C	2888411	POTENTIOMETER REPLACEMENT KIT	1
D	2990468	HANDLE ASSY, VARS	1
E	2991756	BOWGUARD ASSY FW [500-570]	1
F	2991712	MNT 80# 45" 112# HC 52" (SUB)	1
G	2283932	SIDE PLATE, FW, SHORT	1
H	2991925	BRACKET STABILIZER ASSEMBLY	1
J	1378160	PROPELLER KIT WW2	1
K	2994887	BAG ASSEMBLY	1
M	2990466	GRIP ASSY, VARS	1
Item	**Part #**	**Description**	**Quantity**
2	2-100-245	ARMATURE ASSEMBLY	1
4	140-014	BEARING	1
6	788-040	RETAINING RING	1
8	2-200-240	CENTER HOUSING ASSEMBLY	1
10	2-300-155	BRUSH END HSG ASY 4.5" FW	1
12	421-240	PLAIN END HOUSING ASSY. STD	1
14	582-016	RETAINING CLIP	1
16	144-017	FLANGE BEARING (SERVICE ONLY)	1
18	880-025	SEAL	2
20	725-095	PAPER TUBE - SEAL BORE	1
22	188-095	BRUSH	2
24	2-600-241	BRUSH PLATE ASSEMBLY	1
26	975-045	BRUSH SPRING	2
28	701-098	O-RING, PLAIN END HOUSING	1
30	701-103	O-RING, 103 MM X 3.00 MM, 70 BUNA	1
32	701-009	O-RING, THRU-BOLT	2
34	2053410	SCREW-BRUSH PLATE	2
36	830-094	THRU-BOLT	2
38	990-051	WASHER, STEEL	1
40	990-052	WASHER, NYLATRON	1
42	2307312	FERRITE BEAD	1
44	990-011	WASHER, SHIM	1
46	992-011	WASHER, BELLEVILLE	2
48	640-043	LEADWIRE, BLACK 52"	1
50	640-143	LEADWIRE, RED 52"	1
52	640-316	LEADWIRE, BROWN 52"	1
54	2285625	DECAL, C-BOX COVER 112#	1

Item	Part #	Description	Quantity
56	2060295	C-BOX COVER	1
58	2074072	BATTERY METER, 36V FW	1
60	2043427	SCREW, #8 X 7/8 SS	2
62	2184027	CONTROL BOARD, 24/36V	1
64	2303434	SCREW, #8-30 X 5/8 SS	2
66	2062536	CONTROL BOX, CAST, FW	1
68	2062905	STRAIN RELIEF	1
70	2303412	SCREW, #6 X 5/8 SS	6
72	2063410	SCREW, #10-32 X 3/4" CAP SS	2
74	2093400	SCREW, #10-24 X 1-7/8" PPH SS	1
76	2061527	COLLAR, C-BOX	1
78	2383124	NUT, 10-24, NYLOCK, SS	1
80	2991521	CAM LOCK/DEPTH COLLAR ASSY	1
82	2032068	TUBE COMPOSITE 52"	1
84	2060015	BEARING, HANDLE	2
86	2063405	SCREW, #6 PFH SS	2
88	2884092	YOKE / SPIDER ASSY, VARS	1
90	2302742	SPRING, DETENT, OFF	1
92	2060005	BEARING, HANDLE PIVOT	2
94	2060900	HANDLE PIVOT, TOP	1
96	2302745	SPRING, RELEASE BUTTON	1
98	2063700	BUTTON, RELEASE	1
100	2060905	HANDLE PIVOT, BOTTOM	1
102	2303412	SCREW, #6 X 5/8 SS	6
104	2062715	SPRING, HANDLE PIVOT	1
106	2061700	WASHER, POT HOLDER	1
108	2992521	LEADWIRE ASSY	1
110	2283414	SCREW, 5/16-18 SHCS, RIE	1
112	2281700	WASHER, 5/16 HIGH COLLAR LOCK	1
114	✖	BOWGUARD TOP	1
116	2280001	BEARING, BOWGUARD TOP	1
118	2011365	KNOB, SS	1
120	2261525	SPRING SLEEVE, UPPER	1
122	2264702	TUBE INSERT, UPPER	1
124	2262705	SPRING, BOWGUARD	1
126	2282000	TUBE INSERT, LOWER	1
128	2281525	SPACER, LOWER SPRING	1
130	2281520	SPRING SLEEVE, LOWER	1
132	✖	BOWGUARD BOTTOM	1
134	2282612	PIN-SPRING, 5/16", SS	2

