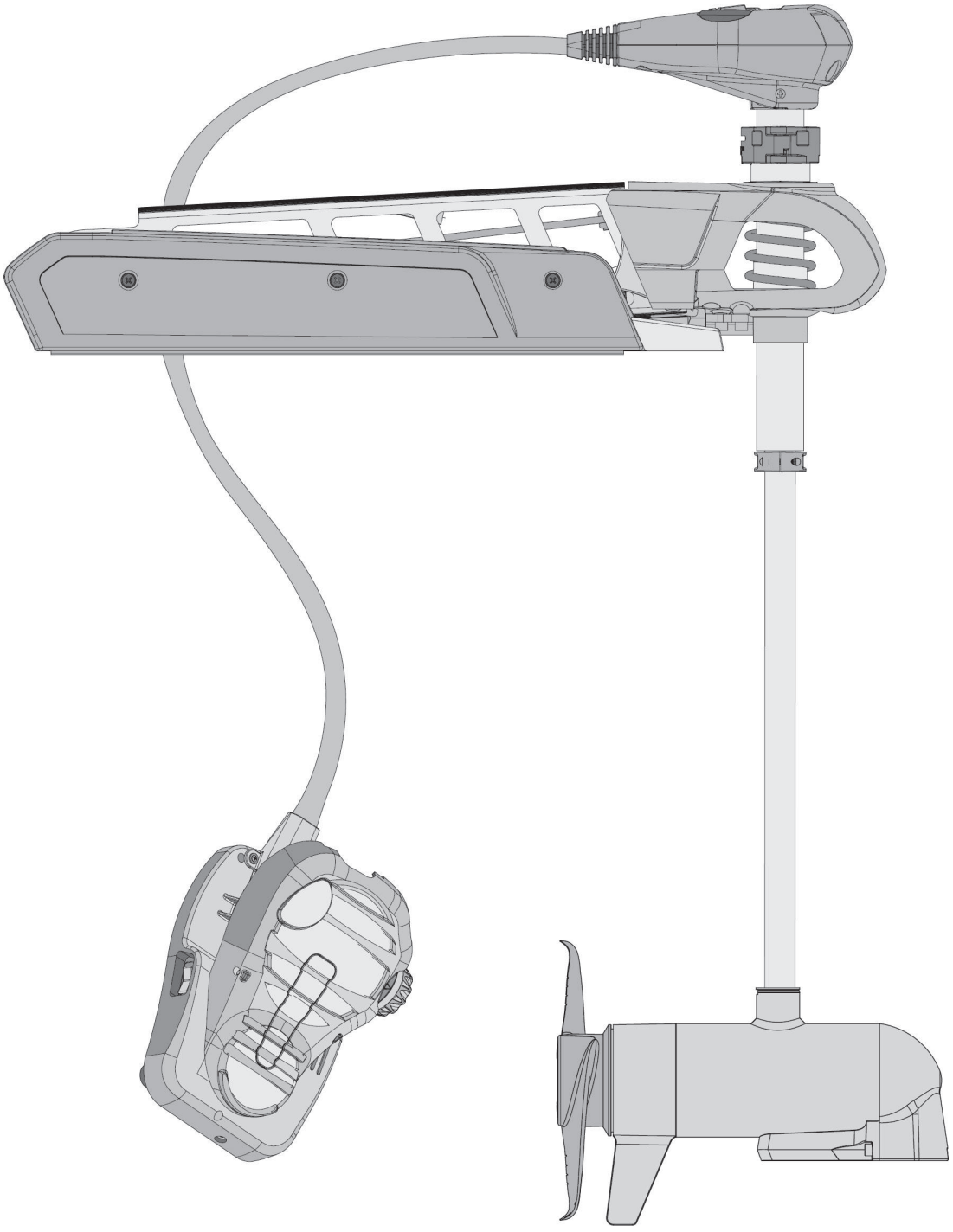
MINN KOTA®



FORTREX®

BOW-MOUNT TROLLING MOTOR

Owner's 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.

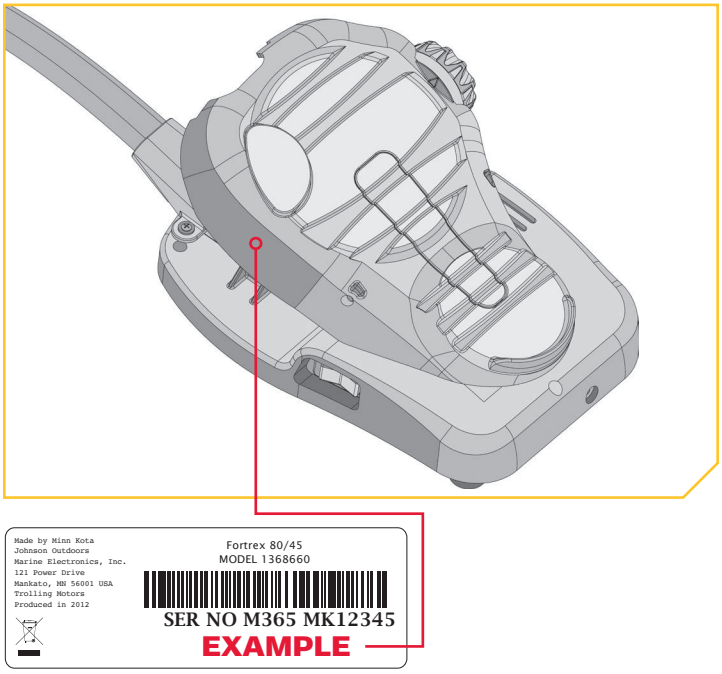
REGISTRATION

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 near the Momentary Switch underneath the side of the Foot Pedal.



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

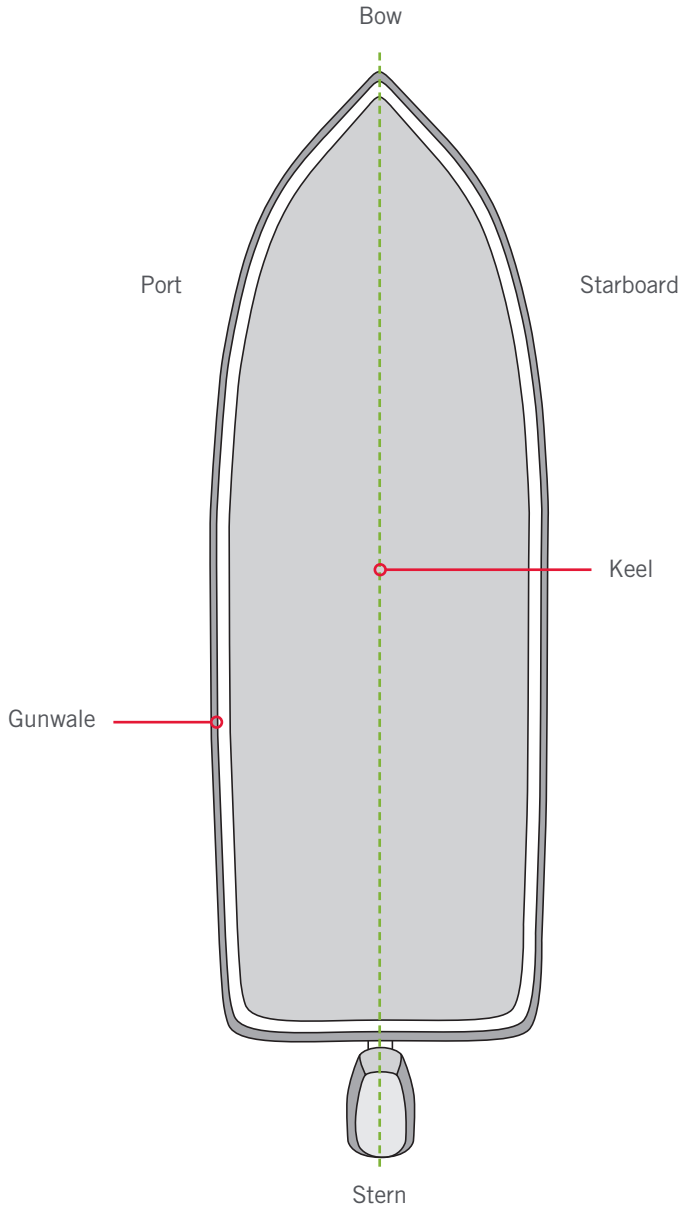
To obtain warranty service in the U.S., the product believed to be defective, and proof of original purchase (including the date of purchase), must be presented to a Minn Kota Authorized Service Center or to Minn Kota's factory service center in Mankato, MN. Any charges incurred for service calls, transportation 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.**

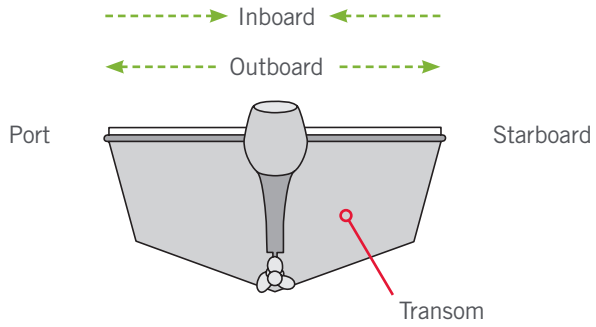
NOTICE: Do not return your Minn Kota product to your retailer. Your retailer is not authorized to repair or replace products.

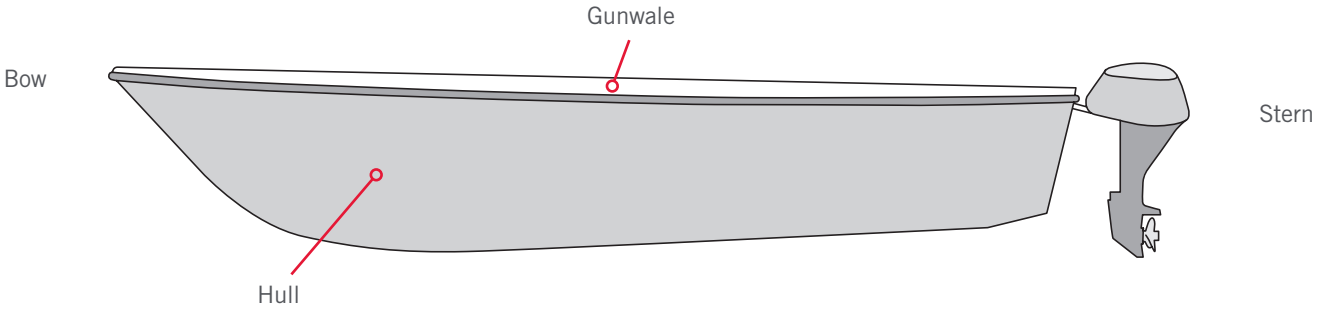
NOTICE: THERE ARE NO EXPRESS WARRANTIES OTHER THAN THESE LIMITED WARRANTIES. IN NO EVENT SHALL ANY IMPLIED WARRANTIES INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE, EXTEND BEYOND THE DURATION OF THE RELEVANT EXPRESS LIMITED WARRANTY. IN NO EVENT SHALL JOME BE LIABLE 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.

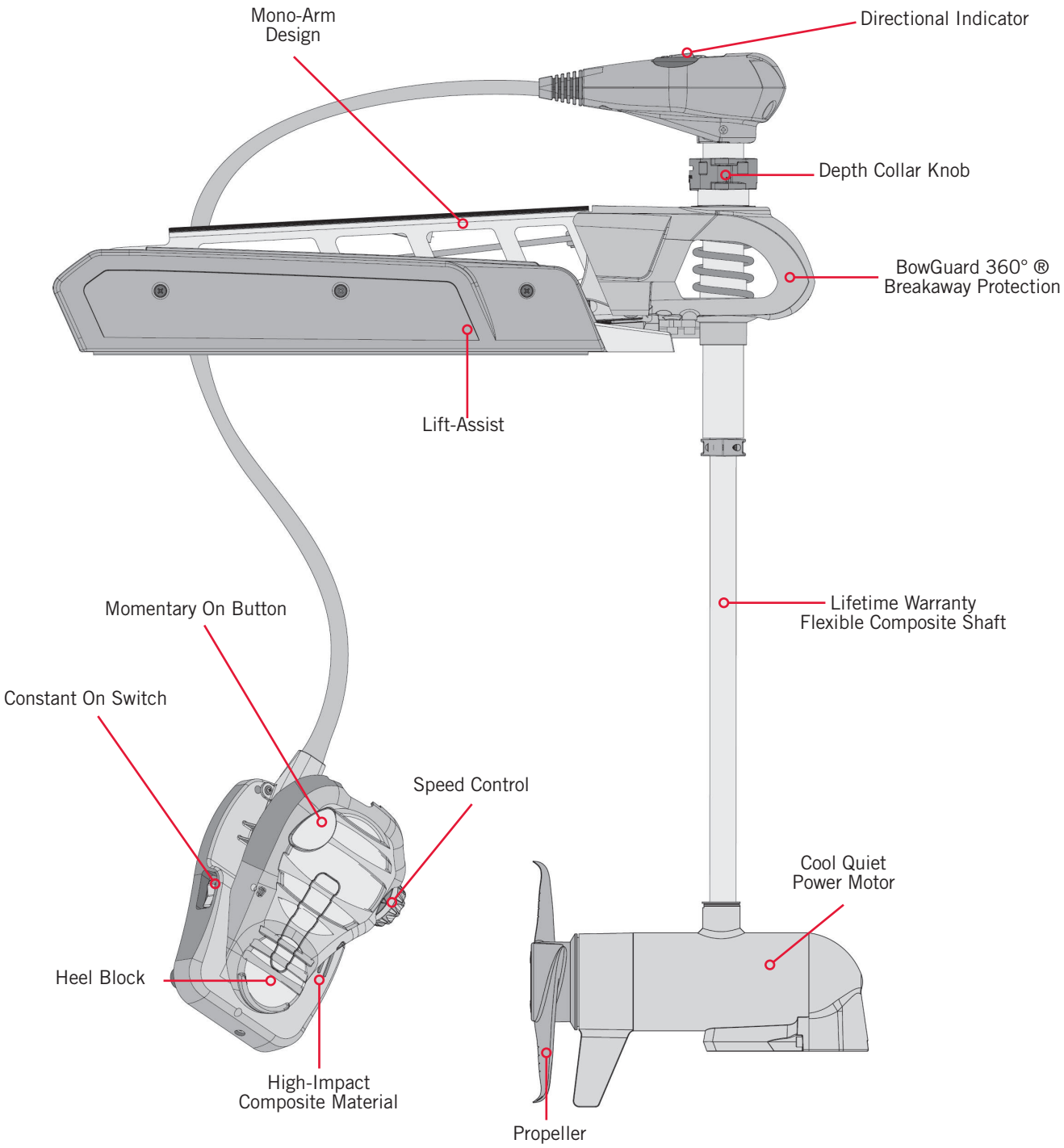
KNOW YOUR BOAT







FEATURES



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

INSTALLATION

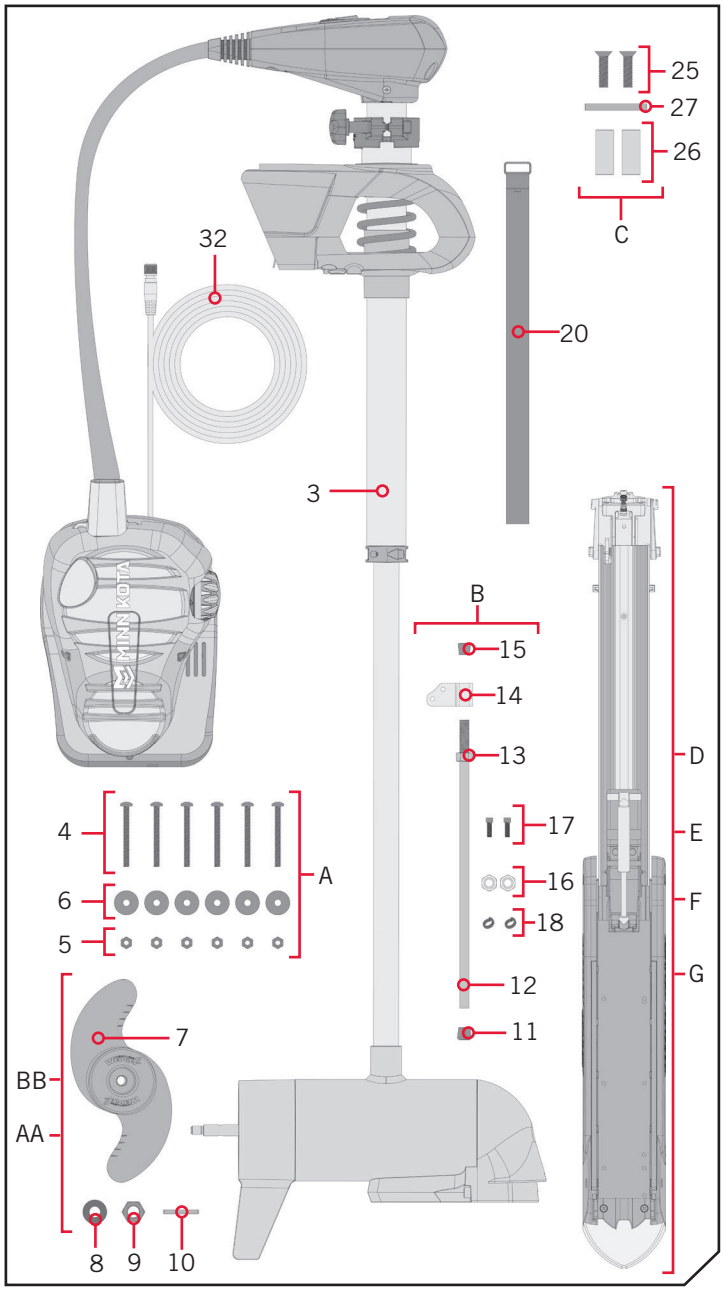
INSTALLING THE FORTREX

Your new Fortrex comes with everything you'll need to directly install it to the boat. This motor can be directly mounted to the boat or coupled with a Minn Kota quick release bracket for ease of mounting and removal. For installation with a quick release bracket, refer to the installation instructions provided with the bracket. For compatible quick release mounting bracket, please visit minnkotamotors.com. To install the motor directly to the boat, please follow the instructions provided in this manual. Please review the parts list, mounting considerations and tools needed for installation prior to getting started. For additional product support and to locate your nearest dealer, please visit minnkotamotors.com.

