# **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 $\wedge$

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 3% voltage drop allowed at full motor power based on published product power requirements.

Motor Thrust / Model	Max	Circuit	Breaker		Wir	e Extension Len	gth	
wotor Thrust / woder	Amp Draw	Amp	Minimum	5 feet	10 feet	15 feet	20 feet	25 feet
80 lb.	56	60 Amp	24 VDC	8 AWG	6 AWG	6 AWG	4 AWG	2 AWG
112 lb.	52	60 Amp	36 VDC	8 AWG	8 AWG	8 AWG	6 AWG	4 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

## 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 minnkota.johnsonoutdoors.com. Minn Kota trolling motors can run on Lithium Ion batteries. However, they are specifically designed to run on traditional lead acid batteries (flooded, AMG or GEL). Lithium Ion batteries maintian higher voltages for longer periods of time than lead acid. Therefore, running a Minn Kota trolling motor at speeds higher than 85% for a prolonged peiod could cause permanent damage to the motor.

## A 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-27 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 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 IN SERIES**

#### 

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.

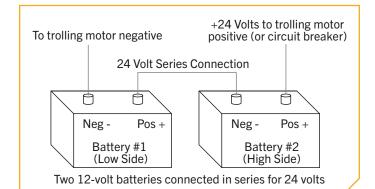
**NOTICE:** The internal bonding wire is equipped with a 3-amp fuse. Improper connections described above carrying in excess of 3 amps will blow this fuse and no further damage will be exhibited. If this occurs, RF interference from the trolling motor affecting sonar units and other electronics will be more significant. If the fuse is blown the wiring error should be found and addressed prior to replacing the fuse. The replacement fuse should be 3 amps or less. An intact fuse does not imply correct rigging; significant damage can be done by incorrect wiring without approaching 3 amps of current.

## 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 the wiring diagram, to provide 24 volts.

- 1. Make sure that the motor is switched off (speed selector on "0").
- 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.



## <u>∧ WARNING</u>

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.

## <u>∧ WARNING</u>

• 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.

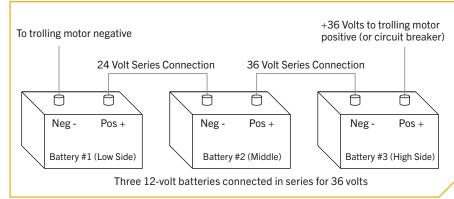
- Improper wiring of 24/36 volt systems could cause battery explosion.
- Keep leadwire wing nut connections tight and solid to battery terminals.
- Locate battery in a ventilated compartment.

## CONNECTING THE BATTERIES IN SERIES

## 36-Volt Systems

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

- 1. Make sure that the motor is switched off (speed selector on "0").
- 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.



## **△ 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.

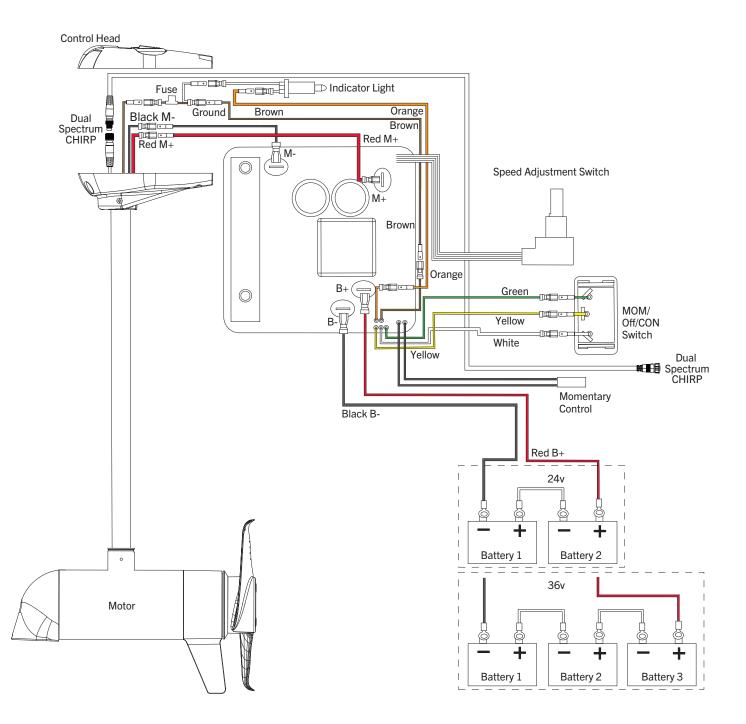
## **△ WARNING**

- 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 Foot Control models installed with Dual Spectrum CHIRP.



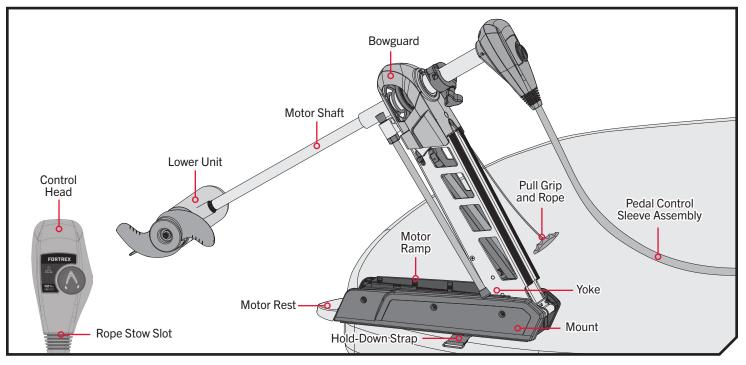
**NOTICE:** This is a multi-voltage diagram. Double-check your motor's voltage for proper connections. Over-Current Protection Devices are not shown in this illustration.

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# **USING & ADJUSTING THE MOTOR**

## **MOUNT FEATURES**

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



- The trolling motor Mount is designed to fold back and lock the motor flat on the deck when not in use and to provide a secure stow for transport.
- The Pull Grip and Rope releases the latch bar, which automatically engages when the trolling motor is lowered or raised into position. The Pull Grip and Rope should be used to both lower and raise the trolling motor.
- The Motor Rest positions the Lower Unit as it comes in contact with the nose of the Mount and guides it onto the Motor Ramps.
- The Yoke in the center of the Mount captures the Motor Shaft and keeps the Lower Unit centered above 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 Ramp when stowed.
- The Pull Grip and Rope can be stored by placing it into the Rope Stow Slot on the Control Head 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.

