



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 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.

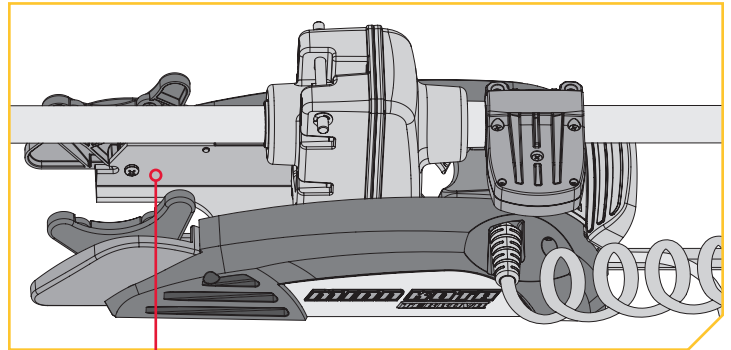
REGISTRATION

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.

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.

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



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 whose 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

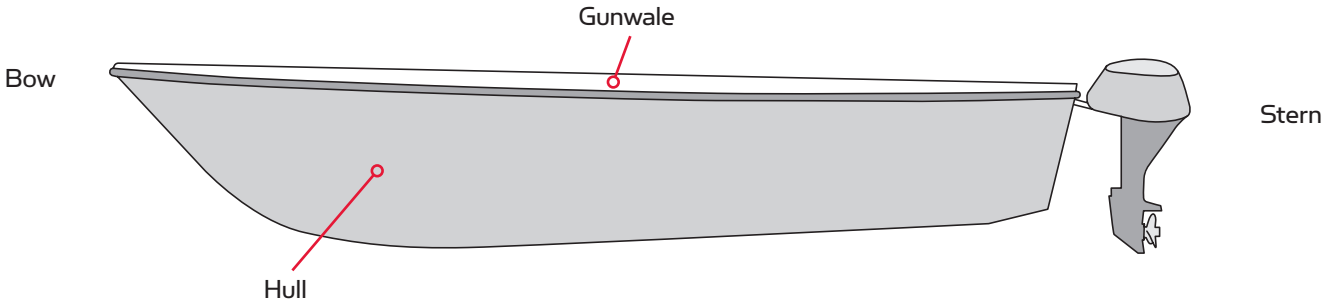
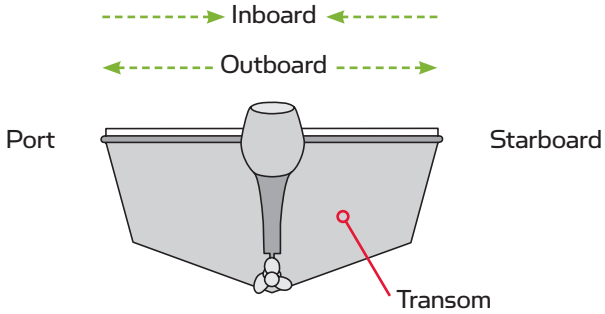
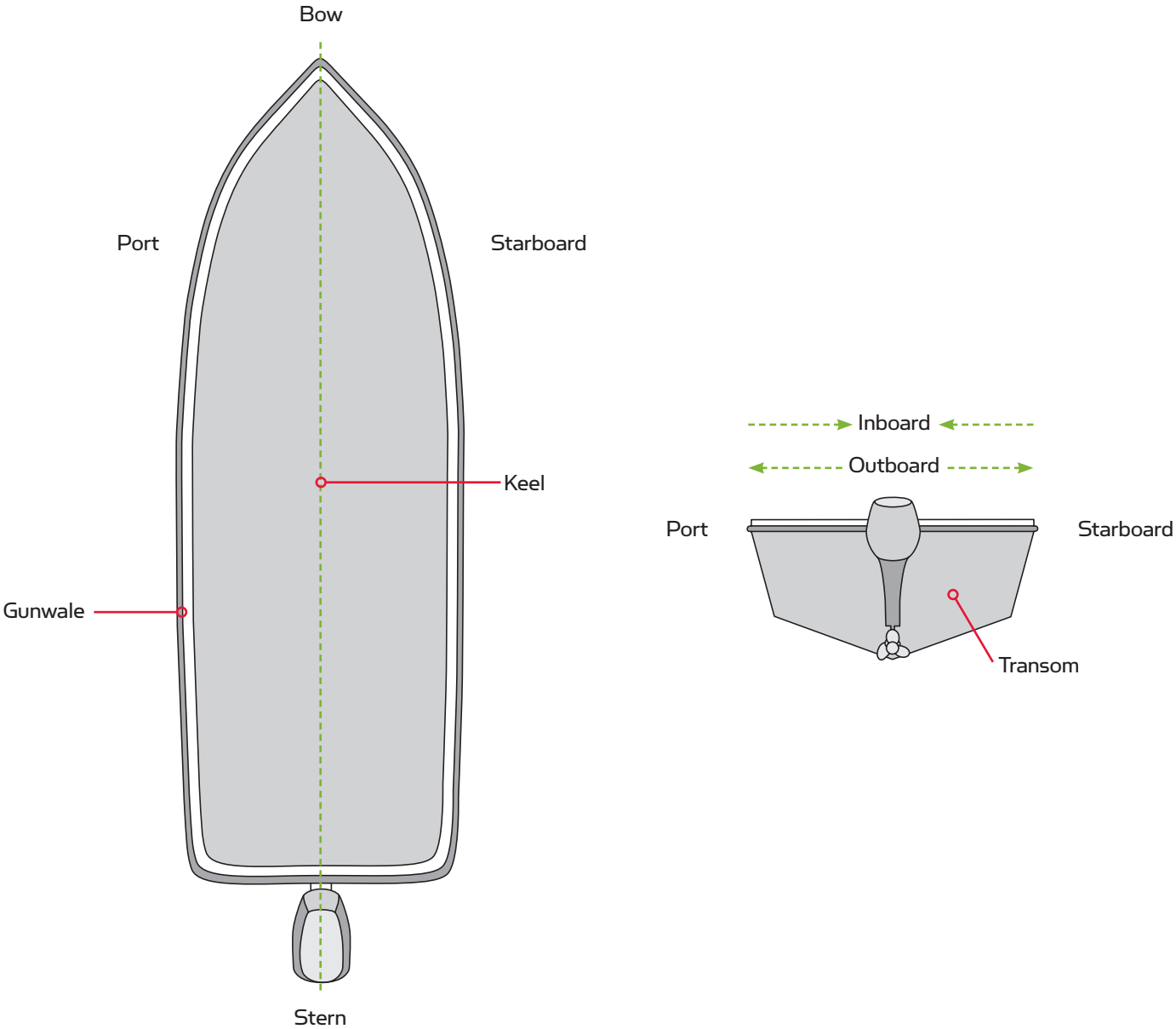
When stowing or deploying the motor, keep fingers clear of all hinge and pivot points and all moving parts. In the event of unexpected operation, remove power leads from the battery.

WARNING

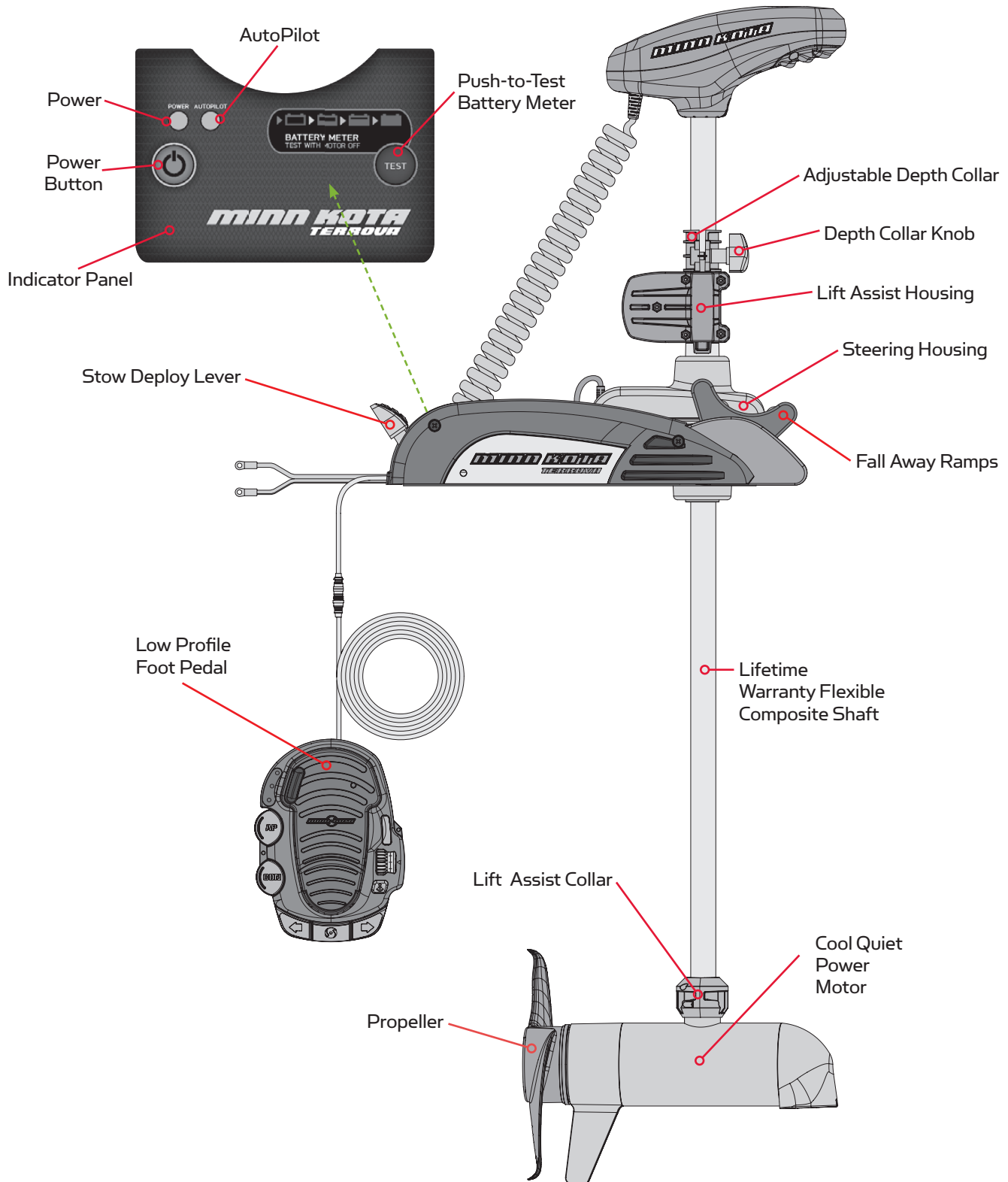
It is recommended to only use Johnson Outdoors approved accessories with your Minn Kota motor. Using non-approved accessories including to mount or control your motor may cause damage, unexpected motor operation and injury. Be sure to use the product and approved accessories, including remotes, safely 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.



KNOW YOUR BOAT



FEATURES



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

INSTALLATION

INSTALLING THE TERROVA

Your new Terrova 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 brackets and to locate your nearest dealer, please refer to the manual. 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.

