

KAYAK TERROVA

BOW-MOUNT TROLLING MOTOR

Owner's Manual

INTRODUCTION

THANK YOU

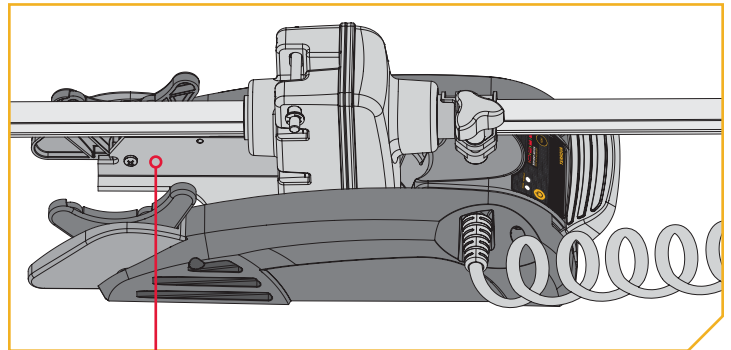
Thank you for choosing Minn Kota. We believe that you should spend more time fishing and less time positioning your watercraft. That's why we build the smartest, toughest, most intuitive trolling motors on the water. Every aspect of a Minn Kota trolling motor is thought out and rethought until it's good 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

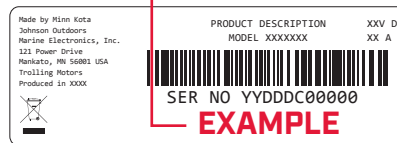
Remember to keep your receipt and immediately register your trolling motor on our website at minnkota.johnsonoutdoors.com/us/register.

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.



NOTICE: The serial number on your Kayak Terrova is located inside the mount below the motor rests.



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 minnkota.johnsonoutdoors.com. Please include proof of purchase, serial number and purchase date for warranty service with any of the above options.

Made for iPhone® 11 and iPhone X

For updated iOS, Humminbird® and Minn Kota® compatibility, visit minnkota.johnsonoutdoors.com



Use of the Made for Apple badge means that an accessory has been designed to connect specifically to the Apple product(s) identified in the badge, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. iPhone is a trademark of Apple Inc., registered in the U.S. and other countries. The trademark "iPhone" is used in Japan with a license from Airphone K.K.

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TABLE OF CONTENTS

SAFETY CONSIDERATIONS	4
WARRANTY	6
FEATURES	7
INSTALLATION	8
Installing the Kayak Terrova	9
Advanced GPS Navigation.....	14
Installing the Prop	19
BATTERY & WIRING INSTALLATION	21
Boat Rigging & Product Installation	21
Selecting the Correct Batteries.....	21
Additional Considerations	22
Connecting the Batteries.....	22
ONE-BOAT NETWORK	23
Optimizing the Performance of the Kayak Terrova with the One-Boat Network App.....	23
Boat Scale	23
MOTOR WIRING DIAGRAM	25
USING & ADJUSTING THE MOTOR	26
Mount Features.....	26
Stowing and Deploying the Motor	27
Push-to-Test Battery Meter	27
Motor Adjustments.....	28
Adjusting the Depth of the Motor.....	28
Adjusting the Lower Unit for a Secure Stow.....	29
Installing an External Transducer.....	30
SERVICE & MAINTENANCE	31
Prop Replacement	31
General Maintenance.....	32
Troubleshooting	32
For Further Troubleshooting and Repair.....	33
COMPLIANCE STATEMENTS	34
PARTS DIAGRAM & PARTS LIST	36

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

Trolling motor must only be used with kayaks that have been manufactured to accommodate a trolling motor. Consult your kayak manufacturer or dealer for proper use and application.

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.

CAUTION

This unit uses a magnetic compass to detect direction of travel. The compass can be adversely affected by magnets or large, ferrous metal objects near (within 24" of) trolling motor control head. Obstructions on the propeller may cause excessive vibration of the motor head. This vibration can cause the compass to wander and erratic steering to occur. Clear the obstruction to return the motor to normal operation.



! 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.

! WARNING

- **INGESTION HAZARD:** This product contains a button cell or coin battery.
- **DEATH** or serious injury can occur if ingested.
- A swallowed button cell or coin battery can cause **Internal Chemical Burns** in as little as **2 hours**.
- **KEEP** new and used batteries **OUT OF REACH** of **CHILDREN**
- **Seek immediate medical attention** if a battery is suspected to be swallowed or inserted inside any part of the body.



1. This product contains a button/coin cell battery. Heed all safety considerations:
 - a) Remove and immediately recycle or dispose of used batteries according to local regulations and keep away from children. Do NOT dispose of batteries in household trash or incinerate.
 - b) Even used batteries may cause severe injury or death.
 - c) Call a local poison control center for treatment information.
 - d) The compatible battery type is CR2450.
 - e) The nominal battery voltage is 3.0 VDC.
 - f) Non-rechargeable batteries are not to be recharged.
 - g) Do not force discharge, recharge, disassemble, heat above (manufacturer's specified temperature rating of 70 °C) or incinerate. Doing so may result in injury due to venting, leakage or explosion resulting in chemical burns.
2. This product contains a replaceable button/coin cell battery. Heed all safety considerations:
 - a) Ensure the batteries are installed correctly according to polarity (+ and -).
 - b) Do not mix old and new batteries, different brands or types of batteries, such as alkaline, carbon-zinc, or rechargeable batteries.
 - c) Remove and immediately recycle or dispose of batteries from equipment not used for an extended period of time according to local regulations.
 - d) Always completely secure the battery compartment. If the battery compartment does not close securely, stop using the product, remove the batteries, and keep them away from children.

WARRANTY

WARRANTY ON MINN KOTA FRESHWATER TROLLING MOTORS

Minn Kota Freshwater Trolling Motors - Limited Lifetime Warranty On Composite Shaft And Limited Two-Year Warranty On The Entire Product

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 the 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 and 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, acts of God, 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. Go to minnkota.johnsonoutdoors.com/us/support/service-providers/locate to find a Minn Kota Authorized Service Center. Any charges incurred for service calls, transportation or shipping/freight to/from the Minn Kota Authorized Service Center, 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. To contact Minn Kota Customer Service go to minnkota-help.johnsonoutdoors.com/hc/en-us. 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 labor rate of the applicable Minn Kota Authorized Service Center and for a minimum of at least one hour.

Service Provider Locator



Contact Customer Service

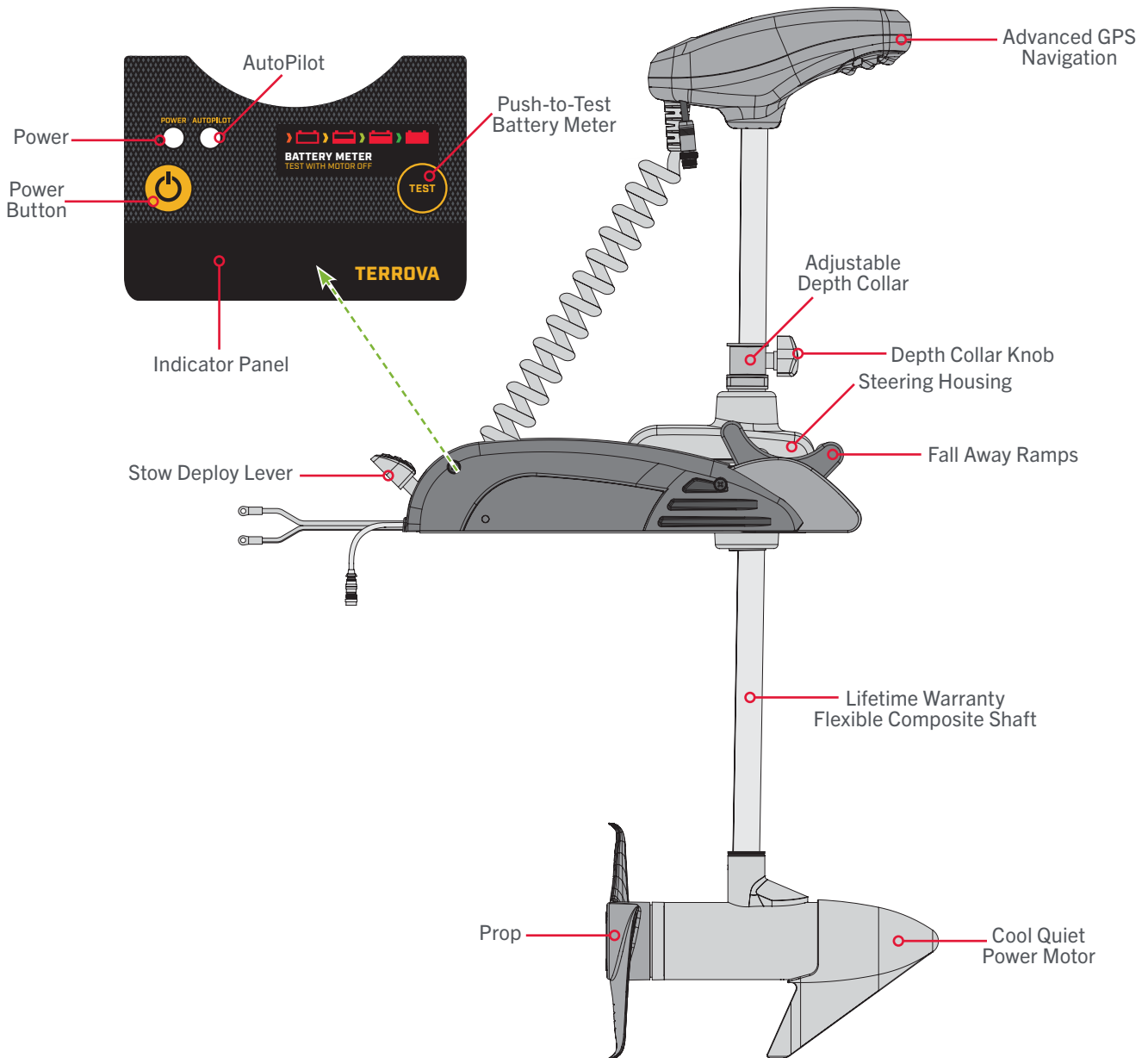


NOTICE: Do not return your Minn Kota product to your retailer. Your retailer is not authorized to repair or replace products.

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.

FEATURES



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

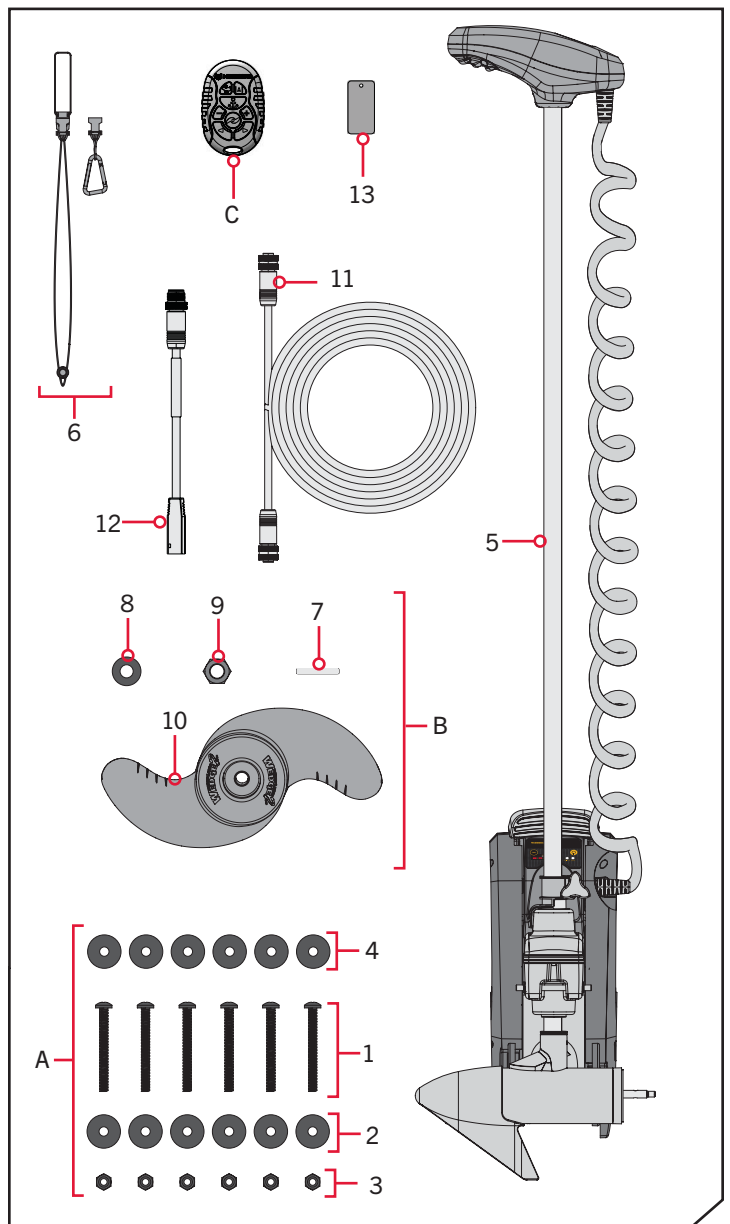
INSTALLATION

INSTALLING THE KAYAK TERROVA

Your new Kayak Terrova comes with everything you'll need to directly install it to the watercraft. This motor can be directly mounted to the watercraft 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 brackets and to locate your nearest dealer, visit minnkota.johnsonoutdoors.com. To install the motor directly to the watercraft, 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, please visit minnkota.johnsonoutdoors.com.

INSTALLATION PARTS LIST

Item / Assembly	Part #	Description	Qty.
A (Includes 1-4)	2994864	BAG ASSEMBLY - (BOLT, NUT, WASHERS)	1
1	2263462	SCREW-1/4-20 X 2" S/S PPH ADJT	6
2	2261713	WASHER-1/4 FLAT 18-8 SS	6
3	2263103	NUT-1/4-20 NYLOCK SS	6
4	2301720	WASHER-MOUNTING - RUBBER	6
5	✘	MOTOR ASSEMBLY	1
6	2390802	LANYARD w/CARABINER IP RMT U2	1
B (Includes 7-10)	1378131	PROP IND 2091160 WDLS WDG II	1
7	2092600	PIN-DRIVE 1.06" LG (SS)	1
8	2151726	WASHER-5/16 STD (S/S)	1
9	2053101	NUT-PROP,NYLOC (MED) 5/16 SS	1
10	2091161	PROP-WW2 3 5/8" MACHINED	1
11	490384-6	CABLE, ETHERNET (M12-M12), 15'	1
12	490380-1	CABLE, ETHERNET PIGTAIL-700 HD	1
C	2994175	REMOTE ASM, MICRO REMOTE	1
13	2394110	TAG, MICRO REMOTE	1
▲	2327145	MANUAL, KAYAK TERROVA	1
▲	2327144	MANUAL-INSTALL GUIDE, KYAK TER	1
▲	2297165	MANUAL-DISCLAIMER,DWNLOAD INFO	1
▲	2294950	INSTRUCTIONS,OBN & REMOTE PAIR	1
▲	2207131	STANDARD QS SETUP GUIDE	1
▲	2394910	INSTR.SHEET, MICRO	1
▲	2394912	QCK. REF GUIDE, MICRO REMOTE	1
▲	2327146	MANUAL-INSTALL GUIDE, SAFESWIT	1
▲	2998801	KIT, SAFETY SWITCH	1



▲ Not shown on Parts Diagram. ✘ This part is included in an assembly and cannot be ordered individually.