## **Δ WARNING**

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

## <u>∧</u> 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

## 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 on the Depth Collar 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.

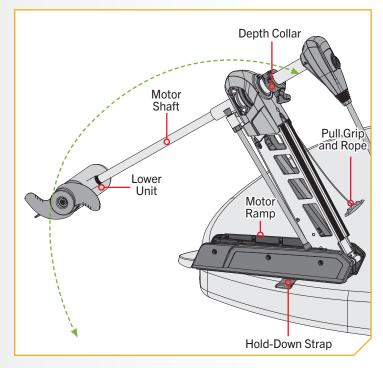
## 🛆 WARNING

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 Bowguard. Always secure the Depth Collar 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.

- a. To deploy the Motor, simply pull up 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 Ramp using the Pull Grip and Rope. The motor will lock into the stowed position automatically. Secure the Quick Release Depth Collar against the top of the Bowguard. 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 mechanisms within the Bowguard can create pinch points. Avoid contact to avoid injury. Always use the Pull Grip and Rope to stow and deploy the motor to prevent injury.



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## ADJUSTING THE LOWER UNIT FOR A SECURE STOW

#### MOTOR ADJUSTMENTS

### Adjusting the Lower Unit for a Secure Stow

When the motor is stowed, the Lower Unit should rest on the Motor Ramps just inside the Motor Rest on the Mount. It is recommended to secure the motor using the following instructions to avoid damage to the trolling motor and Shaft from vibrations during transport.

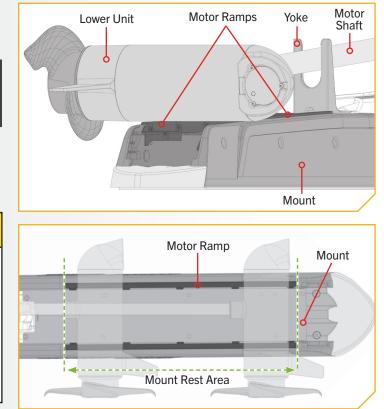
- 1
- Before transporting the boat over water or land, stow a. the motor to determine where the Lower Unit rests on the Mount.

**NOTICE:** The correct positioning of the Lower Unit will place it directly on the Motor Ramps located in the Mount Rest Area of the Mount.

b. If the Lower Unit does not sit on the Mount Ramps, deploy the motor so the Depth Collar can be loosened and the motor can be adjusted to allow it to rest on the Motor Ramps.

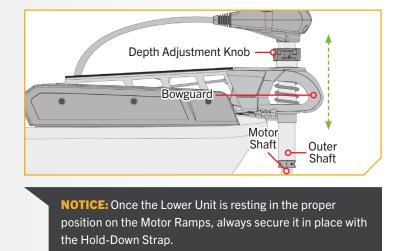
#### CAUTION

The Lower Unit should be placed on the Motor Ramps within the Motor Rest Area every time the motor is transported. If the Lower Unit is improperly placed, either above or below the Motor Rest Area, damage to the Lower Unit or Shaft will occur and the Shaft will be incorrectly captured in the Yoke. Not following the recommended placement for the Lower Unit will cause damage to the product and void your product warranty.



## ADJUSTING THE DEPTH OF THE MOTOR

- With the motor in the deployed position, firmly grasp С. the Motor Shaft above the Bowguard.
- d. Locate the Depth Adjustment Knob on the Depth Collar. While holding the Shaft in place, loosen the Depth Adjustment Knob until the Shaft slides freely.
- e. Raise or lower the motor to the desired depth.
- f. Tighten the Depth Adjustment Knob to secure the motor in place.
- g. Stow the motor again and confirm that the Lower Unit is resting on the Motor Ramps in the Motor Rest Area. If it is not resting in the recommended location, re-deploy the motor and re-adjust until it sits where recommended when stowed.



## Adjusting the Depth of the Motor

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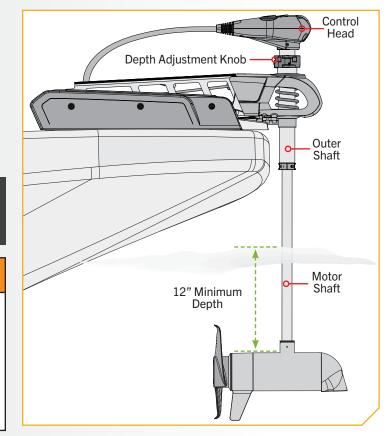
When setting the depth be sure the top of the motor is submerged at least 12" to avoid churning or agitation of surface water. The Prop must be completely submerged.

- a. With the motor deployed, firmly grasp the Outer Shaft or Control Head and hold it steady.
- b. Loosen the Depth Adjustment Knob on the Depth Collar until the Shaft slides freely.
- c. Raise or lower the motor to the desired depth.
- d. Turn the motor Control Head to the desired position.
- e. Tighten the Depth Adjustment Knob to secure the motor in place.

**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 trolling motor 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 or Bowguard. 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.



## INSTALLING AN EXTERNAL TRANSDUCER

## INSTALLING AN EXTERNAL TRANSDUCER

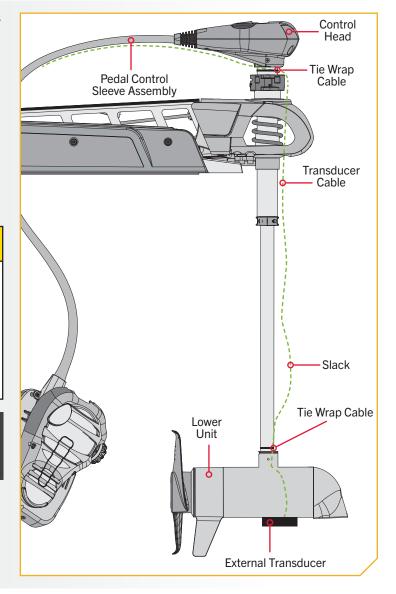
An external transducer is not included with your trolling motor. An external transducer can be installed onto motors that have Dual Spectrum CHIRP. For more information on Dual Spectrum CHIRP, please visit minnkota.johnsonoutdoors.com.

- a. Mount the external transducer according to directions provided with the transducer.
- b. Leave enough slack in the transducer cable between the Lower Unit and Control Head to allow the motor to properly stow and deploy.
- c. Use two Tie Wrap Cables to secure the transducer cable to the Shaft just above the Lower Unit and just below the Control Head.
- d. Run the transducer cable along the Pedal Control Sleeve Assembly toward the Foot Pedal.