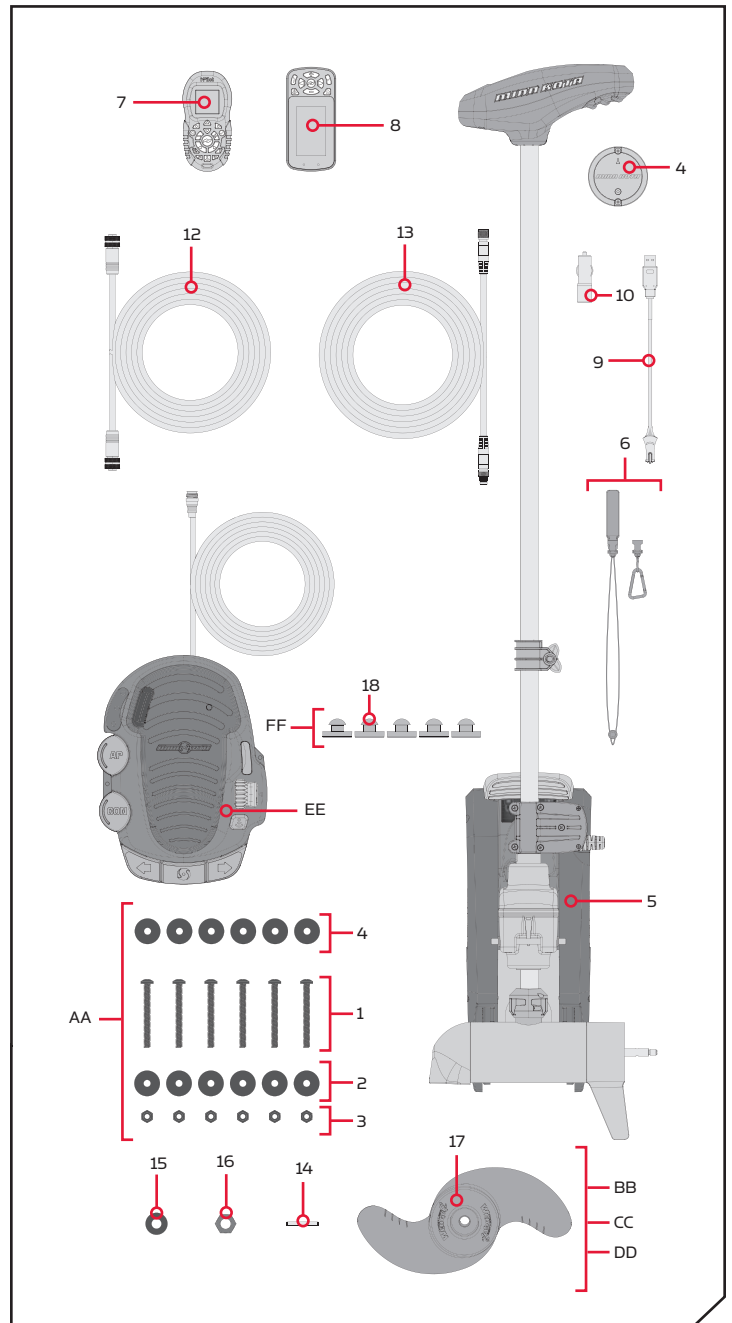
INSTALLATION PARTS LIST

Item / Assembly	Part #	Description	Qty.
AA	2994864	BAG ASSEMBLY - (BOLT, NUT, WASHERS)	1
1	2263462	BOLT-MOUNTING-1/4X2 W/STG	6
2	2261713	WASHER-1/4	6
3	2263103	NUT NYLOK 1/4-20 MTG	6
4	2301720	WASHER-MOUNTING RUBBER	6
5	*	MOTOR ASSEMBLY	1
6	2390800 ♦	LANYARD, REMOTE W/ CARABEENER	1
7	2994075 ♦	REMOTE ASY, IPILOT	1
▲	2397101 ♦	MANUAL, QUICK REF., IPILOT 1.6	1
8	2994076 ♦	REMOTE ASSEMBLY LINK TOUCHSCREEN	1
9	2373241 ♦	CABLE, USB REMOTE CHARGER LINK	1
10	2375901 ♦	ADAPTER, USB DC POWER LINK	1
11	2996400 ♦	HEADING SENSOR ASSEMBLY	1
12	490389-1 ♦	CABLE, ETH (M12-M-M12-F, 30')	1
13	2211415	CABLE-EXTENSION, PD/AP 110"	1
14	2092600	PIN-DRIVE 1.06" LG (S5)	1
	2262658	PIN-DRIVE 1" X 3/16" S/S	1
15	2151726	WASHER-5/16 STD (S/S)	1
	2091701	WASHER-PROP (LARGE)	1
16	2053101	NUT-PROP,NYLOC (MED) 5/16 S5	1
	2093101	NUT-PROP,NYLOC,LG, 3/8 S5	1
17	2091160	PROP-WW2 (3-5/8") REAMED	1
	2341160	PROP-WW2 (4.5) W/ADP.RING	1
	2331160	PROP-WW2 (4") W/ADP.RING	1
BB	1378131	PROP IND 2091160 WDLS WDG II	1
CC	1378160	PROP KIT 2341160 112# WW2	1
DD	1378132	PROP IND 2331160 WDLS WDG II	1
EE	2994721	FT PED ASY, TRV, W/SPOT LCK	1
FF	2994859	BAG, ASY-TERROVA/V2, RUB BUMPERS	1
18	2325110	PAD, FOOT PEDAL	5
▲	2327132	INSTALLATION INSTRUCTIONS TERROVA	1
▲	2397103 ♦	MANUAL, QUICK REF., IPILOT LINK 3.0	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 i-Pilot or i-Pilot Link.



MOUNTING CONSIDERATIONS

It is recommended that the motor be mounted as close to the 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.

TOOLS AND RESOURCES REQUIRED

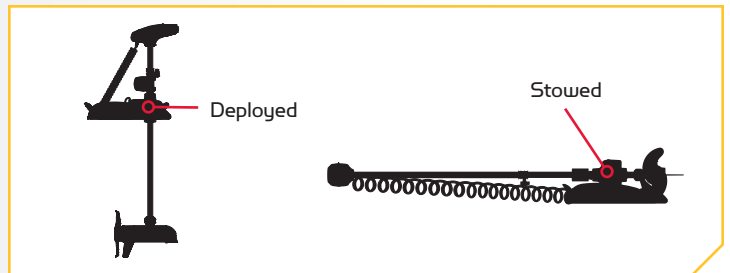
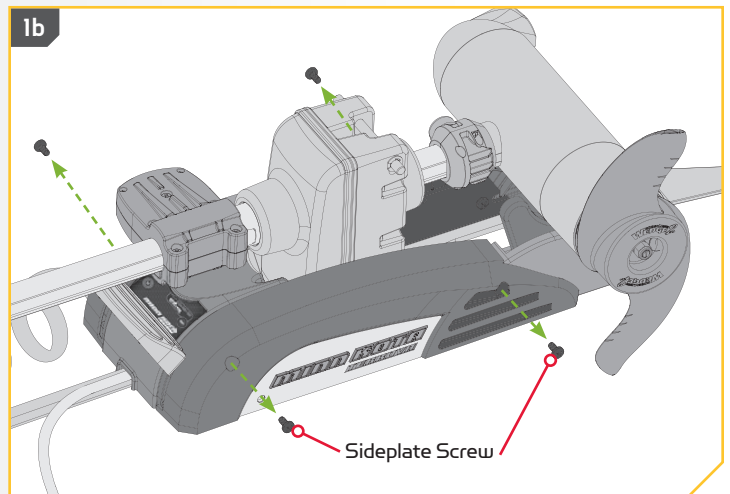
- #3 Phillips Screw Driver
- Drill
- 9/32" Drill Bit
- 7/16" Box End Wrench
- A second person to help with the installation

INSTALLATION

Installing the Terrova

- 1
 - a. Place the mount 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. Remove the four sideplate screws using a #3 Phillips screwdriver. Two of these screws will be located on each side of the mount.

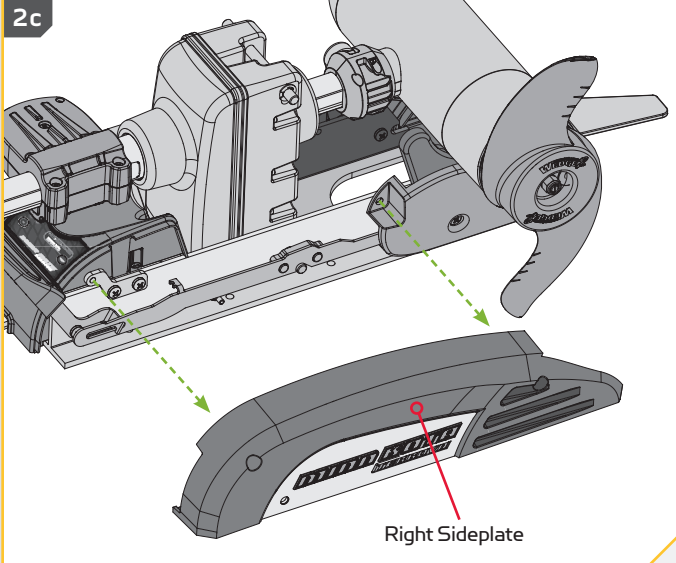
NOTE: This motor weighs approximately 65lbs. We recommend having a second person help with the installation.



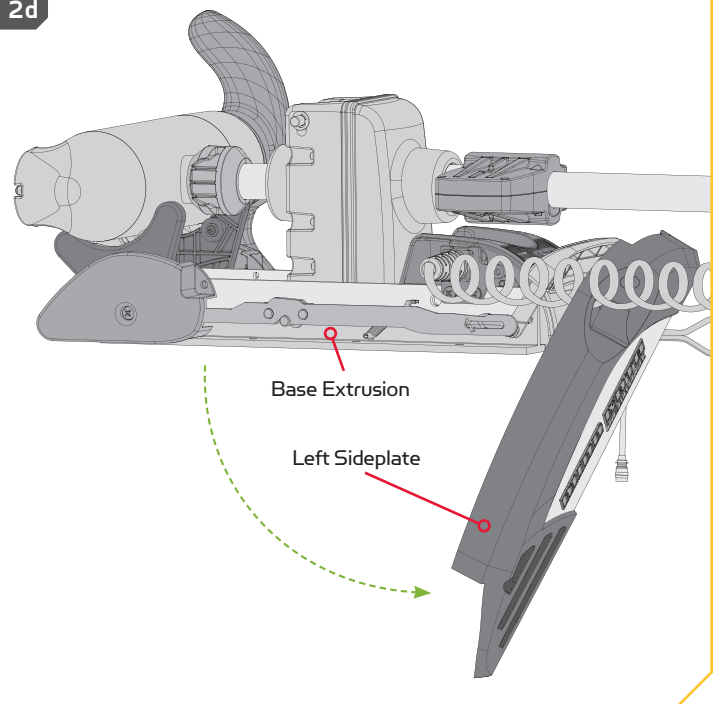
INSTALLING THE TERROVA

2

- c. Remove the Right Sideplate.
- d. Swing the Left Sideplate out and away from the Base Extrusion.



2d

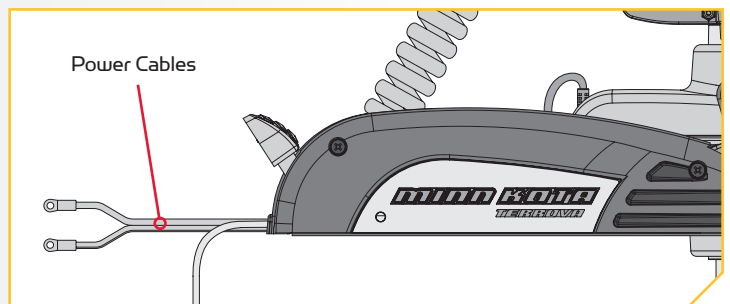


3

- e. Make sure that the Power Cables from the battery are disconnected, or that the breaker, if equipped, is "off".