INSTALLATION PARTS LIST ❯

Item / Assembly	Part #	Description	Qty.
3	✖	MOTOR ASSEMBLY	1
A	2994887	INSTALLATION HARDWARE BAG ASSEMBLY	1
4	2263468	1/4 - 20 X 2.5" SS PPH SCREW	6
5	2263103	1/4 - 20 SS NYLOCK NUT	6
6	2261713	1/4 FLAT 18-8 SS WASHER	6
AA	1378132	80# THRUST PROP KIT	1
BB	1378160	112# THRUST PROP KIT	1
7	2341160	PROP-WW2 (4.5)W/ADP.RING	1
8	2091701	WASHER-PROP (LARGE)	1
9	2093101	NUT-PROP NYLOC,LG, MX101 3/8 SS	1
10	2262658	PIN-DRIVE 1" 3/16" S/S	1
B	2991925 ◘	BRACKET STABLZR ARM ASY (SUB)	1
11	22655100	BUMPER STABILIZER	1
12	2263624	STABILIZER ROD	1
13	2263107	NYLON HEX NUT 3/4 - 10 UNC	1
14	2281829	BRACKET	1
15	2260221	VINYL CAP	1
16	2223100	NUT 5/16-18 NYLOCS SS	2
17	2263422	BOLT 5/16-18 X 1" SS CAP SCREW	2
18	2281700	5/16 "ID X .457 OD HIGH COLLAR LOCK WASHER	2
20	2773806	STRAP, HOLD DOWN	1
C	2994912	BAG ASSY, FORTREX MOUNT HDW	1
25	2283410	SCREW-1/4-20 X .500" PFH	2
26	2281710	SPACER, GAS SPRING, FORTREX	2
27	2282610	PIN, UPPER SHOCK	1
▲	2287110	INSTALLATION GUIDE, FORTREX	1
D	2991650	MNT FW 80# 45", 112#/HC 52" *80 LB 45"* *112 LB 52"*	1
E	2991652	MNT ASM FTX FW 80# 52/62" *80 LB 52"* *80 LB 62"*	1
F	2991653	MNT ASM FTX FW 112# 45" *112 LB 45"*	1
G	2991654	MNT ASM FTX FW 112# 52" *112 LB 52"*	1
32	2211415 ✚	CABLE-EXTENSION, PD/AP 110" *PRE-INSTALLED*	1
	490507-2 ➔	CABLE, ADP-INT MDI 14 M12-174" *PRE-INSTALLED*	1

▲ *Not shown on Parts Diagram.*
✖ *This part is included in an assembly and cannot be ordered individually.*
✚ *Only available with models factory installed with Universal Sonar.*
➔ *Only available with models factory installed with Built-in MEGA Down Imaging.*
◘ *The Bow-Mount Stabilizer Assembly is not required or included on the 80lb 45" Fortrex.*



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

INSTALLATION

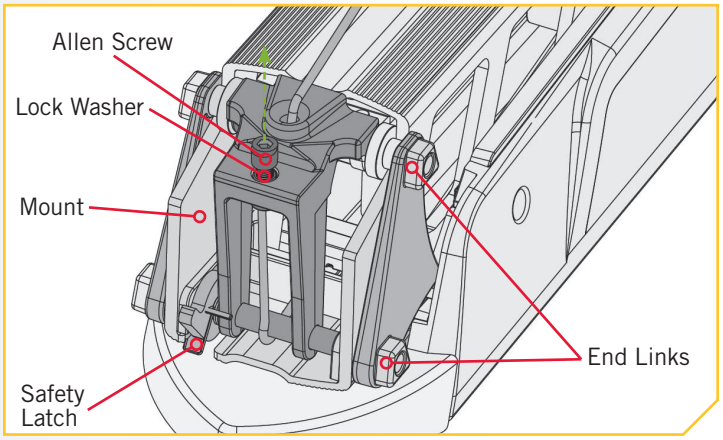
Assembly of Motor to Mount

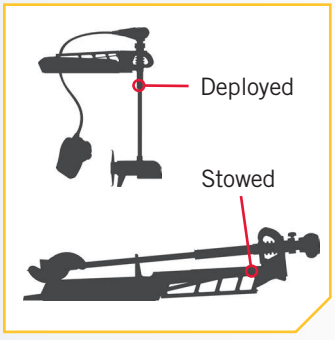
1

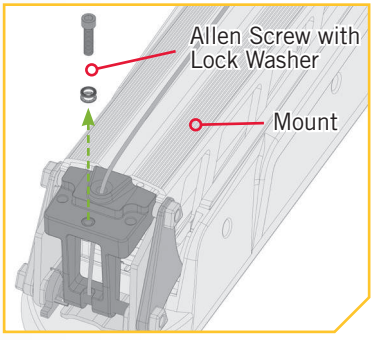
a. Place the Mount on an elevated, level surface such as a workbench or the tailgate of a pickup. The Mount, as removed from the box, should be in the deployed position.

b. Remove the 5/16" Allen Screw and Lock Washer from the Mount using the 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.

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







2

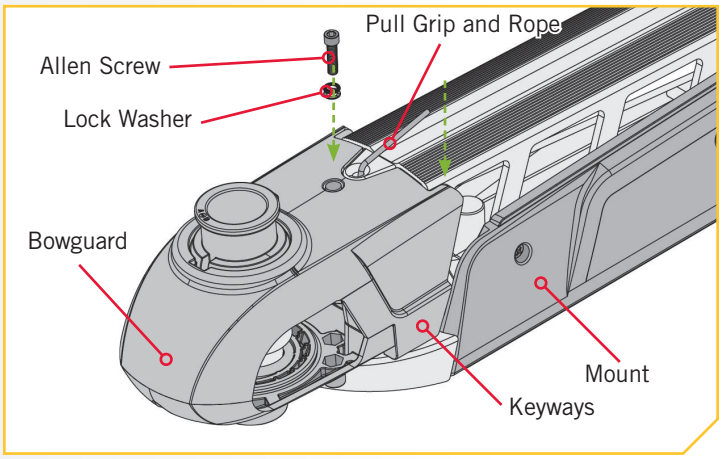
c. Align the Keyways on the inside of the Bowguard with the End Links on the Mount. Lower the motor assembly straight down until seated.

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

⚠ 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 Bowguard

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

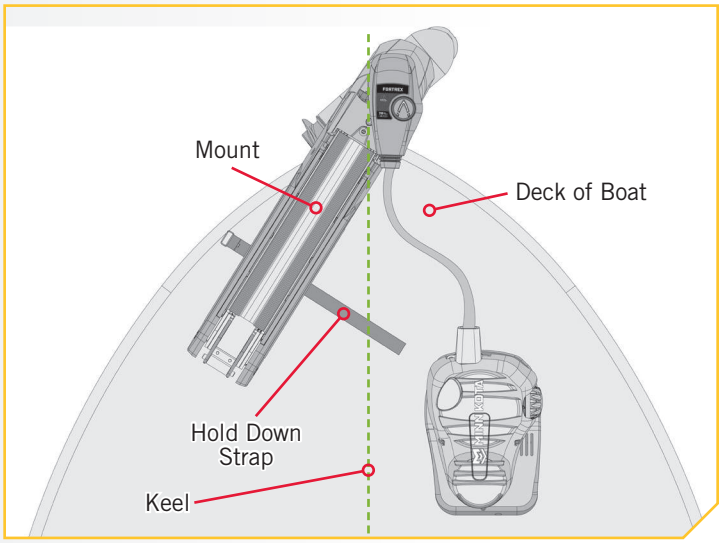
ITEM(S) NEEDED

#20 x 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 deployed position, on the deck of the boat. Check placement with the motor in the stowed and deployed positions.

⚠ 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.

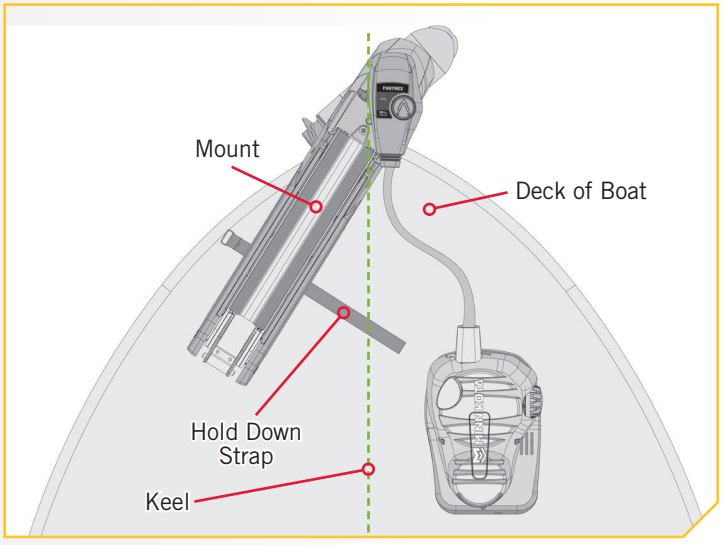


b. Stow the motor into the flat position by pulling the Pull Grip and Rope to disengage the latch bar, allowing the motor to fold into the flat position.

c. Place the Hold-Down Strap (Item #20) under the base of the Mount Plate so that it is below the Mount when placed.

2

d. The Mount can be installed on either the Port or Starboard side of the boat based on personal preference. Test the placement of the Hold-Down Strap to be sure it can hold the Mount as placed. The placement of the buckle on the Hold-Down Strap either inboard or outboard is based on personal preference. The hook and loop on the fastener should be face down for the Hold-Down Strap to function.

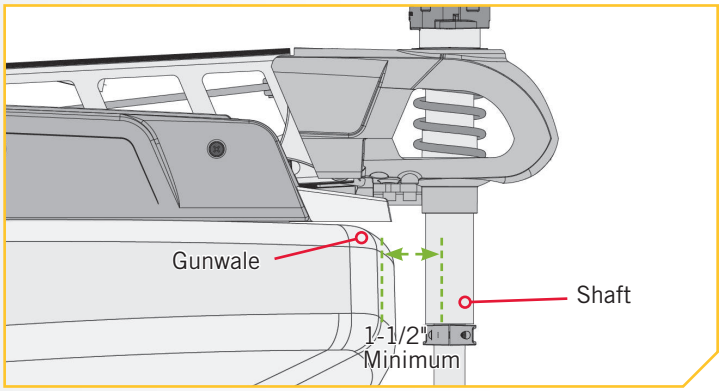


INSTALLING THE BOWGUARD

3

e. Check the placement with the motor in the deployed position. When the motor is in the deployed position, make sure that the Shaft is 1-1/2" out past the Gunwale of the boat. The lower unit, when stowed and deployed must not encounter any obstructions.

f. Check the placement of the Hold-Down Strap when the motor is in the stowed and deployed position and adjust if necessary.



4

g. Once the Mount is in position, determine which bolt pattern to use. The bolt pattern selected will depend on the deck space available on your boat.

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

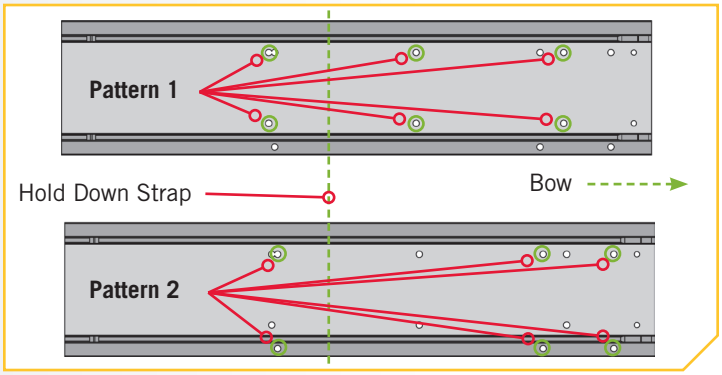
h. It is recommended to mark at least 4 of the 6 holes in the base of the Mount and to have two bolts on each side that are located the farthest apart on the Mount Plate. Ideal installation would allow for 6 bolts to be used, with a minimum of 4.

i. Drill through the deck of the boat using a 9/32" Drill Bit on the marked locations.

j. Be sure the Hold-Down Strap under the base of the Mount Plate sits between the second and third set of bolts according to the mounting pattern selected. Double check that it can close around the Mount when stowed.

⚠ 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 Bowguard. Always secure the Depth Collar 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.

5

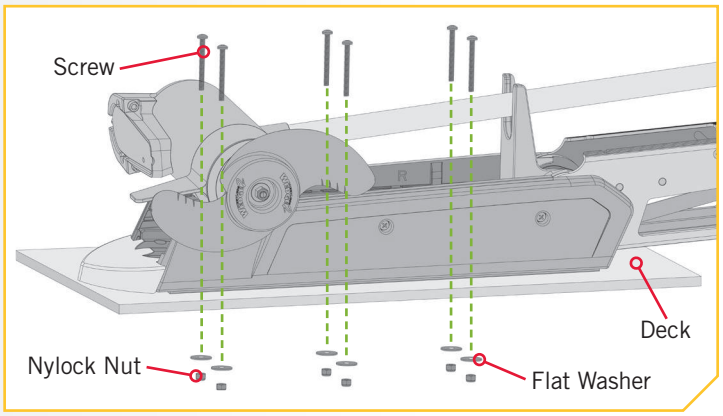
ITEM(S) NEEDED

- #6 x 6
- #5 x 6
- #4 x 6

k. Put a 1/4-20 x 2 1/2" Screw (Item #4) in each of the drilled locations. The Screw should pass through the Mount Plate and the boat deck.

l. Place a Flat Washer (Item #5) and then a Nylock Nut (Item #6) at the end of each screw as shown and secure. Make sure all hardware is secure.

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

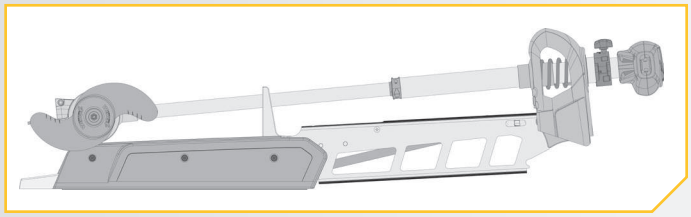
⚠ WARNING

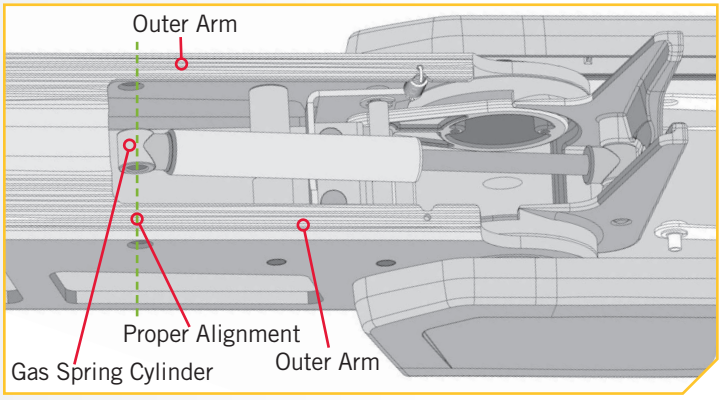
The gas assist lift mechanism in this unit is under high spring pressure when the motor is in the deployed position. Do not remove the Bowguard from the mount without disconnecting one end of the gas spring. Failure to do this can create a condition where accidental pulling of the Pull Grip and Rope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

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.





2

ITEM(S) NEEDED

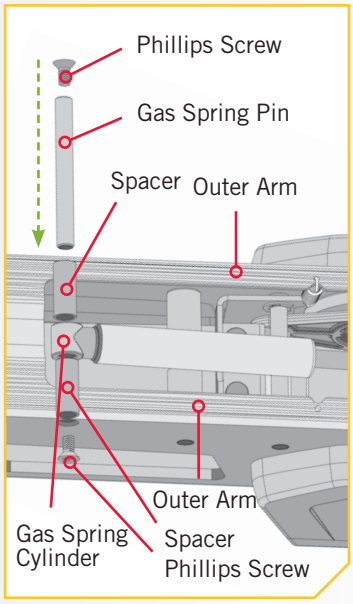
#25 x 2 #26 x 2 #27 x 1

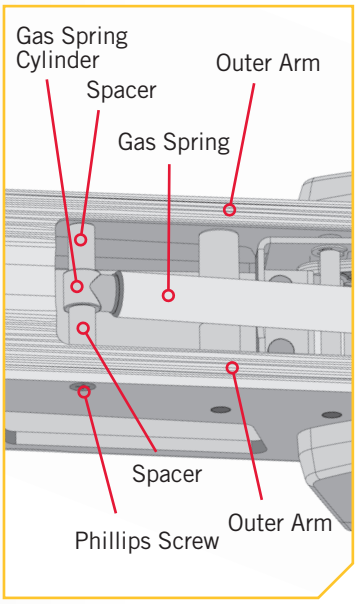
c. Locate the upper Gas Spring Pin (Item #27) and Spacers (Item #26) in the bag assembly. Align the end of the Gas Spring with the holes in the Outer Arm.