INSTALLING THE KAYAK TERROVA

MOUNTING CONSIDERATIONS

It is recommended that the motor be mounted as close to the centerline of the kayak 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 watercraft. The motor must not encounter any obstructions as it is lowered into the water or raised into the watercraft 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 minnkota.johnsonoutdoors.com.



View accessories available for your trolling motor at minnkota.johnsonoutdoors.com.

TOOLS AND RESOURCES REQUIRED

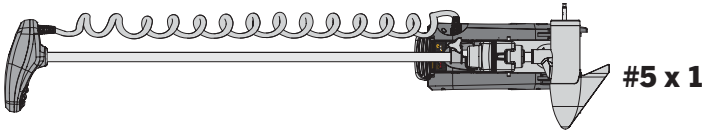
- #3 Phillips Screwdriver
- Drill
- 9/32" Drill Bit
- 7/16" Box/Open End Wrench
- 1/2" Box/Open End Wrench
- Pliers or Vice Grip
- A second person to help with the installation
- Flat-blade Screwdriver
- Awl or similar Marking Tool

INSTALLATION

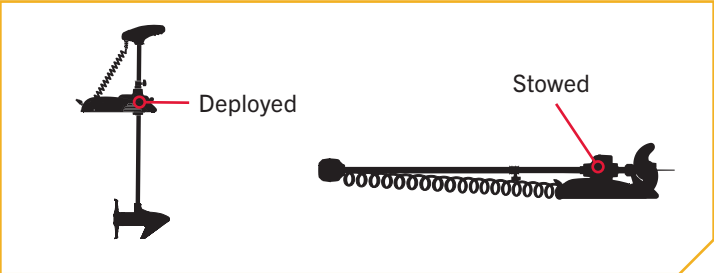
INSTALLING THE KAYAK TERROVA

1

ITEM(S) NEEDED



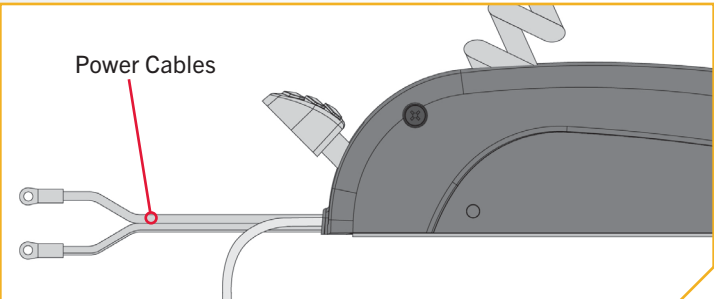
- a. Place the trolling motor (Item #5) on an elevated, level surface, such as a workbench or the tailgate of a pickup. The motor, as removed from the box, should be in the stowed position.
- b. Make sure the Power Cables are not connected to a power source or that the battery breaker, if equipped, is "off."



WARNING

Make sure the motor is on a level surface and is not connected to a power source.

NOTICE: The trolling motor weighs approximately 35 lbs. Minn Kota recommends having a second person help with the installation.

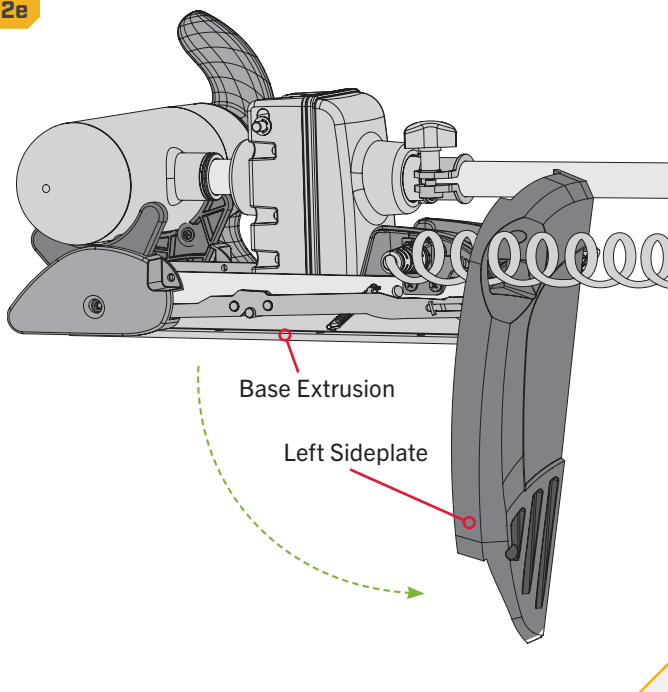


INSTALLING THE KAYAK TERROVA

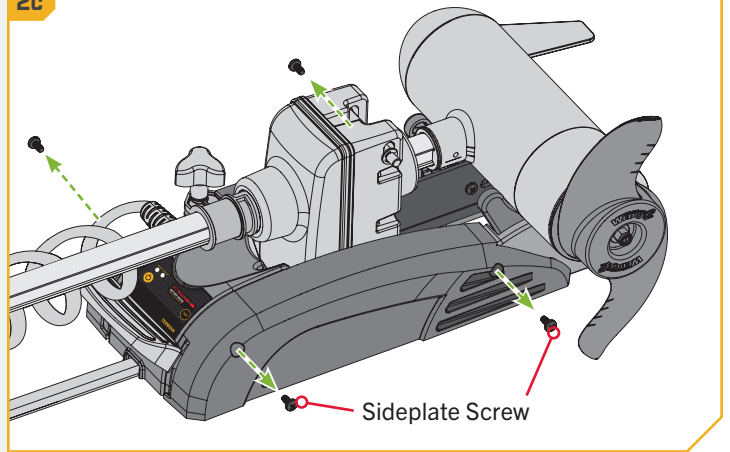
2

- c. Remove the four sideplate screws using a #3 Phillips Screwdriver. Two of these screws will be located on each side of the mount.
- d. Remove the Right Sideplate.
- e. Swing the Left Sideplate out and away from the Base Extrusion.

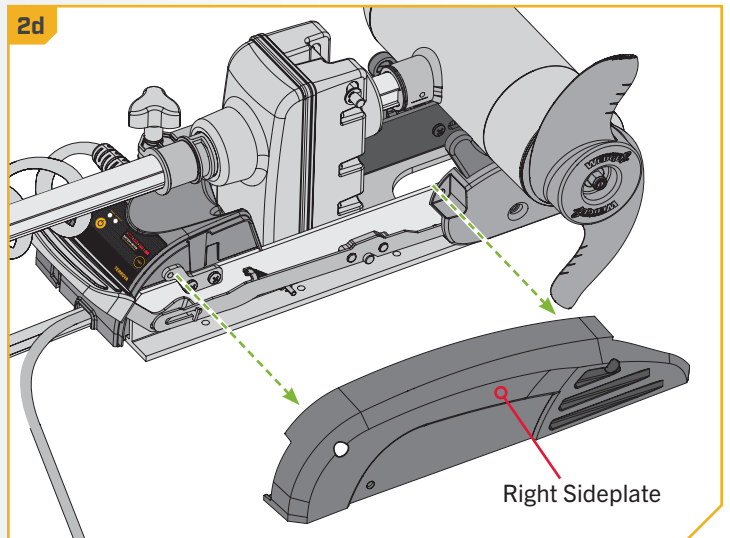
2e



2c

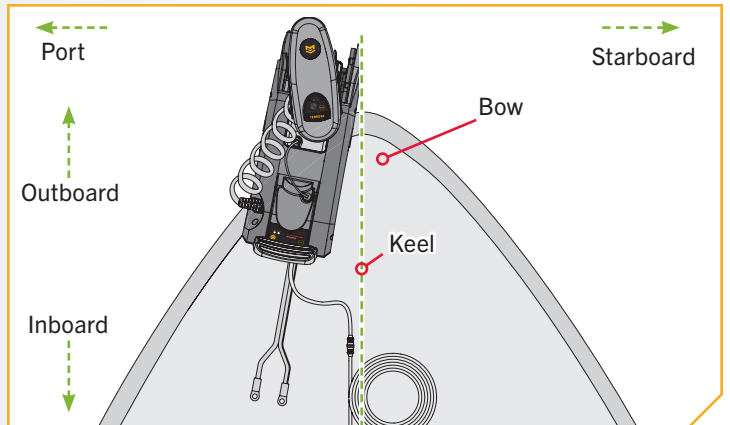


2d



3

- f. Review the mounting considerations at the beginning of the installation. Place the motor on the bow of the watercraft at the intended mounting location, as close to the centerline or keel as possible. The motor can be installed on either the Port or Starboard side of the watercraft, based on personal preference. Check placement with the motor in the stowed and deployed positions.



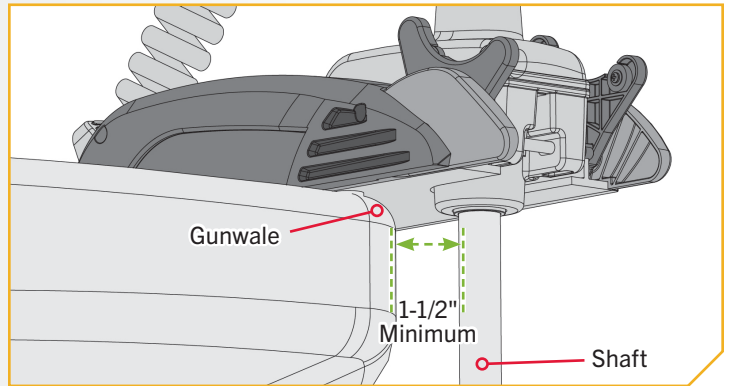
4

ITEM(S) NEEDED

● #4 x 6

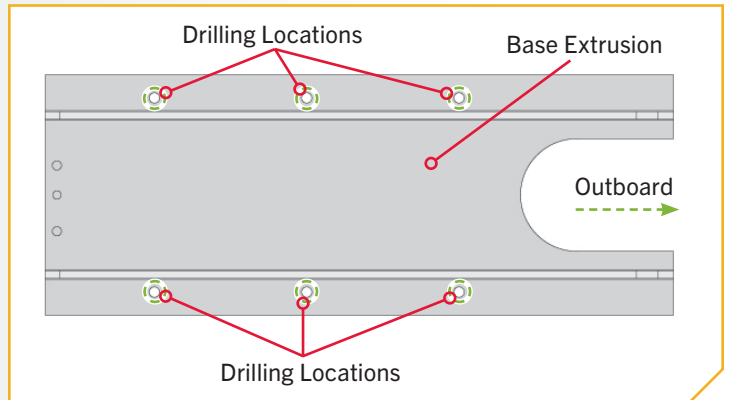
- g. When the motor is in the deployed position, make sure that the Shaft is 1-1/2" out past the Gunwale of the kayak. The lower unit, when stowed and deployed must not encounter any obstructions.
- h. Check to be sure that the mount is level. Use the Rubber Washers (Item #4) provided to create a level surface if necessary.

NOTICE: The mounting surface for the trolling motor must be flat. Rubber Washers may be used to shim the Base Extrusion flat before hardware is tightened.



5

- i. With the motor at the intended mounting location, take an Awl or similar tool and mark all six mounting holes in the Base Extrusion.
- j. Make sure the area under the mounting location is clear to drill holes and install nuts and washers. Slide the motor aside to drill the mounting holes.
- k. Drill through the watercraft deck using a Drill and a 9/32" Drill Bit on all six marked locations.