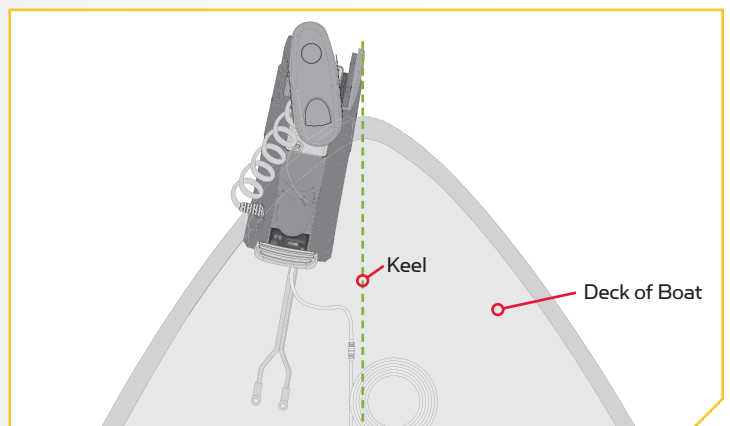
WARNING

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



4

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

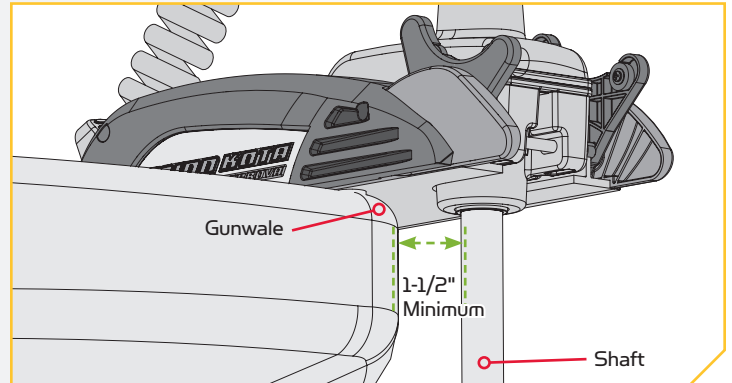


5

ITEM(S) NEEDED

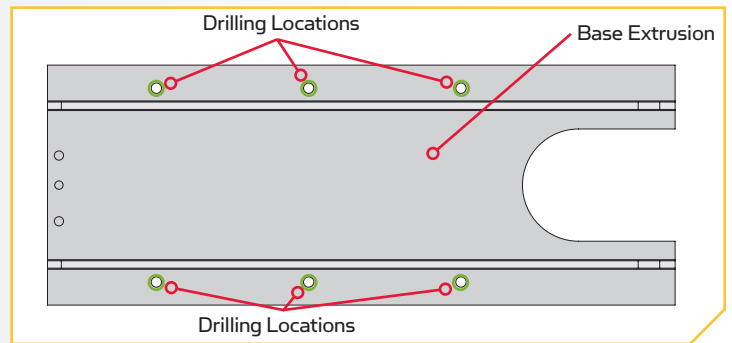
- #4 x 6

- 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.
- Check to be sure that the mount is level. Use the Rubber Washers (Item #4) provided to create a level surface if necessary.



6

- It is recommended to mark at least 4 of the 6 holes in the Base Extrusion and to have a minimum of two bolts on each side that are located the farthest apart. Ideal installation would allow for 6 bolts to be used, with a minimum of 4.
- Drill through the deck of the boat using a 9/32" Drill Bit on the marked locations.



INSTALLING THE TERROVA

7

ITEM(S) NEEDED

#1 x 6

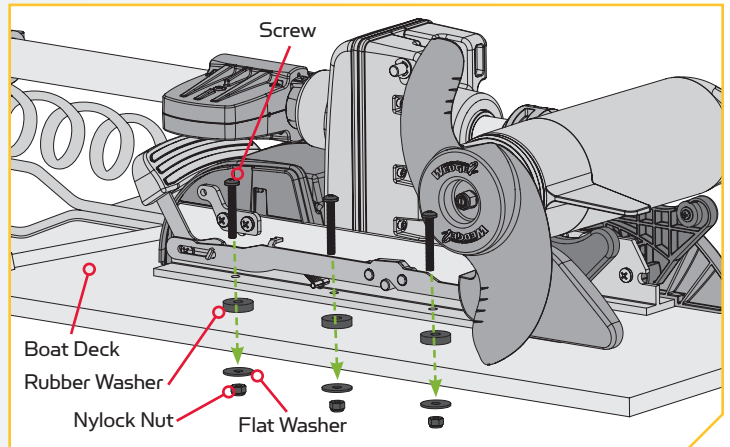
● #2 x 6

○ #3 x 6

● #4 x 6

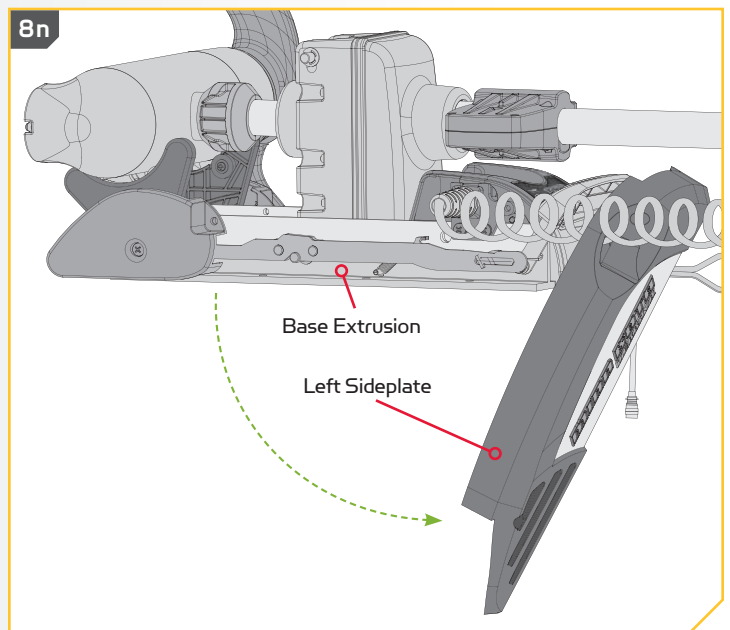
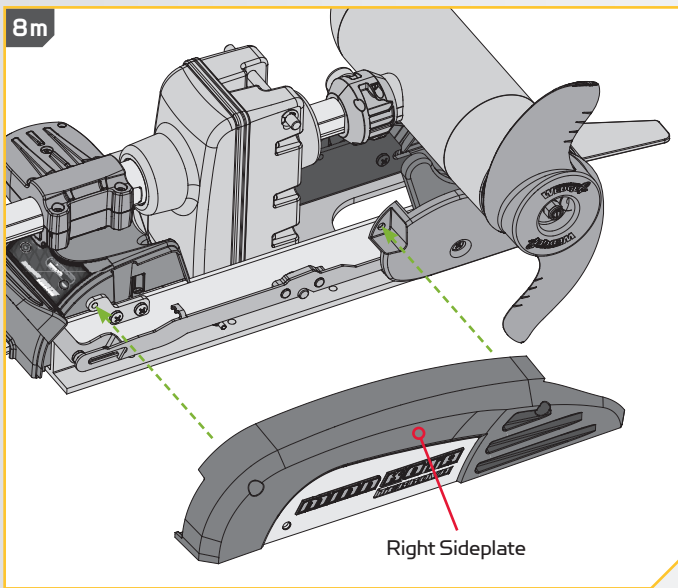
- k. Put a 1/4-20 x 3 1/2" (Item #1) screw in each of the drilled locations. The screw should pass through the Base Extrusion and the boat deck. If the rubber washers (Item #4) are used, they should sit between the Base Extrusion and boat deck. Make sure to secure the motor with screws on each side of the Base Extrusion.
- l. Place a Flat Washer (Item #2) and then a Nylock Nut (Item #3) at the end of each screw as shown and secure. Make sure all hardware is secure.

NOTE: 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.



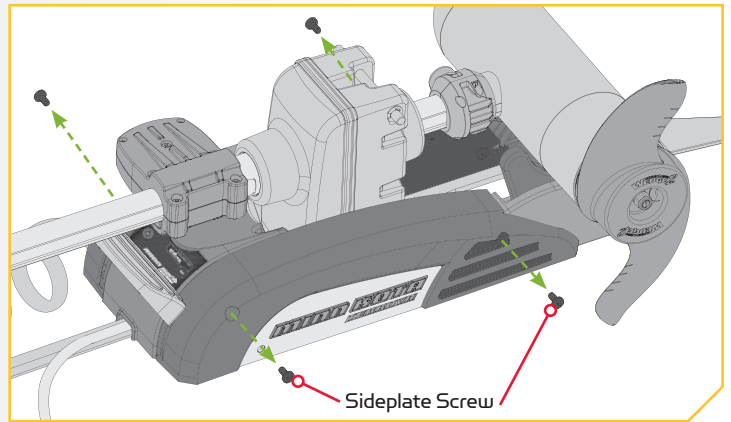
8

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



9

- o. Replace the four sideplate screws using a #3 or #2 Phillips screwdriver. Two of these screws will be located on each side of the mount.



10

ITEM(S) NEEDED

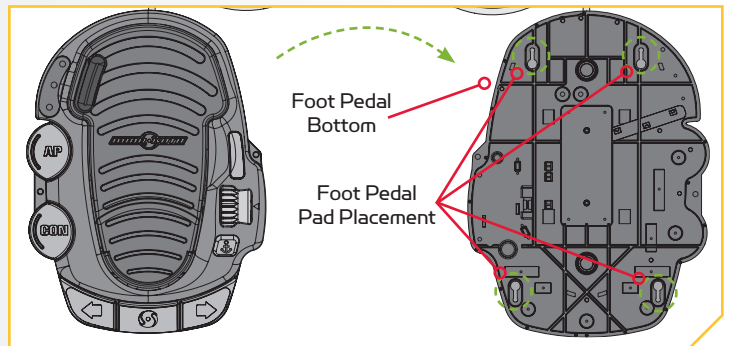
 #18 x 5



#EE x 1

- p. Take the Foot Pedal (Item #EE) and turn it over. Put a Foot Pedal Pad (Item #18) in each of the pad locations.

NOTE: The pads are recommended when using the Foot Pedal on non-carpeted surfaces.



ROUTING UNIVERSAL SONAR & i-PILOT LINK CABLES

Routing Universal Sonar & i-Pilot Link Cables

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.

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.

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. Please refer to the Battery & Wiring Installation and Motor Wiring Diagram sections of this manual for correct rigging instructions.

NOTE: Universal Sonar only provides 2D sonar that operates at 83/200 kHz. It 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.

*Requires an adapter that is sold separately.

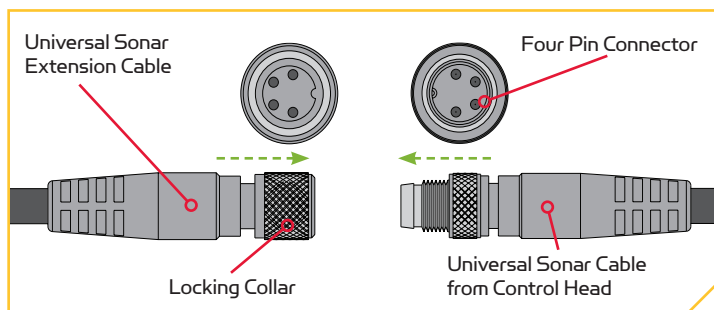
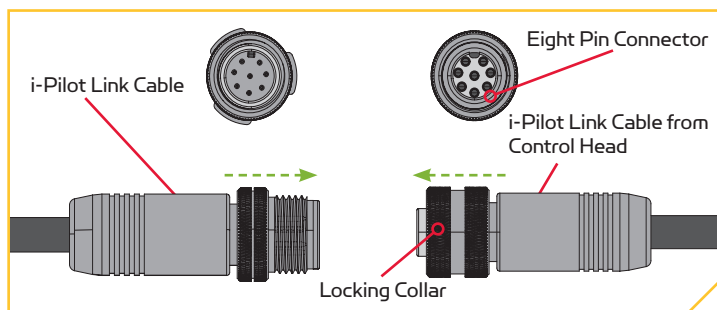
Your trolling motor may be pre-installed with a Universal Sonar transducer system. Your trolling motor may also be pre-installed with either i-Pilot or i-Pilot Link. To learn more about the GPS capabilities available with your i-Pilot or i-Pilot Link navigation system, please refer to the corresponding Owner's Manual.

Both the Universal Sonar and i-Pilot Link features require cables to be connected to an output device. These connections are present on the trolling motor below the Control Head. The i-Pilot system does not need an external wired connection. If only one connection is present, it is because your motor is equipped with the i-Pilot system. If only a single connection is present, it is to connect the Universal Sonar. If two cables are present, one is to connect the Universal Sonar, and the other is to connect the i-Pilot Link connection. Please follow the Minn Kota recommendations on routing the cables to optimize mobility and maximize functionality. The routing will be the same regardless of the number of cables present. Use the following instructions to properly route cables.

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.

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.

To better identify cables present that exit the Control Head, refer to the diagrams below that detail what the Universal Sonar and i-Pilot Link cable connectors look like.