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 (Item #25) on each end of the Gas Spring Pin and secure with two #3 Phillips screwdrivers.

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





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.

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

⚠ 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.

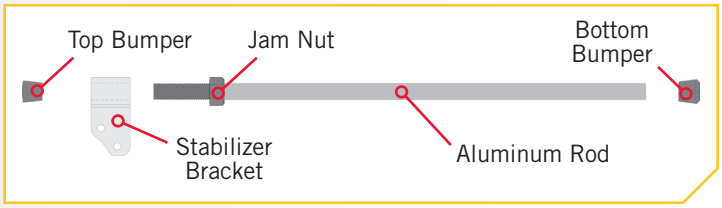
1

ITEM(S) NEEDED

#11 x 1 #12 x 1 #13 x 1 #14 x 1 #15 x 1

a. Place the motor in the stowed position.

b. Un-thread the Aluminum Rod (Item #13) from the Stabilizer Bracket (Item #12) by removing the Top Bumper (Item #11) and unscrewing the bracket. Also remove the Bottom Bumper (Item #15). Keep the Jam Nut (Item #14) in place.



2

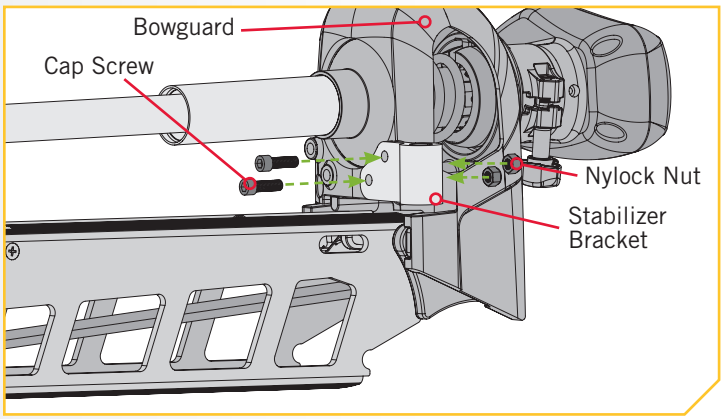
ITEM(S) NEEDED

#17 x 2 #18 x 2 #16 x 2

c. Determine the desired orientation of the Stabilizer Bracket and attach it to the bottom of the Bowguard.

NOTICE: The Bow-Mount Stabilizer Bracket can be installed on the left or right side of the Bowguard.

d. Put the 5/16" Cap Screws (Item #17) 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 lb.



NOTICE: The two Lock Washers (Item #16) are not used when installing on the Fortrex.

PLACING THE BOW-MOUNT STABILIZER

3

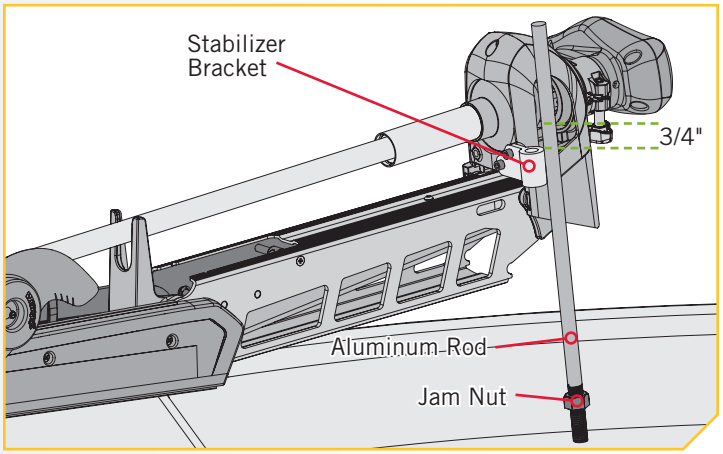
e. Measure the proper length of the Aluminum Rod by standing it, with the threaded end down, onto the deck surface so that it sits vertically right next to the Stabilizer Bracket.

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

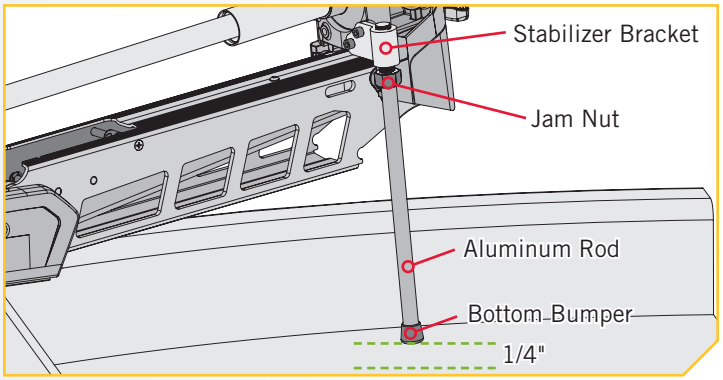
h. Replace the Bottom Bumper on the Aluminum Rod, opposite from the threads.

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.

⚠ CAUTION

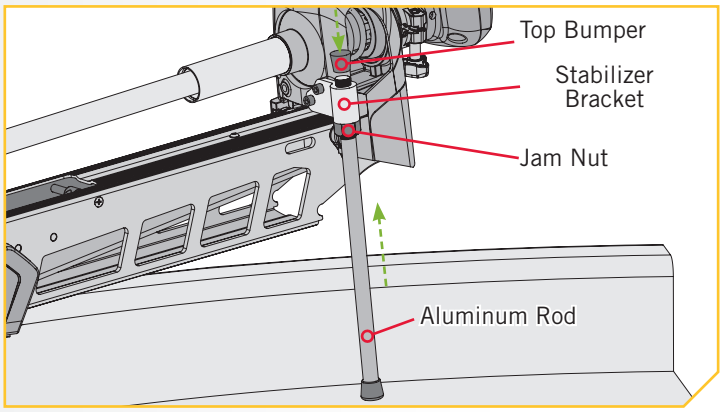
Adjusting the Aluminum Rod too tightly removes the end play needed for proper latch pin engagement and doing so could prevent the mount from fully latching in the stowed position. Improper latching may cause damage. If installed correctly, the tip of the Aluminum Rod should lift off of the boat deck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



5

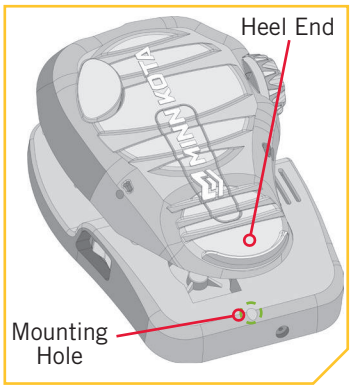
k. Once in the correct position, tighten the Jam Nut upwards against the Stabilizer Bracket. This will prevent the Aluminum Rod from turning.

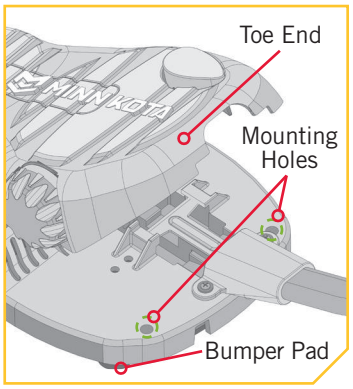
l. Install the Top Bumper if there are threads exposed on the Aluminum Rod above the Stabilizer Bracket.



Mounting the Foot Pedal

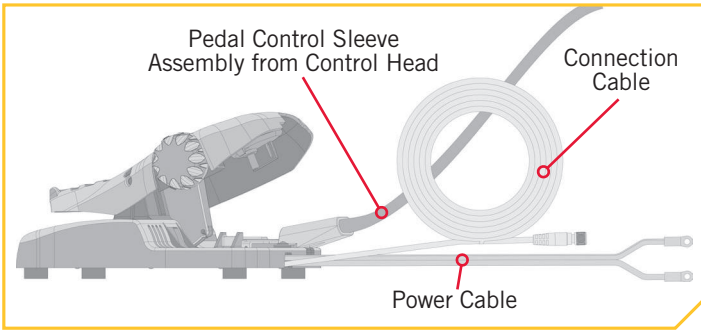
We recommend securing the Foot Pedal to the boat deck to prevent it from being damaged during transport and to make motor operation more efficient. It is recommended to use the Mounting Holes on the Foot Pedal for a secure mount. The Foot Pedal has three Mounting Holes. One Mounting Hole is located under the Heel End of the Foot Pedal. The other two are located under the Toe End of the Foot Pedal. We recommend using a 1/8" or 3/16" diameter screw and only tighten enough to slightly compress the Bumper Pads underneath the Foot Pedal.



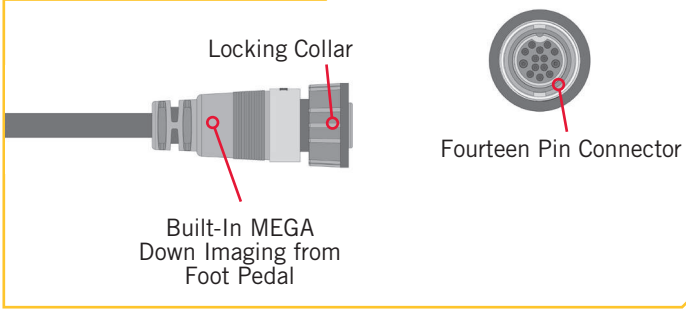


IDENTIFYING TROLLING MOTOR FEATURES BY THEIR ASSOCIATED CABLES

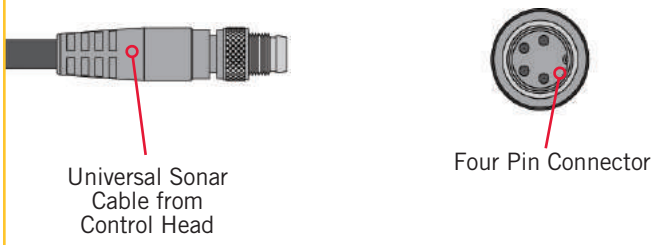
Your trolling motor may be pre-installed with Built-In MEGA Down Imaging OR Universal Sonar. These features require cables to be connected to an output device. These connections are present on the trolling motor and have cables that exit from the Foot Pedal. These connection cables, if present, will exit the Foot Pedal in the same location as the power cables. To better identify cables present, refer to the diagrams below that detail what the Built-In MEGA Down Imaging and Universal Sonar cable connectors look like.



Built-In MEGA Down Imaging



Universal Sonar



ROUTING CONNECTION CABLES

Please follow these instructions for routing any and all of the cables present for any of the pre-installed features that may come with your trolling motor. This routing should be followed no matter the type of connection cable present. If you are unsure of the cables present, please review the "Identifying Trolling Motor Features By Their Associated Cables" section of these Installation Instructions.

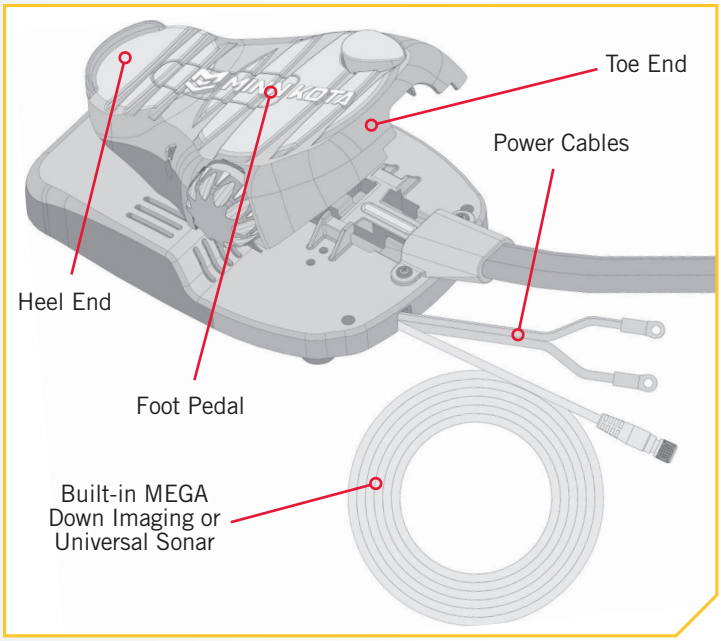
1

a. Locate the Built-in MEGA Down Imaging or Universal Sonar cable, at the base of the Foot Pedal.

⚠ CAUTION

Not following the recommended wire routing for the Built-in MEGA Down Imaging or Universal Sonar cable, if equipped, may cause damage to the product and void your product warranty. Route cables away from pinch points or other areas that may cause them to bend in sharp angles. Routing the cables in any way other than directed may cause damage to the cables by being pinched or severed.

NOTICE: Universal Sonar connector shown for illustration purposes.

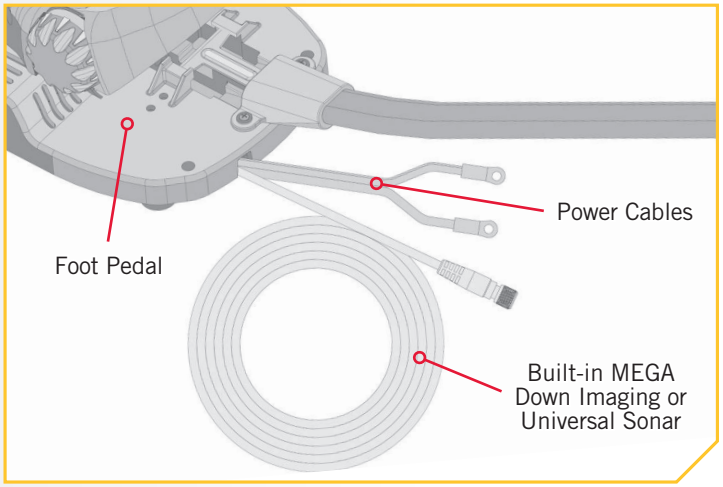


2

b. Identify where the Built-in MEGA Down Imaging or Universal Sonar Cable needs to be connected and route along an established routing system in your boat.

c. Use cable ties to loosely secure cables if needed.

NOTICE: After the cable(s) exit(s) the Foot Pedal, it should be routed through an established routing system on the boat, in an area with minimal interference. Power cables or other elements that may produce interference for the sonar signals. Inspect the selected route carefully to ensure that there are no sharp edges, obstacles, or obstructions that may damage the cables.



⚠ CAUTION

Improperly securing the Connection Cables may cause damage to the product and void your product warranty. Do not over tighten the cable ties as it may damage the wires.

FEATURE OVERVIEW AND CONNECTING THE CABLES

The cable(s) from the Foot Pedal for each feature installed on the trolling motor is connected to an output device separately. Once the features that may be installed are identified, follow the instructions below to ensure the cables are connected correctly.

Built-In MEGA Down Imaging

Built-In MEGA Down Imaging delivers nearly 3X the output of standard Side Imaging®, and takes fishfinding into the megahertz frequency for the very first time. The Minn Kota flagship families of trolling motors, including Ultrex, Ulterra, Terrova, and Fortrex, now include Built-In MEGA Down Imaging sonar, the clearest imaging available only from Humminbird. With Humminbird MEGA imaging sonar built right into the trolling motor, you now have a crystal clear view of what's directly beneath the boat, without having to manage all of the cables that come with external transducers. The Built-In MEGA DI transducer is only available on new models equipped from the factory and cannot be added to an existing trolling motor.

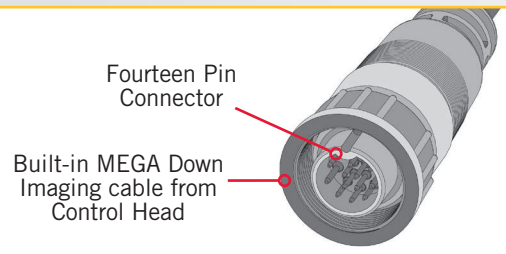
The Built-in MEGA DI transducer will provide both MEGA Down Imaging and 2D CHIRP Digital Sonar to select Humminbird models. All Built-In MEGA DI trolling motors, will come "Solix Ready" out of the box. An adapter cable accessory (MKR-MDI-1 1852085 or MKR-MDI-2 1852086) is available for purchase that will allow the connection of any compatible Humminbird Helix fish finder. The MKR-MDI-1 is used on Helix 8, 9, 10 and 12 models. The MKR-MDI-2 is used for Humminbird Helix 7 models only. See the Built-In MEGA Down Imaging Compatibility chart online.