INSTALLING THE KAYAK TERROVA

6

ITEM(S) NEEDED

● #2 x 6



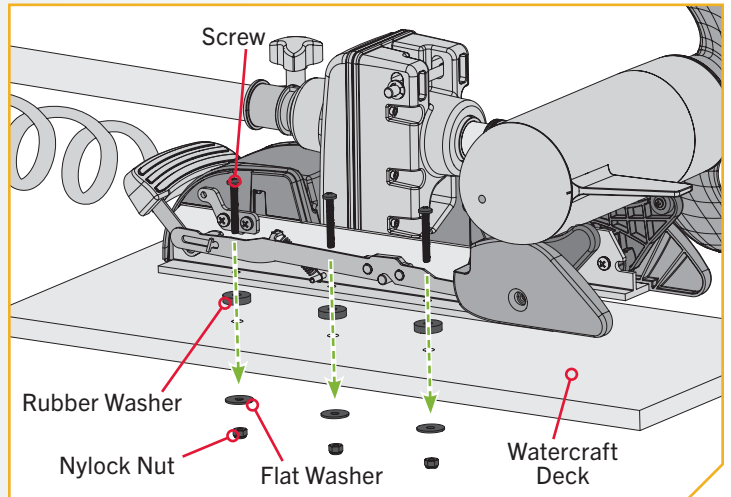
#1 x 6

○ #3 x 6

● #4 x 6

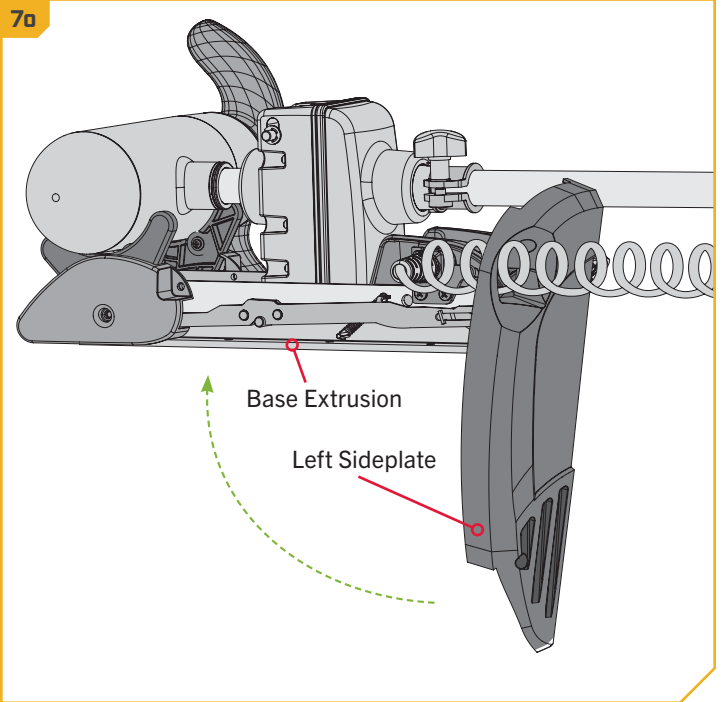
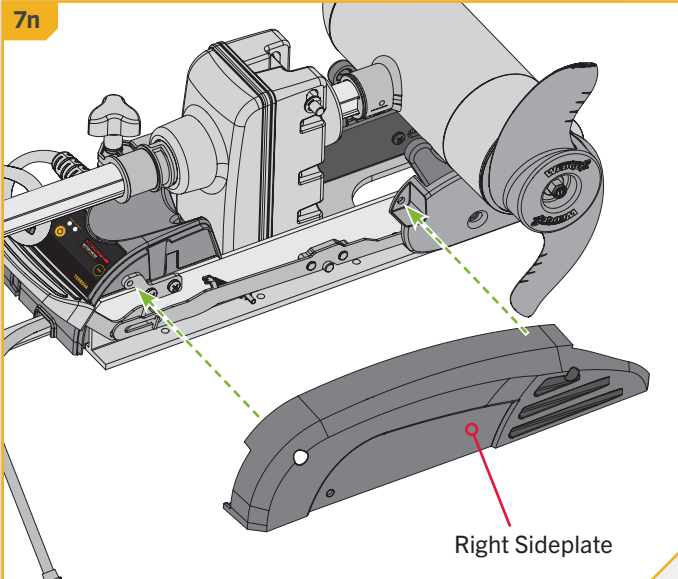
- i. Put a 1/4-20 x 2" (Item #1) Screw into each of the drilled locations. The Screw should pass through the Base Extrusion and the watercraft deck. If the Rubber Washers (Item #4) are used, they should sit between the Base Extrusion and watercraft deck. Make sure to secure the motor with screws on each side of the Base Extrusion.
- m. Place a Flat Washer (Item #2) and then a Nylock Nut (Item #3) at the end of each screw and secure with a 7/16" Box End Wrench. 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.



7

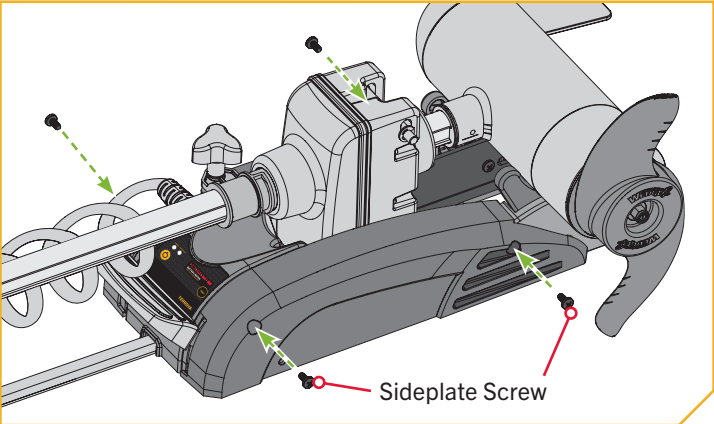
- n. Replace the Right Sideplate.
- o. Swing the Left Sideplate back into its correct position on the Base Extrusion.



INSTALLING THE KAYAK TERROVA

8

- p. Replace the four sideplate screws using a #3 Phillips Screwdriver. Two of these screws will be located on each side of the mount.



ADVANCED GPS NAVIGATION

ADVANCED GPS NAVIGATION >

Your Minn Kota trolling motor and Humminbird fish finder communicate with each other to change the way you fish. Advanced GPS Navigation offers a large array of features including controlling speed, steering, Spot-Lock, and the ability to record and retrace tracks on the water, all at your fingertips. To learn more about the GPS capabilities available with your new motor, please refer to the Advanced GPS Navigation Owner's Manual by visiting minnkota.johnsonoutdoors.com.

The remote and GPS controller make up the Advanced GPS Navigation system. A micro remote comes paired to the controller from the factory. The GPS controller contains a very sensitive compass and is where all GPS satellite and remote signals are received. The GPS controller is located in the trolling motor Control Head and may be connected to a fish finder from an Accessory Cable that exits the Control Head. If the Advanced GPS Navigation system will be used with a fish finder, the Ethernet link between the trolling motor and the fish finder must be connected.

> Considerations for Connecting and Routing Advanced GPS Navigation

Advanced GPS Navigation is pre-installed on your trolling motor. One eight pin Advanced GPS Ethernet Connector exits the base of the Control Head and rest just below the Control Head next to the Coil Cord. If the Advanced GPS Navigation on the trolling motor will be used with a fish finder, an Ethernet Cable will need to be attached to the Advanced GPS Ethernet Connector below the Control Head. Consider the distance between the trolling motor and the fish finder to determine how to complete the Ethernet connection.

ETHERNET CABLES - Minn Kota provides one 15 ft Ethernet cable (AS EC 15E - 15' Ethernet Cable - 720073-5) with every trolling motor equipped with Advanced GPS Navigation. The 15 ft Ethernet cable will accommodate a standard Ethernet connection for most installations to a Humminbird fish finder and is "Apex and Solix Ready". If the distance between the trolling motor and Humminbird fish finder is relatively small and a shorter cable is preferred, alternate cable lengths are available from humminbird.johnsonoutdoors.com. These options include:

- 10 ft - (AS EC 10E - 10' Ethernet Cable - 720073-2)
- 20 ft - (AS EC 20E - 20' Ethernet Cable - 720073-3)
- 30 ft - (AS EC 30E - 30' Ethernet Cable - 720073-4)

Every length of Ethernet cable plugs directly into a Solix or Apex or directly into a Helix Adapter Cable.

HUMMINBIRD HELIX ADAPTER CABLES - Minn Kota provides one Helix Adapter Cable (AS EC QDE - Ethernet Adapter Cable - 720074-1) with every trolling motor equipped with Advanced GPS Navigation. If the Ethernet connection is being made between the trolling motor and any Humminbird® Helix fish finder, the Helix Adapter Cable should be used. The Helix Adapter Cable directly connects the Ethernet Cable to a Helix fish finder.

ETHERNET EXTENSION CABLES - If the 15 ft Ethernet cable provided with your trolling motor with Advanced GPS Navigation is not long enough to reach the fish finder, an Ethernet Extension cable should be used. The Ethernet Extension cable is available from humminbird.johnsonoutdoors.com and is available in a 30 ft length (AS ECX 30E - 30' Ethernet Extension Cable - 760025-1). The Ethernet Extension Cable will plug directly into any length of Ethernet cable.

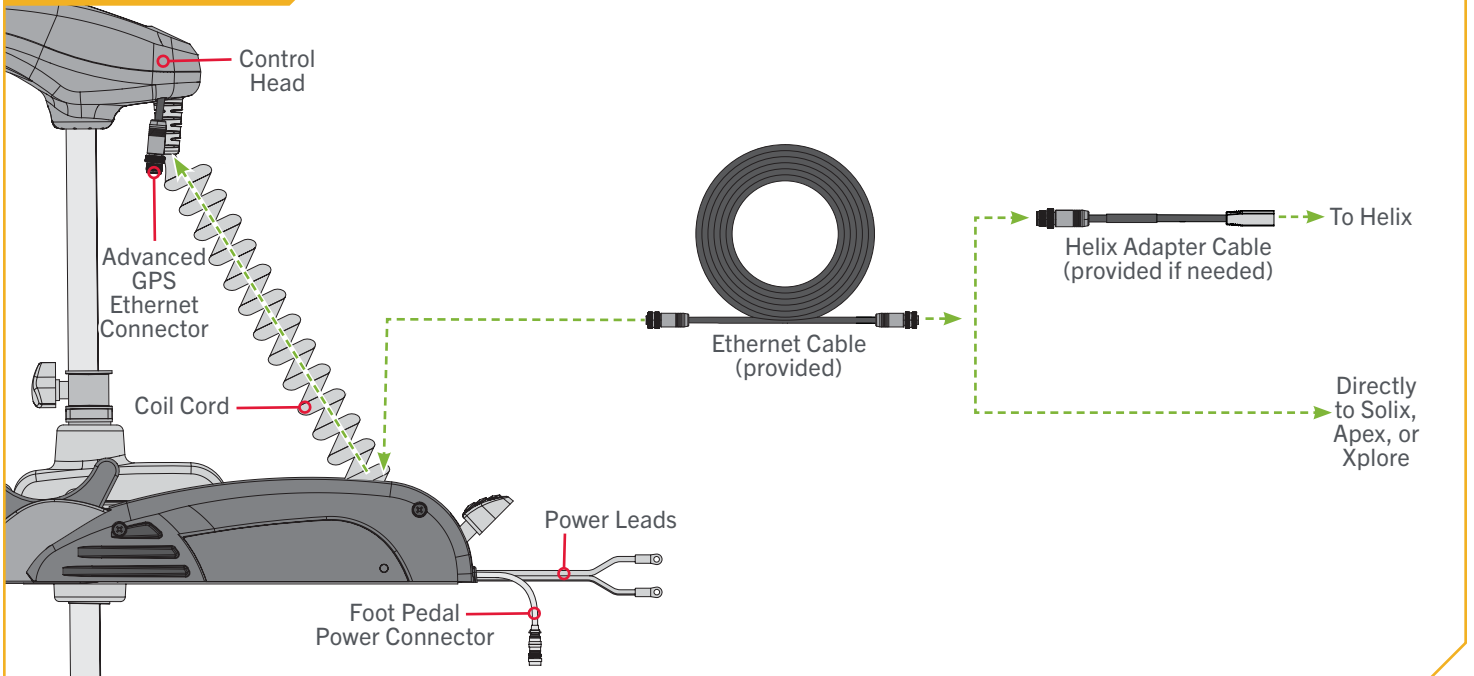
NOTICE: Minn Kota recommends routing the Ethernet Cable or Ethernet Extension Cable through the Coil Cord when making the Ethernet connection. The cables will be installed from the Mount to the Control Head through the Coil Cord. Bypassing the Coil Cord when routing the Ethernet Cable or Ethernet Extension Cable is not recommended.



CAUTION

Failure to follow the recommended wire routing for installed features, 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. Do not over-tighten cable ties as it may damage the wires.

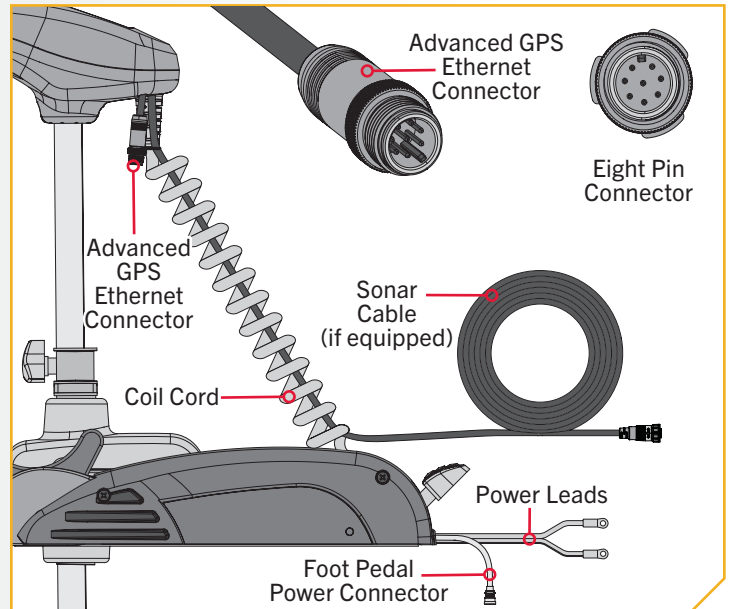
GPS Ethernet Connection



1

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

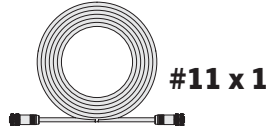
- a. Place the motor in the deployed position.
- b. Locate the Eight Pin Advanced GPS Ethernet Connector below the Control Head. The Advanced GPS Ethernet Connector will exit the base of the Control Head and will rest just below the Control Head next to the Coil Cord.



ADVANCED GPS NAVIGATION

2

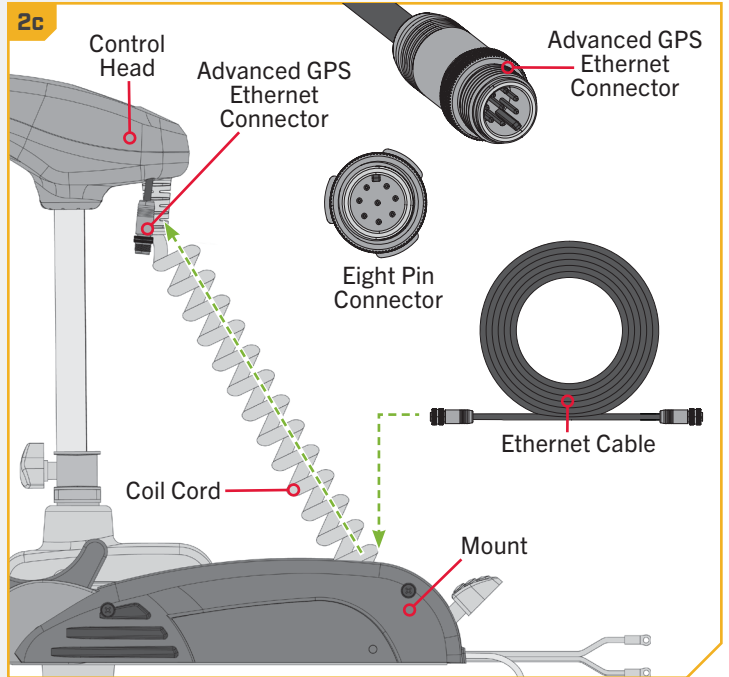
ITEM(S) NEEDED



- c. Identify the keyed Receptacle on the Ethernet Cable (Item #11). It will be keyed to fit with the Eight Pin Advanced GPS Ethernet Connector below the Control Head.

NOTICE: The Ethernet Cable has a Receptacle for the Advanced GPS Ethernet Connector on both ends. Either end may be connected.