ROUTING UNIVERSAL SONAR & i-PILOT LINK CABLES

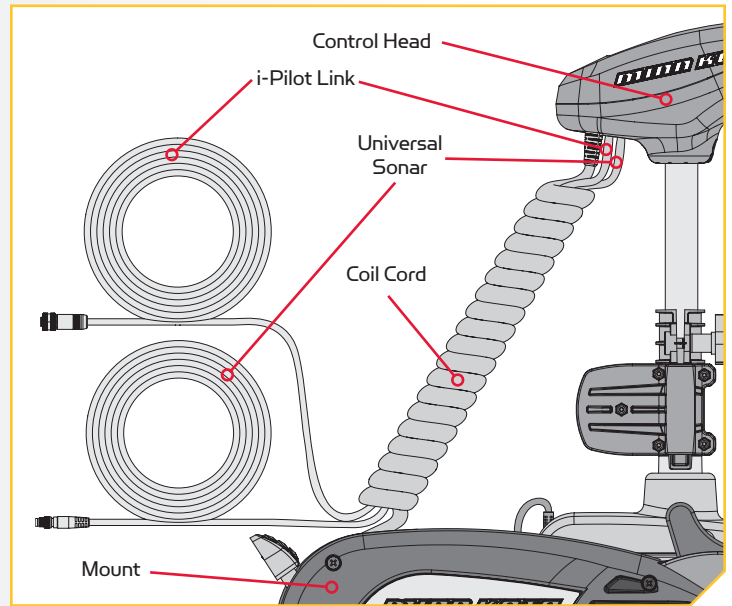
1

- a. Place the motor in the deployed position.
- b. Locate the Universal Sonar and/or the i-Pilot Link cable(s), at the base of the Control Head.

CAUTION

Not following the recommended wire routing for the Universal Sonar and/or i-Pilot Link cable(s), 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.

- c. The Universal Sonar Cable and/or i-Pilot Link cable should be fed all the way through the Coil Cord. It/they should exit the Coil Cord at the bottom of the Coil Cord, where it connects to the Mount.



NOTE: After the Universal Sonar Cable and/or i-Pilot Link Cable exits the Coil Cord, it should be routed through an established routing system on the boat, in an area with minimal interference. Inspect the selected route carefully to ensure that there are no sharp edges, obstacles, or obstructions that may damage the cables.

CONNECTING A UNIVERSAL SONAR EXTENSION CABLE

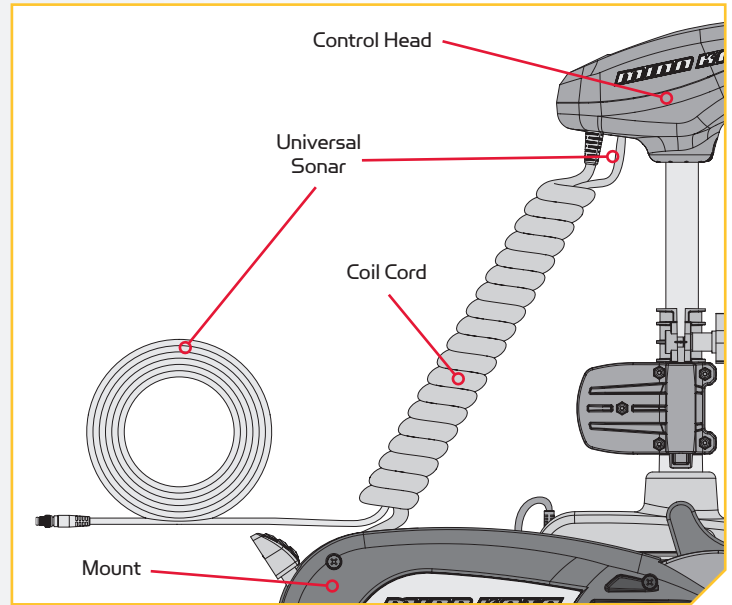
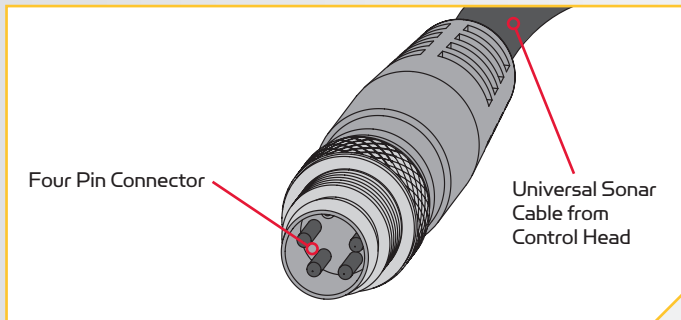
Connecting a Universal Sonar Extension Cable

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. Minn Kota recommends using the MKR-US2-11.

1

- Place the motor in the deployed position.
- Locate the Universal Sonar, if equipped, at the base of the Mount.
- 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.

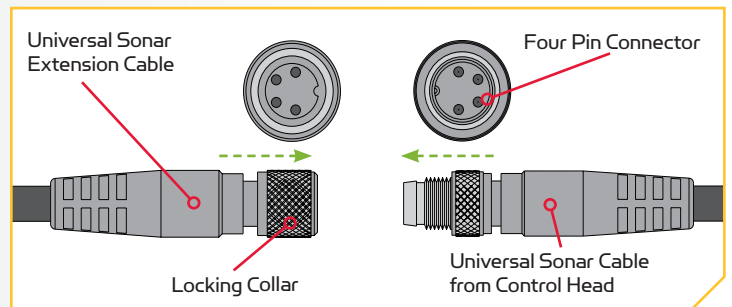
NOTE: Your fish finder should be turned off until this procedure is complete.



NOTE: 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

- Align the pins of the Universal Sonar connector plug from the Control Head with the matching socket end of the appropriate Universal Sonar Extension Cable for your fish finder. Firmly push the connector plug into the socket of the Universal Sonar connection. Twist the locking collar until it is snug.
- Connect the other end of your adapter plug to your fish finder following the manufacturer's instructions.



NOTE: The connectors are keyed to prevent reversed installation.

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 3 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	6 AWG	4 AWG	4 AWG	2 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	2 AWG	2 AWG	2 AWG	2 AWG	2 AWG
E-Drive	40	50 Amp @ 48 VDC	10 AWG	10 AWG	10 AWG	10 AWG	10 AWG

NOTE: Wire Extension Length refers to the distance from the batteries to the trolling motor leads. Consult website for available thrust options. Maximum Amp Draw values only occur intermittently during select conditions and should not be used as continuous amp load ratings.

Reference

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

SELECTING THE CORRECT BATTERIES

SELECTING THE CORRECT BATTERIES

The motor will operate with any lead acid, deep cycle marine 12 volt battery/batteries. For best results, use a deep cycle, marine battery with at least a 105 amp-hour rating. Maintain battery at full charge. Proper care will ensure having battery power when you need it, and will significantly improve the battery life. Failure to recharge lead-acid batteries (within 12-24 hours) is the leading cause of premature battery failure. Use a multi-stage charger to avoid overcharging. We offer a wide selection of chargers to fit your charging needs. If you are using a crank battery to start a gasoline outboard, we recommend that you use a separate deep cycle marine battery/batteries for your Minn Kota trolling motor.

WARNING

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

CAUTION

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

CAUTION

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

ADDITIONAL CONSIDERATIONS

Using DC or Alternator Chargers

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

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

Additional Accessories Connected to Trolling Motor Batteries

Significant damage to your Minn Kota motor, your boat electronics, and your boat can occur if incorrect connections are made between your trolling motor batteries and other battery systems. Minn Kota recommends using an exclusive battery system for your trolling motor. Where possible, accessories should be connected to a separate battery system. Radios and sonar units should not be connected to any trolling motor battery systems as interference from the trolling motor is unavoidable. If connecting any additional accessories to any trolling motor battery system, or making connections between the trolling motor batteries and other battery systems on the boat, be sure to carefully observe the information below.

CONNECTING THE BATTERIES IN SERIES

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

Automatic Jump Start Systems and Selector Switches

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

NOTE: 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

12 Volt Systems

1. Make sure that the motor is switched off (speed selector on “OFF” or “O”).
2. Connect positive (+) red lead to positive (+) battery terminal.
3. Connect negative (-) black lead to negative (-) battery terminal.
4. For safety reasons do not switch the motor on until the propeller is in the water.



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. See wiring diagram on following pages.



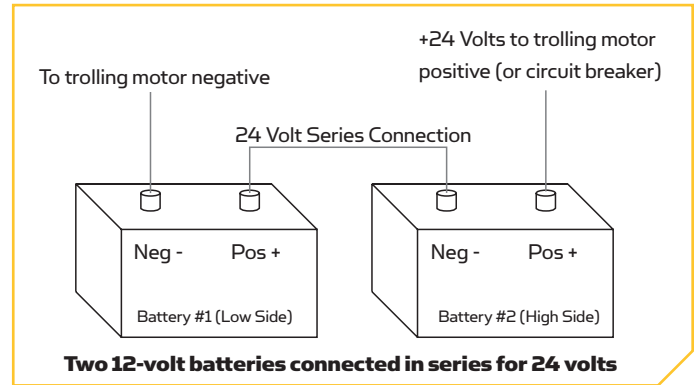
CONNECTING THE BATTERIES IN SERIES

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.



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

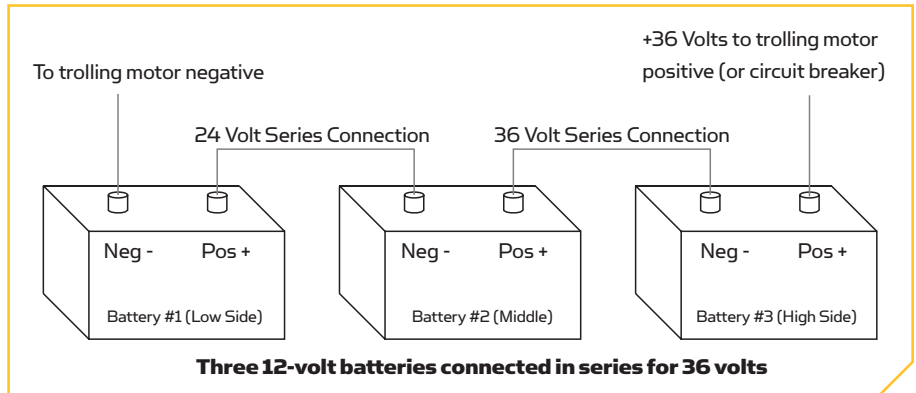
- For safety reasons, disconnect the motor from the battery or batteries when the motor is not in use or while the battery/batteries are being charged.
- Improper wiring of 24/36 volt systems could cause battery explosion.
- Keep leadwire wing nut connections tight and solid to battery terminals.
- Locate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

CONNECTING THE BATTERIES IN SERIES

36 Volt Systems

Three 12 volt batteries are required. The batteries must be wired in series, only as directed in 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 3.
3. Connect positive (+) red motor lead to positive (+) terminal on battery 3.
4. Connect negative (-) black motor lead to negative (-) terminal of battery 1.