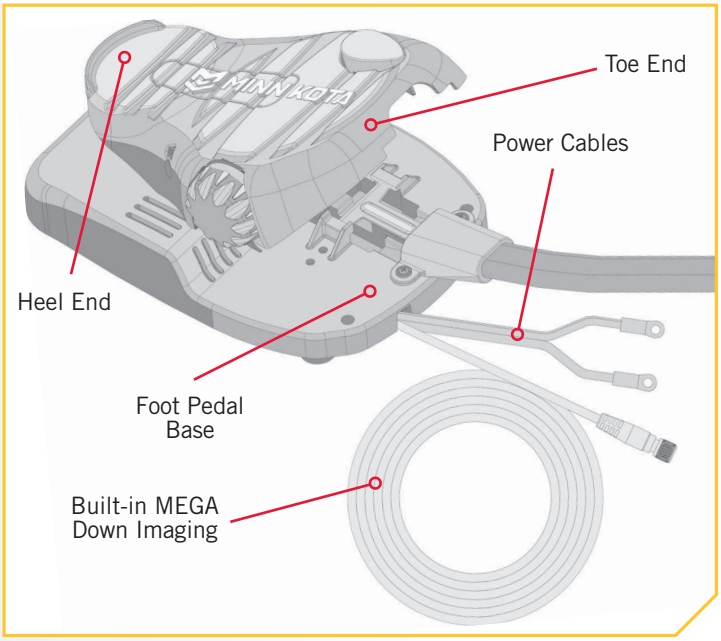
NOTICE: You can only view MEGA Down Imaging with a MEGA DI or MEGA SI HELIX G2N or G3N Series model and a required adapter, or with any SOLIX Series model. The built-in transducer cannot supply MEGA Down Imaging to Humminbird models that do not already have the capability. f you have a G2/G2N or a G3/G3N HELIX that is not a MEGA SI or MEGA DI model, you will still get 2D CHIRP Digital Sonar from the transducer. Built-In MEGA DI is not supported by HELIX G1 models or other brands of fish finders.

1

a. The Built-In MEGA Down Imaging connector from the Foot Pedal is a 14 pin connector. On a Fortrex, Built-In MEGA Down Imaging will never be installed with Universal Sonar. Locate and identify the correct connection for Built-in MEGA Down Imaging cable(s), at the base of the Foot Pedal.

NOTICE: Built-in MEGA Down Imaging may be pre-installed on a Fortrex motor without other features that require external connections.





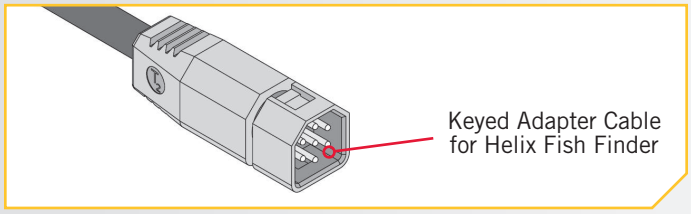
2

b. **When installing with a Solix**, the Built-In MEGA Down Imaging cable can be plugged directly into the Solix fish finder. Plug the Built-in MEGA Down Imaging cable into the corresponding connection on the Solix fish finder.

c. **When installing with a Helix**, first attach the Adapter Cable and then plug the Adapter Cable into the Helix fish finder. The Adapter Cable will only have one connection that is keyed on the back of the Helix fish finder. Plug the Adapter Cable into the only matching keyed connection.

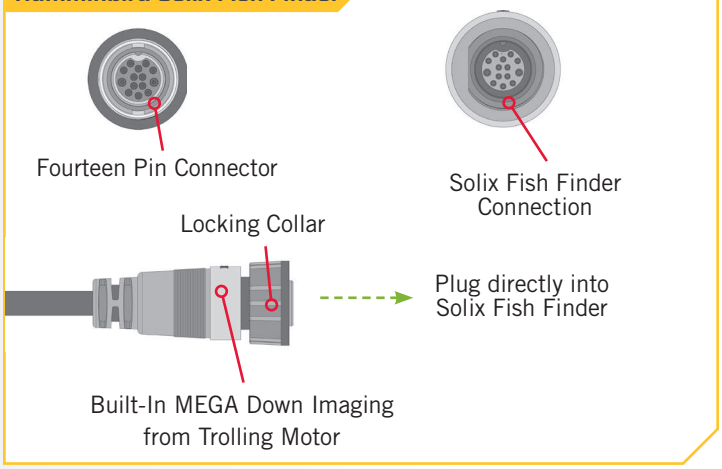
NOTICE: Check for compatibility or any required adapter cables online at minnkotamotors.com. The cable from the trolling motor can be extended with a 10' Extension Cable #720081-1 or the 30' Extension Cable #720081-2 found at humminbird.com.

NOTICE: If any cables need to be routed, please follow the guidelines in the Routing Connection Cables section of these installation instructions.

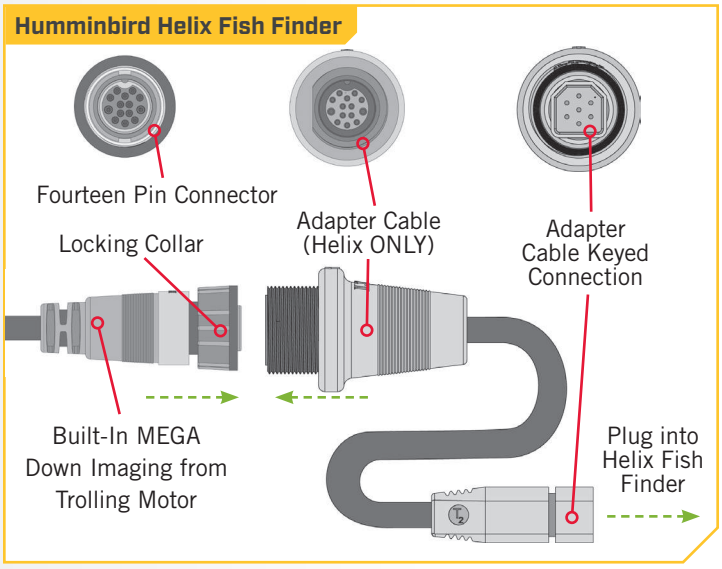


NOTICE: The connectors are keyed to prevent reversed installation.

Humminbird Solix Fish Finder



Humminbird Helix Fish Finder



Universal Sonar

Your trolling motor may be pre-installed with a Universal Sonar transducer system. Universal Sonar is a 2D sonar transducer with a temperature sensor that is integrated into the lower unit of the trolling motor. It has an operating frequency of 83/200 kHz. Connecting this transducer to a compatible fish finder gives you a 2D sonar view of what is happening directly below your trolling motor. The integrated design protects the transducer from underwater hazards, and prevents tangles and damage to the transducer cables.

All Universal Sonar motors are equipped with an internal bonding wire, incorrect rigging will cause sonar interference and can damage your trolling motor, electronics and other boat accessories. To minimize trolling motor interference, ensure that the fish finder and trolling motor are powered by separate batteries. Please refer to the Battery & Wiring Installation and Motor Wiring Diagram sections of this manual for correct rigging instructions.

The Universal Sonar Cables are shielded to minimize interference. To protect this shielding the cables should not be pulled tight against sharp angles or hard objects. If using cable ties, do not over-tighten. Any excess cable should be bundled in a loose loop of no less than 4" in diameter. In certain situations, air bubbles may adhere to the surface of the Universal Sonar transducer, and effect the performance. If this happens simply wipe the surface of the transducer with your finger.

NOTICE: Universal Sonar does not support imaging screens that require higher frequencies such as 455 kHz or 800 kHz (Down Imaging, Side Imaging, etc.). Down Imaging (DI) specific units are not compatible with Universal Sonar. See compatibility chart for a list of compatible fish finders at minnkotamotors.com.

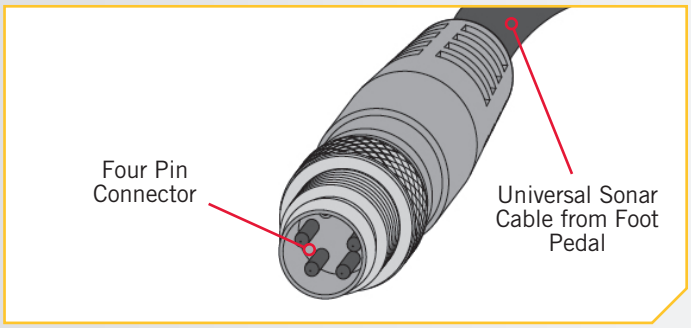
The connector for Universal Sonar exits the trolling motor at the base of the Foot Pedal and consists of a 4 pin plug. An adapter cable (MKR-US2) that is sold separately is required for all installations. For a current list of compatible fish finders and the correct adapter cable, or more information on Universal Sonar, please visit minnkotamotors.com.

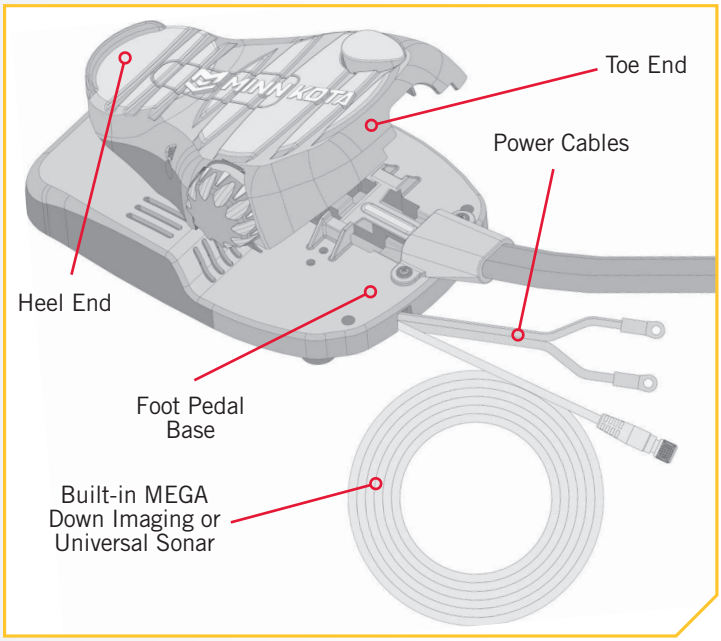
1

a. Locate the Universal Sonar, if equipped, at the base of the Foot Pedal.

b. Locate the Universal Sonar four pin connector at the end of Universal Sonar Extension Cable. The connector is black with a stainless steel threaded locking collar.

NOTICE: Your fish finder should be turned off until this procedure is complete.





NOTICE: If the cable length does not reach the desired fish finder installation location, a 14.5' extension cable is available (MKR-US2-11) (sold separately).

2

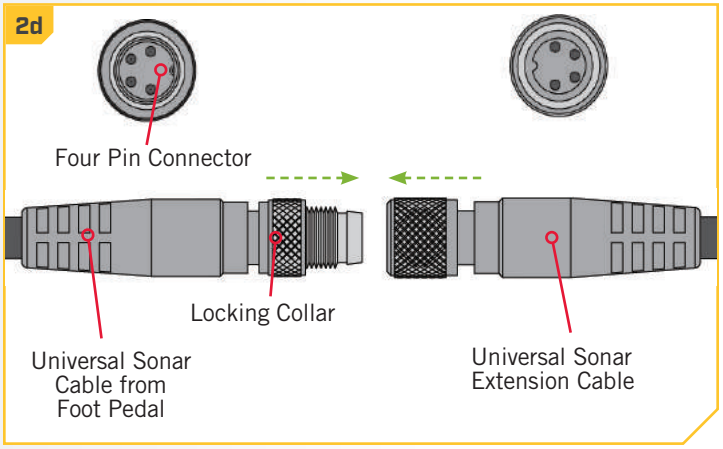
NOTICE: The Universal Sonar Cable may not be long enough to reach the fish finder. If the cable length does not reach the desired fish finder installation location, a 14.5' extension cable is available to purchase. Minn Kota recommends using the MKR-US2-11.

c. Take the Universal Sonar Extension Cable, if needed, and attach it to the Universal Sonar Cable exiting the Foot Pedal. Firmly push the plug together and twist the locking collar until it is snug.

d. Install the Universal Sonar Cable that exits the Foot Pedal or the Universal Sonar Extension Cable (if used) to the appropriate Universal Sonar Adapter Cable. Install the Adapter Cable to your fish finder. Refer to your fish finder manual for complete installation instructions.

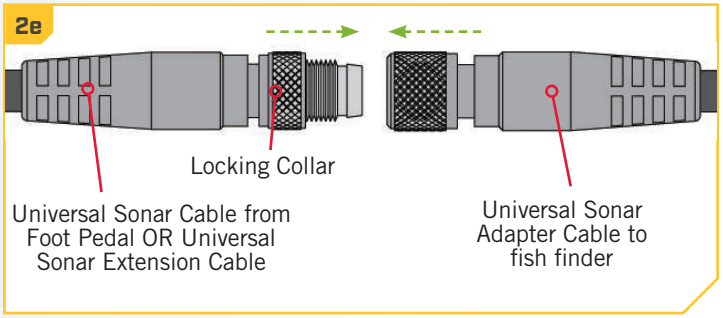
NOTICE: If any cables need to be routed, please follow the guidelines in the Routing Connection Cables section of these installation instructions.

2d



NOTICE: The connectors are keyed to prevent reversed installation.

2e



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 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.

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

positivevoltage 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.

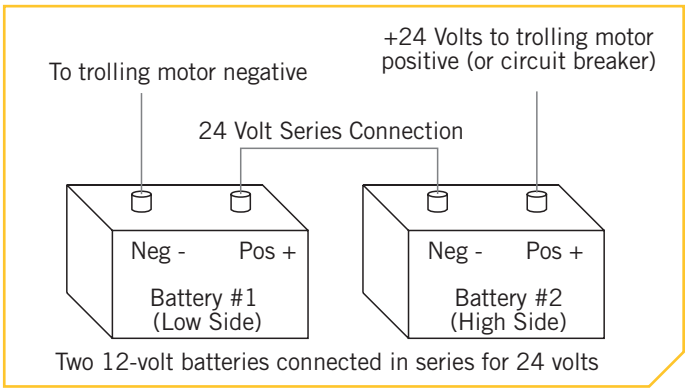
NOTICE: The internal bonding wire is equipped with a 3 amp fuse. Improper connections described above carrying in excess of 3 amps will blow this fuse and no further damage will be exhibited. If this occurs, RF interference from the trolling motor affecting sonar units and other electronics will be more 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 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.



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.

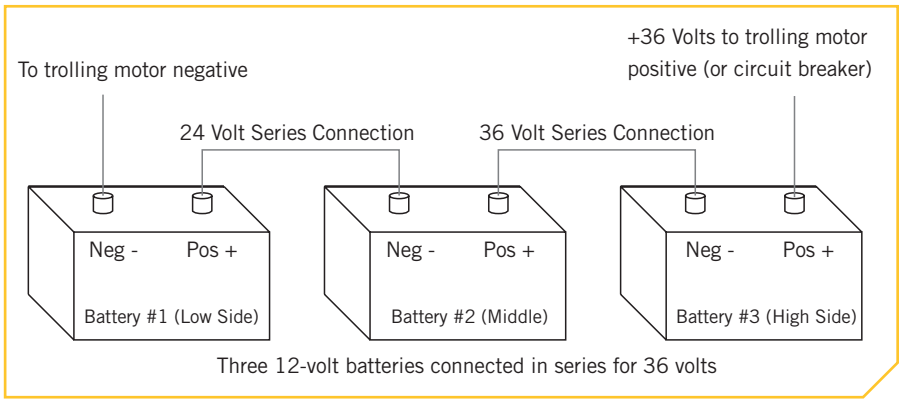
⚠ WARNING

- 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 “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.



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.