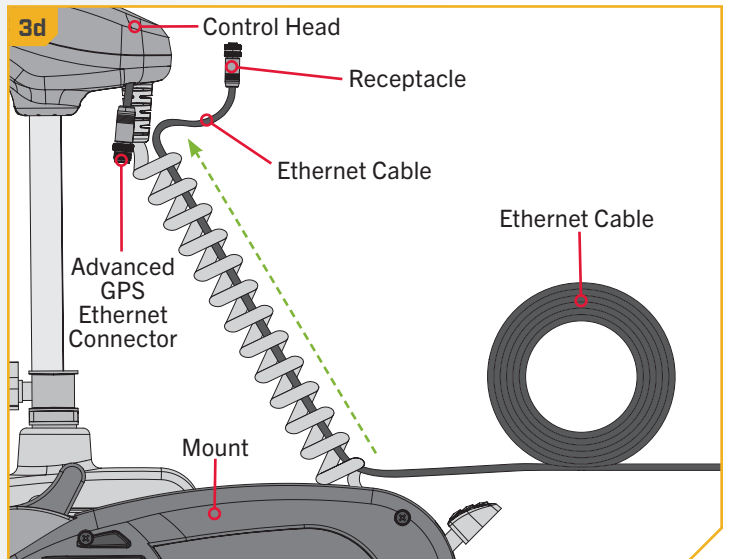
NOTICE: The 15' Ethernet Cable (AS EC 15E - 15' Ethernet Cable - 720073-5) is provided. Alternate cable lengths are available from humminbird.johnsonoutdoors.com.



3

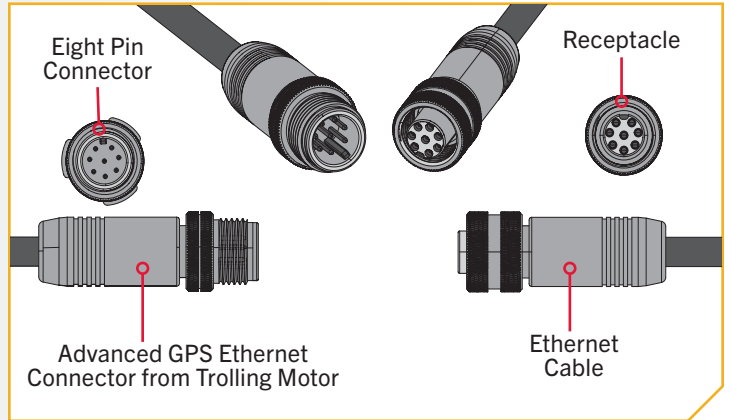
- d. Take the Receptacle on the Ethernet Cable and run it through the center of the Coil Cord, starting at the end of the Coil Cord attached to the Mount and working up towards the Control Head. Allow enough slack in the cable to attach the Receptacle to the Advanced GPS Ethernet Connector.

NOTICE: Minn Kota recommends routing the Ethernet Cable through the Coil Cord when making the Ethernet connection. Bypassing the Coil Cord when routing the Ethernet Cable is not recommended.



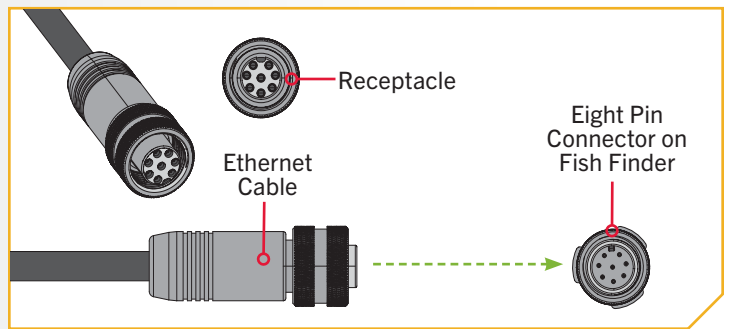
4

- e. To install the Ethernet Cable, align the pins on the Advanced GPS Ethernet Connector with the Receptacle on the Ethernet Cable. Notice the keyed connectors. Tighten the Collar from the Ethernet Cable to secure the connection.
- f. The Ethernet Cable will plug directly into a Solix, Helix, or Xplore Fish Finder or directly into a Helix Adapter Cable.



5

- g. **If installing directly to a Solix, Apex, or Xplore,** the connector will be flat on the back of the fish finder display.
- h. Align the Receptacle on the Ethernet Cable with the Eight Pin Connector on the fish finder. Notice the keyed connectors. Tighten the Collar from the Ethernet Cable to secure the connection. Once directly installed to the Solix, Apex, or Xplore the connection is complete.



ADVANCED GPS NAVIGATION

6

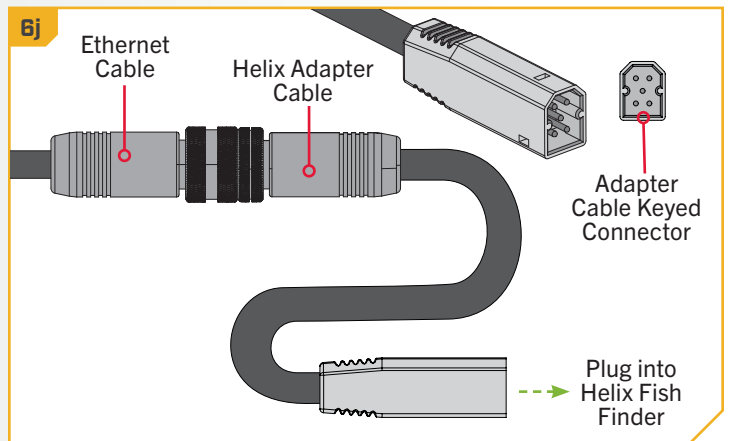
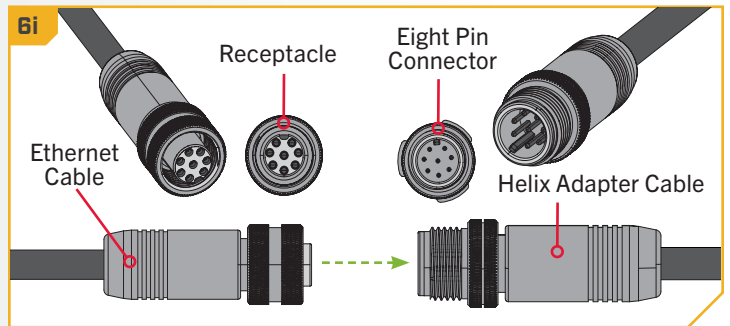
ITEM(S) NEEDED



- i. If installing directly to a Helix Adapter Cable (Item #12), align the Receptacle on the Ethernet Cable with the Eight Pin Connector on the Helix Adapter Cable provided. Notice the keyed connectors. Tighten the Collar from the Ethernet Cable to secure the connection.

NOTICE: Minn Kota provides one Helix Adapter Cable (AS EC QDE - Ethernet Adapter Cable - 720074-1) with every trolling motor equipped with Advanced GPS Navigation.

- j. The Helix Adapter Cable directly connects the Ethernet Cable to a Helix fish finder. Locate the Helix Adapter Cable Keyed Connector on the back of the fish finder. Plug the Helix Adapter Cable into the back of the Helix fish finder to complete the connection.



› Installing the Prop

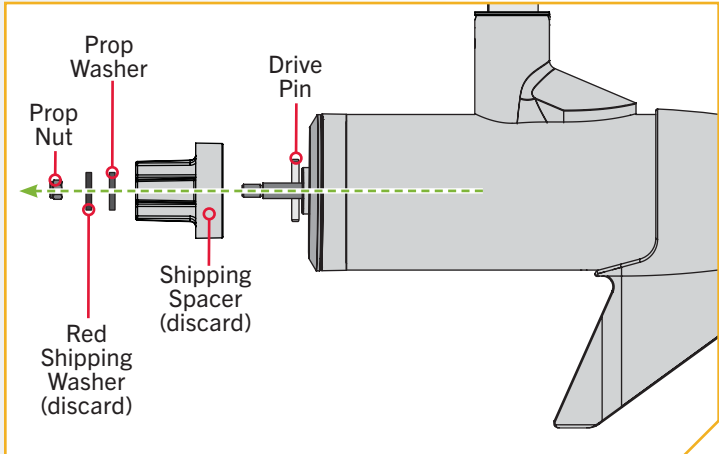
1

CAUTION

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

- a. While holding the Shipping Spacer with a pliers or vise grip, remove the Prop Nut, Red Shipping Washer, Prop Washer and Spacer, being careful not to lose the Drive Pin. Reuse the Prop Nut, Prop Washer and Drive Pin to attach the Prop.

NOTICE: The Shipping Spacer and Red Shipping Washer are for shipping purposes only and must be discarded. The Red Shipping Washer will rust if used to attach the Prop.

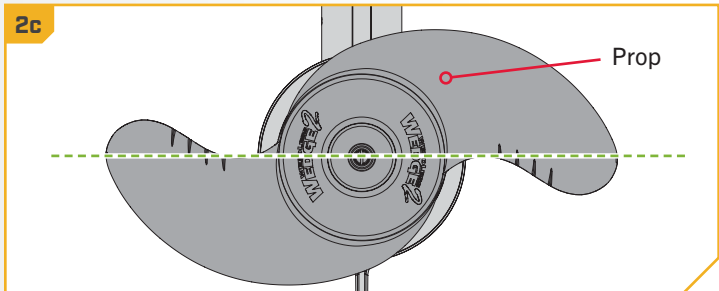
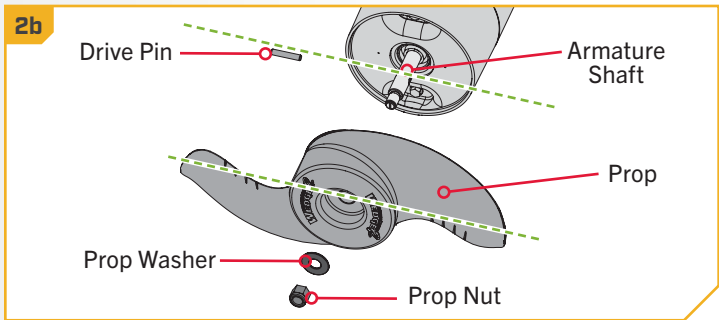


2

ITEM(S) NEEDED



- b. Take the Drive Pin (Item #7) and slide it through the Hole in the Armature Shaft. Position the Drive Pin horizontally by grasping the Armature Shaft and rotating it with the Drive Pin in place.
- c. Align the Prop (Item #10) so it is also horizontal and parallel with the Drive Pin. Slide the Prop onto the Armature Shaft and Drive Pin until it is seated against the lower unit.
- d. Install the Prop Washer (Item #8) and the Prop Nut (Item #9) onto the end of the Armature Shaft.



INSTALLING THE PROP

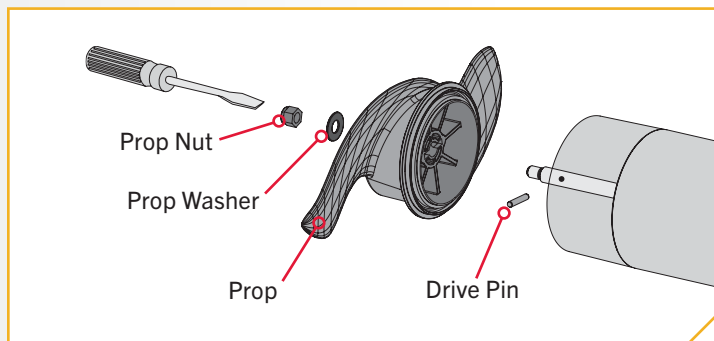
3

- e. Holding the end of the Armature Shaft with a Flat Blade Screwdriver, tighten the Prop Nut with a 1/2" Box End or Open End Wrench.
- f. Tighten the Prop Nut 1/4 turn past snug to 25-35 in-lbs.



CAUTION

Do not over-tighten as this can damage the Prop.



BATTERY & WIRING INSTALLATION

BOAT RIGGING & PRODUCT INSTALLATION

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 Kayak Terrova motor. Powering multiple motors or additional electrical devices from the same power circuit may impact the recommended conductor gauge and circuit breaker size. Extend the Kayak Terrova lead wires no more than 9 feet using 10 AWG with 90°C minimum insulation single strand wire. To accommodate longer lead wire extensions with proper wire sizing, seek the help of a certified marine installer.

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.

SELECTING THE CORRECT BATTERIES

The motor will operate with any lead-acid, deep-cycle marine 12-volt battery/batteries. For best results, use a deep-cycle, marine battery with at least a 105 amp-hour rating. Maintain battery at full charge. Proper care will ensure having battery power when you need it, and will significantly improve the battery life. Failure to recharge lead-acid batteries (within 12-24 hours) is the leading cause of premature battery failure. Use a multi-stage charger to avoid overcharging. We offer a wide selection of chargers to fit your charging needs. If you are using a crank battery to start a gasoline outboard, we recommend that you use a separate deep-cycle marine battery/batteries for your Minn Kota trolling motor. For more information on battery selection and rigging, please visit minnkota.johnsonoutdoors.com. Minn Kota trolling motors can run on Lithium-Ion batteries. However, they are specifically designed to run on traditional lead acid batteries (flooded, AGM or GEL). Lithium-Ion batteries maintain higher voltages for longer periods of time than lead-acid. Therefore, running a Minn Kota trolling motor at speeds higher than 85% for a prolonged period could cause permanent damage to the motor.

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

Find an appropriate circuit breaker or fuse for the trolling motor. For motors requiring a 60-amp breaker, the Minn Kota MKR-27 60-amp circuit breaker is recommended.

CAUTION

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

BATTERY & WIRING INSTALLATION

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 positive voltage into the "ground" of that accessory, which can cause excess corrosion. Any damage caused by incorrect connections between battery systems will not be covered under warranty.

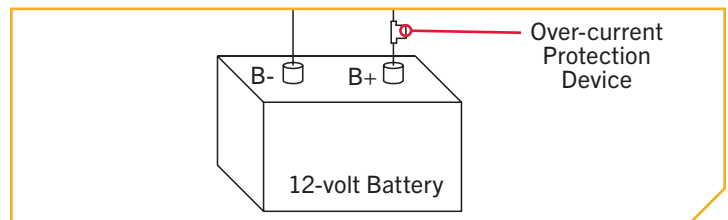
› Automatic Jump Start Systems and Selector Switches

Automatic jump start systems and selector switches tie the negatives of the connected batteries together. Connecting these systems to the "High Side" Battery or "Middle" Battery in multi-battery systems 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 multi-battery systems is the "Low Side" Battery.

CONNECTING THE BATTERIES

› 12-Volt Systems

1. Make sure that the motor is switched off (speed selector on "OFF" or "0").
2. Connect positive (+) red lead to positive (+) battery terminal.
3. Connect negative (-) black lead to negative (-) battery terminal.