## **CAUTION**

Not following the recommended wire routing for external transducer cables may cause damage to the product and void your product warranty. Take care to test the length and placement of cable to be sure that there is enough slack where needed and that cables are free of being entangled in moving parts. Routing the cables in any way other than directed may cause damage to the cables by being pinched or severed.

> **NOTICE:** For additional details on cable routing see the "Routing Connection Cables" section of this manual.

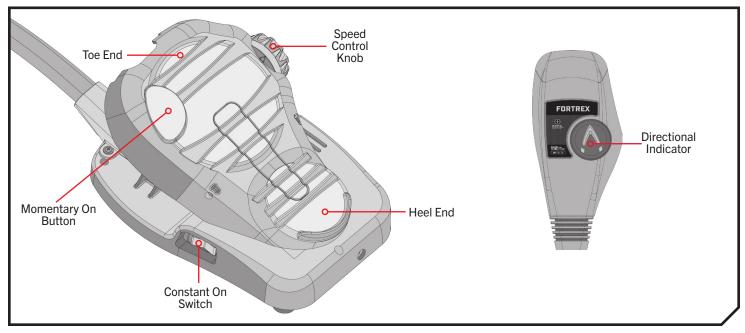


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# **USING THE FOOT PEDAL**

## **CONTROLLING SPEED & STEERING WITH THE FOOT PEDAL**

Most controls on the Foot Pedal are easy to operate by either foot or hand.



## > To Adjust Motor Speed

Turn the Speed Control Knob clockwise to increase speed and counter-clockwise to decrease speed.

## > To Operate the Motor in Momentary Mode

The default mode of operation for the Foot Pedal is Momentary. In this mode, the motor will only run while downward force is applied to the Momentary On button on the top of the Foot Pedal. A toe touch to the Momentary button on the top of the Foot Pedal will turn the Prop on in this mode. Removing downward force on the Momentary button will turn the Prop off.

## > To Operate the Motor in Constant Mode

To switch to Constant Mode, flip the side-mounted Constant On switch until the Prop starts. In Constant Mode, the Prop will continually run, regardless of whether force is being applied to the Momentary On button on the top of the Foot Pedal.

## > To Turn Left or Right

Push the Toe End of the Foot Pedal down to turn right and push the Toe End of the Foot Pedal down to turn left. The Directional Indicator on the Control Head shows the direction of the motor. The motor will not maintain its own heading. You must keep your foot on the Foot Pedal to control steering during operation.

## > To Reverse the Motor

The trolling motor always travels in the direction of the Directional Indicator. Reverse the direction of the motor by turning the motor 180° from straight ahead.

## **▲ CAUTION**

Make sure that the Constant On Switch is turned off when the motor is not in use.

For safety reasons, disconnect the motor from the battery/ batteries when the motor is not in use or while the battery/ batteries are being charged.

Moving parts can cut or crush. Avoid pinch points when operating the Foot Pedal.

**NOTICE:** Remember to turn the power off when the motor is not in use to prevent the motor from draining the battery.

## ADJUSTING THE STEERING CABLE

## **△ CAUTION**

Route the Foot Pedal Cable neatly to minimize tripping hazards.

Practice proper ergonomics when operating the Foot Pedal to avoid fatigue and prevent injury.

#### FOOT PEDAL ADJUSTMENTS

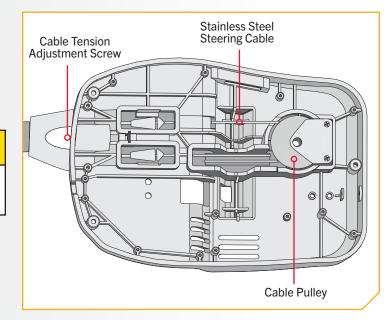
## > Adjusting the Steering Cable

The steering cable tension is pre-set at the factory but, through normal use, may need occasional adjustment.

- Adjust the tension of the cables by turning the Cable a. Tension Adjustment Screw (Phillips pan-head screw) located near the bottom of the Foot Pedal, just under the Pedal Control Sleeve Assembly.
  - b. Turn the screw clockwise to increase tension and counter-clockwise to decrease tension.

#### CAUTION /!\

If the cable becomes too loose, it may disengage the wrap drum in the Control Head or the pulley in the Foot Pedal.



# **SERVICE & MAINTENANCE**

## PROP REPLACEMENT

#### TOOLS AND RESOURCES REQUIRED >

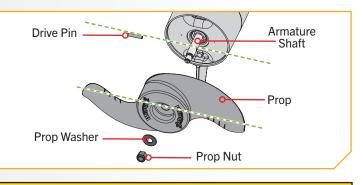
• 9/16" Open End Wrench

Flat Blade Screwdriver

#### INSTALLATION >

- a. Disconnect the motor from all sources of power prior to changing the Prop.
- b. Hold the Prop 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, hold the Armature Shaft stationary with a flat blade screwdriver pressed into the slot on the end of the shaft while loosening the Prop Nut.



## ▲ CAUTION

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

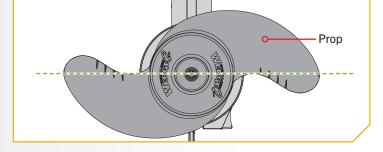
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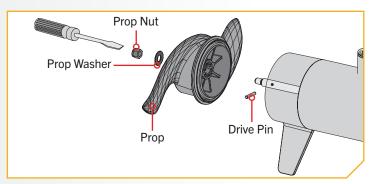
e.

d. Turn the old Prop to horizontal and pull it straight off. If the Drive Pin falls out, push it back in.

## 

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.





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Align the new Prop with the Drive Pin.

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

## 

Do not over tighten as this can damage the Prop.