WARNING

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

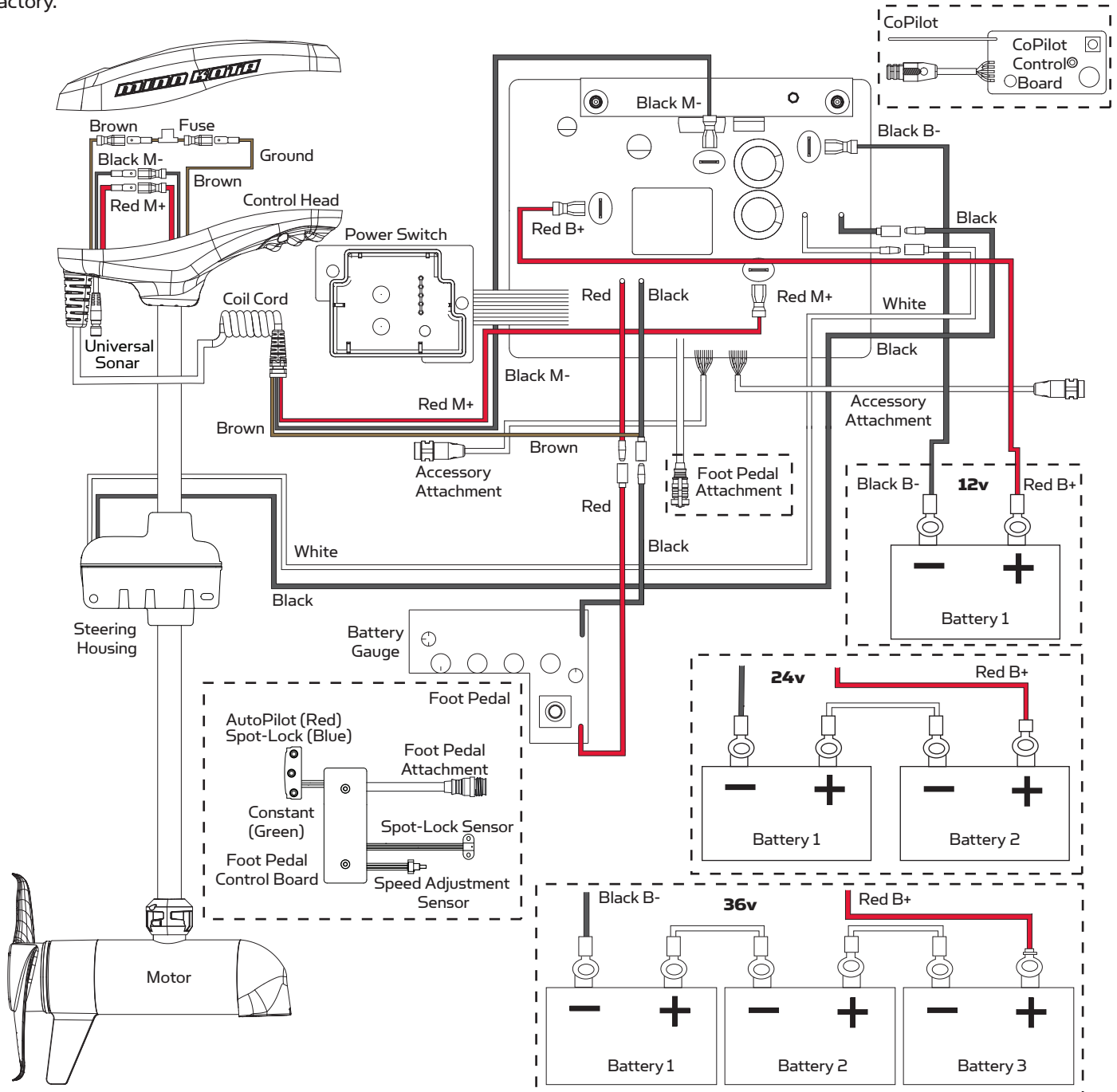
WARNING

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

MOTOR WIRING DIAGRAM

TERROVA

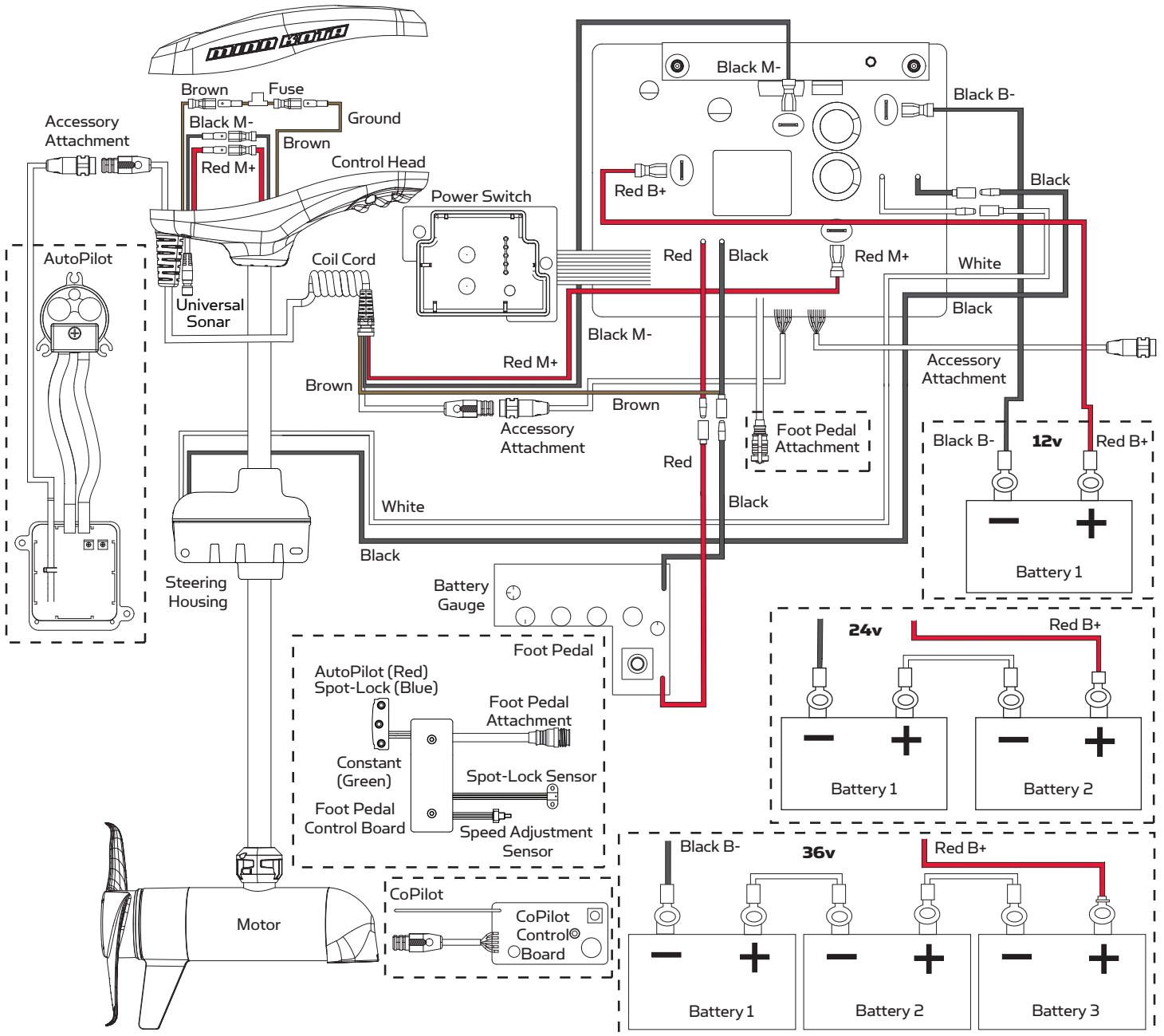
The following Motor Wiring Diagram applies to all Terrova models that do not come factory installed with AutoPilot or i-Pilot. CoPilot and Universal Sonar can be installed on these models, but these features may not come already installed from the factory.



NOTE: 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. If equipped with Universal Sonar, please see instruction sheet on the website.

TERROVA WITH AUTOPILOT

The following Motor Wiring Diagram applies to all Terrova models that come factory installed with AutoPilot. CoPilot and Universal Sonar can be installed on these models, but these features may not come already installed from the factory.

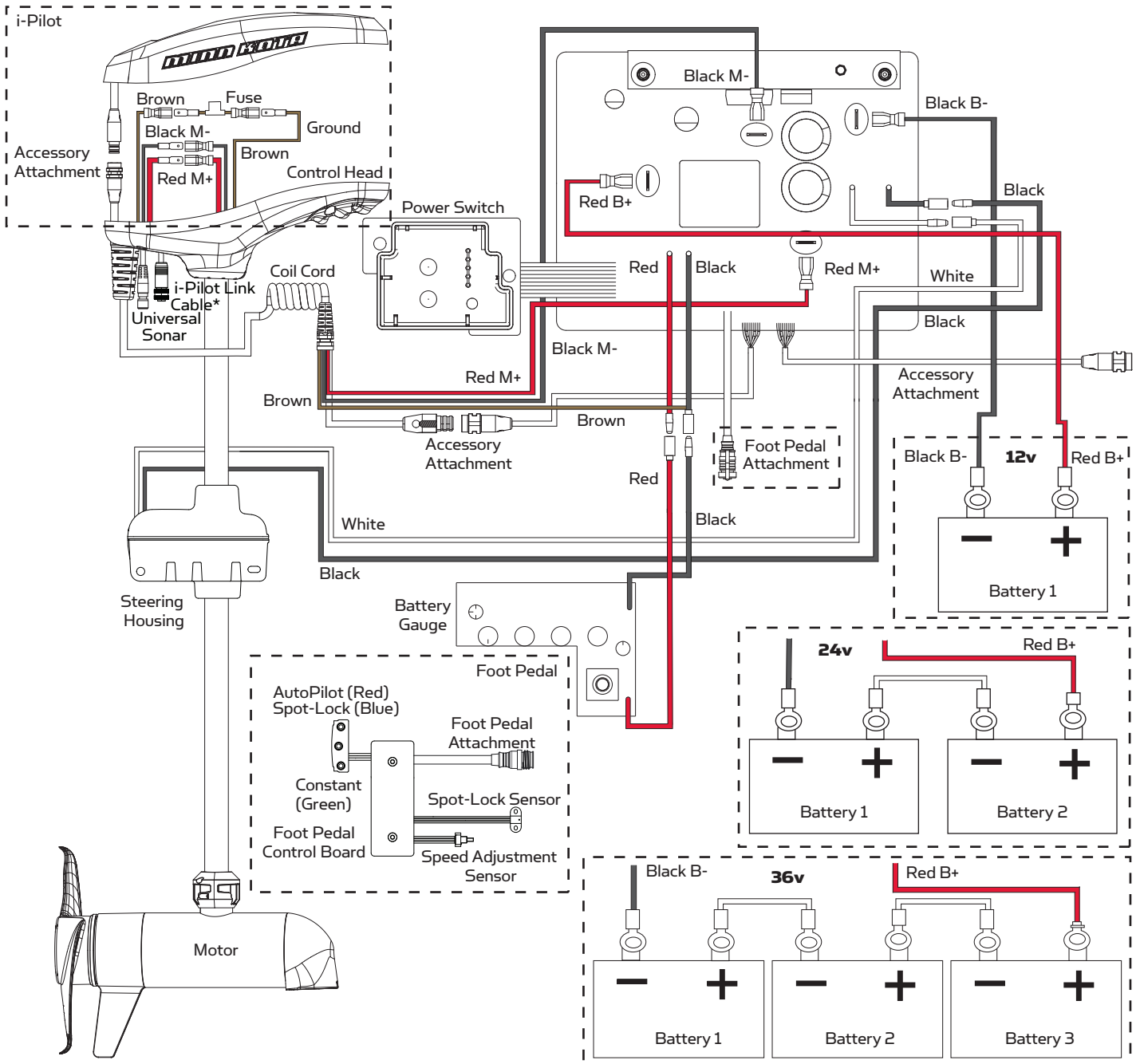


NOTE: This is a multi-voltage diagram. Double-check your motor's voltage for proper connections. Over-Current Protection Devices are not shown in this illustration. If equipped with Universal Sonar, please see instruction sheet on the website.

MOTOR WIRING DIAGRAM

TERROVA WITH i-PILOT OR i-PILOT LINK

The following Motor Wiring Diagram applies to all Terrova models that come factory installed with either i-Pilot or i-Pilot Link. Universal Sonar can be installed on these models, but this feature may not come already installed from the factory.