⚠ WARNING

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

⚠ WARNING

- For safety reasons, disconnect the motor from the battery or batteries when the motor is not in use or while the battery/batteries are being charged.
- Keep leadwire wing nut connections tight and solid to battery terminals.
- Locate battery in a ventilated compartment.

ONE-BOAT NETWORK

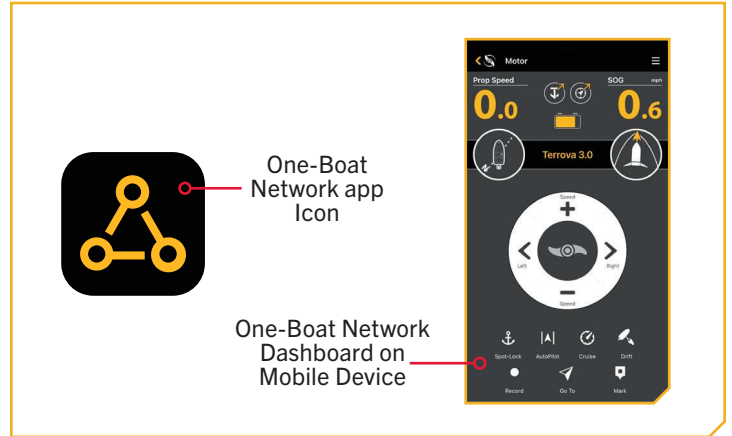
OPTIMIZING THE PERFORMANCE OF THE KAYAK TERROVA WITH THE ONE-BOAT NETWORK APP

Minn Kota® and Humminbird® have joined forces to bring you the One-Boat Network (OBN). To get the most from your One-Boat Network, we encourage you to download the One-Boat Network app onto your smart device. The One-Boat Network® app is a free iOS and Android application that you can download to a mobile device, providing unparalleled control over all of your One-Boat Network connected products.

Minn Kota recommends connecting the trolling motor to the OBN app to assist in these steps. For instructions on pairing the OBN app to the trolling motor, refer to the OBN Quick Start Guide included with the motor. For more information on the OBN app, refer to the One-Boat Network Owner's Manual online at minnkota.johnsonoutdoors.com.

Completing the installation of the Kayak Terrova through the One-Boat Network app should be done following the Prop installation. Ensure that the trolling motor is connected to a power source before adjusting One-Boat Network settings.

NOTICE: Ensure that the trolling motor is connected to a power source before adjusting One-Boat Network settings.



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. Stay clear of the Prop and watch out for accidental engagement.

BOAT SCALE

Trolling motor performance can be impacted by factors including, but not limited to, wind, water conditions, boat specifications, battery health, wiring, etc.

Boat Scale provides a method of adjusting how the trolling motor will perform to account for these and other variables. The Kayak Terrova comes from the factory with a Boat scale of -2. Boat Scale can be adjusted up (+2) or down (-2) to increase or decrease how the motor control software applies power while using a navigation mode like Spot-Lock.

An example showing the need to reduce Boat Scale would be while using Spot-Lock and the motor is over-correcting or making frequent adjustments. In this case, try reducing Boat Scale -1 to reduce this behavior. If the behavior continues, reduce Boat Scale to -2.

An example showing the need to increase Boat Scale while using Spot-Lock would be the motor is drifting away from its target location frequently or needs help to make corrections. Try increasing Boat Scale to +1 to help improve the trolling motor accuracy in this case. If the behavior continues, increase Boat Scale to +2.

NOTICE: Minn Kota recommends setting the Boat Scale for the Kayak Terrova to -2.

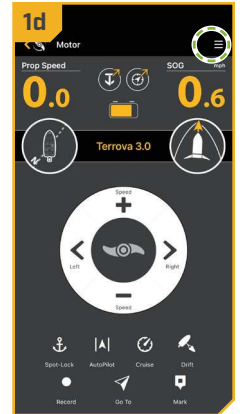
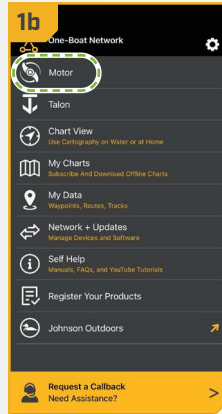
ONE-BOAT NETWORK

Adjusting Boat Scale with the One-Boat Network App

1

- Open the One-Boat Network (OBN) app on a mobile device. Make sure the mobile device is paired with the trolling motor and that the motor is powered "on."
- From the OBN home screen, tap the Motor menu. The Motor menu opens the Motor home screen.
- Before the Motor home screen will open, tap Agree on the on-screen prompt.

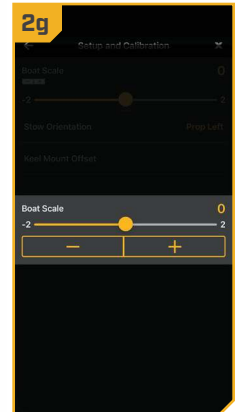
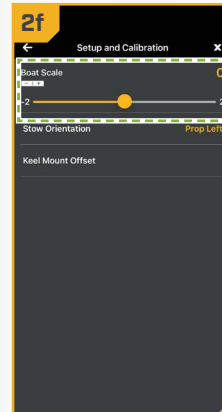
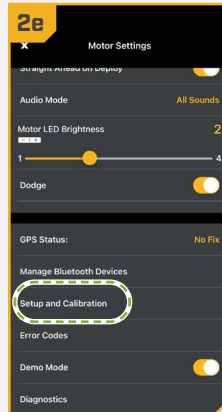
NOTICE: The on-screen prompt will only display once each time the app is launched. If the prompt has displayed, the Motor home screen appears.



- On the Motor home screen, locate the Motor Settings button in the upper-right corner and tap it.

2

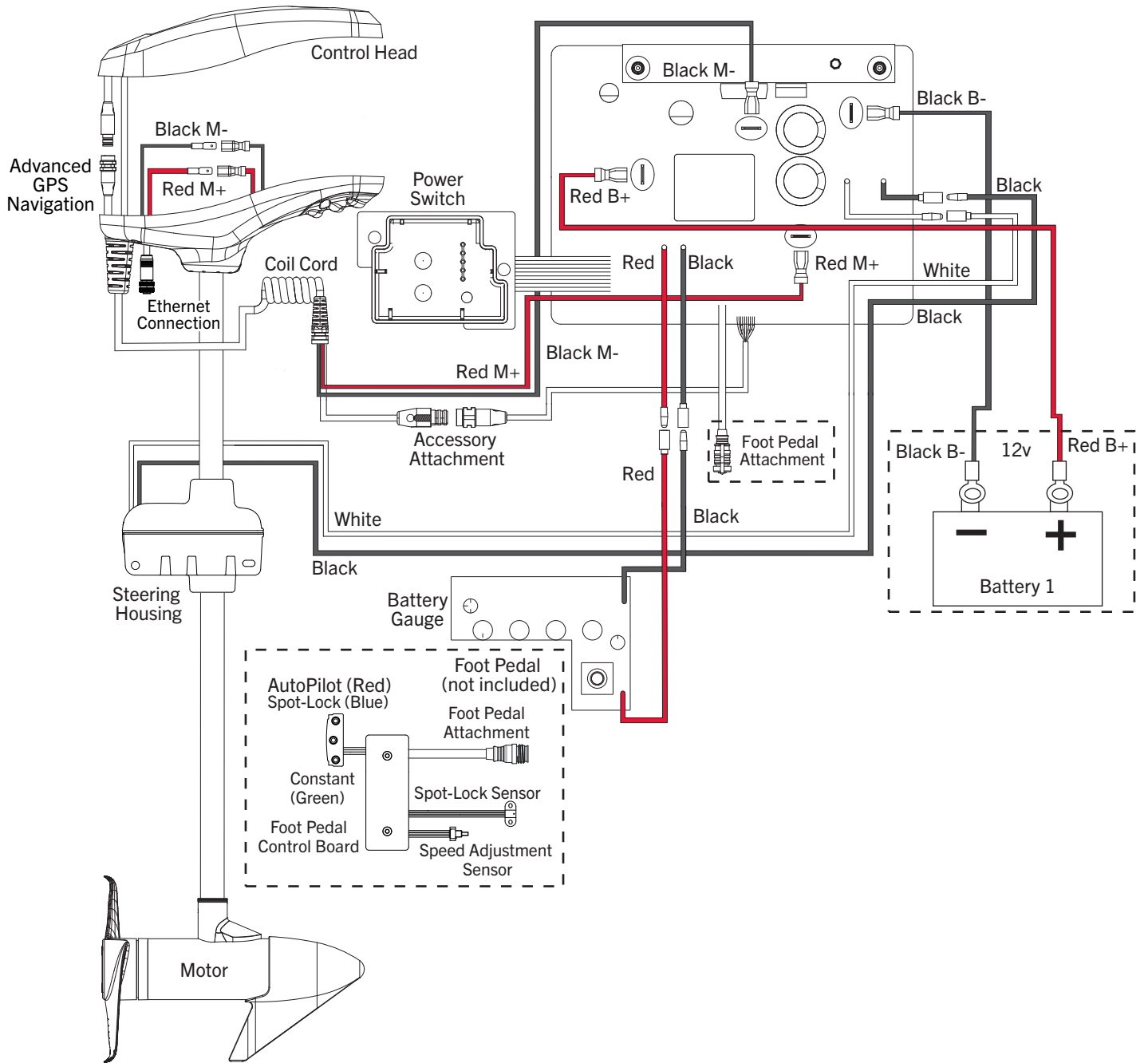
- In the Motor Settings menu, find and tap Setup and Calibration.
- In Setup and Calibration, find and tap Boat Scale.
- Set the feature to decrease Boat Scale to -2 for the Kayak Terraova.



MOTOR WIRING DIAGRAM

KAYAK TERROVA WITH ADVANCED GPS NAVIGATION

The following Motor Wiring Diagram applies to all Kayak Terrova models pre-installed with Advanced GPS Navigation.

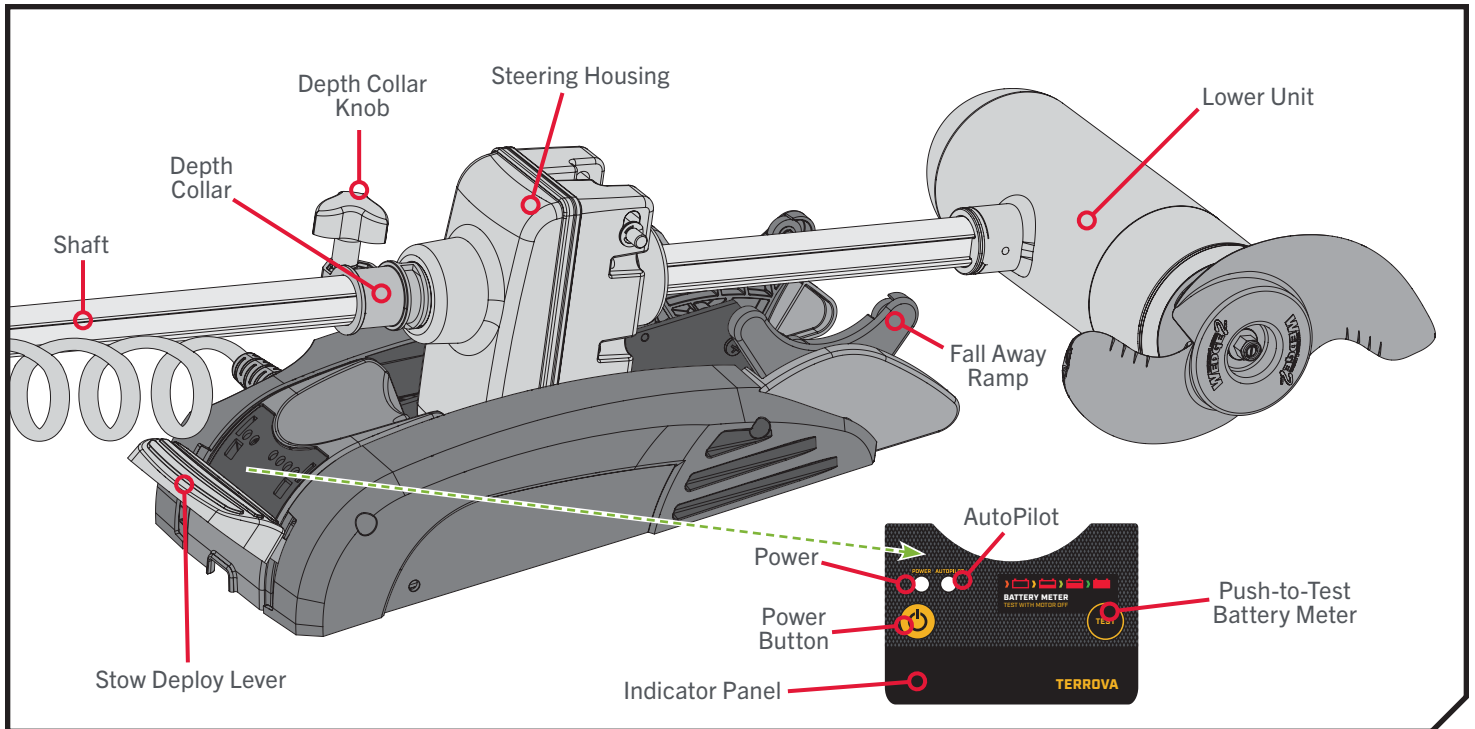


NOTICE: This is a multi-voltage diagram. Double-check your motor's voltage for proper connections. Over-Current Protection Devices are not shown in this illustration. This diagram is for reference only and is not to scale.

USING & ADJUSTING THE MOTOR

MOUNT FEATURES

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






› Depth Collar & Depth Collar Knob

The Depth Collar is located on the Shaft above the Steering Housing. It functions to hold the motor at the proper depth while deployed. It also functions to hold the Lower Unit in place when stowed while not in use and during transport. The Depth Collar Knob is used to loosen and tighten the Depth Collar so that it can slide up and down the motor shaft.

› Fall Away Ramps

The Fall Away Ramps hold the Lower Unit when the Motor is stowed and rotate to release the Lower Unit as the unit is being deployed. When the Stow Deploy Lever is pressed it unlocks the position of the Fall Away Ramps and the Ramps rotate to guide the Lower Unit back onto the mount when the motor is stowed.

› Power Button

The Power button  is located on the Indicator Panel on the Mount. The Kayak Terrova must be manually powered "on" and "off." When the Motor is powered "on," the Power Indicator will be illuminated green . When the Motor is powered "off," the Power Indicator will not be illuminated .