### **REMOVAL OF THE BOWGUARD**

## **REMOVAL OF THE BOWGUARD**

#### TOOLS AND RESOURCES REQUIRED >

- (2) #3 Phillips Screwdrivers
- Torque Wrench

• 1/4" Allen Wrench

Needle Nose Pliers

#### INSTALLATION >

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### Disconnect the Gas Spring

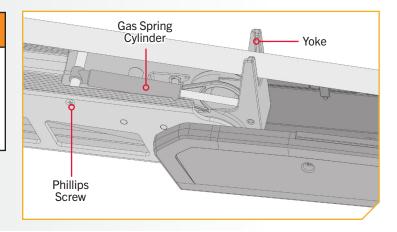
## **▲ WARNING**

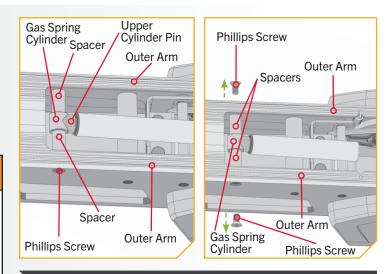
Moving parts can cut or crush. The gas assist lift mechanism is under pressure. Disconnect the Gas Spring before removing the motor from the Mount. Do not engage the Pull Grip and Rope until Gas Spring is disconnected.

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





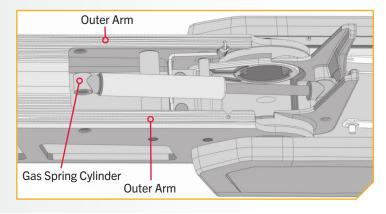
**NOTICE:** Use a #3 Philips screwdriver to remove the screws. They have a pre-applied thread locker. Not using the recommended tool can cause damage and prevent them from being removed.

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### REMOVAL OF THE BOWGUARD

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- Once the screws are removed, the Cylinder Pin and d. Spacers can be removed from the Gas Spring Cylinder.
- e. Now it is safe to remove the Bowguard from the Mount when the motor is in the deployed position.



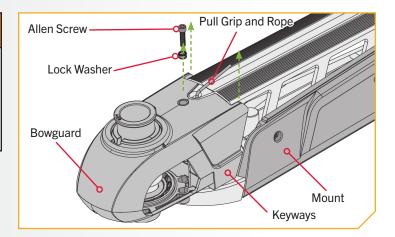
#### 

## Remove the Bowguard 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 the Gas Spring is disconnected.

- 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.



**NOTICE:** To re-assemble the motor, first refer to the "Assembly of Bowguard 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.

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### **GENERAL MAINTENANCE**

## **GENERAL MAINTENANCE**

- After use, the entire motor should be rinsed with freshwater. This series of motors is not equipped for saltwater exposure.
- The Shaft requires periodic cleaning and lubrication for proper retraction and deployment. A coating of an aqueous based silicone spray will improve operation.
- The Prop 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 Prop 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 Shaft.
- 4. You experience Prop vibration during normal operation:
  - Remove and rotate the Prop 180°. See removal instructions in the Prop Replacement section.
- 5. Experiencing interference with your fish finder:
  - You may, in some applications, experience interference in your depth finder display. We recommend that you use a separate 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 minnkota.johnsonoutdoors.com, or by calling our customer service number at 800-227-6433.

## FOR FURTHER TROUBLESHOOTING AND REPAIR

## 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 minnkota.johnsonoutdoors.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 minnkota.johnsonoutdoors.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 minnkota.johnsonoutdoors.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.

## **COMPLIANCE STATEMENTS**

#### ......

### 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.

**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

> CE KA ©2023 Johnson Outdoors Marine Electronics, Inc.

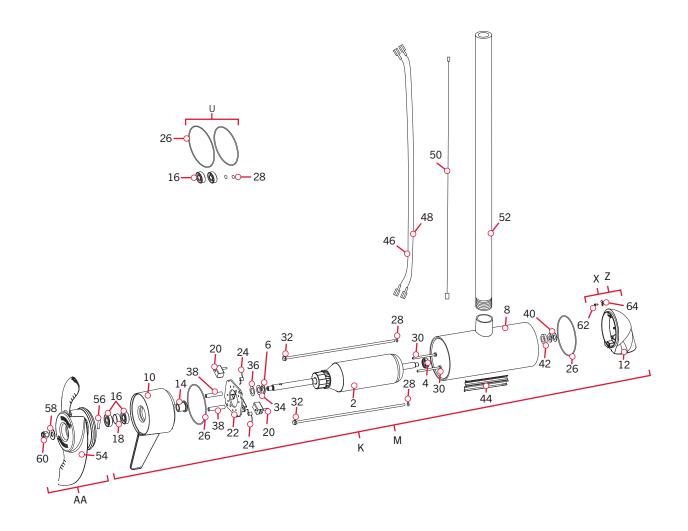
CE/UKCA MASTER USER MANUAL (FOR CE/UKCA CERTIFIED MODELS)

## FORTREX - 80/112 LBS THRUST - 24/36 VOLT - 45"/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 MOTOR >

## > 24 Volt 4" Motor Parts Diagram



## > 24 Volt 4" Motor Parts List

Assembly	Part #	Description	Notes	Quantity
K	2437022	MTR ASY 24V 4" 80# DSC 45" FW	*80 LB 45"*	1
М	2437023	MTR ASY 24V 4" 80# DSC 52" FW	*80 LB 52"*	1
U	2889460	SEAL & O-RING KIT	*80 LB* *4"*	1
Х	2993032	TRANSDUCER ASSEMBLY	*80 LB 52"*	1
Z	2993026	TRANSDUCER ASSEMBLY	*80 LB 45"*	1
AA	1378132	PROPELLER KIT WW2	*80 LB* *4"*	1
Item	Part #	Description	Notes	Quantity
2	2-100-214	ARMATURE ASSEMBLY		1
4	140-010	BEARING		1
6	788-040	RETAINING RING		1
8	2-200-130	CTR HSG ASY 4.0 CB FW MAG		1
10	2-300-170	BRUSH END HSG ASY 4.0 FW		1
12	×	PLAIN END HSG/TRNDCR 4.0 DSC 67"	*SEE X OR Z*	
14	144-017	FLANGE BEARING		1
16	880-025	SEAL		2
18	725-095	PAPER TUBE - SEAL BORE		1
20	188-094	BRUSH		2
22	9-738-015	BRUSH PLATE ASSEMBLY		1
24	975-041	BRUSH SPRING		2
26	701-043	O-RING, MOTOR		2
28	701-009	O-RING, THRU-BOLT		2
30	830-027	SCREW, 10-32 X 2		2
32	830-094	THRU-BOLT 12-24	*80 LB 45"*	2
32	830-095	THRU-BOLT	*80 LB 52"*	2
34	990-051	WASHER, STEEL		1
36	990-052	WASHER, NYLATRON		1
38	973-025	SPACER, BRUSH PLATE		2
40	992-010	WASHER, BELLEVILLE		2
42	990-045	SPACER, THRUST		1
44	582-013	CLIP, RETAINING, SHORT		1
46	640-016	LEADWIRE, BLK AWG 56 1/2 XLP	*80LB 45"*	1
40	640-018	LEADWIRE, BLK 10 AWG 62 1/2 XLP	*80 LB 52"*	1
48	640-119	LEADWIRE, RED	*80 LB 45"*	1
40	640-123	LEADWIRE, RED 10 AWG 64 XLP	*80 LB 52"*	1
50	640-315	BONDING WIRE, BROWN 45"	*80 LB 45"*	1
50	640-316	BONDING WIRE, BROWN 52"	*80 LB 52"*	1

▲ Not shown on Parts Diagram.