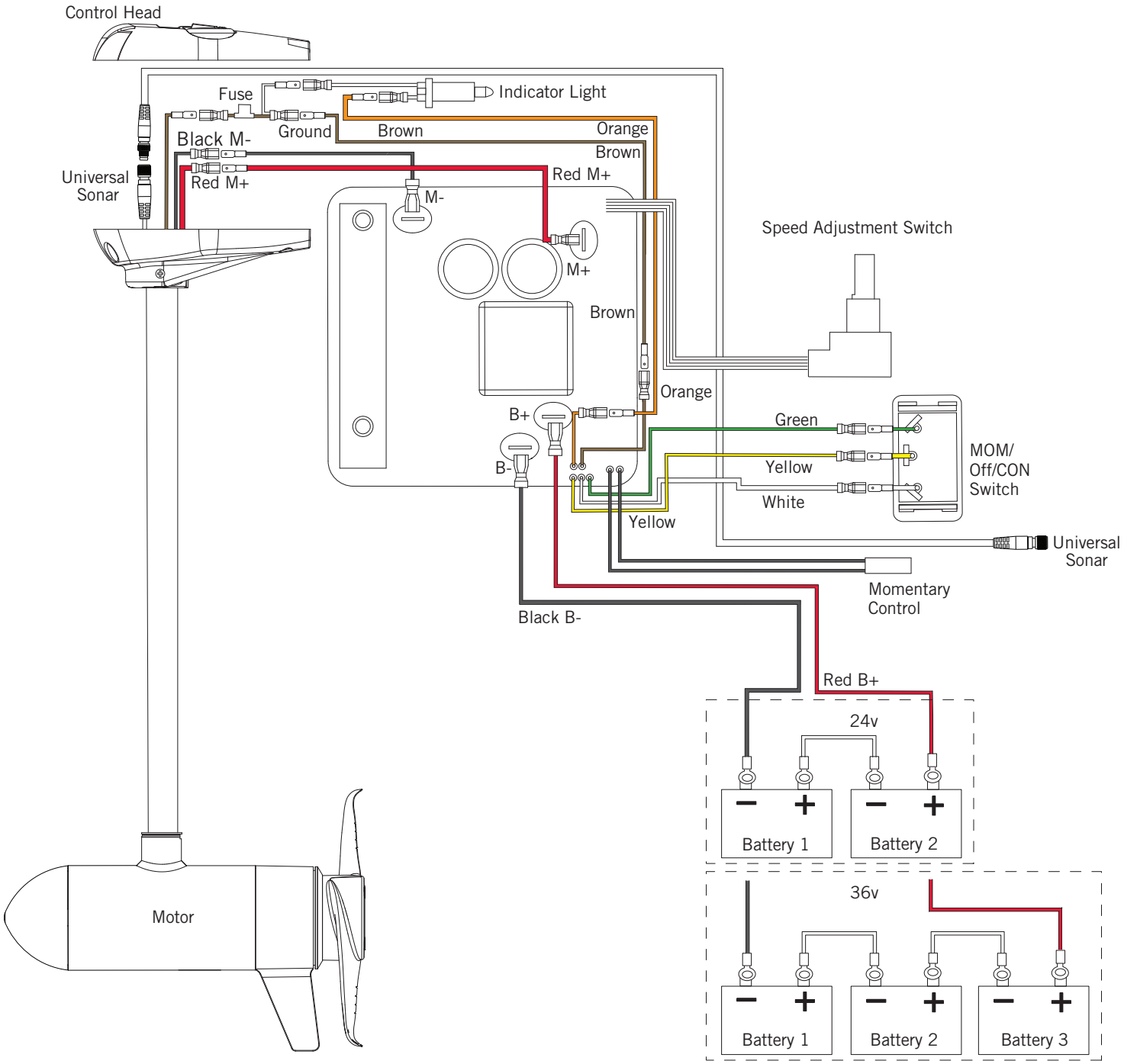
⚠ WARNING

- 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

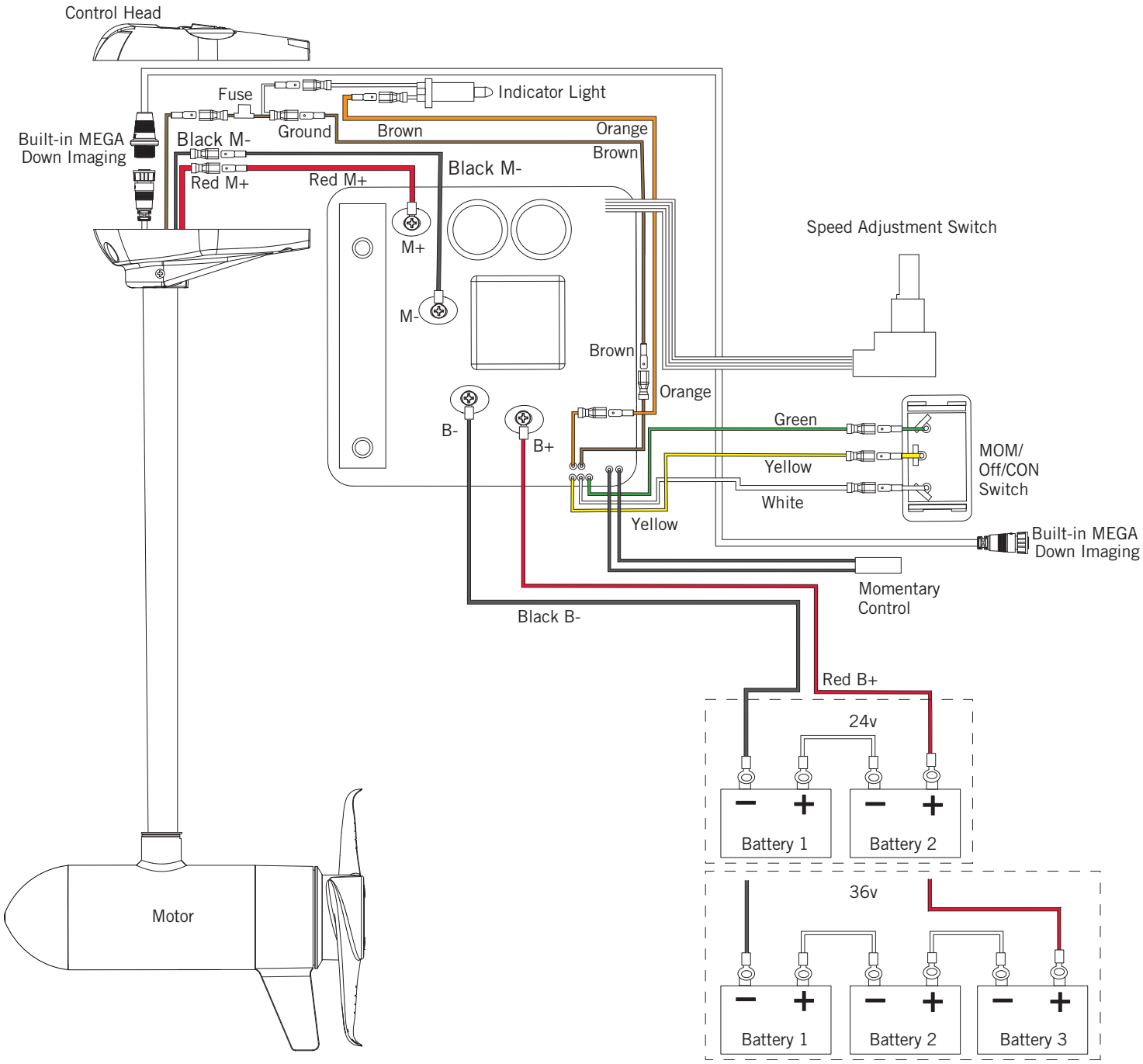
The following Motor Wiring Diagram applies to all Fortrex Foot Control models that do not come preinstalled with Built-in MEGA Down Imaging. Universal Sonar is an optional feature that may come factory installed.



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.

FORTREX

The following Motor Wiring Diagram applies to all Fortrex Foot Control models that come preinstalled with Built-in MEGA Down Imaging.

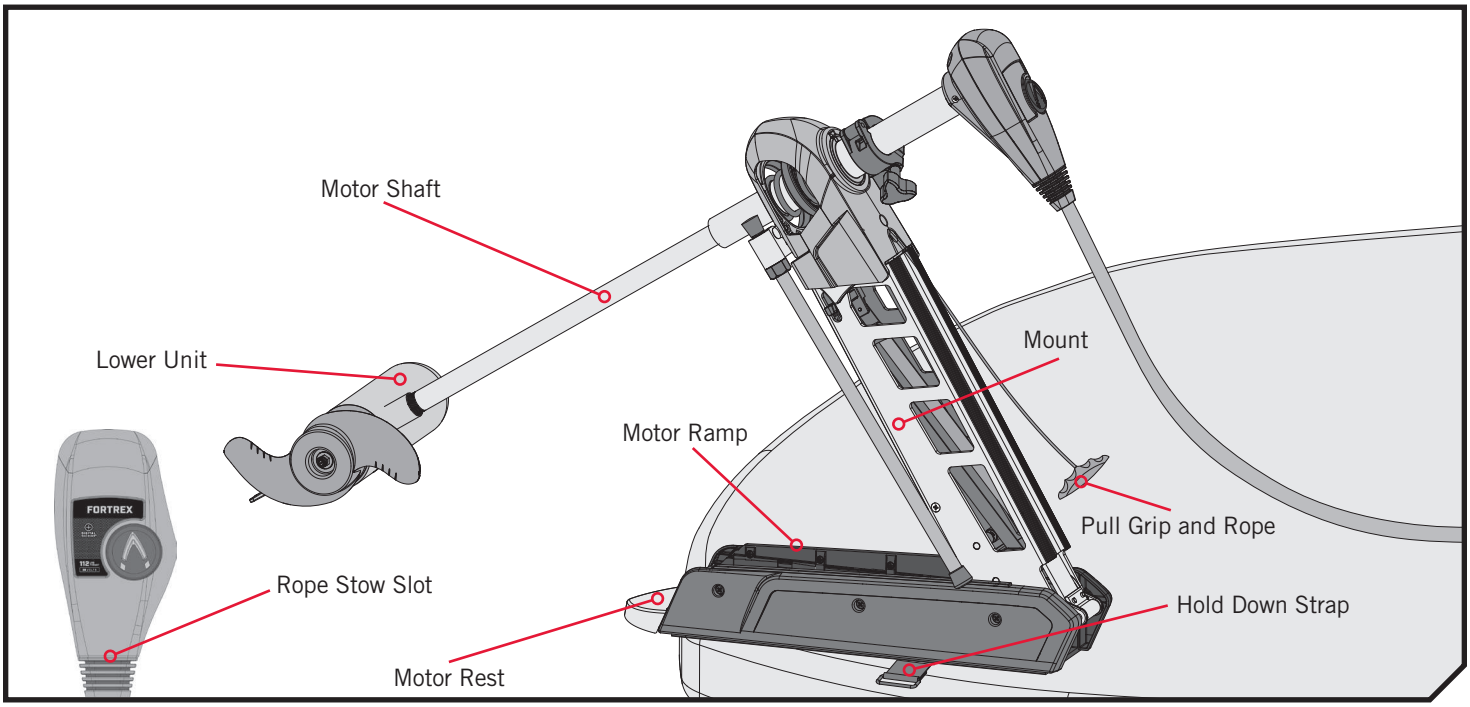


NOTICE: This is a multi-voltage diagram. Double-check your motor's voltage for proper connections. Over-Current Protection Devices are not shown in this illustration.

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

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 Bowguard. Always secure the Quick Release 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.

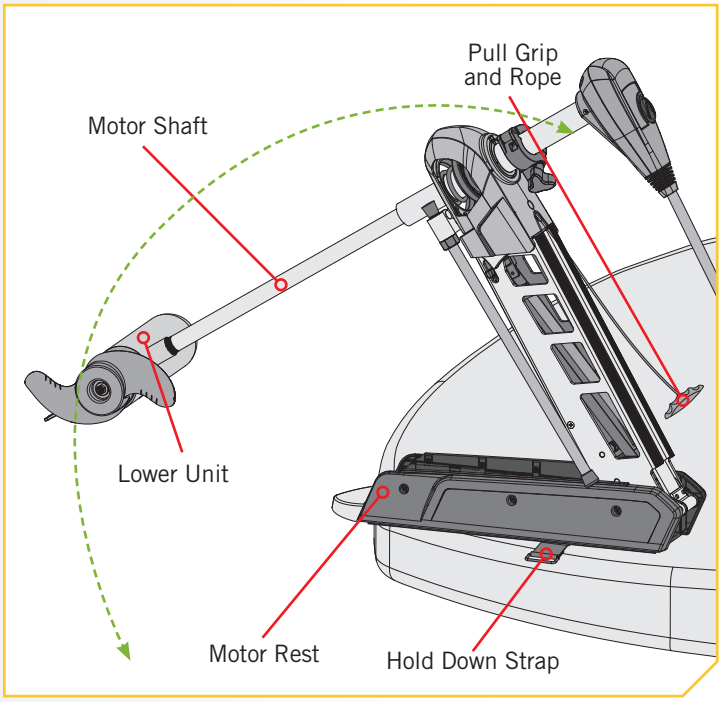
1

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 mechanisms 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.



Adjusting the Lower Unit for a Secure Stow

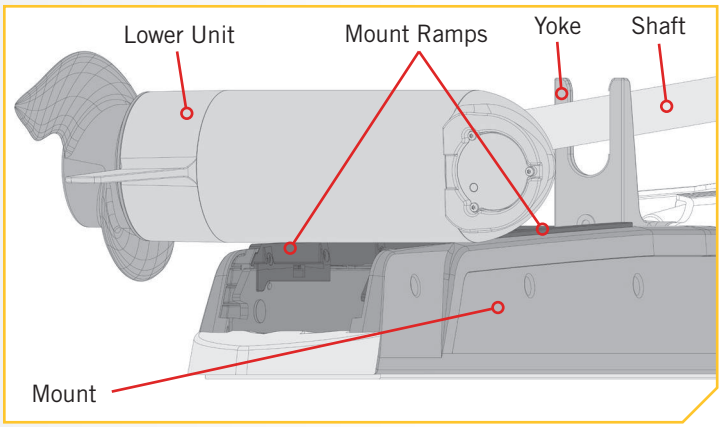
When the Motor is stowed, the Lower Unit should rest on the Mount Ramps just inside the Motor Rest on the Motor Mount. It is recommended to secure the motor using the following instructions to avoid damage to the motor and shaft from vibrations during transport.

1

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

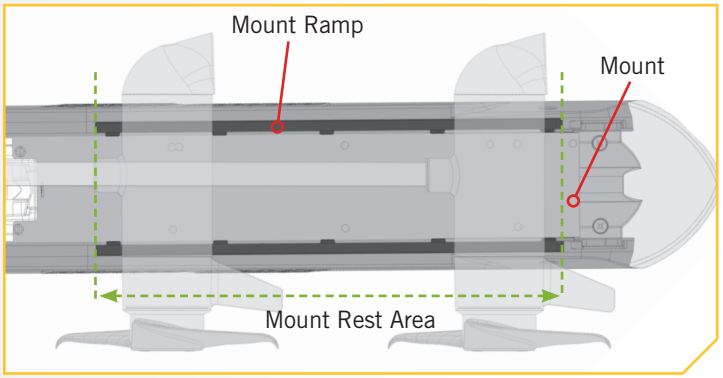
NOTICE: The correct positioning of the Lower Unit will place it directly on the Mount Ramps located on the Mount Rest.

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 Mount 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.



2

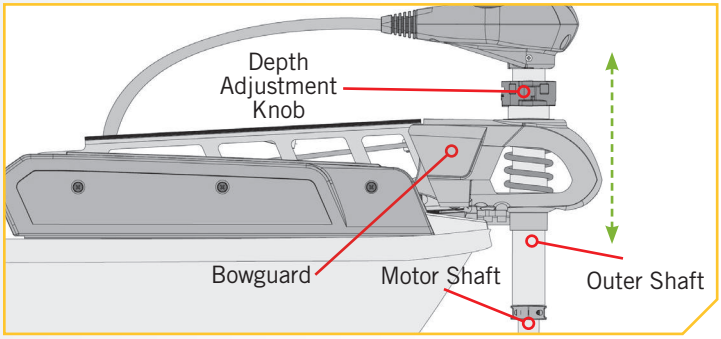
c. With the motor in the deployed position, firmly grasp the motor Shaft above the Bowguard.

d. Locate the Depth Adjustment Knob on the Shaft. Loosen the Depth Adjustment Knob, while holding the Shaft in place, 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 Mount 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.



NOTICE: Once the Lower Unit is resting in the proper position on the Mount Ramps, always secure it in place with the Hold-Down Strap.

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. With the motor deployed, firmly grasp the Outer Shaft or Control Head and hold it steady.

b. Loosen the Depth Adjustment Knob until the Shaft slides freely.

c. Raise or lower the motor to the desired depth.

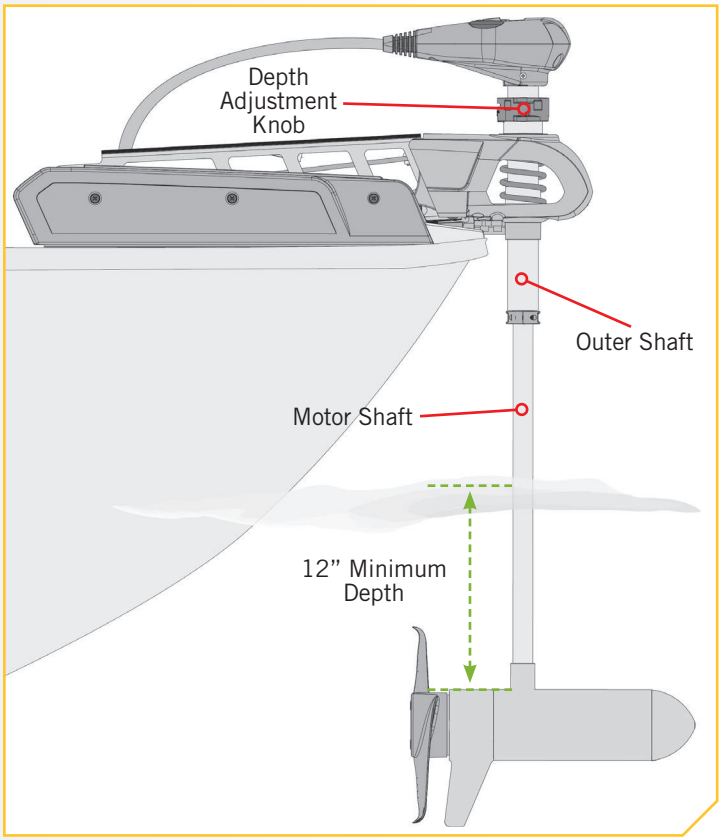
d. Turn the motor Control Head to the desired position.

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 motor head will create a pinch point if the Depth Adjustment Knob is loosened and the motor 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.



INSTALLING AN EXTERNAL TRANSDUCER

An external transducer is not included with your trolling motor. An external transducer can be installed onto motors that have Universal Sonar or motors that do not have a built in transducer. For more information on Universal Sonar, please visit minnkotamotors.com. Installing an external transducer is not recommended for motors with Built-in MEGA Down Imaging.

1

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.