WARNING

When the motor is being transported, it is important to place the Depth Collar snug against the Steering Housing and tighten. 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.



WARNING

When stowing or deploying the motor, keep fingers clear of all hinge and pivot points and all moving parts.



NOTICE: Do not completely remove the Depth Collar Knob from the Depth Collar Assembly. Doing so allows a washer-shaped spacer to fall out of the Depth Collar. This spacer plays a key role in creating tension for the Depth Collar to clamp and function properly.

STOWING AND DEPLOYING THE MOTOR

CAUTION

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. If the motor control is left on and the propeller rotation is blocked, severe motor damage can result.

› AutoPilot

The AutoPilot Indicator is located on the Indicator Panel on the Mount. It is illuminated green  when AutoPilot is engaged and it is not illuminated  when AutoPilot is not engaged.

› Stow Deploy Lever

The Stow Deploy Lever is located at the top of the mount. The Stow Deploy Lever functions to unlatch the Fall Away Ramps which rotate to guide the Lower Unit. The Stow Deploy Lever is actuated by pressing it down.

STOWING AND DEPLOYING THE MOTOR

› To Deploy the Motor

Loosen the Depth Collar then push firmly down on the Stow Deploy Lever. Slide the motor forward, out from the Fall Away Ramp. Lower the motor to the desired depth. Make sure it clicks into a secure, vertical position. Once at the desired depth, slide the Depth Collar against the Steering Housing and tighten.

› To Stow the Motor

Loosen the Depth Collar and depress the Stow Deploy Lever. Raise the motor by pulling up on the Shaft or Control Head. Pull the motor toward the stern until it rests securely on the Fall Away Ramp and the Fall Away Ramps captures the Lower Unit. Slide the Depth Collar down and secure it against the top of the Steering Housing to secure the motor in place and prevent accidental deployment.

PUSH-TO-TEST BATTERY METER

This motor is equipped with a Push-to-Test Battery Meter. The LED located on the Indicator Panel on the Mount of the motor. The Battery Meter provides an accurate display of the remaining charge in the battery. It is only accurate when the motor is off. The meter reads as follows:

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

NOTICE: The Push-to-test Battery Meter accuracy may vary when using battery types other than a lead-acid battery.

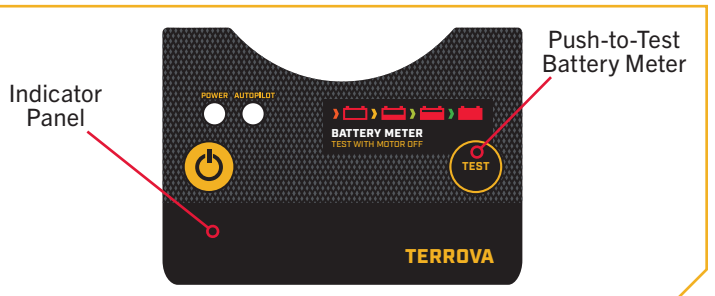
WARNING

When stowing or deploying the motor, keep fingers clear of all hinge and pivot points and all moving parts.

WARNING

The Control Head will create a pinch point if the Depth Collar Knob is loosened and the Control Head slides to the top of the Depth Collar. Grasp the Shaft and prevent it from sliding all the way down to prevent the pinch point.

Practice proper ergonomics when stowing and deploying the motor to prevent injury.



WARNING

Moving parts can cut or crush. Keep fingers clear of all moving parts.

ADJUSTING THE DEPTH OF THE MOTOR

MOTOR ADJUSTMENTS >

ADJUSTING THE DEPTH OF THE MOTOR

Once the watercraft is on the water, it may be necessary to adjust the Lower Unit up or down to achieve an optimum depth for motor performance. When setting the depth of the motor, 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.

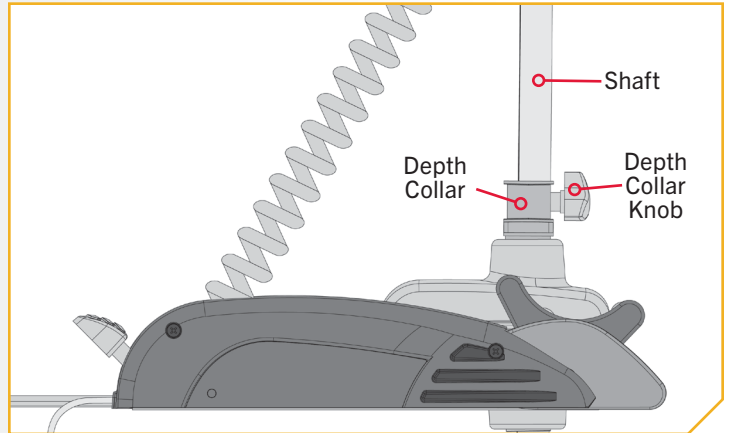
1

- a. With the motor in the deployed position, locate the Depth Collar on the Shaft above the Steering Housing.
- b. While holding the Shaft, loosen the Depth Collar Knob until the Shaft can slide up and down freely.



WARNING

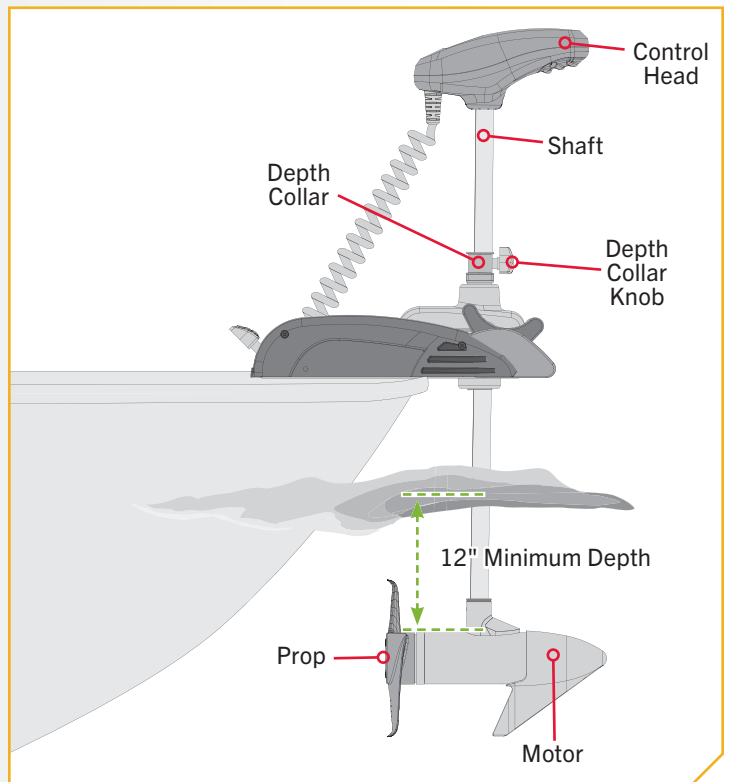
The Control Head will create a pinch point if the Depth Collar Knob is loosened and the Control Head slides to the top of the Depth Collar. Grasp the Shaft and prevent it from sliding all the way down to prevent the pinch point.



2

- c. Raise or lower the motor to the desired depth.
- d. Turn the motor Control Head to the desired position.
- e. Slide the Depth Collar against the Steering Housing and tighten the Depth Collar 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.



ADJUSTING THE LOWER UNIT FOR A SECURE STOW

ADJUSTING THE LOWER UNIT FOR A SECURE STOW

When the trolling motor is stowed, the Lower Unit should rest on the Fall Away Ramps, a part of 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.

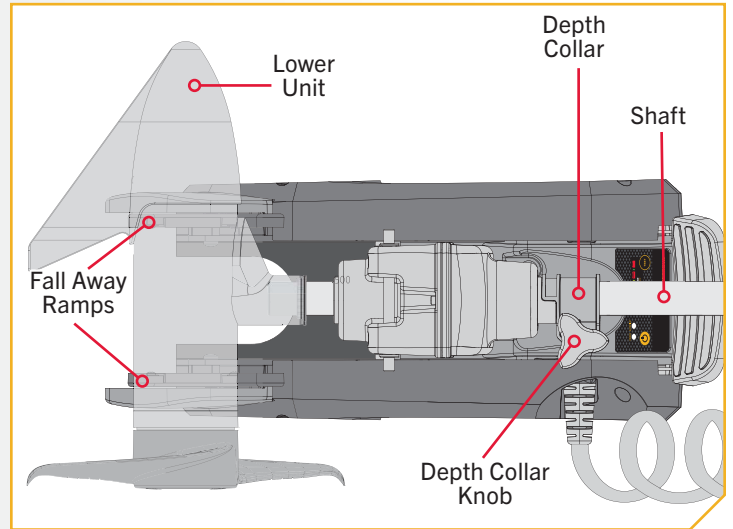
- 1**
- Before transporting the watercraft over water or land, stow the motor to determine where the Lower Unit rests on the Fall Away Ramps.

NOTICE: The correct positioning of the Lower Unit will place it directly on the Fall Away Ramps.

- If the Lower Unit does not sit on the Fall Away Ramps, deploy the motor, and stow it again.
- Be sure to press the Stow Deploy Lever and adjust the Motor to allow it to rest on the Fall Away Ramps.

CAUTION

The Lower Unit should be placed on the Fall Away Ramps every time the motor is transported. If the Lower Unit is improperly placed, damage to the Lower Unit or Shaft will occur. Failure to follow the recommended placement for the Lower Unit will cause damage to the product and void your product warranty.



NOTICE: Slide the Depth Collar down and secure it against the top of the Steering Housing when stowed to secure the motor in place and prevent accidental deployment.

WARNING

When the motor is stowed, the depth collar must be positioned against the steering housing and tightened in place with the knob to prevent accidental deployment, which may result in injury, or damage to the trolling motor, accessories, or watercraft.

WARNING

When the motor is being transported, it is important to place the Depth Collar snug against the Steering Housing and tighten. 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.

INSTALLING AN EXTERNAL TRANSDUCER

INSTALLING AN EXTERNAL TRANSDUCER

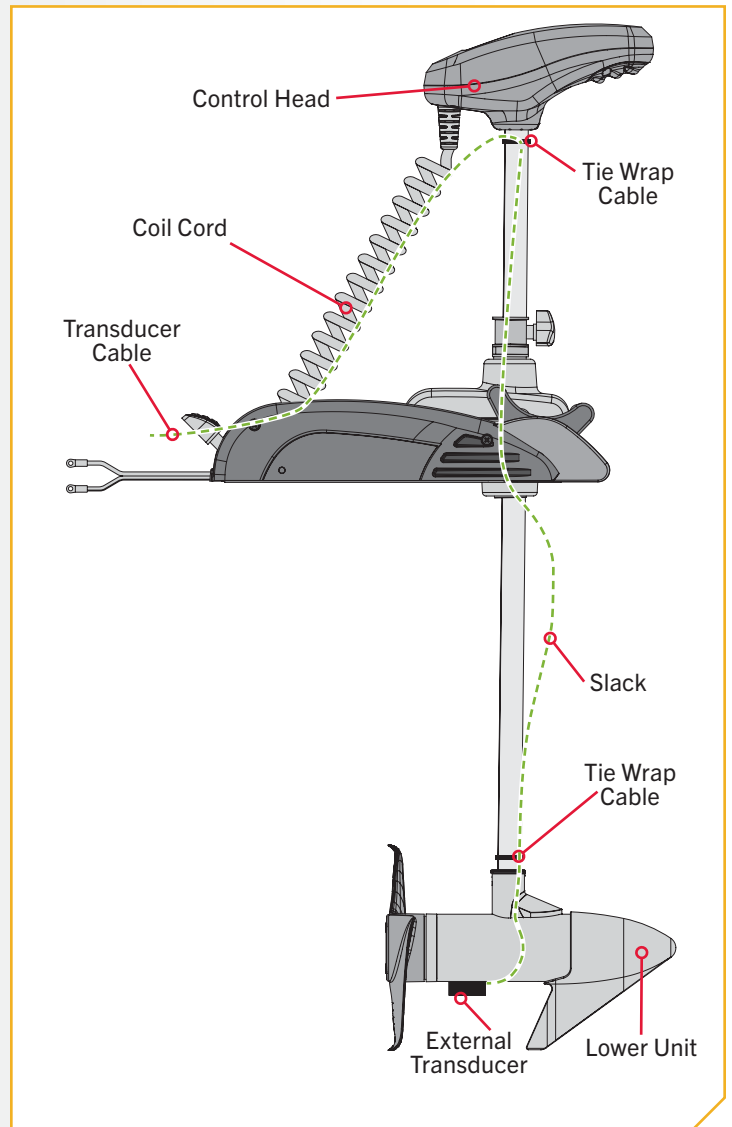
An external transducer is not included with your trolling motor. An external transducer can be installed onto motors that have Advanced GPS Navigation or motors that do not have a built-in transducer. Installing an external transducer is not recommended for motors with Built-in MEGA Down Imaging.

- 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 below the Control Head.
 - d. Run the Transducer Cable through the Coil Cord to the power supply.



CAUTION

Failure to follow the recommended wire routing for the Advanced GPS Navigation and 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.



SERVICE & MAINTENANCE

PROP REPLACEMENT

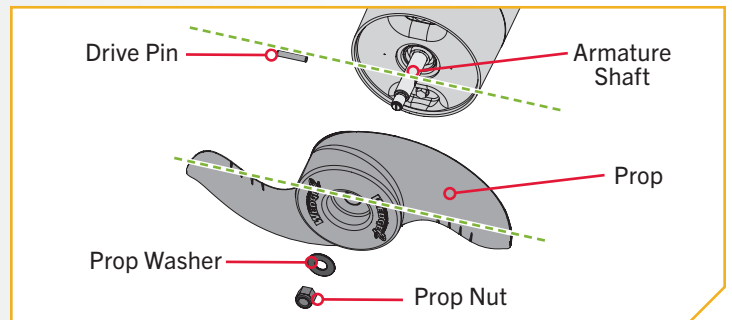
TOOLS AND RESOURCES REQUIRED >

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

INSTALLATION >

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



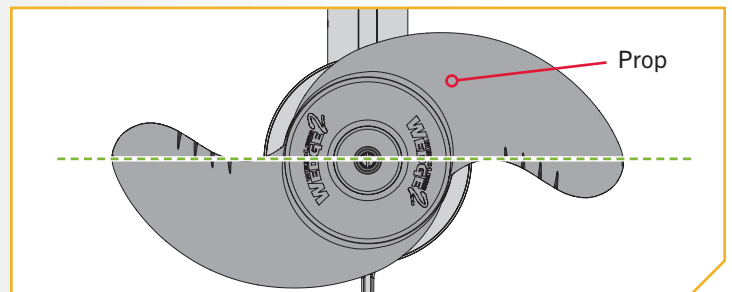
CAUTION

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

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

CAUTION

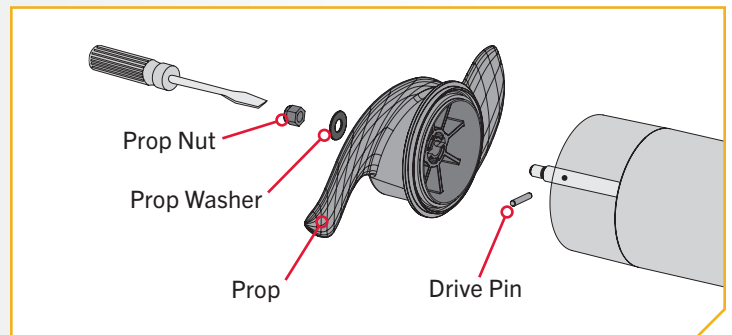
If the Prop does not readily slide off, take care to not bend the Armature Shaft while removing the Prop by pulling the prop evenly off the Armature Shaft.