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

□ The Bow-Mount Stabilizer Assembly is not required or included on the 80lb 45" Fortrex.

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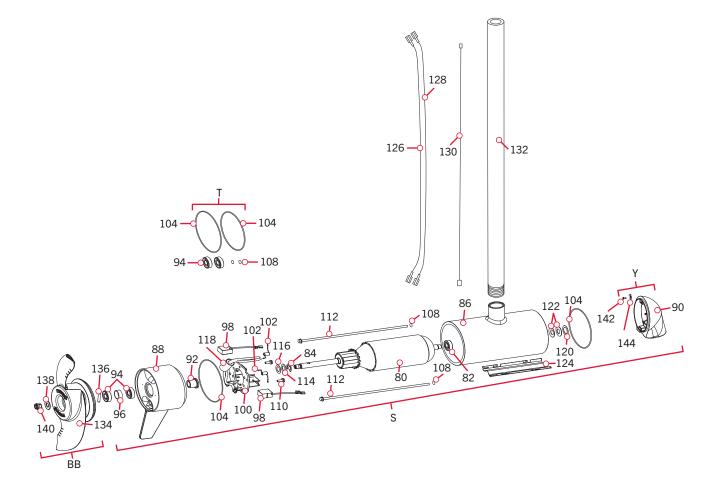
Item	Part #	Description	Notes	Quantity
52	2032003	TUBE 45"		1
52	2032006	TUBE 52"		1
54	2331160	PROPELLER	*80LB* *4"*	1
56	2262658	DRIVE PIN, LARGE		1
58	2091701	WASHER, PROP, LARGE		1
60	2093101	NUT, NYLOCK, PROP, LARGE		1
	×	DSC XDUCER ASSY 67" HWT	*80 LB 45"* *SEE Z*	1
	*	DSC XDUCER ASSY 73 HWT	*80 LB 52"* *SEE X*	1
62	2302104	SCREW - #6-20 X 3/8 THD CUTS, RI		1
	*	SCREW - #6-20 X 1/2 THD CUTS, RI	*SEE X OR Z*	3
64	230-038	CABLE CLAMP		1

▲ Not shown on Parts Diagram.

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

■ The Bow-Mount Stabilizer Assembly is not required or included on the 80lb 45" Fortrex.

## > 36 Volt 4.5" Motor Parts Diagram



## > 36 Volt 4.5" Motor Parts List

Assembly	Part #	Description	Notes	Quantity
S	2437075	MTR ASY 36V 4.5"	*112 LB 45"*	1
Т	2881450	SEAL & O-RING KIT	*4.5"* *112 LB*	1
Y	2993022	TRANSDUCER ASSEMBLY	*112 LB 45"*	1
BB	1378160	PROPELLER KIT WW2	*112 LB* *4.5"*	1
Item	Part #	Description	Notes	Quantity
80	2-100-245	ARMATURE ASSEMBLY		1
82	140-014	BEARING-BALL 6000		1
84	788-040	RETAINING RING		1
86	2-200-250	CENTER HOUSING ASSEMBLY		1
88	2-300-175	BRUSH END HSG ASY 4.5" FW		1
90	×	PLAIN END HOUSING ASSEMBLY STD	*SEE Y*	1
92	144-017	FLANGE BEARING		1
94	880-025	SEAL		2
96	725-095	PAPER TUBE - SEAL BORE		1
98	188-095	BRUSH		2
100	9-738-015	BRUSH PLATE ASSEMBLY		1
102	975-045	BRUSH SPRING		2
104	701-098	O-RING, PLAIN END		2
108	701-009	O-RING, THRU-BOLT		2
110	2053410	SCREW, 8-32 X 1/2		2
112	830-094	THRU-BOLT 12-24		2
114	990-051	WASHER, STEEL		1
116	990-052	WASHER, NYLATRON		1
118	2307312	FERRITE BEAD		1
120	990-011	WASHER, SHIM		1
122	992-011	WASHER, BELLEVILLE		2
124	582-016	CLIP, RETAINING		1
126	640-040	LEADWIRE, BLACK 45"	*112 LB 45"*	1
128	640-140	LEADWIRE, RED 45"	*112 LB 45"*	1
130	640-315	BONDING WIRE, BROWN 45"	*112 LB 45"*	1
132	2032003	TUBE 45"		1
134	2341160	PROPELLER WW2	*112LB* *4.5"*	1
136	2262658	DRIVE PIN, LARGE		1
138	2091701	WASHER, PROP, LARGE		1
140	2093101	NUT, NYLOCK, PROP, LARGE		1
	×	DSC XDUCER ASSY 67" HWT	*112 LB 45"* *SEE Y*	1

▲ Not shown on Parts Diagram.

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

D The Bow-Mount Stabilizer Assembly is not required or included on

the 80lb 45" Fortrex.