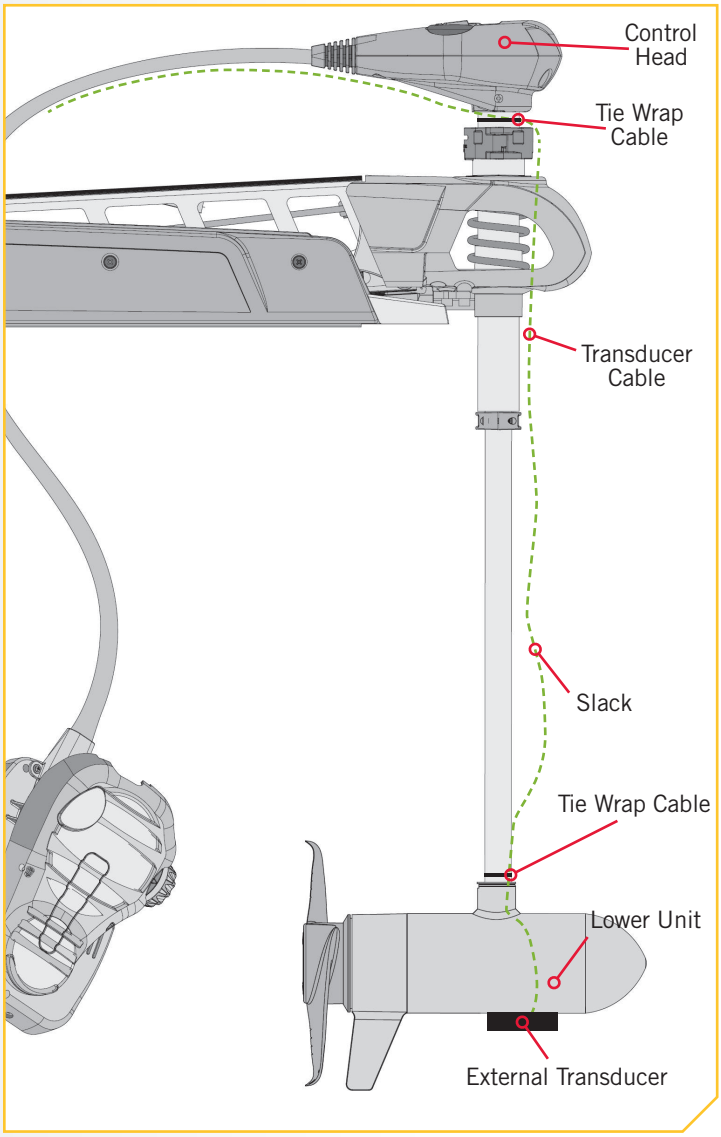
c. Use two tie wrap cables to secure the Transducer Cable to the Shaft just above the Lower Unit and just below the Control Head.

d. Run the Transducer Cable through the Coil Cord to the power supply.

⚠ 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.

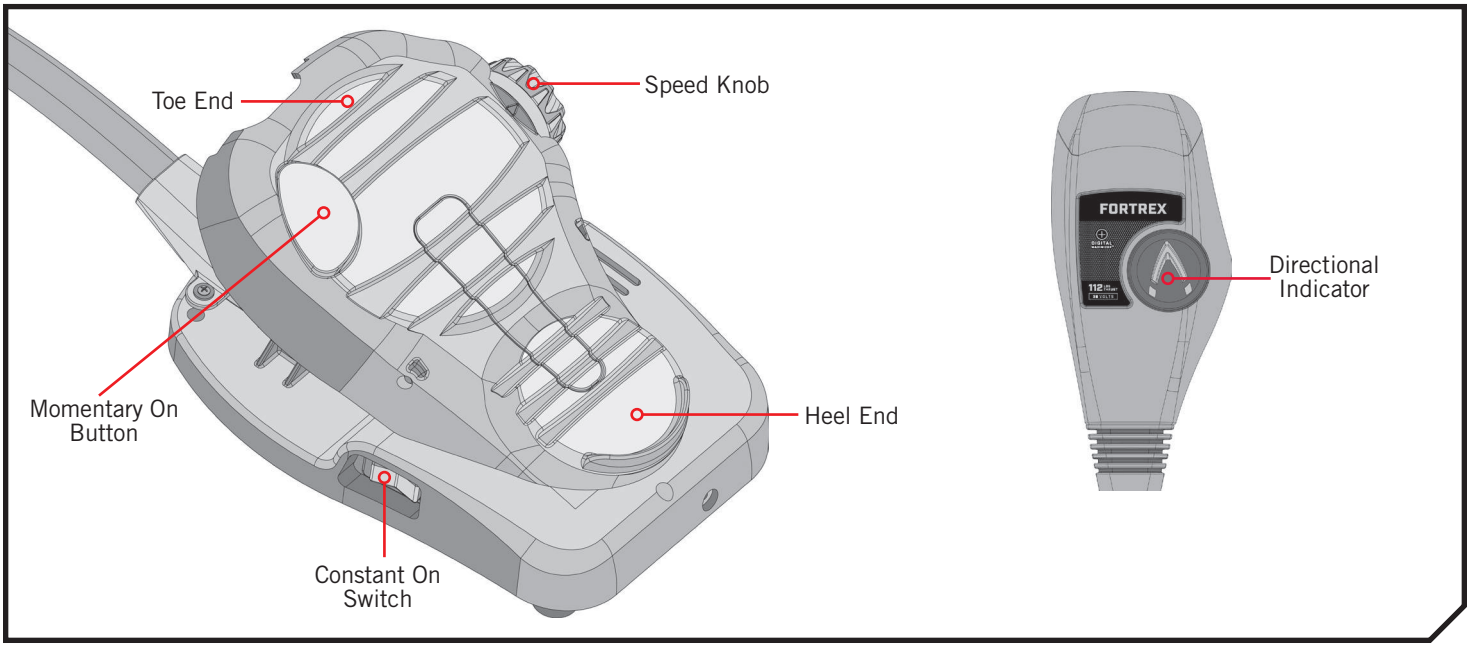
NOTICE: For additional details on cable routing see the "Routing Connection Cables" section of this manual.



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 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 propeller on in this mode. Removing downward force on the Momentary button will turn the propeller off.

To Operate the Motor in Constant Mode

To switch to Constant Mode, flip the side-mounted Constant On switch until the propeller starts. In Constant Mode, the propeller 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 heel end of the foot pedal down to turn left. The indicator on the motor head shows the direction of the motor. The motor will not maintain its own heading. You must keep your foot on the pedal to control steering during operation.

To Reverse the Motor

The motor always travels in the direction of the indicator. You can 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.

⚠ 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.

› Adjusting the Steering Cable

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

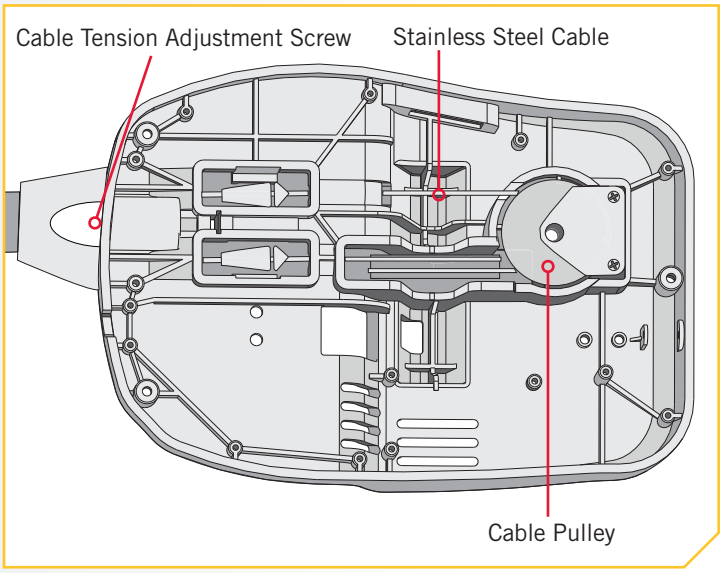
1

a. Adjust the tension of the cables by turning the cable tension adjustment screw (Phillips pan-head screw) located near the bottom of the foot pedal, just under the steering cable cover.

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 box or the pulley in the foot pedal.



SERVICE & MAINTENANCE

PROPELLER REPLACEMENT

TOOLS AND RESOURCES REQUIRED

- 9/16” Open End Wrench
- Flat Blade Screwdriver

INSTALLATION

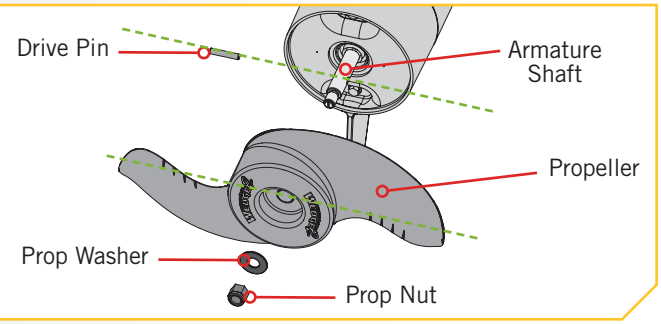
1

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

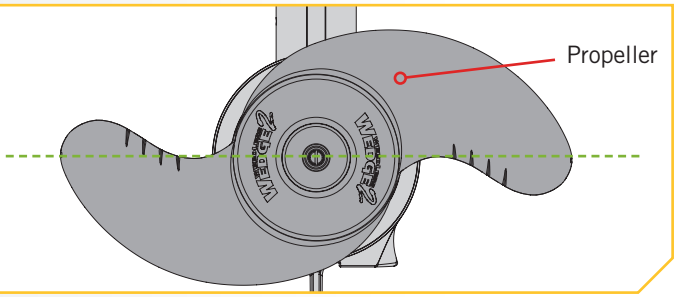
Disconnect the motor from the battery before beginning any prop work or maintenance.

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.



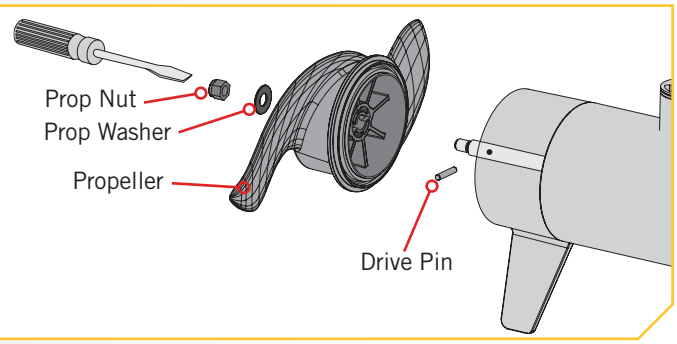
3

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



REMOVAL OF THE BOWGUARD

TOOLS AND RESOURCES REQUIRED

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

INSTALLATION

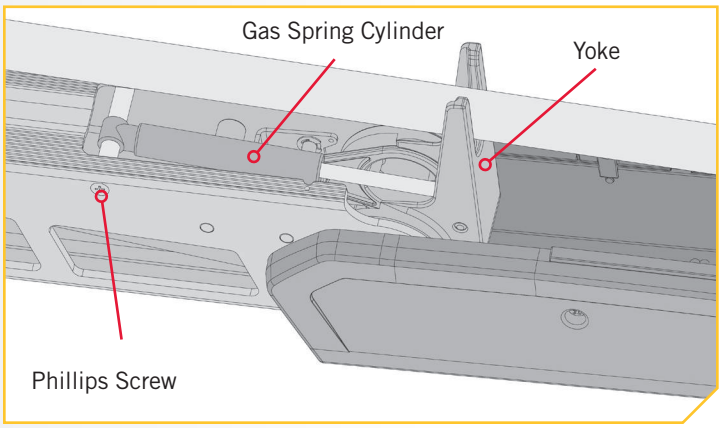
Disconnect the Gas Spring

1

⚠ 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.

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



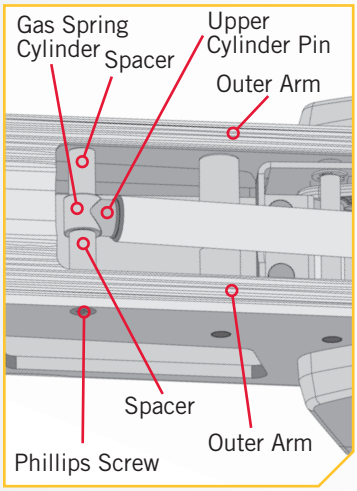
2

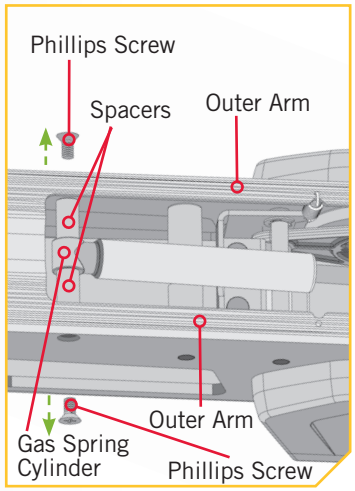
b. To disconnect the Gas Spring, locate the Upper Cylinder Pin. Two Phillips Screws hold the Upper Cylinder for the Gas Spring in place. Using two #3 Phillips screwdrivers, hold the screw at one end of the Upper Cylinder Pin in place.

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.



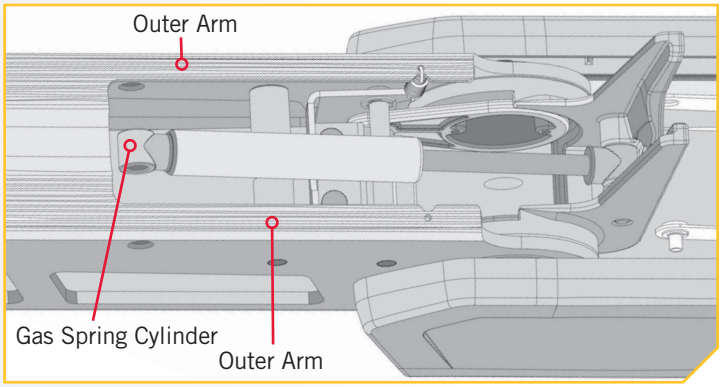


NOTICE: Use a #3 Philips screwdriver to remove the screws. They have a pre-applied thread locker. Not using the recommended tool can cause damage and prevent them from being removed.

2

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

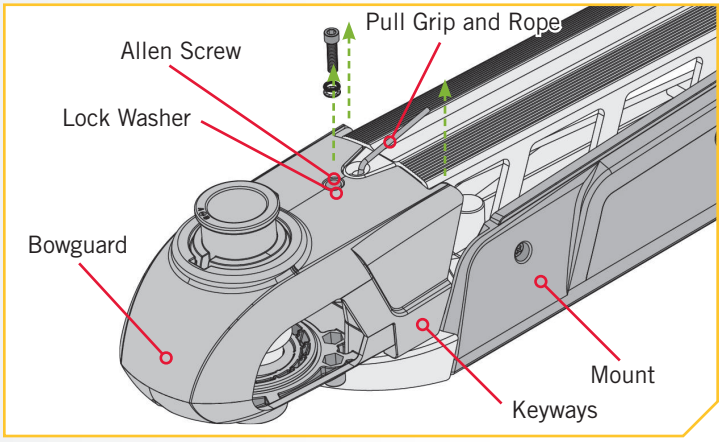
⚠ WARNING

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.

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 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

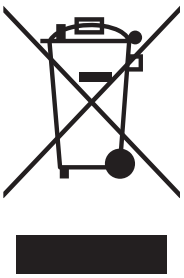
It is the intention of JOME to be a responsible corporate citizen, operating in compliance with known and applicable environmental regulations, and a good neighbor in the communities where we make or sell our products.

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.