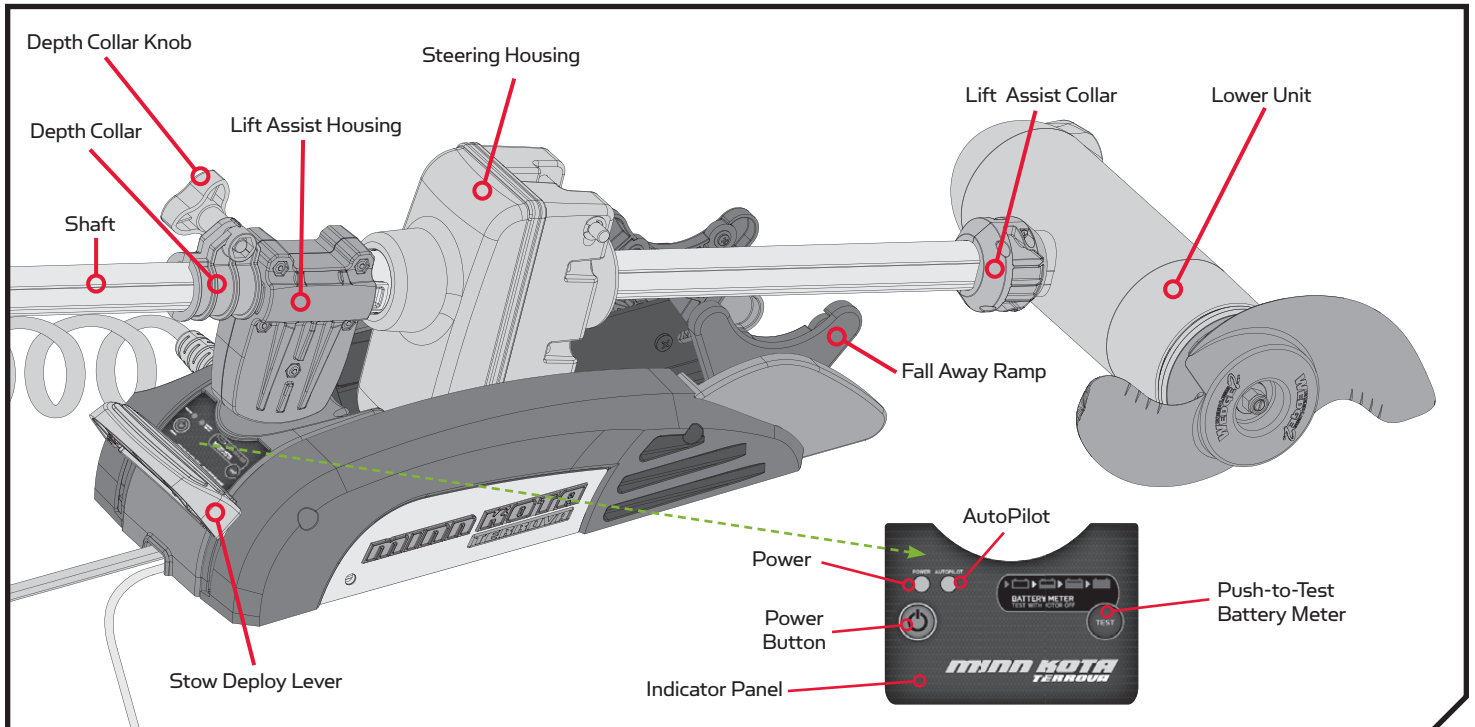


NOTE: This is a multi-voltage diagram. Double-check your motor's voltage for proper connections. Over-Current Protection Devices are not shown in this illustration. If equipped with Universal Sonar, please see instruction sheet on the website.

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 Lift Assist 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 be used to slide up and down the motor shaft.

WARNING

When the motor is being transported, it is important to place the Depth Collar snug against the Lift Assist 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.




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.

WARNING

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

Power Button

The Power button  is located on the Indicator Panel on the Mount. The TerraNova 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 .





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 to release the Lift Assist Collar and 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 Lift Assist 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 Lift Assist 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.

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. The Lift Assist Housing can come off of Steering Housing and create a crushing hazard. Keep fingers clear of all moving parts.

MOTOR ADJUSTMENTS

Adjusting the Depth of the Motor

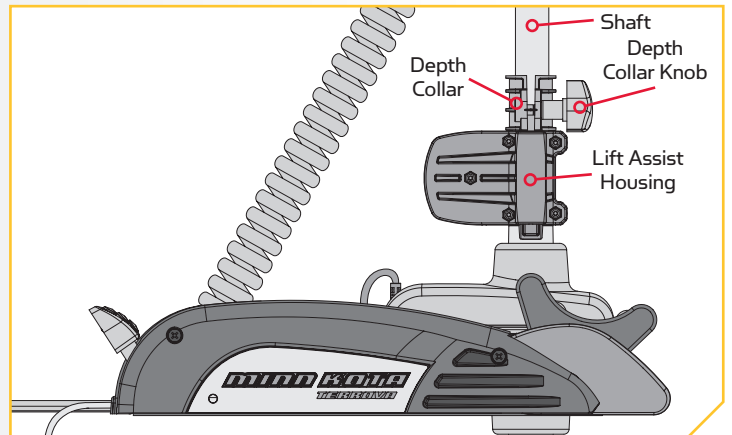
Once the boat is on the water, it may be necessary to adjust the Lower Unit up or down to achieve an optimum depth for motor performance. When setting the depth of the motor, be sure the top of the motor is submerged at least 12" below the surface of the water to avoid churning or agitation of surface water.

- 1
 - a. With the motor in the deployed position, locate the Depth Collar on the Shaft above the Lift Assist 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.



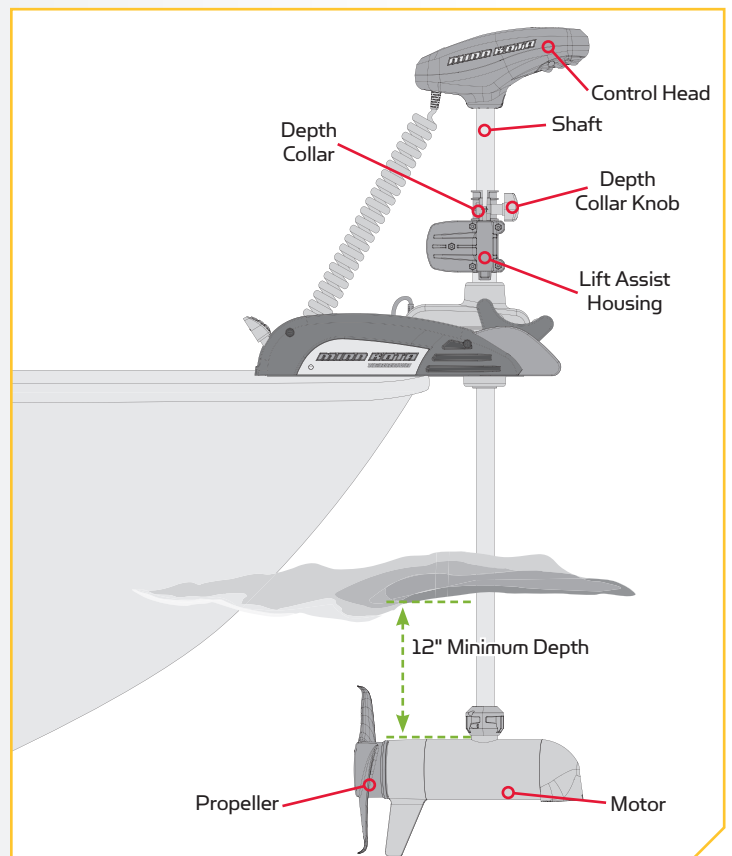
- 2
 - c. Raise or lower the motor to the desired depth.
 - d. Turn the motor Control Head to the desired position.
 - e. Slide the Depth Collar against the Steering Housing and tighten the Depth Collar Knob to secure the motor in place.

NOTE: 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 Lift Assist Housing contains a spring that may break from excessive wear. Watch for sharp points that can be a puncture hazard. Always use care when handling the motor.



ADJUSTING THE LATCH COLLAR

Adjusting the Lower Unit for a Secure Stow

When the 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

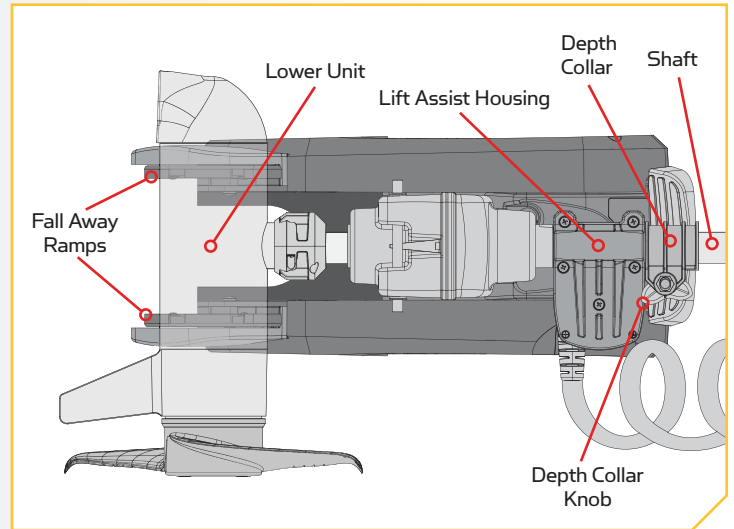
- a. Before transporting the boat over water or land, stow the motor to determine where the Lower Unit rests on the Fall Away Ramps.

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

- b. If the Lower Unit does not sit on the Fall Away Ramps, deploy the motor, and stow it again.
- c. 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 Mount Ramps 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. Not following the recommended placement for the Lower Unit will cause damage to the product and void your product warranty.



NOTE: 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 being transported, it is important to place the Depth Collar snug against the Lift Assist 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

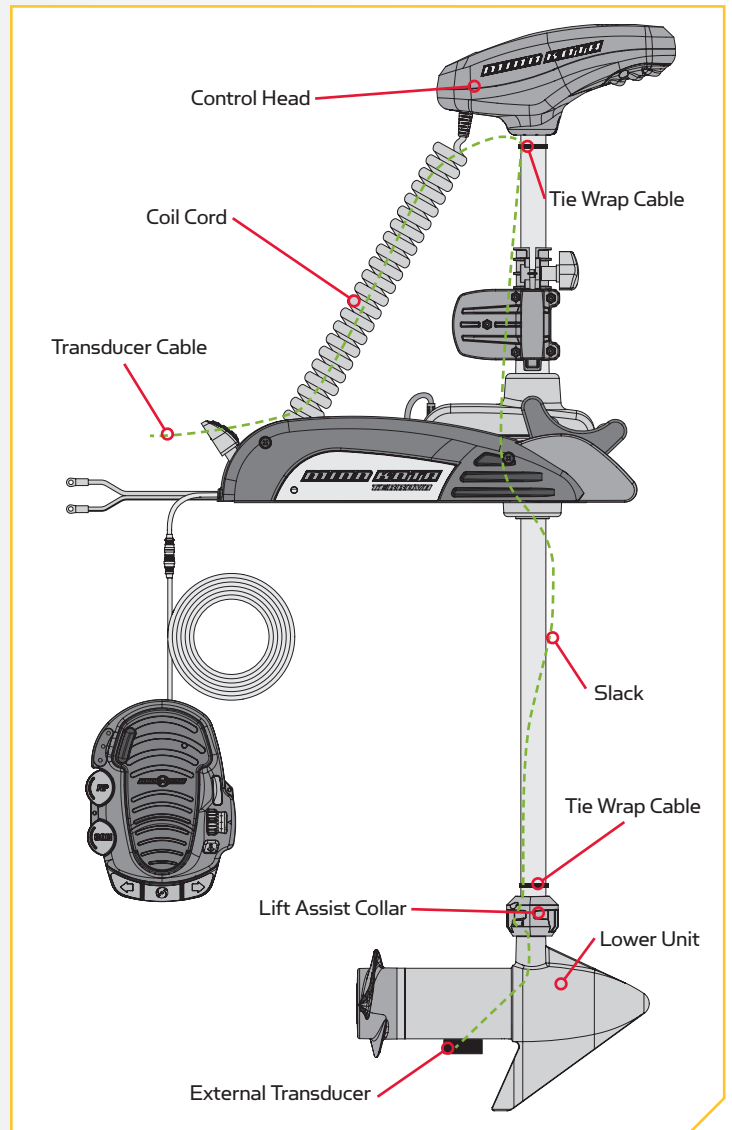
Your trolling motor may be pre-installed with a Universal Sonar transducer system. An external transducer is not included with your trolling motor. An external transducer can be installed onto the motor.

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 Lift Assist Collar and just below the Control Head.
- d. Run the Transducer Cable through the Coil Cord to the power supply.