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Item	Part #	Description	Notes	Quantity
142	2302104	SCREW - #6-20 X 3/8 THD CUTS, RI		1
	×	SCREW - #6-20 X 1/2 THD CUTS, RI	*SEE Y*	3
144	230-038	CABLE CLAMP		1

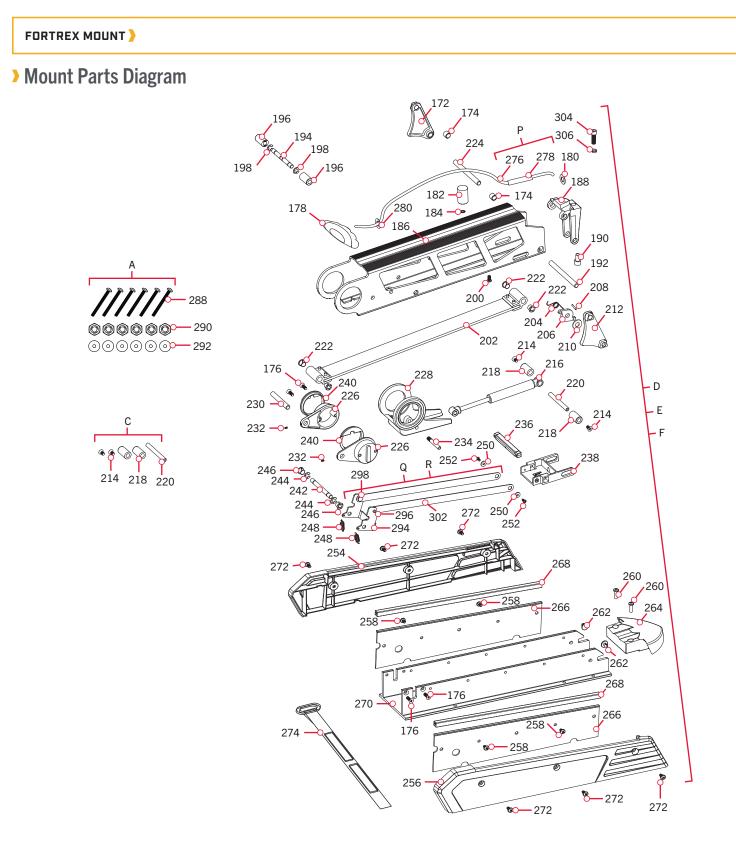
▲ Not shown on Parts Diagram.

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

■ The Bow-Mount Stabilizer Assembly is not required or included on the 80th 46" Fortray

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the 80lb 45" Fortrex.



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## > Mount Parts List

Assembly	Part #	Description	Notes	Quantity
D	2991650	MNT FW 80# 45", 112#/HC 52"	*80 LB 45"*	1
E	2991652	MNT ASM FTX FW 80# 52/62"	*80 LB 52"*	1
F	2991653	MNT ASM FTX FW 112# 45"	*112 LB 45"*	1
Р	2771601	ROPE ASSEMBLY		1
Q	2773600	LATCH STRAP ASSEMBLY, SHORT	*80 LB 45"* *112 LB 45"*	1
R	2773601	LATCH STRAP ASSEMBLY, LONG	*80 LB 52"*	1
А	2994887	MOUNTING HARDWARE BAG ASSY		1
С	2991912	BAG, ASSY. FORTREX MOUNT HDW		1
Item	Part #	Description	Notes	Quantity
172	2280800	LINK, BOWGUARD MOUNT, LEFT		1
174	2287303	BUSHING, UPPER PINS		2
176	2283411	SCREW, 1/4-20 X 1" FHS RIE TORX		4
178	2880401	PULL GRIP ASSEMBLY		1
180	2261732	WASHER		2
182	2281516	SPACER, INNER ARM		1
184	2281702	WASHER, LOCK 1/4		1
100	2284202	OUTER ARM, SHORT	*80 LB 45"* *112 LB 45"*	1
186	2284212	OUTER ARM, LONG	*80 LB 52"*	1
188	2992322	ROPE GUIDE ASSEMBLY	*INCLUDES THREADED INSERT*	1
190	2281530	INSERT, THREADED		1
192	2282608	PIN, 7/16 X 5 5/32 - 52"		1
194	2282602	PIN, 3/8 X 3 3/4" SS		1
196	2261505	SPACER		2
198	2263011	E-RING, 3/8 SHAFT		2
200	2223418	SCREW, 1/4-20 X 1/2 BHCS		1
202	2993821	INNER ARM ASSEMBLY, LONG	*80 LB 52"*	1
202	2993819	INNER ARM ASSEMBLY, SHORT	*80 LB 45"* *112 LB 45"*	1
204	2042711	SPRING, TORSION		1
206	2283620	LATCH, SAFETY		1
208	2282611	PIN, SAFETY LATCH		1
210	2281704	WASHER 7/16 NYLON		1
212	2280805	LINK, BOWGUARD MOUNT, RIGHT		1
214	2283410	SCREW 1/4-20 X 1/2 PFH		2
	2288403	GAS SPRING (CYLINDER)	*80 LB 45"*	1
216	2288404	GAS SPRING (CYLINDER)	*80 LB 52"*	1
	2288405	GAS SPRING (CYLINDER)	*112 LB 45"*	1

▲ Not shown on Parts Diagram.

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

□ The Bow-Mount Stabilizer Assembly is not required or included on

the 80lb 45" Fortrex.

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Item	Part #	Description	Notes	Quantity
218	2281710	SPACER, GAS SPRING		2
220	2282610	PIN, UPPER, SHOCK		1
222	2280005	BEARING, NYLINER 7/16"		4
224	2282600	PIN, 7/16 X 4 7/8		1
226	2281932	BRACKET, REAR PIVOT		2
228	2281501	YOKE, FORTREX		1
230	2282606	PIN, 7/16 X 3 1/8		1
232	2283402	SCREW, SET, 6-32 X 1/4		2
234	2282604	PIN, KNURLED 5/16 X 2		1
236	2283615	LATCH BAR		1
238	2283610	BRACKET - LATCH/STRAP, ROPE PULL		1
240	2287300	BUSHING, REAR PIVOT		2
242	2282602	PIN, 3/8 X 3 3/4		1
244	2263011	E-RING, 3/8 SHAFT		2
246	2280008	BEARING, IGLIDE		2
248	2282720	SPRING, EXTENSION		2
250	2261732	WASHER 8, NYLON		2
252	2373450	SCREW 8-18 X 3/8		2
054	2283937	SIDEPLATE, LEFT, SHORT, FW	*80 LB 45"* *112 LB 45"*	2
254	2283947	SIDEPLATE, LEFT, LONG, FW	*80 LB 52"*	1
05.0	2283932	SIDEPLATE, RIGHT, SHORT, FW	*80 LB 45"* *112 LB 45"*	1
256	2283942	SIDEPLATE, RIGHT, LONG, FW	*80 LB 52"*	1
258	2323403	SCREW-1/4-20 X .375 MCH SS CRPH		4
260	2073408	SCREW 1/4-20 X 7/8		2
262	2286700	PLUG, SPACER		2
264	2283900	RAMP, MOTOR		1
266	2283631	RAIL, MACH., MOTOR REST		2
268	2286400	COVER, RAIL, MOTOR REST		2
270	2281903	BASE-EXTRUSION, SHORT, MACH	*80 LB 45"* *112 LB 45"*	1
270	2281913	BASE-EXTRUSION, LONG, MACH	*80 LB 52"*	1
272	2323405	SCREW 1/4-20 X 1/2		8
274	2263806	STRAP HOLD DOWN		1
276	×	ROPE, MAXXUW MNT	*SEE DD*	1
278	*	SHRINK TUBE .252 FD, ADHES	*SEE DD*	1
280	×	WASHER - EYE SHAFT (.562 OD) SS	*SEE DD*	1
288	2263468	SCREW -1/4-20 X 2.5" S/S PPH		6
290	2263103	NUT-1/4-20 NYLOCK SS		6
292	2261713	WASHER-1/4 FLAT 18-8 SS		6

▲ Not shown on Parts Diagram.