- Align the new Prop with the Drive Pin.
 - Install the Prop Washer and Prop Nut.
 - Tighten the Prop Nut 1/4 turn past snug at 25-35 inch-lbs.

CAUTION

Do not over-tighten as this can damage the Prop.



GENERAL MAINTENANCE



GENERAL MAINTENANCE

- After use, the entire motor should be rinsed with freshwater. This series of motors is not equipped for saltwater exposure.
- The composite shaft requires periodic cleaning and lubrication for proper retraction and deployment. A coating of an aqueous-based silicone spray will improve operation.
- The Prop must be inspected and cleaned of weeds and fishing line after every use. Fishing line and weeds can get behind the Prop, damage the seals and allow water to enter the motor.
- Verify that 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 the battery to full charge prior to use.
- Keep battery terminals clean with fine sandpaper or emery cloth.
- The Prop is designed to provide weed-free operation with very high efficiency. To maintain this top performance, the leading edge of the blades must be kept smooth. If they are rough or nicked from use, restore to smoothness by sanding with fine sandpaper.

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 "Prop 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 separate deep-cycle marine battery for your trolling motor and that you power the depth finder from the starting/cranking battery. If problems still persist, call our service department at 1-800-227-6433.

NOTICE: For all other malfunctions, visit an Authorized Service Center. You can search for an Authorized Service Center in your area by visiting minnkota.johnsonoutdoors.com, or by calling our customer service number at 1-800-227-6433.

FOR FURTHER TROUBLESHOOTING AND REPAIR

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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 online directly from our website at minnkota.johnsonoutdoors.com. From screws to sideplates, you can order replacement parts for your Minn Kota products.



Frequently Asked Questions

Find answers to general inquiries, battery and rigging installation, and networking scenarios. We have FAQs available on our website at minnkota.johnsonoutdoors.com to help answer all of your Minn Kota questions.



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.



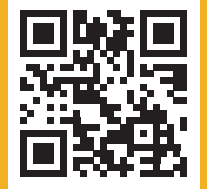
Contact Us

You can contact our consumer service department with questions regarding your Minn Kota products. To inquire, visit minnkota.johnsonoutdoors.com.



Authorized Service Centers

Minn Kota has over 800 authorized service centers in the United States and Canada where you can purchase parts or get your products repaired. Please visit our website to locate a service center in your area.



Scan to visit
Minn Kota
service online.

COMPLIANCE STATEMENTS

ENVIRONMENTAL COMPLIANCE STATEMENT

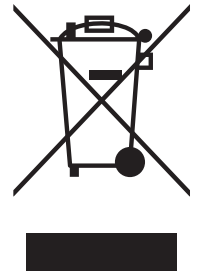
It is the intention of JOME to be a responsible corporate citizen, operating in compliance with known and applicable environmental regulations, and a good neighbor in the communities where we make or sell our products.

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 wheelee 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.

REGULATORY COMPLIANCE INFORMATION

› Motors with Advanced GPS Navigation

For regulatory information on motors with Advanced GPS Navigation, please refer to the Advanced GPS Navigation Manual online at minnkota.johnsonoutdoors.com.



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



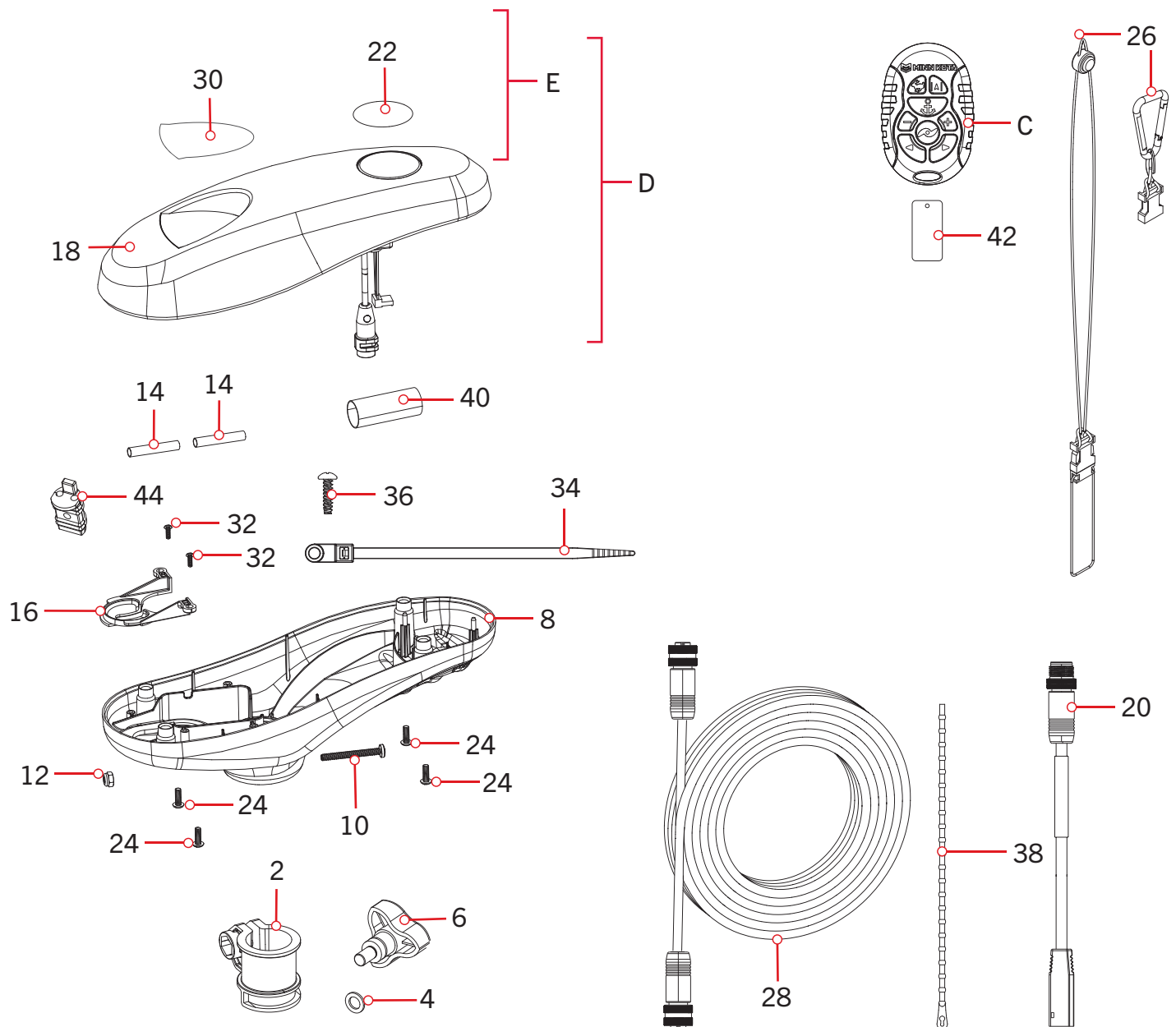
PARTS DIAGRAM & PARTS LIST

KAYAK TERROVA - 55 LBS THRUST - 12 VOLT - 36" 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.

KAYAK TERROVA CONTROL HEAD

Control Head Parts Diagram



PARTS DIAGRAM & PARTS LIST

Control Head Parts List

Assembly	Part #	Description	Notes	Quantity
D	2774103	CONTROLLER,ADV GPS NAV,TRV/UTX		1
E	2770242	CVR KIT, ADV GPS NAV, TRV/UTX		1
C	2994175	REMOTE ASM, MICRO REMOTE		1
Item	Part #	Description	Notes	Quantity
▲	✘	SEAL,BUNG LOWER		1
▲	✘	SEAL,BUNG UPPER,FW		1
2	2321500	DEPTH COLLAR 1.30		1
4	2321702	WASHER-FLAT .375 NYLON		1
6	2260905	KNOB-SOFT GRIP,HG/DR,ZNC		1
8	2292500	CONTROL BOX, ULTREX, T2		1
10	2263406	SCREW-#10-24 X 2" S/S PPH		1
12	2333101	NUT-HEX #10-24 UNC-2B NYL SS		1
14	2065400	WIRE INSULATOR-LGE 1-3/4,BLUE		2
16	2224706	PLUG, SCREW-DOWN, BLK		1
18	2290212	COVER,CTRL BOX iP, PD PRINTED		1
20	490380-1	CABLE, ETHERNET PIGTAIL-700 HD		1
22	2395524	DECAL, DOMED FW		1
24	2372100	SCREW-#8-18 X 5/8 THD (SS)		4
26	2390802	LANYARD w/CARABINR,WIRELESS RMT		1
28	490384-6	CABLE, ETHERNET (M12-M12), 15'		1
30	2395564	DECAL,PUSH BTN TOP 55# FW	*55LB*	1
32	2372103	SCREW. #6 x 3/8 PLASTITE		2
34	2206302	TIE WRAP, SCREW MOUNT 6.3"		1
36	2203441	SCREW-#6 X 1/2" THRD FORM,SSTL		1
38	2206305	TIE WRAP, REUSABLE RED, 8"		1
40	2205412	SHRINK TUBE-.75 ID X 2"		1
42	2394110	TAG, MICRO REMOTE		1
44	2394110	PLUG-WIRE D-SHAPE		1
▲	2206301	TIE WRAP, LOW PROFILE 8"		1
▲	2327144	MANUAL-INSTALL GUIDE, KYAK TER		1
▲	2327145	MANUAL, KAYAK TERROVA		1
▲	2294950	INSTRUCTIONS,OBN & REMOTE PAIR		1
▲	2207131	STANDARD QS SETUP GUIDE		1
▲	2394910	INSTRUC. SHEET MICRO REMOTE		1
▲	2394912	QCK. REF GUIDE, MICRO REMOTE		1
▲	2327146	MANUAL-INSTALL GUIDE, SAFESWIT		1
▲	2998801	KIT, SAFESWITCH		1

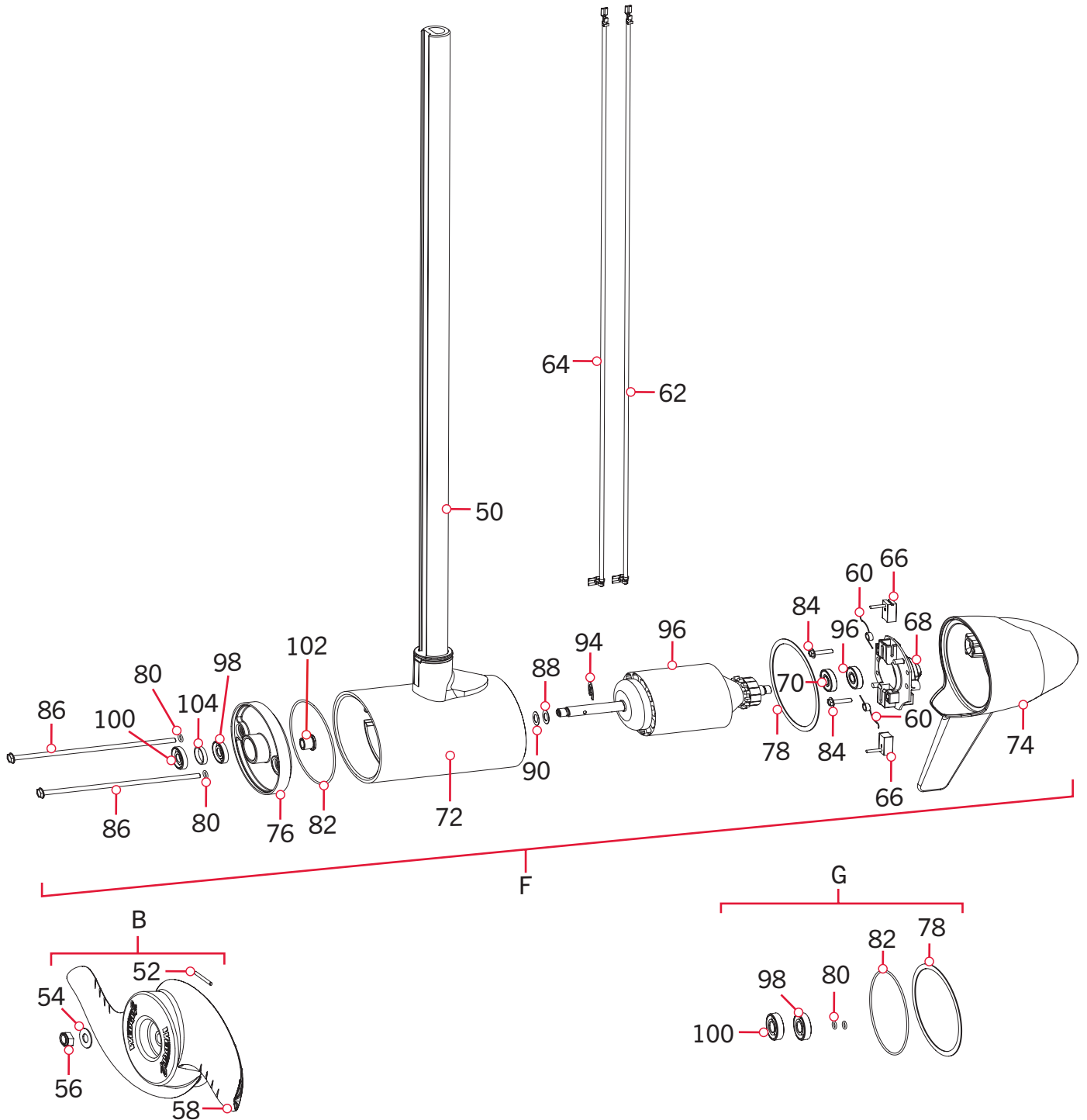
▲ Not shown on Parts Diagram.