CAUTION

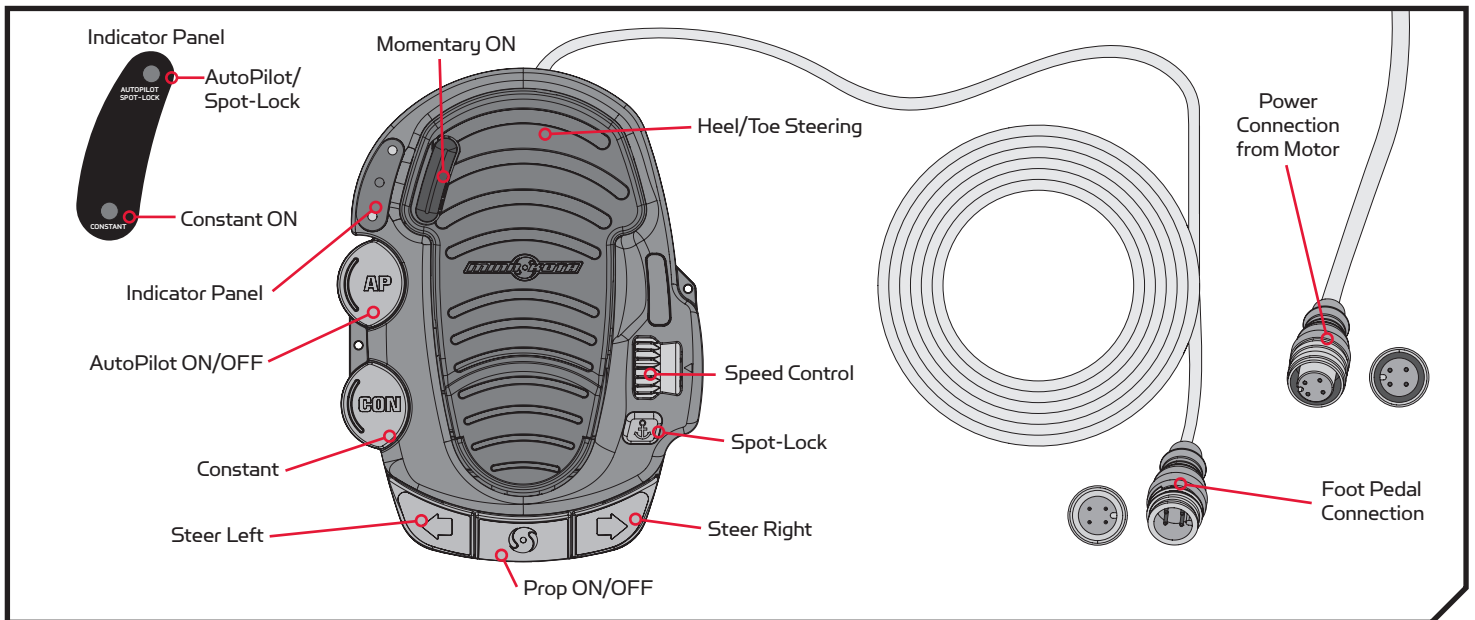
Not following the recommended wire routing for the Universal Sonar may cause damage to the product and void your product warranty. Take care to test the length and placement of cable to be sure that there is enough slack where needed and that cables are free of being entangled in moving parts. Routing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



USING THE FOOT PEDAL

CONTROLLING SPEED & STEERING WITH THE FOOT PEDAL



The foot pedal is used to operate the motor, and controls on the foot pedal are easy to operate by either foot or hand. A light touch is all that is necessary. The motor can also be controlled by an i-Pilot or i-Pilot Link remote, as well as any compatible Minn Kota remote. Please refer to the [i-Pilot](#), [i-Pilot Link](#) or compatible remote manual on how the remote controls the motor.



Motor Speed

The Speed Control knob is located on the right side of the Foot Pedal above the Spot-Lock button. Turn the Speed Knob forward to increase speed and backwards to decrease speed. The Speed Control knob can be set in a range from 0 to 10. Speed can also be adjusted using the remote.

Spot-Lock



The Spot-Lock button  is located on the bottom, right side of the Foot Pedal and is labeled with an anchor symbol. When the Spot-Lock button is pressed, the location of the motor is recorded to a temporary memory location. The blue light  next to the Spot-Lock label on the Indicator Panel is illuminated when Spot-Lock is engaged. To engage Spot-Lock press the Spot-Lock button, to disengage, press the Spot-Lock button again. When engaging Spot-Lock, a tone will be emitted. When disengaging Spot-Lock with the Spot-Lock button, no tone will be emitted. Steering the motor with the Foot Pedal or adjusting the speed using the Speed Knob will cancel Spot-Lock and a High-Low, High-Low, High-Low tone will be emitted. Spot-Lock can also be controlled with the remote. For more specific directions on how to use Spot-Lock, please refer to either the [i-Pilot](#) or [i-Pilot Link](#) Manual.

WARNING

You are responsible for the safe and prudent operation of your vessel. We have designed the Terrova 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 Terrova in an area free from hazards and obstacles.

Practice proper ergonomics when operating the foot pedal to prevent injury.

Steer Right/Steer Left

The Steer Right  and Steer Left  buttons are located at the bottom of the Foot Pedal. They function to steer right and left. Holding the Steer Right or Steer Left buttons down will continue to steer the motor to the left or right. Small steering changes of less than one degree can be made by quickly tapping the Steer Right and Steer Left buttons. The position and direction of the Steering Head directly corresponds to the position of the motor. The direction of the motor can also be controlled with the remote.




CAUTION



The steering system is designed to turn your motor 360 degrees. Be careful to avoid over-wrapping the Coil Cord around the trolling motor Shaft. Overwrapping the coil cord will cause damage and prevent operation.

NOTE: The motor will not auto correct to drive straight when it encounters an obstruction.

Prop ON/OFF



The Prop ON/OFF  button is located in the bottom, middle of the Foot Pedal. It functions to turn the Prop on and off. The Prop will turn on when pressure is applied and turn off when pressure to the button is removed.

Constant

The Constant button  is located on the left side of the Foot Pedal, towards the bottom, right below the AutoPilot button. It functions to toggle the motor between Constant Motor Operation and Momentary Motor Operation. The green light  on the Indicator Panel will be illuminated when the motor is in Constant Motor Operation. In Constant Mode, the propeller will continually run, regardless of whether or not force is being applied to the Momentary button or Prop ON/OFF button. While in Constant Motor Operation, the propeller will run continuously at the speed set by the Speed Control knob, or by the i-Pilot or i-Pilot Link remote.

If a propeller encounters an obstruction while either in Momentary or Constant Mode, while the propeller is running, the increased electrical current being generated by the obstruction will signal the motor to decrease the power to the propeller to prevent damage. If the current overload is detected for more than 20 seconds, the prop will be disabled to prevent damage to the motor. In this event, the operator can turn the prop back on after being sure that the obstruction has been cleared.

AutoPilot

The AutoPilot  button is located in the middle, on the left side of the Foot Pedal. Pressing the AutoPilot button toggles the feature on and off for motor that are installed with this feature. The red light  on the Indicator Panel is illuminated when this feature is engaged. When AutoPilot is initiated from the Foot Pedal, the default AutoPilot mode is determined by the remote. AutoPilot can also be engaged and disengaged using the remote. For more specific directions on how to use AutoPilot, please refer to either the [i-Pilot](#) or [i-Pilot Link](#) Manual. The AutoPilot Indicator on the Mount will also be illuminated when AutoPilot is engaged.

Momentary

In Momentary Motor Operation, the propeller will only run while downward force is applied to the Momentary button. The Momentary button is on the Toe End of the Heel/Toe Steering pedal. Applying downward pressure to the Momentary button will turn the propeller on. The motor will then run at the speed set by the Speed Knob or remote. Removing downward force to the Momentary button will turn the propeller off. No indicator light is associated with the Momentary button. The Momentary button functions very similar to the Prop ON/OFF button.

Heel/Toe Steering

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 position and direction of the Control Head directly corresponds to the position of the motor. You must use your foot on the pedal to control the steering direction during manual operation. The direction of the motor can also be controlled with the remote.

Steering in Reverse

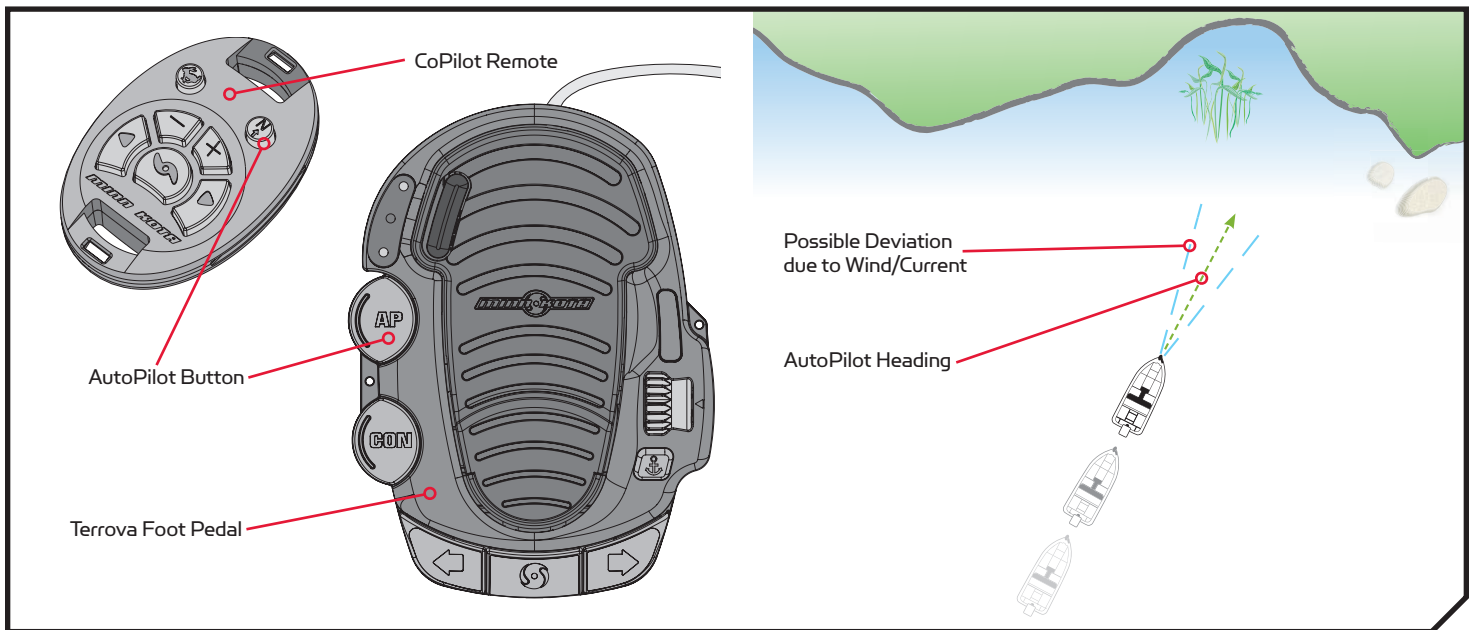
The propeller always turns in the forward direction. You can reverse the direction of thrust by turning the motor 180°.



AUTOPILOT

AUTOPILOT™ CONTROLS

Your Terrova may be purchased with factory installed AutoPilot. The Minn Kota AutoPilot™ uses a magnetic compass and microprocessor chip to keep the trolling motor pointed in the direction you want to go. Each time the wind or water current moves the boat off course, the AutoPilot senses the change and steers itself back to the original heading. The AutoPilot direction is set every time a steering change is made. To change direction, steer until the Control Head points to the desired course. The AutoPilot will pull the bow of the boat around and correct automatically until the boat is moving in the direction you chose. If your motor is installed with AutoPilot, it may be controlled with the Foot Pedal, CoPilot remote, or i-Pilot or i-Pilot Link remote depending on your motor. Be sure to verify how AutoPilot is controlled on your motor if applicable. If your motor is installed with either **i-Pilot** or **i-Pilot Link**, please refer to the applicable owner's manual online.



AutoPilot

AutoPilot uses an internal compass to provide heading lock. When AutoPilot is on, it keeps the motor pointed in the same compass direction. If a manual steering correction is made, AutoPilot locks onto the new compass heading to which the boat was steered. This method of heading tracking does not take into account external forces such as a side wind or currents, which can allow side drift.

This unit has an automatic steering shutdown for safety. In conditions where an obstruction prevents the trolling motor from turning, or in extremely windy conditions, the automatic steering may stop. Any steering input will reset the system to normal.

When AutoPilot is "on" and the trolling motor is pulled out of the water to the stow position, the steering motor will continue to run until the motor is stowed properly. Once the motor is stowed properly, AutoPilot will turn "off" and the AutoPilot Indicator will no longer be illuminated.

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 12" of) the 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.