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

#### Part # Description Notes 1Quantity Item BRACKET, LATCH \*SEE EE OR FF\* 294 × 1 2288610 RIVET, SHLDR 5/16" X .159" SS 2 296 2280006 BEARING, NYLINER 5/16" 2 298 2 × LATCH, STRAP, SHORT \*SEE EE\* 302 × LATCH, STRAP, LONG \*SEE FF\* 2 304 2283414 SCREW 5/16-18 SHCS, RIE 2 306 2281700 WASHER 5/16 LOCK 1 2285803 HANG TAG, WARNING FORTREX 1 1 2285801 HANG TAG, HOOK AND LOOP STRAP HANG TAG "CAUTION" TILT HINGE 2015800 1 2297165 MANUAL-DISCLAIMER-DOWNLOAD INFO 1 2287111 INSTALLTION GUIDE, FTX FC 1 MANUAL FORTREX FC FW 2287106 1

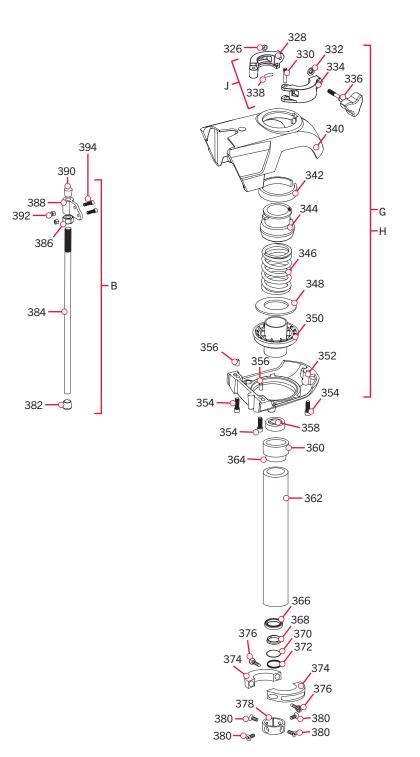
▲ Not shown on Parts Diagram.

× This part is included in an assembly and cannot be ordered individually. D The Bow-Mount Stabilizer Assembly is not required or included on the 80lb 45" Fortrex.

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FORTREX BOWGUARD >

## **>** Bowguard Parts Diagram



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## **>** Bowguard Parts List

Assembly	Part #	Description	Notes	Quantity
J	2991550	CLAMP COLLAR ASSEMBLY		1
G	2991754	BOWGUARD ASSEMBLY	*80 LB 52"* *80 LB 45"*	1
Н	2991755	BOWGUARD ASSEMBLY	*112 LB 45"*	1
В	2991925 🗖	BRACKET STABILIZER ASSEMBLY	*NOT USED ON 80 LB 45"*	1
Item	Part #	Description	Notes	Quantity
326	2073102	NUT, 1/4-28 SS		1
328	×	COLLAR CLAMP, "A" SIDE	*SEE JJ*	1
330	2072621	PIN, KNURLED		1
332	2071718	WASHER #10 NYLON RETAINING		1
334	×	COLLAR CLAMP, "B" SIDE	*SEE JJ*	1
336	2281505	KNOB - SOFT GRIP, FW		1
338	2075120	PAD, URETHANE, DEPTH COLLAR		1
340	2281952	BRACKET, TOP		1
342	2280001	BEARING, TOP BRACKET		1
344	2071541	SPRING SLEEVE, UPPER		1
346	2282700	SPRING, BOWGUARD 80		1
348	2281525	SPACER, SPRING 62" ONLY		1
350	2281520	SPRING SLEEVE, LOWER	*80 LB 52"* *80 LB 45"*	1
550	2071535	SPRING SLEEVE, LOWER	*112 LB 45"*	1
352	2991728	BRACKET, BOTTOM	*80 LB 52"* *80 LB 45"*	1
302	2991730	BRACKET, BOTTOM	*112 LB 45"*	1
354	2283413	SCREW 3/8-16 X 1 SHCS, RIE		3
356	2282612	PIN, SPRING 5/16" SS		2
358	2266000	BEARING, BALL, STEEL		1
360	2266260	BEARING RACE		1
362	2772085	TUBE W/ BEARING RACE 21"	*80 LB 45"* *112 LB 45"*	1
302	2772086	TUBE W/BEARING RACE 24"	*80 LB 52"*	1
364	2267307	BUSHING OUTER TUBE	"80 LB 52" ONLY*	1
366	2266116	BEARING, CARTRIDGE		1
368	2266001	BEARING, SPLIT RING		1
370	2284600	0-RING	*112 LB 45" ONLY*	1
372	2281706	WASHER-NYLATRON	*112 LB 45" ONLY*	1
374	2261622	COLLAR HALF		2
376	2263453	SCREW, 1/4-20 X 1 SHCS		2
378	2071560	COLLAR, TUBE		1
380	2263457	SCREW-#8-32 X 3/8 PFH		4
382	2265100	BUMPER (CRUTCH TIP)		1

Not shown on Parts Diagram.

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

the 80lb 45" Fortrex.