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

PARTS DIAGRAM & PARTS LIST

KAYAK TERROVA MOTOR

12 Volt 3.625" Motor Parts Diagram



PARTS DIAGRAM & PARTS LIST

▶ 12 Volt 3.625" Motor Parts List

Assembly	Part #	Description	Notes	Quantity
F	2779038	MTR/TUBE ASM 55#36"TRV	*NON-SONAR*	1
C	1378131	PROP IND 2091160 WDLS WDG II		1
G	2888460	SEAL & O-RING KIT		1
Item	Part #	Description	Notes	Quantity
50	✘	PULT-MGB 1.30 - D35-35CH		1
52	2092600	PIN-DRIVE 1.06" LG (SS)		1
54	2151726	WASHER-5/16 STD (S/S)		1
56	2053101	NUT-PROP,NYLOC (MED) 5/16 SS		1
58	2091161	PROP-WW2 3 5/8" MACHINED		1
60	975-040	SPRING - TORSION		2
62	640-058M	LEADWIRE BLK 10 AWG 47 GPT		1
64	640-158M	LEADWIRE RED 10AWG 49 GPT		1
66	188-036	BRUSH ASSEMBLY 3.625		2
68	738-036	BRUSH PLATE WITH HOLDER 3.625		1
70	725-050	PAPER TUBE - BRUSH RETENTION		1
72	✘	CTR HSG ASY 3.62 FW-MAGNET CB		1
74	421-050	HSG BRSH END 3.62 FW	*NON-SONAR*	1
76	2-400-101A	PLAIN END HSG ASY 3.625		1
78	337-036	GASKET		1
80	701-008	O-RING	*THRU-BOLT*	2
82	701-081	O-RING		1
84	830-007	SCREW, # 8-32		2
86	830-008	THRU BOLT 10-32 x 9.205		2
88	990-067	WASHER - STEEL THRUST		1
90	990-070	WASHER - NYLATRON		1
92	788-015	RETAINING RING		1
94	140-010	BEARING - BALL		1
96	2-100-146	ARM ASY 12V 3.62 55#CB/LS		1
98	880-003	SEAL		1
100	880-006	SEAL WITH SHIELD		1
102	144-049	BEARING - FLANGE		1
104	725-035	PAPER TUBE - SEAL BORE		1

▲ Not shown on Parts Diagram.

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

PARTS DIAGRAM & PARTS LIST

Steering Housing Parts List

Assembly	Part #	Description	Notes	Quantity
H	2997053	STR HSG ASM w/BSHG 12V FW	*55LB*	1
J	2776561	STEERING HSG TOP FW/GEAR KIT		1
K	2777060	STEERING MOTOR KIT, 12V T2	*55LB*	1
Item	Part #	Description	Notes	Quantity
120	2326566	HOUSING-STEERING, BTM, FW		1
122	2302605	PIN-ROLL 5/16" X 1/2"		4
124	✘	SHAFT-GEAR, FIRST CLUSTER		1
126	✘	SHAFT-GEAR,INTERMED.CLUSTER		1
128	✘	SHAFT-GEAR, THIRD CLUSTER		1
130	2322210	GEAR & PINION, DR.HSG, STAGE 2		1
132	2302250	GEAR & PINION,DR. HSG, STAGE 3		1
134	2302255	GEAR & PINION,DR. HSG, STAGE 4		1
136	2321730	SPACER,GEAR CLUSTER		1
138	2327060	MOTOR, STEERING 12V T2	*55LB*	1
140	2322215	GEAR-PINION, DR.HSG, STAGE 1		1
142	2322520	CASE-MOTOR, STEERING HSG, TOP		1
144	2322525	CASE-MOTOR,STEERING HSG,BTM,T2		1
146	2053422	SCREW-M3-.5 X 10 PPH, ZPS		2
148	2051710	LOCKWASHER-SPLIT, 3MM, ZP		2
150	2043413	SCREW-#8-18 X .75 PPH TY AB NYSHD		1
152	2308601	BREATHER FILTER, DR.HOUSING		1
154	2322030	TUBE-OUTPUT, MACHINED		1
156	2322200	GEAR-OUTPUT		1
158	2327308	BEARING-BALL,SEALED		2
160	2321704	WASHER-THRUST, STEERING		2
162	2321510	COLLAR-DRIVE,BOTTOM		1
164	2321720	SHIM,O-RING		2
166	2324608	O-RING,224,PD PRO STR HSG		2
168	2321515	LINER OUTPUT TUBE		1
170	2324604	O-RING, CASE SEAL		1
172	✘	HOUSING-STEERING, TOP, FW		1
174	2323408	SCREW-#8-32 X 2.0 SHCS SS		7
176	2322600	PIN-LATCH, ZP		1
178	2321702	WASHER-FLAT .375 NYLON		2
180	2263011	E-RING 3/8 DIA. SHAFT*		2
182	2322702	SPRING, LATCH PIN SS		2
184	2323410	SCREW-#8-32 X .75 SHCS SS		1

▲ Not shown on Parts Diagram.

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

PARTS DIAGRAM & PARTS LIST



Item	Part #	Description	Notes	Quantity
186	2327310	BUSHING,STEERING HSG PIVOT,FW		2
188	✘	LEADWIRE, STEERING MOTOR		1
190	2325503	DECAL,STOW/DEPLOY,TRV3 PM		1
192	3394602	WASHER-FLAT #8 SS		7

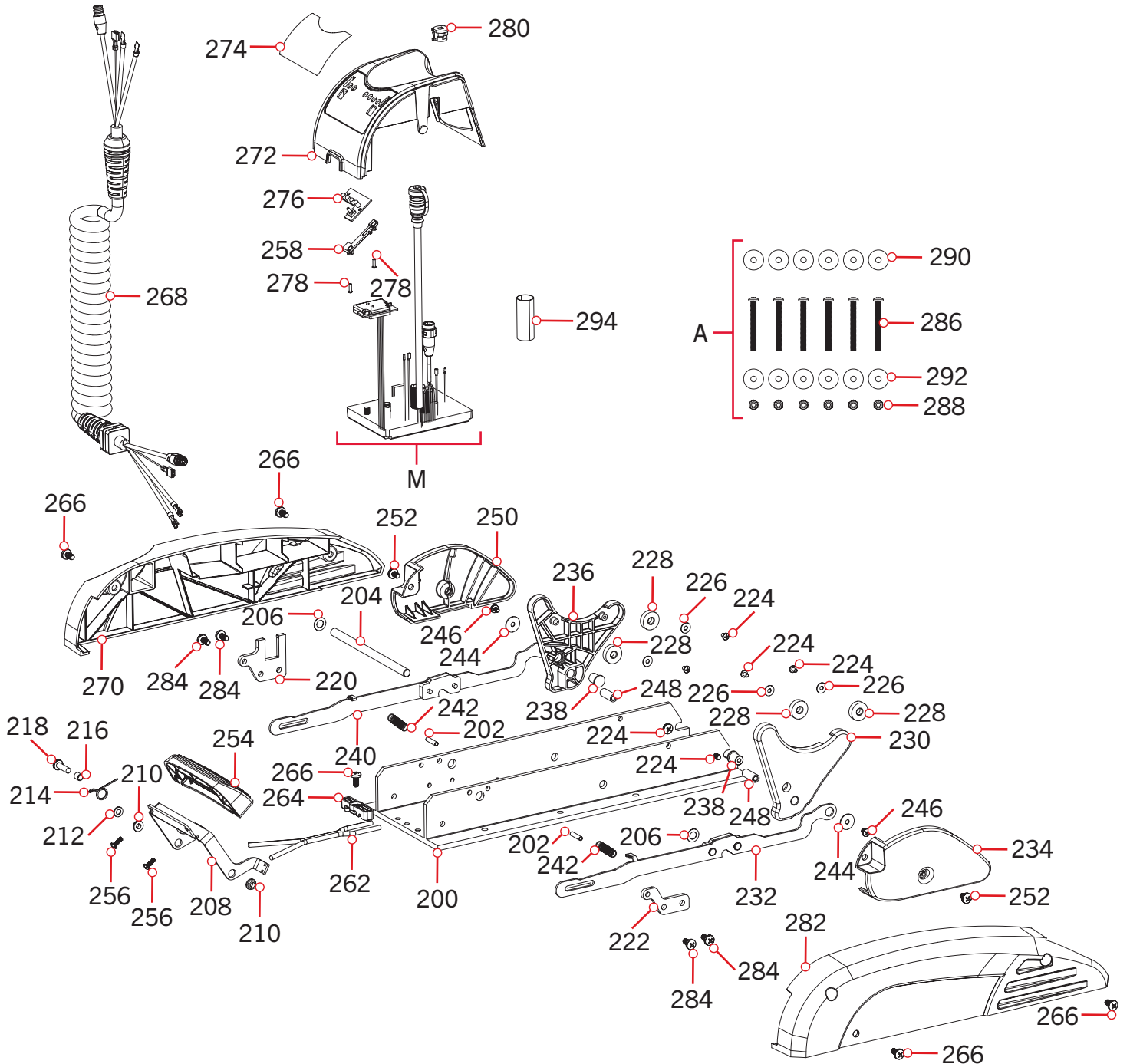
▲ Not shown on Parts Diagram.

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



KAYAK TERROVA MOUNT >

> Mount Parts Diagram



PARTS DIAGRAM & PARTS LIST

Mount Parts List

Assembly	Part #	Description	Notes	Quantity
M	2324062	CONTROL BRD ASY, MAIN, 12V, IP	*55LB*	1
A	2994864	BAG ASSY-TERROVA/V2,MNTG HDW		1
Item	Part #	Description	Notes	Quantity
200	2321907	BASE, EXTRUSION, MACHINED		1
202	2322912	PIN-ROLL .1875 X 1.000 SS		2
204	2322602	PIN-PIVOT, ZP		1
206	2013100	NUT-SPEED		2
208	2320405	HANDLE, RELEASE, FW		1
210	2322604	BUSHING,HANDLE		2
212	2071716	WASHER-FLAT SS .253 x .470		1
214	2322701	SPRING, TORSION		1
216	2301700	SPACER-RELEASE LEVER-BRASS		1
218	2073408	SCREW-1/4-20 X 7/8 PPH S/S		1
220	2321940	BRACKET, STRAIN RELIEF FW		1
222	2321950	BRACKET, SIDEPLATE FW		1
224	2323412	SCREW-#8-18 X .25 PPH SS TY B		4
226	2321706	WASHER-FLAT #8 .50 OD/.188 SS		4
228	2325115	PAD, RUBBER REST, BLACK		4
230	2323910	RAMP-MOTOR, RIGHT 3-5/8"	*55LB*	1
232	2994204	ARM/SUPPORT BLOCK ASSY,R,FW		1
234	2321920	PLATE-SKID, RIGHT FW	*55LB*	1
236	2323915	RAMP-MOTOR, LEFT 3 5/8"	*55LB*	1
238	2324705	INSERT-MOTOR RAMP,METAL,ZP		2
240	2994202	ARM/SUPPORT BLOCK ASSY,L,FW		1
242	2322716	SPRING, EXTENSION, T2		2
244	2321700	WASHER #10 SS		2
246	2323422	SCREW-#10-24 X .25" PPH SS MCH		2
248	2322920	STAND-OFF, ALUMINUM PLAIN		2
250	2321925	PLATE-SKID, LEFT FW	*55LB*	1
252	2323403	SCREW-1/4-20 X.375 MCH SS CRPH		2
254	2320217	COVER, HANDLE COSMETIC FW		1
256	2383446	SCREW-#8-16 X .50" PLASTITE SS		2
258	2320830	LOCKING TAB,PWR/BAT.METER		1
260 ▲	2323406	SCREW-#10-24 X .50 CRPH SS		2
262	2090651	LEADWIRE,10 GA		1
264	2321310	STRAIN RELIEF		1
266	2323405	SCREW-1/4-20 X 1/2" MCH SS		7

▲ Not shown on Parts Diagram.

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

PARTS DIAGRAM & PARTS LIST



Item	Part #	Description	Notes	Quantity
268	2991271	COIL CORD ASY 54"/60" NON-US2	*NON-SONAR*	1
270	2323927	SIDEPLATE-LEFT, TERROVA		1
272	2326530	HOUSING-CENTER, TERROVA		1
274	2325636	DECAL-PWR SWTCH,T3PM,FW		1
276	2074070	BATTERY METER, 12V, FW	*55LB*	1
278	2383428	SCREW-#4-24 X 3/8 HI-LO SS		2
280	2322901	STRAIN RELIEF, HEYCO P/N 1852		1
282	2323922	SIDEPLATE-RIGHT, TERROVA		1
284	2323404	SCREW-1/4-20 X 1/2" T-L ZP		4
286	2263462	SCREW-1/4-20 X 2" S/S PPH ADJT		6
288	2263103	NUT-1/4-20 NYLOCK SS		6
290	2301720	WASHER-MOUNTING - RUBBER		6
292	2261713	WASHER-1/4 FLAT 18-8 SS		6
294	2205412	SHRINK TUBE-.75 ID X 2"		1
▲	2015800	HANG TAG "CAUTION..TILT HINGE"		1

▲ Not shown on Parts Diagram.

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



RECOMMENDED ACCESSORIES

PRECISION BATTERY CHARGERS

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



SHALLOW WATER ANCHORS

When you find fish, we're down. From the relentless Raptor to the trusted power of Talon, when you're ready to lock down fish in shallow water, we have your weapon.



RAPTOR
SHALLOW WATER ANCHOR



TALON
SHALLOW WATER ANCHOR

How to Dominate in Shallow Water

A shallow water anchor revolutionizes the way you stay on fish. Both Raptor and Talon give fish nowhere to run and nowhere to hide. Zero in on your target by keeping your boat in the exact position and orientation you want, with a whisper-quiet anchor and no prop to disturb sediment or spook fish.

Anchor in Anything

Raptor and Talon can adjust their anchoring force based on what kind of bottom you're anchoring into, so you get the right amount of power you need for a secure hold in rocks, silt, mud or sand. Raptor can even sense the bottom automatically, dialing in the right amount of force for the job.

Control from Anywhere

Raise and lower your anchor from the unit, a dedicated remote control, wireless remote, One-Boat Network App, or Humminbird fish finder.



MINN KOTA ACCESSORIES

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

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



minnkota.johnsonoutdoors.com



Part #2327145

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ECN 45175

Rev B

03/25