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

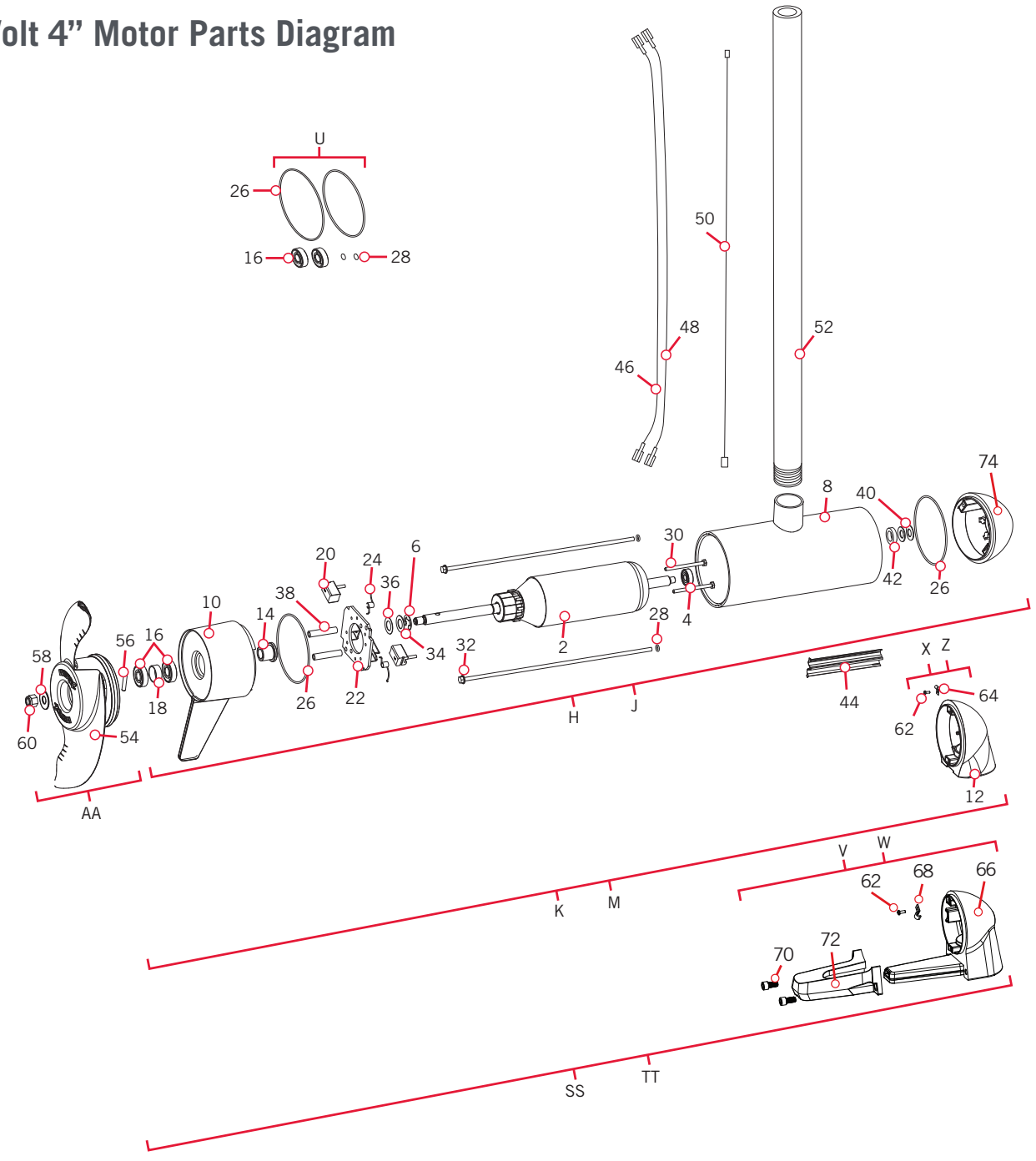
PARTS DIAGRAM & PARTS LIST

FORTREX - 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	Quantity
H	2417005	24V MOTOR 45” FW *80 LB* *24V* *45”* *4”*	1
J	2417006	MTR ASY 24V 4” VS FW 80 BS *24V* *4”*	1
K	2427005 ✚	24V MOTOR US2 45” *80 LB* *24V* *45”* *US2* *4”*	1
M	2427006 ✚	24V MOTOR US2 52” *80 LB* *24V* *52”* *US2* *4”*	1
U	2889460	SEAL & O-RING KIT *80 LB* *4”*	1
X	9421-244 ✚	TRANSDUCER ASSEMBLY *52”* *80 LB* *4”* *US2* *NON MDI*	1
Z	9421-288 ✚	TRANSDUCER ASSEMBLY *45”* *80 LB* *4.5”* *US2* *NON MDI*	1
AA	1378132	PROPELLER KIT WW2 *80 LB* 4”	1
SS	2437000 ➔	MTR ASY 24V 4” 80# CB FW *80LB* *45”* *MDI*	1
TT	2437001 ➔	MTR ASY 24V 4” 80# CB FW *80LB* *52”* *MDI*	1
V	2773007 ➔	FORTREX 80-52" MDI TRANSDUCER *MDI*	1
W	2773001 ➔	FORTREX 80-45" MDI TRANSDUCER *MDI*	1
Item	**Part #**	**Description**	**Quantity**
2	2-100-214	ARMATURE ASSEMBLY *80 LB*	1
4	140-010	BEARING *80 LB*	1
6	788-040	RETAINING RING	1
8	2-200-160	CENTER HOUSING ASSEMBLY *80 LB* *4”*	1
	2-200-130	CTR HSG ASY 4.0 CB FW MAG *80LB*	1
10	2-300-160	BRUSH END HSG ASY *80 LB* *4”*	1
12	✖ ✚	PLAIN END HOUSING ASSEMBLY STD *4”* *80 LB* *US2* • 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 *80 LB*	2
22	9-738-015	BRUSH PLATE ASSEMBLY *4”*	1
24	975-041	BRUSH SPRING *80 LB*	2
26	701-043	O-RING, MOTOR *80 LB* *4"*	2
28	701-009	O-RING, THRU-BOLT	2
30	830-027	SCREW, 10-32 X 2 *80 LB*	2
32	830-094	THRU-BOLT 12-24	2
34	990-051	WASHER, STEEL	1
36	990-052	WASHER, NYLATRON	1
38	973-025	SPACER, BRUSH PLATE *80 LB*	2
40	992-010	WASHER, BELLEVILLE *80 LB*	2
42	990-045	SPACER, THRUST *80 LB*	1

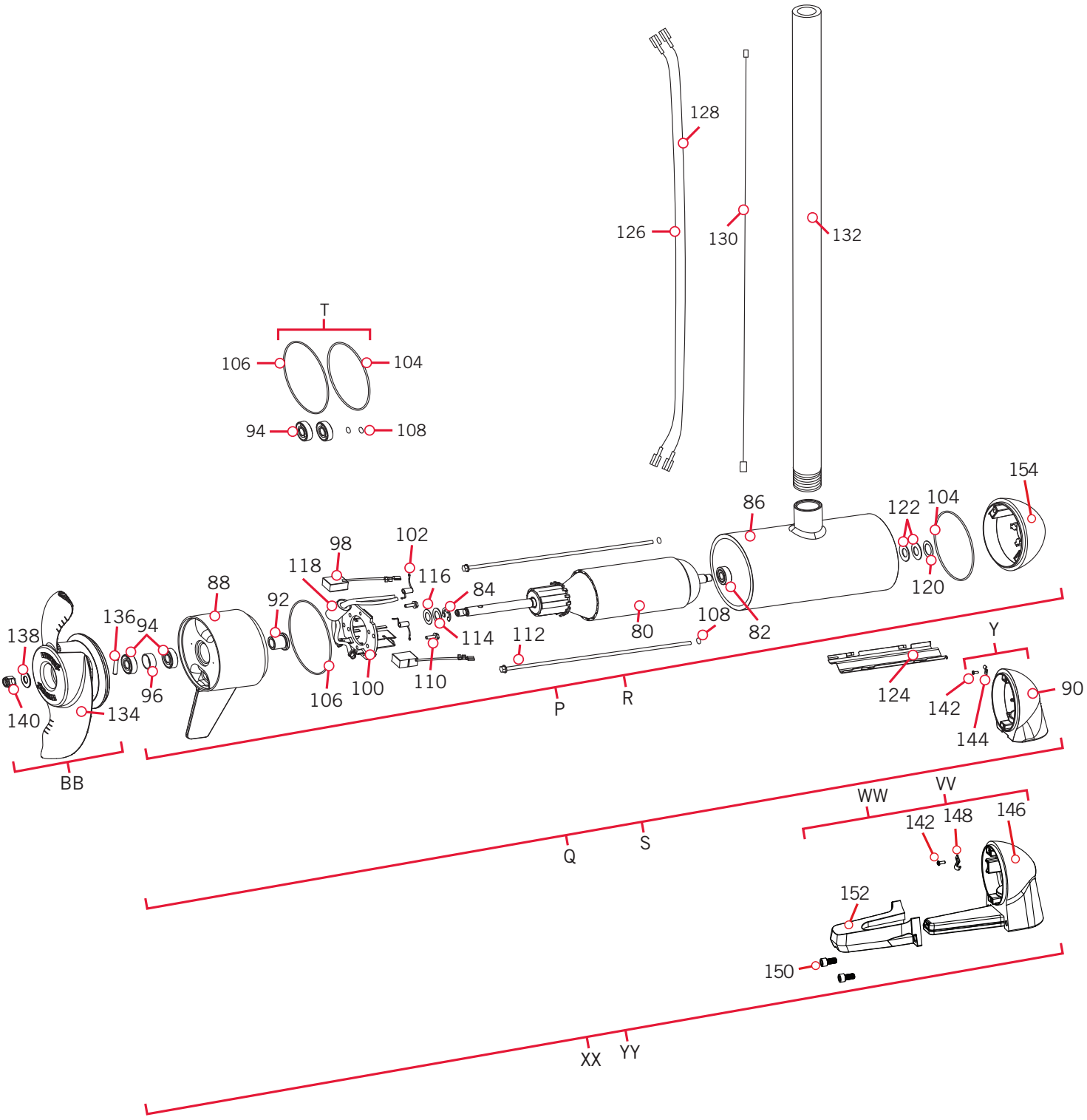
▲ *Not shown on Parts Diagram.*
✖ *This part is included in an assembly and cannot be ordered individually.*
✚ *Only available with models factory installed with Universal Sonar.*
➔ *Only available with models factory installed with Built-in MEGA Down Imaging.*
□ *The Bow-Mount Stabilizer Assembly is not required or included on the 80lb 45” Fortrex.*

PARTS DIAGRAM & PARTS LIST

Item	Part #	Description	Quantity
44	582-013	CLIP, RETAINING, SHORT, US2 ONLY *80 LB*	1
46	640-015	LEADWIRE, BLACK *80 LB* *45”* *4”* *US2* *NON US2*	1
	640-016	LEADWIRE, BLK AWG 56 1/2 XLP *80LB* *45”* *MDI*	1
	640-017	LEADWIRE, BLACK *80 LB* *52”* *4”* *US2*	1
48	640-119	LEADWIRE, RED *80 LB* *45”* *US2* *NON US2*	1
	640-123	LEADWIRE, RED 10 AWG 64 XLP *4”* *52”* *80 LB* *US2*	1
	640-121	LEADWIRE, RED *80 LB* *52”* *4”* *US2*	1
50	640-315	BONDING WIRE, BROWN 45” *45”*	1
	640-316	BONDING WIRE, BROWN 52” *52”*	1
52	2032003	TUBE 45”	1
	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
▲	✖	TRANSDUCER ASSY 67” US2 W/T *45”* *SEE Z*	1
	✖	TRANSDUCER ASSY 73” US2 W/T *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	3
64	230-038 ✚	CABLE CLAMP	1
66	✖ ➔	PLAIN END HOUSING US2 52” *80 LB* *4”* *MDI* *SEE V OR W*	1
68	230-039 ➔	CABLE CLAMP, 1/4" STEEL	1
70	830-110 ➔	SCREW-5-16-18 X 5/8 SHCS SS	2
72	792-001 ➔	GUARD, TRANSDUCER, PNT 4.0 DI *80 LB* *4"*	1
74	421-276	HSG PLN END 4" PAINTED FW BS *80 LB*	1

▲ *Not shown on Parts Diagram.*
✖ *This part is included in an assembly and cannot be ordered individually.*
✚ *Only available with models factory installed with Universal Sonar.*
➔ *Only available with models factory installed with Built-in MEGA Down Imaging.*
□ *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	Quantity
P	2317081	36V MOTOR 52” FW *112 LB* *36V* *52”* *4.5”*	1
Q	2327081 ✚	36V MOTOR US2 52” *112 LB* *36V* *US2* *52”* *4.5”*	1
R	2317080 ✚	36V MOTOR 45” *112 LB* *36V* *45”* *4.5”*	1
S	2327080 ✚	36V MOTOR US2 45” *112 LB* *36V* *US2* *45”* *4.5”*	1
T	2881450	SEAL & O-RING KIT *4.5”* *112 LB*	1
Y	9421-245 ✚	TRANSDUCER ASSEMBLY *UP TO 52”* *112 LB* *4.5”* *US2* *NON MDI*	1
BB	1378160	PROPELLER KIT WW2 *112 LB* *4.5”*	1
XX	2437011 ➔	MTR ASY 36V 4.5" 112# MDI FW *MDI* *52"*	1
YY	2437010 ➔	MTR ASY 36V 4.5" 112# MDI FW *MDI* *45"*	1
VV	2773002 ➔	FORTREX 112-52" MDI TRANSDUCER *MDI* *52"*	1
WW	2773008 ➔	FORTREX 112-45" MDI TRANSDUCER *MDI* *45"*	1
Item	**Part #**	**Description**	**Quantity**
80	2-100-245	ARMATURE ASSEMBLY *112 LB*	1
82	140-014	BEARING *112 LB*	1
84	788-040	RETAINING RING	1
86	2-200-240	CENTER HOUSING ASSEMBLY *4.5”* *112 LB*	1
88	2-300-155	BRUSH END HSG ASY 4.5” FW *4.5”* *112 LB*	1
90	✖ ✚	PLAIN END HOUSING ASSEMBLY STD *4.5”* *112 LB* *US2* *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 *112 LB*	2
100	9-738-015	BRUSH PLATE ASSEMBLY *4.5”*	1
102	975-045	BRUSH SPRING *112 LB*	2
104	701-098	O-RING, PLAIN END *4.5”* *112 LB*	1
106	701-103	O-RING, 103 MM X 3.00 MM, 70 BUNA *4.5”*	1
108	701-009	O-RING, THRU-BOLT	2
110	2053410	SCREW, 8-32 X 1/2 *112 LB*	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 *112 LB*	2
124	582-016	CLIP, RETAINING *112 LB*	1

▲ *Not shown on Parts Diagram.*
✖ *This part is included in an assembly and cannot be ordered individually.*
✚ *Only available with models factory installed with Universal Sonar.*
➔ *Only available with models factory installed with Built-in MEGA Down Imaging.*
□ *The Bow-Mount Stabilizer Assembly is not required or included on the 80lb 45” Fortrex.*

Item	Part #	Description	Quantity
126	640-040	LEADWIRE, BLACK 45” *112 LB* *4.5”* *45”* *US2* *NON US2*	1
	640-043	LEADWIRE, BLACK 52” *112 LB* *52”* *4.5”* *US2* *NON US2*	1
128	640-140	LEADWIRE, RED 45” *112 LB* *4.5”* *45* *US2* *NON US2*	1
	640-143	LEADWIRE, RED 52” *112 LB* *52”* *4.5”* *US2* *NON US2*	1
130	640-315	BONDING WIRE, BROWN 45” *45”*	1
	640-316	BONDING WIRE, BROWN 52” *52”*	1
132	2032003	TUBE 45”	1
	2032006	TUBE 52”	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
▲	✖	TRANSDUCER ASSY US2 W/T *45”*	1
	✖	TRANSDUCER ASSY US2 W/T *52”*	1
142	2302104 ✚	SCREW - #6-20 X 3/8 THD CUTS, RI	1
▲	✖	SCREW - #6-20 X 1/2 THD CUTS, RI	3
144	230-038	CABLE CLAMP	1
146	✖ ➔	PLAIN END HOUSING US2 52” *4.5”* *112 LB* *MDI* *SEE WW OR VV*	1
148	230-039 ➔	CABLE CLAMP, 1/4" STEEL	1
150	830-110 ➔	SCREW-5-16-18 X 5/8 SHCS SS	2
152	792-005 ➔	GUARD, TRANSDUCER, PNT 4.5 DI *112 LB* *4.5"*	1
154	421-240	PLAIN END HSG 4.5" PNTD FW 4.5" LOWER UNIT *112 LB*	1

▲ *Not shown on Parts Diagram.*
✖ *This part is included in an assembly and cannot be ordered individually.*
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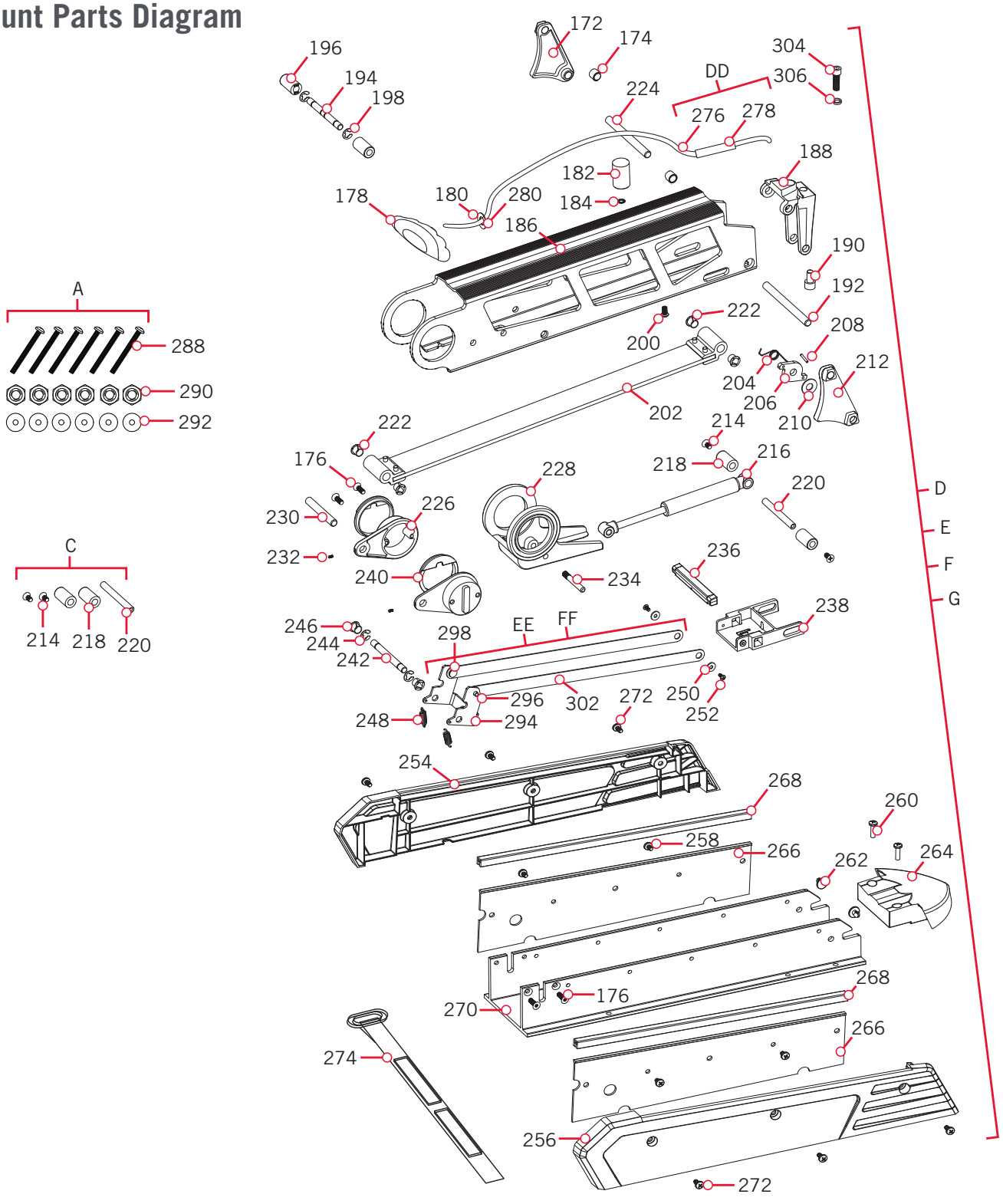
➔ *Only available with models factory installed with Built-in MEGA Down Imaging.*
□ *The Bow-Mount Stabilizer Assembly is not required or included on the 80lb 45” Fortrex.*