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Item	Part #	Description	Notes	Quantity
384	2263624	ANODIZED ALUMINUM 3/4" ROD, 22"		1
386	2263107	HEX NUT 3/4-10 NYLON		1
388	2281929	STABILIZER ARM BRACKET		1
390	2260221	VINYL CAP		1
392	2223100	NYLOCK STAINLESS STEEL NUT		2
394	2263422	SCREW - 5/16-18 X 1"		2

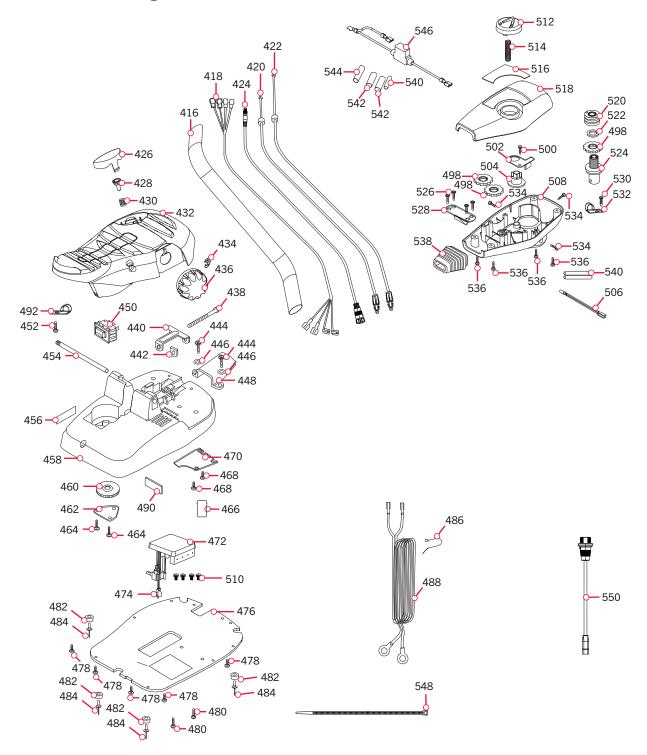
▲ Not shown on Parts Diagram.

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

■ The Bow-Mount Stabilizer Assembly is not required or included on the 80lb 45" Fortrex.

#### FORTREX FOOT PEDAL >

## > Foot Pedal Parts Diagram



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## > Foot Pedal Parts List

Item	Part #	Description	Quantity
416	2265430	CABLE JACKET, 5'	1
418	2261220	WIRE HARNESS, MAX	1
420	2267505	CABLE ASSEMBLY, RIGHT, 5'	1
422	2267515	CABLE ASSEMBLY, LEFT, 5'	1
424	490575-2	CABLE, ADPTR, 14 PIN, 175"-DSC	1
426	2773705	PUSH BUTTON W/ MAGNET	1
428	2260810	CLIP, REED SENSOR	1
430	2302732	SPRING, PEDAL BUTTON	1
432	2994497	FOOT PEDAL W/ PLUG	1
434	2263000	E-RING, KNOB	1
436	2280115	KNOB, SPEED CONTROL VARS	1
438	2263466	SCREW 1/4-20 X 2	1
440	2263210	BRACKET, CONDUIT ADJUSTMENT	1
442	2263140	NYLOCK KEEPER	1
444	2372100	SCREW 8-18 X 5/8	2
446	2261714	WASHER, MAX FOOT PEDAL	2
448	2265115	BOOT, FOOT PEDAL	1
450	2254031	SWITCH, MOM/OFF/CON	1
452	2332103	SCREW 6-20 X 3/8	1
454	2260511	PIN, PIVOT, FOOT PEDAL	1
456	2266610	DECAL, ON/OFF SWITCH	1
458	2994556	ASSEMBLY, FT PED BASE/PIN	1
460	2262301	PULLY, FOOT PEDAL	1
462	2266401	COVER, PULLEY	1
464	2301310	SCREW 8-18 X 1/2	2
466	2266413	TENSION SCREW PLATE	1
468	2332103	SCREW 6-20 X 3/8	2
470	2266412	SWITCH PLATE, FOOT PEDAL	1
472	2264056	CONTROL BOARD MAX 24/36	1
474	2884019	SWITCH-REED, MAGNETIC W/CONNECTORS	1
476	2264511	BOTTOM PLATE, MAX	1
478	2372100	SCREW 8-18 X 5/8	5
480	2223455	SCREW 10-32 X 1/2 ZP	2
482	2265126	BUMPER PAD, FOOT PEDAL	4
484	2378600	POP RIVET, 3/16 X 3/4 ALUM	4
486	2256300	TIEWRAP	1
488	2261238	LEADWIRE	1

▲ Not shown on Parts Diagram.

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

Item	Part #	Description		Quantity
490	2365107	INSULATING PAD (2.3 X 3.2)		1
492	2263201	CLAMP WIRE HARNESS MICRO		1
498	2267800	GEAR, INDICATOR		3
500	2301310	SCREW 8-18 X 1/2		1
502	2261905	BRACKET, INDICATOR		1
504	2262221	INDICATOR, DRIVE		1
506	2264015	LIGHT, INDICATOR		1
508	2282500	CONTROL BOX		1
510	2263471	SCREW #6-32 X 1/4" SEMS ZPS		4
512	2990140	INDICATOR ASSEMBLY		1
514	2282730	SPRING, INDICATOR		1
510	2285621	DECAL-COVER 80#, FW	*80 LB 45"* *80 LB 52"*	1
516	2285623	DECAL, COVER 112#, FW	*112 LB 45"*	1
518	2280202	COVER, CONTROL BOX		1
520	2232360	PULLEY, CABLE DRUM		1
522	2261730	WASHER, NYLON		1
524	2996247	TOP BEARING, PINION DRIVE		1
526	2223430	SCREW 8 X 3/4		4
528	2261901	BRACKET, CONDUIT		1
530	2372100	SCREW 8-18 X 5/8 THD		1
532	2263201	CLAMP, WIRE HARNESS		1
534	2053414	SCREW PPH 8-32 X 1/2 TRI-LOBE		3
536	2372100	SCREW 8-18 X 2/8		4
538	2265110	BOOT, CONTROL BOX		1
540	2355410	SHRINK TUBE 3/8		3
542	2335400	SHRINK TUBE 1/2" OD X 2"		2
544	2375400	SHRINK TUBE 1/4" OD X 1 3/4"		1
546	2218200	FUSE HOLDER ASSEMBLY		1
548	9953310	TIE WRAP-8.5"		1
550	2994961	BAG ASM, CABLE ADPT, 490537-2	*490537-2* *MKR-MI-1*	1

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▲ Not shown on Parts Diagram.

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




# **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.



## > TALON SHALLOW WATER ANCHOR

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<sup>®</sup> 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<sup>®</sup> Connectivity
- Advanced GPS Navigation
- System 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







Part #2287106

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