✖ *This part is included in an assembly and cannot be ordered individually.*

▲ *Not shown on Parts Diagram.*

Item	Part #	Description	Quantity
136	2283413	SCREW, 3/8-16 SHCS, RIE	3
138	2280800	LINK, BOWGUARD MOUNT, LEFT	1
140	2287303	BUSHING, UPPER PINS	2
142	2283411	SCREW, 1/4-20 X 1" FHS RIE TORX	4
144	2880401	PULL GRIP ASSEMBLY	1
146	2261732	WASHER	2
148	2251601	ROPE ASSEMBLY	1
150	2281516	SPACER, INNER ARM	1
152	2281702	WASHER, LOCK 1/4	1
154	2284202	OUTER ARM, SHORT, 52"	1
156	2992322	ROPE GUIDE ASSEMBLY	1
158	2281530	INSERT, THREADED	1
160	2282608	PIN, 7/16 X 5 5/32	1
162	2282602	PIN, 3/8 X 3 3/4	1
164	2261505	SPACER	2
166	2263011	E-RING, 3/8 SHAFT	2
168	2223418	SCREW, 1/4-20 X 1/2 BHCS	1
170	2993819	INNER ARM ASSEMBLY, SHORT, 52"	1
172	2042711	SPRING, TORSION	1
174	2283620	LATCH, SAFETY	1
176	2282611	SPRING, SAFETY LATCH	1
178	2281704	WASHER 7/16 NYLON	1
180	2280805	LINK, BOWGUARD MOUNT, RIGHT	1
182	2283410	SCREW 1/4-20 X 1/2 PFH	2
184	2288403	GAS SPRING, 101#, SHORT	1
186	2281710	SPACER, GAS SPRING	2
188	2282610	PIN, UPPER, SHOCK	1
190	2280005	BEARING, NYLINER 7/16"	4
192	2282600	PIN, 7/16 X 4 7/8	1
194	2281932	BRACKET, REAR PIVOT	2
196	2281501	YOKE, SHOCK MOUNT	1
198	2282606	PIN, 7/16 X 4 1/2	1
200	2283402	SCREW, SET, 6-32 X 1/4	2
202	2282604	PIN, KNURLED 5/16 X 2	1
204	2283615	LATCH BAR	1
206	2283610	BRACKET - LATCH/STRAP, ROPE PULL	1
208	2287300	BUSHING, REAR PIVOT	2
210	2282602	PIN, 3/8 X 3 3/4	1
212	2263011	E-RING, 3/8 SHAFT	2
214	2280008	BEARING, IGLIDE	2

Item	Part #	Description	Quantity
216	2282720	SPRING, EXTENSION	2
218	2773600	LATCH STRAP ASSEMBLY, SHORT	1
220	2261732	WASHER 8, NYLON	2
222	2373450	SCREW 8-18 X 3/8	2
224	2283937	SIDEPLATE, LEFT, SHORT, FW	1
226	2283932	SIDEPLATE, RIGHT, SHORT, FW	1
228	2323403	SCREW-1/4/20 X .375 MCH SS CRPH	4
230	2073408	SCREW 1/4-20 X 7/8	2
232	2286700	PLUG, SPACER	2
234	2283900	RAMP, MOTOR	1
236	2283631	RAIL, MACH., MOTOR REST	2
238	2286400	COVER-RAIL, MOTOR REST (SUB)	2
240	2281903	BASE-EXTRUSION, SHORT, MACH	1
242	2323405	SCREW 1/4-20 X 1/2	6
244	2773806	STRAP HOLD DOWN	1
246	2341160	PROPELLER WW2	1
248	2262658	DRIVE PIN, LARGE 1" X 3/16" SS	1
250	2091701	WASHER, PROP, LARGE	1
252	2093101	NUT, NYLOCK, PROP, ANODE	1
254	2265100	BUMPER (CRUTCH TIP)	1
256	2263624	ANODIZED ALUMINUM 3/4" ROD, 22"	1
258	2263107	HEX NUT 3/4-10 NYLON	1
260	2281929	STABILIZER ARM BRACKET	1
262	2260221	VINYL CAP	1
264	2223100	NYLOCK STAINLESS STEEL NUT	2
266	2263422	SCREW - 5/16-18 X 1"	2
268	✖	BRACKET, LATCH	1
270	✖	RIVER, SHLDR 5/16" X .159" SS	2
272	✖	BEARING, NYLINER 5/16"	2
274	✖	SHRINK TUBE .252 ID, ADHES.	1
276	2151700	WASHER-EYE SHAFT (.562 OD) SS	1
278	2263468	SCREW-1/4-20X2.5" S/S PPH	6
280	2263103	NUT-1/4-20 NYLOCK SS	6
282	2261713	WASHER-1/4 FLAT 18-8 SS	6
284	2287102 ▲	MANUAL, FORTREX HC FW	1
286	2284913 ▲	PARTS LIST, FORTREX 112/HC 52"	1

✖ *This part is included in an assembly and cannot be ordered individually.*

▲ *Not shown on Parts Diagram.*

RECOMMENDED ACCESSORIES

ON-BOARD & PORTABLE BATTERY CHARGERS

Stop buying new batteries and start taking care of the ones you've got. Many chargers can actually damage your battery over time – creating shorter run times and shorter overall life. Digitally controlled Minn Kota chargers are designed to provide the fastest charge that protect and extend battery life.

MK212PC

MK210D

MK110PD

TALON SHALLOW WATER ANCHOR

Introducing the all-new, sleek redesigned Talon. Talon is the only shallow water anchor with up to 15' of anchoring depth, multiple anchoring modes, and control from the bow, transom, console, remote or mobile device.

BUILT-IN WORK LIGHT

Lets you tie lines and work from the transom any time of day — or night. Includes both white and blue LED lights with three brightness settings.

BLUETOOTH® CONNECTIVITY

Lets you control Talon from your mobile device and easily update it. Also opens up communication to other control options.

UP TO 15' DEEP

Control more water and catch more fish with the first 15' shallow water anchor.

MORE CONTROL OPTIONS

- Control Panel
- Wireless Remote
- Mobile App
- Wireless Foot Switch
- Humminbird® Connectivity
- i-Pilot® & i-Pilot Link™ Remote

MINN KOTA ACCESSORIES

We offer a wide variety of trolling motor accessories, including:

- 60-Amp Circuit Breaker
- Mounting Brackets
- Stabilizer Kits
- Extension Handles
- Battery Connectors
- Battery Boxes
- Quick Connect Plugs

MINN KOTA®

minnkotamotors.com

Minn Kota Consumer & Technical Service
Johnson Outdoors Marine Electronics, Inc.
PO Box 8129
Mankato, MN 56001

121 Power Drive
Mankato, MN 56001
Phone (800) 227-6433
Fax (800) 527-4464

JOHNSON OUTDOORS

Part #2287102 ECN 38211 Rev E 06/18