FORTREX MOUNT

Mount Parts Diagram



Mount Parts List

Assembly	Part #	Description	Quantity
D	2991650	MNT FW 80# 45”, 112#/HC 52” *80 LB 45”* *112 LB 52”*	1
E	2991652	MNT ASM FTX FW 80# 52/62” *80 LB 52”* *80 LB 62”*	1
F	2991653	MNT ASM FTX FW 112# 45” *112 LB 45”*	1
G	2991654	MNT ASM FTX FW 112# 52” *112 LB 52”*	1
DD	2771601	ROPE ASSEMBLY	1
EE	2773600	LATCH STRAP ASSEMBLY, SHORT	1
FF	2773601	LATCH STRAP ASSEMBLY, LONG	1
A	2994887	MOUNTING HARDWARE BAG ASSY	1
C	2991912	BAG, ASSY. FORTREX MOUNT HDW	1
Item	Part #	Description	Quantity
172	2280800	LINK, BOWGUARD MOUNT, LEFT	1
	2990810	END LINK, LEFT, MACHINED *112 LB 62" ONLY*	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
186	2284202	OUTER ARM, SHORT	1
	2284212	OUTER ARM, LONG	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	1
	2993819	INNER ARM ASSEMBLY, SHORT	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
	2990815	END LINK, RIGHT, MACHINED *112 LB 62" ONLY*	1

▲ *Not shown on Parts Diagram.*
✖ *This part is included in an assembly and cannot be ordered individually.*
✚ *Only available with models factory installed with Universal Sonar.*
➔ *Only available with models factory installed with Built-in MEGA Down Imaging.*
◘ *The Bow-Mount Stabilizer Assembly is not required or included on the 80lb 45” Fortrex.*

PARTS DIAGRAM & PARTS LIST

Item	Part #	Description	Quantity
214	2283410	SCREW 1/4-20 X 1/2 PFH	2
216	2288403	GAS SPRING (CYLINDER) *ASSEMBLY D* *80# 45"*	1
	2288404	GAS SPRING (CYLINDER) *ASSEMBLY E* *80# 52"62"*	1
	2288405	GAS SPRING (CYLINDER) *ASSEMBLY F* *ASSEMBLY G* *112#*	1
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, SHOCK MOUNT	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
	2283616	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
254	2283937	SIDEPLATE, LEFT, SHORT, FW	1
	2283947	SIDEPLATE, LEFT, LONG, FW	1
256	2283932	SIDEPLATE, RIGHT, SHORT, FW	1
	2283942	SIDEPLATE, RIGHT, LONG, FW	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 (SUB)	2
270	2281903	BASE-EXTRUSION, SHORT, MACH	1
	2281913	BASE-EXTRUSION, LONG, MACH	1
272	2323405	SCREW 1/4-20 X 1/2	8
274	2773806	STRAP HOLD DOWN	1

▲ *Not shown on Parts Diagram.*
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➔ *Only available with models factory installed with Built-in MEGA Down Imaging.*
◻ *The Bow-Mount Stabilizer Assembly is not required or included on the 80lb 45" Fortrex.*

Item	Part #	Description	Quantity
276	✖	ROPE, MAXXUW MNT	1
278	✖	SHRINK TUBE .252 FD, ADHES	1
280	✖	WASHER - EYE SHAFT (.562 OD) SS	1
▲	2287100	MANUAL FORTREX FC FW	1
▲	2217110	MANUAL - UWV. SONAR	1
▲	2284912	PARTS LIST, FRTRX 112/FC 52”	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
294	✖	BRACKET, LATCH *SEE EE OR FF*	1
296	2288610	RIVET, SHLDR 5/16” X .159” SS	2
298	2280006	BEARING, NYLINER 5/16”	2
▲	2284911	PARTS LIST, FORTREX 112 FC 45”	1
302	✖	LATCH, STRAP, SHORT *SEE EE*	2
	✖	LATCH, STRAP, LONG *SEE FF*	2
304	2283414	SCREW 5/16-18 SHCS, RIE	1
306	2281700	WASHER 5/16 LOCK	1

▲ *Not shown on Parts Diagram.*
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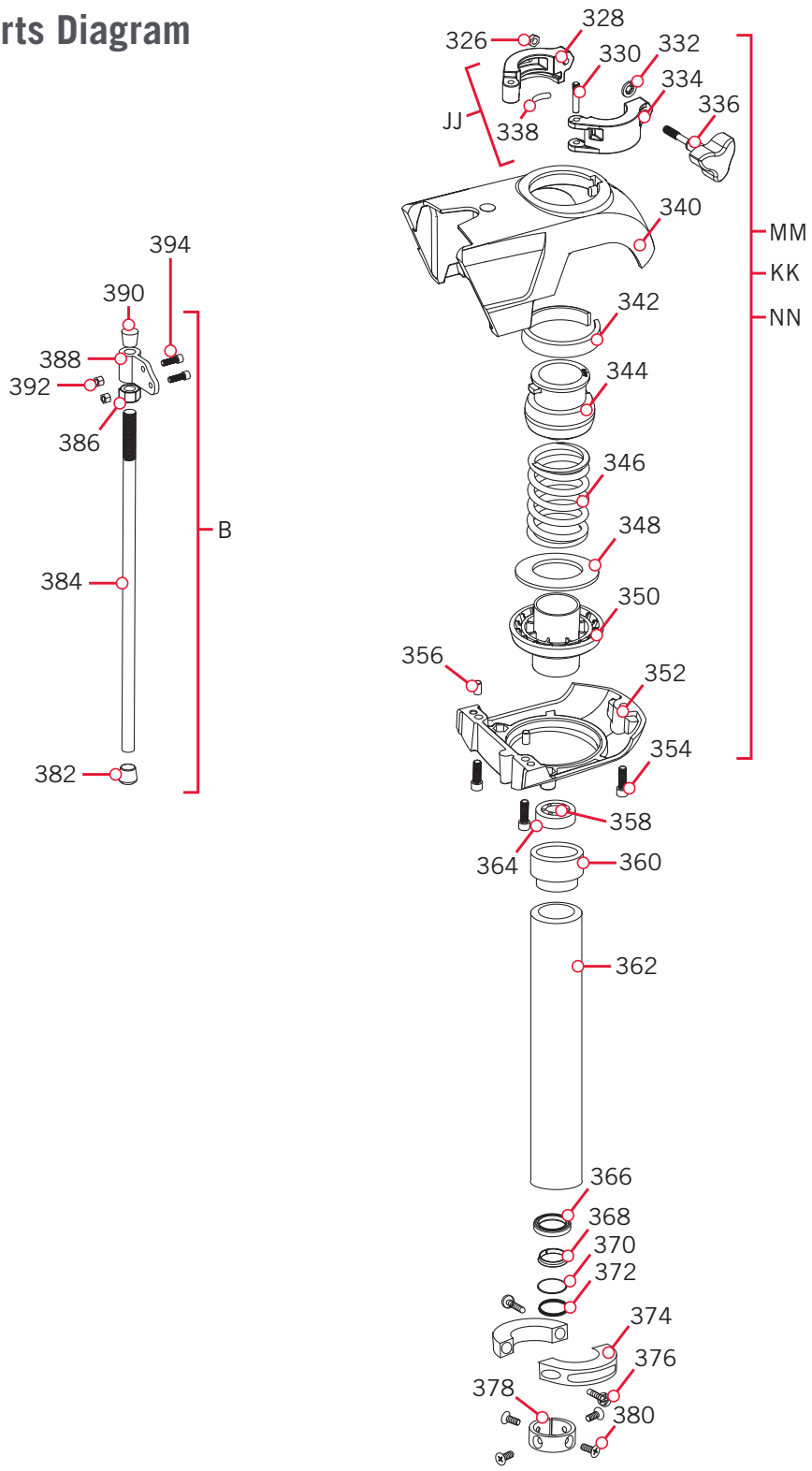
➔ *Only available with models factory installed with Built-in MEGA Down Imaging.*
□ *The Bow-Mount Stabilizer Assembly is not required or included on the 80lb 45” Fortrex.*

FORTREX BOWGUARD

Bowguard Parts Diagram



Bowguard Parts List

Assembly	Part #	Description	Quantity
JJ	2991550	CLAMP COLLAR ASSEMBLY	1
KK	2991753	BOWGUARD ASSEMBLY *112 LB 52”*	1
MM	2991754	BOWGUARD ASSEMBLY *80 LB 52”* *80 LB 45”*	1
NN	2991755	BOWGUARD ASSEMBLY *112 LB 45”* *80 LB 62”*	1
B	2991925 □	BRACKET STABILIZER ASSEMBLY	1
Item	**Part #**	**Description**	**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
	2282704	SPRING, BOWGUARD 112	1
348	2281525	SPACER, SPRING 62” ONLY	1
350	2281520	SPRING SLEEVE, LOWER *80 LB 52”* *80 LB 45”*	1
	2071535	SPRING SLEEVE, LOWER *80 LB 62”* *112 LB 45”*	1
	2281540	SPRING SLEEVE, LOWER *112 LB 52”*	1
352	2991728	BRACKET, BOTTOM *80 LB 52”* *80 LB 45”*	1
	2991730	BRACKET, BOTTOM *112 LB 52”* *112 LB 45”* *80 LB 62”*	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
	2772086	TUBE W/BEARING RACE 24” *80 LB 52”*	1
	2772092	TUBE W/BEARING RACE 24”*112 LB 52”*	1
	2772088	TUBE W/BEARING RACE 28.5” *80 LB 62”*	1
364	2267307	BUSHING OUTER TUBE	1
366	2266116	BEARING, CARTRIDGE	1
368	2266001	BEARING, SPLIT RING	1
370	2284600	O-RING	1

▲ *Not shown on Parts Diagram.*
✖ *This part is included in an assembly and cannot be ordered individually.*
✚ *Only available with models factory installed with Universal Sonar.*
➔ *Only available with models factory installed with Built-in MEGA Down Imaging.*
□ *The Bow-Mount Stabilizer Assembly is not required or included on the 80lb 45” Fortrex.*

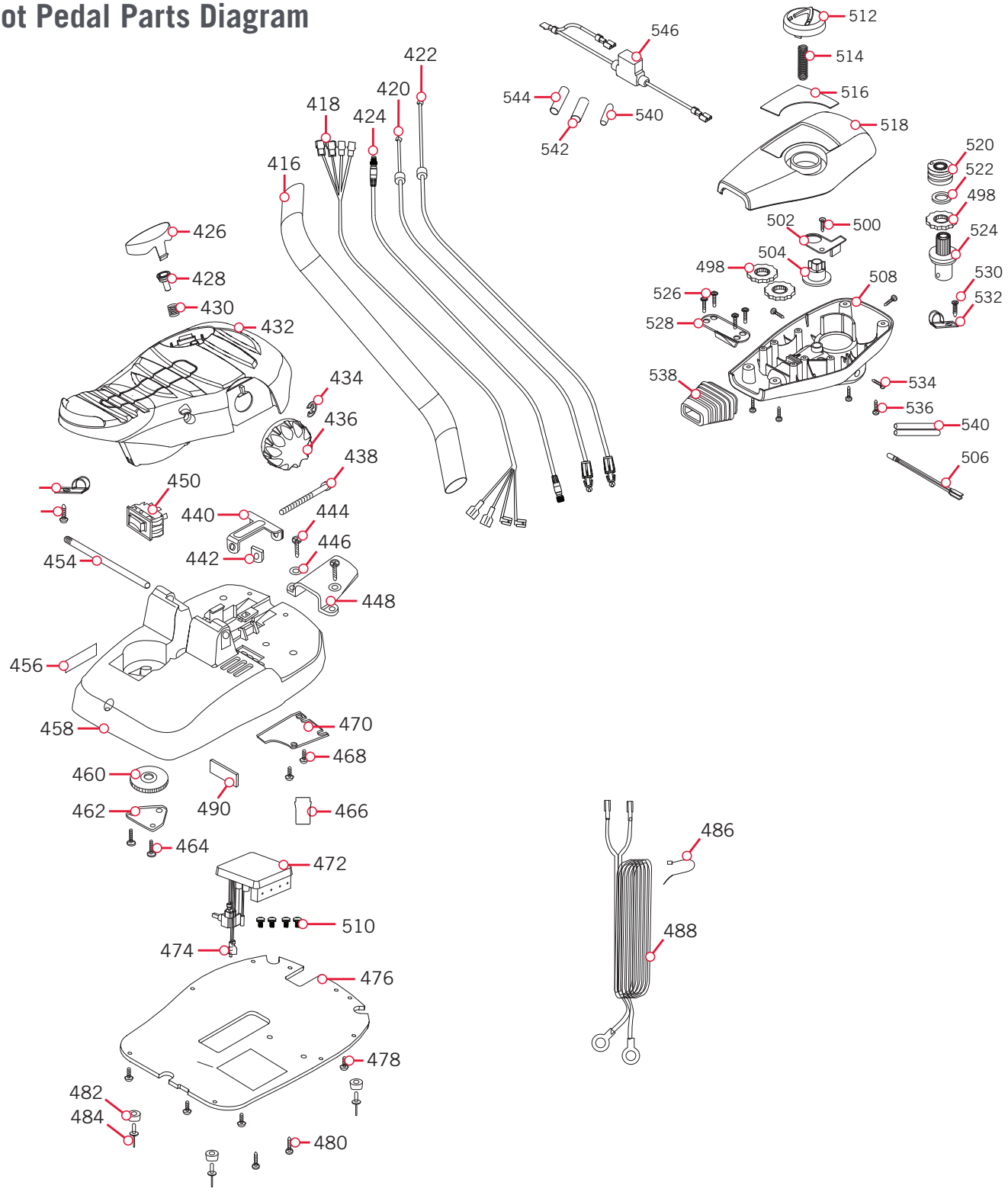
PARTS DIAGRAM & PARTS LIST

Item	Part #	Description	Quantity
372	2281706	WASHER-NYLATRON	1
374	2261622	COLLAR HALF	2
376	2263453	SCREW, 1/4-20 X 1 SHCS	2
378	2071560	COLLAR, TUBE	1
380	2223468	SCREW 8-32 X 7/16 FLT HD	4
382	2265100	BUMPER (CRUTCH TIP)	1
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.*
✚ *Only available with models factory installed with Universal Sonar.*
➔ *Only available with models factory installed with Built-in MEGA Down Imaging.*
◘ *The Bow-Mount Stabilizer Assembly is not required or included on the 80lb 45" Fortrex.*

FORTREX FOOT PEDAL

Foot Pedal Parts Diagram



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	2211410 ✚	CABLE EXTENSION, US2 175” *US2 ONLY*	1
	490507-2 ➔	CABLE, ADP-INT MDI 14 M12-174" *PRE-INSTALLED*	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	2992104	FOOT PEDAL BASE	1
	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 *NON MDI* *NON US2* *US2*	1
	2264066	CONTROL BOARD MAX 24/36 *MDI*	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

▲ *Not shown on Parts Diagram.*
✖ *This part is included in an assembly and cannot be ordered individually.*
✚ *Only available with models factory installed with Universal Sonar.*
➔ *Only available with models factory installed with Built-in MEGA Down Imaging.*
◻ *The Bow-Mount Stabilizer Assembly is not required or included on the 80lb 45” Fortrex.*

Item	Part #	Description	Quantity
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
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
516	2285621	DECAL-COVER 80#, FW *80 LB*	1
	2285623	DECAL, COVER 112#, FW *112 LB*	1
518	2280202	COVER, CONTROL BOX	1
520	2232360	PULLEY, CABLE DRUM	1
	2232361	PULLEY, CABLE DRUM *MDI*	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	8-18 X 5/8	1
532	2263201	CLAMP, WIRE HARNESS	1
534	2053414	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

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

RECOMMENDED ACCESSORIES

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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.

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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.

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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

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MORE CONTROL OPTIONS

- Control Panel
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- Mobile App
- Wireless Foot Switch
- Humminbird® Connectivity
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MINN KOTA ACCESSORIES

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- 60-Amp Circuit Breaker
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- Extension Handles
- Battery Connectors
- Battery Boxes
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Part #2287100 ECN 39714 Rev W 12/18