CONTROLLING AUTOPILOT

Toggle AutoPilot On/Off

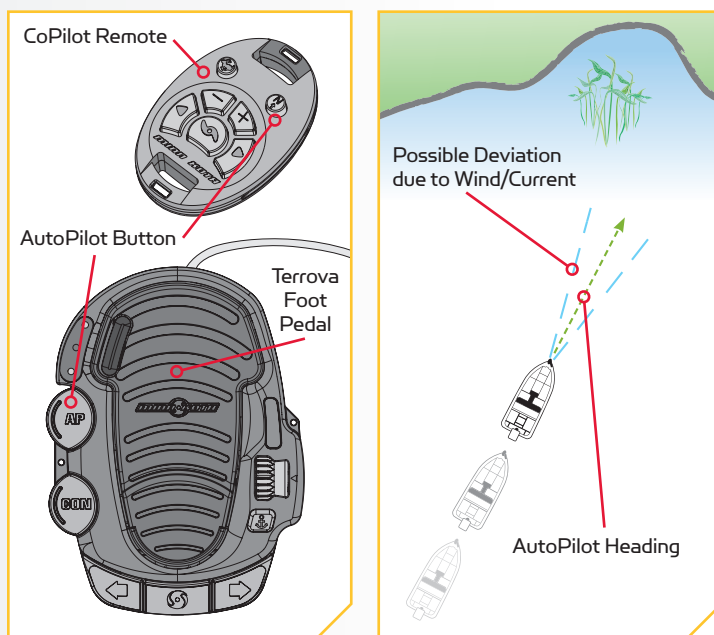
When the AutoPilot is on and the trolling motor is pulled out of the water to the stow position, the steering motor will continue to run. Turn off AutoPilot to stop the motor. If AutoPilot is left on, the steering motor will shut off automatically after 10 seconds. The motor should not be stored in this condition for long periods as power is still being applied to all electronics. Always turn AutoPilot off and disconnect your motor from the battery when storing your boat.

- 1 a. While the motor is running, AutoPilot can be turned on by pressing the AutoPilot button located on the Foot Pedal, CoPilot remote, or using either the i-Pilot or i-Pilot Link remote.

CAUTION

When the AutoPilot is on and the trolling motor is pulled out of the water to the stow position, the steering motor will continue to run. Turn off the AutoPilot switch to stop the motor. If the switch is left on, the steering motor will shut off automatically after 10 seconds. The motor should not be stored in this condition for long periods as power is still being applied to all electronics. Always turn the AutoPilot switch off and disconnect your motor from the battery when storing your boat.

- b. While AutoPilot is on, drive the boat as desired.
- c. To turn AutoPilot off, press the AutoPilot button again.



NOTE: After steering to a new direction, there is a short delay before the direction is locked in to allow the compass to stabilize. When broad speed changes are made, the AutoPilot heading may change slightly. This is normal.



SERVICE & MAINTENANCE

PROPELLER REPLACEMENT

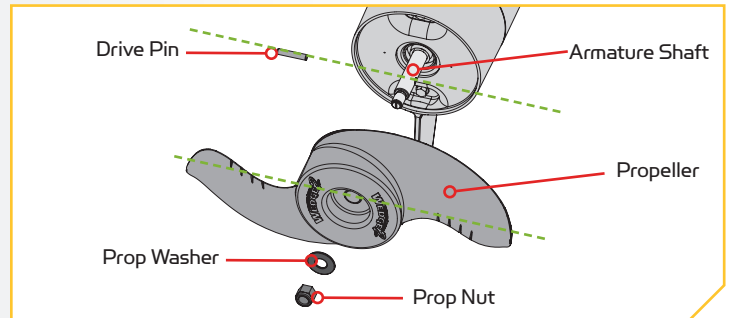
TOOLS AND RESOURCES REQUIRED

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

INSTALLATION

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

NOTE: 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.



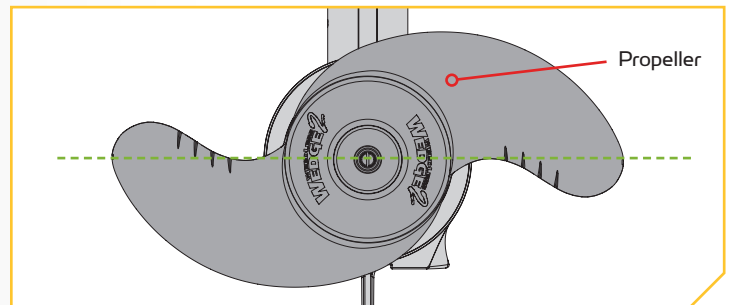
CAUTION

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

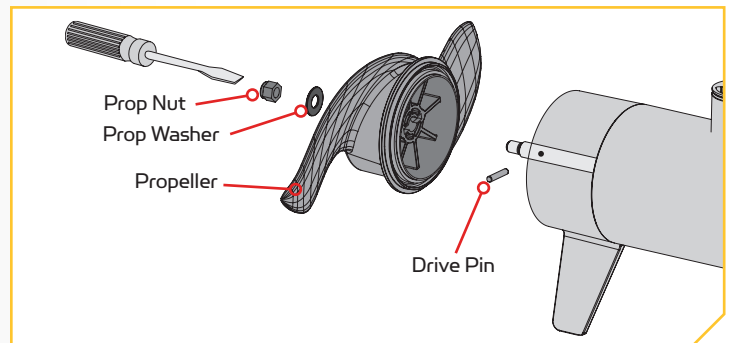
If the prop does not readily slide off, take care to not bend the Armature Shaft while removing the prop by pulling the prop evenly off the Armature Shaft.



- Align the new Propeller 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

- 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.
- Keep the Foot Pedal well dry and clean. Debris that gets in the Foot Pedal can cause interference of pedal operation. It is recommended to use compressed air to clean the foot pedal after each use.

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:
 - Check steering cables for proper tension. Adjust as necessary.
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 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.

NOTE: 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 online or by calling our customer service.



COMPLIANCE STATEMENTS

ENVIRONMENTAL COMPLIANCE STATEMENT

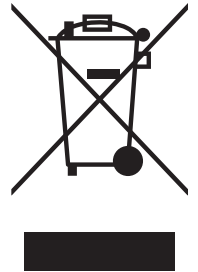
It is the intention of JOME to be a responsible corporate citizen, operating in compliance with known and applicable environmental regulations, and a good neighbor in the communities where we make or sell our products.

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.

WARNING

This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

REGULATORY COMPLIANCE INFORMATION

i-Pilot Equipped Motors

For regulatory information on motors that come factory installed with i-Pilot, please refer to the i-Pilot Owner's Manual.

i-Pilot Link Equipped Motors

For regulatory information on motors that come factory installed with i-Pilot Link, please refer to the i-Pilot Link Owner's Manual.



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.

NOTE: 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

Motor Parts List

Assembly	Part #	Description	Quantity
A	2779032	MTR/TUBE ASM 55# 45" TRV/US2 BT *45* *3.625*	1
B	2777018	MTR/TUBE ASM 80# 45" TRV/US2 BT *45* *4.0*	1
C	2779024	MTR/TUBE ASM 55# 54" TRV BT *54* *3.625*	1
D	2777090	MTR/TUBE 112# 54" TRV/US2 BT *54* *4.5* *UNIVERSAL SONAR*	1
E	2779033	MTR/TUBE ASM 55# 54" TRV/US2 BT *54* *3.625* *UNIVERSAL SONAR*	1
F	2777038	MTR/TUBE ASM 80# 54" TRV/US2 BT *54* *4.0* *UNIVERSAL SONAR*	1
G	2777006	MTR/TUBE ASM 80# 60" TRV BT *60* *4.0*	1
H	2777078	MTR/TUBE 112# 60" TRV/US2 BT *60* *4.5* *UNIVERSAL SONAR*	1
J	2777012	MTR/TUBE ASM 80# 60" TRV/US2 BT *60* *4.0* *UNIVERSAL SONAR*	1
K	2777079	MTR/TUBE 112# 72" TRV/US2 BT *72* *4.5* *UNIVERSAL SONAR*	1
L	2777041	MTR/TUBE ASM 80# 72" TRV/US2 BT *72* *4.0* *UNIVERSAL SONAR*	1
P	2777019	MTR/TUBE 80# 45" TRV/US2-M BT *45* *4.0* *UNIVERSAL SONAR* *EUROPE ONLY*	1
Q	2777039	MTR/TUBE 80# 54" TRV/US2-M BT *54* *4.0* *UNIVERSAL SONAR* *EUROPE ONLY*	1
R	2777007	MTR/TUBE ASM 80# 60" TRV-M BT *60* *4.0* *EUROPE ONLY*	1
Z	2777014	MTR/TUBE 80# 60" TRV/US2-M BT *60* *4.0* *UNIVERSAL SONAR* *EUROPE ONLY*	1
CCC	2777241	CTR HSG, CB, 112#, FW, UP TO 60" *TUBE*	1
DDD	2777196	CTR HSG, CB, 80#, FW, UP TO 60" *TUBE*	1
EEE	2777242	CTR HSG, CB, 112#, FW, 72" TUBE *TUBE*	1
FFF	2777197	CTR HSG, CB, 80#, FW, 72" TUBE *TUBE*	1
M	2774062 ◆	MOTOR KIT, iPLT 1.6 TRV,UTX *I-PILOT RECEIVER*	1
N	2774064 ◆	MOTOR KIT, iPLT 3.0 TRV,UTX *I-PILOT LINK RECEIVER*	1
BB	1378131	PROP IND 2091160 WDL5 WDG II *3.625* *55LB THRUST*	1
CC	1378160	PROP KIT 2341160 112# WW2 *4.5* *112LB THRUST*	1
DD	1378132	PROP IND 233160 WDL5 WDG II *4* *80LB THRUST*	1
S	2888460	SEAL & O-RING KIT *55LB THRUST* *3.625*	1
T	2889460	SEAL & O-RING KIT *80LB THRUST* *4*	1
U	2881450	SEAL & O-RING KIT *112LB THRUST* *4.5*	1
V	2994075 ◆	REMOTE ASSY, IPILOT 1.6	1
W	2994076 ◆	REMOTE ASSY, IPILOT LINK *I-PILOT LINK ONLY*	1
X	2770204 ◆	COVER KIT, IPLT 1.6 TRV, ULTREX *I-PILOT* *COVER & DECALS ONLY*	1
Y	2770211 ◆	COVER KIT, IPLT 3.0 TRV, ULTREX *I-PILOT LINK* *COVER & DECALS ONLY*	1
HH	9421-149	BRS END CB/TRANSDUCER ASY 3.625 *55LB THRUST* *54"* *TRANSDUCER*	1
JJ	9421-144	BRS END CB/TRANSDUCER ASY 3.625 *55LB THRUST* *45"* *TRANSDUCER*	1
KK	9421-290	PLN END HSG/TRANSDUCER ASY 4.0 *80LB THRUST* *60"* *TRANSDUCER*	1
LL	9421-287	PLN END HSG/TRANSDUCER ASY 4.0 *80LB THRUST* *45"* *TRANSDUCER*	1

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

▲ Not shown on Parts Diagram.

◆ May only be available with i-Pilot or i-Pilot Link.



PARTS DIAGRAM & PARTS LIST

Assembly	Part #	Description	Quantity
MM	9421-288	PLN END HSG/TRANDUCER ASY 4.0 *80LB THRUST* *54"* *TRANSDUCER*	1
NN	9421-291	PLN END HSG/TRANDUCER ASY 4.0 *80LB THRUST* *72"* *TRANSDUCER*	1
PP	9421-246	PLN END HSG/TRANDUCER ASY 4.5 *112LB THRUST* *60"* *TRANSDUCER*	1
QQ	9421-245	PLN END HSG/TRANDUCER ASY 4.5 *112LB THRUST* *54"* *TRANSDUCER*	1
RR	9421-247	PLN END HSG/TRANDUCER ASY 4.5 *112LB THRUST* *72"* *TRANSDUCER*	1
Item	Part #	Description	Quantity
2	✘	TUBE-CMP,BLK,45",1/4" WLL	1
	✘	TUBE-CMP,BLK,48",1/4" WLL	1
	✘	TUBE-CMP,BLK,60",1/4" WLL	1
	✘	TUBE-CMP,BLK,54",1/4" WLL	1
	✘	TUBE-CMP,BLK,72",1/4" WLL	1
	✘	TUBE-CMP,BLK,45",1/4", "M"	1
	✘	TUBE-CMP,BLK,54",1/4", "M"	1
▲	✘	TUBE-CMP,BLK,60",1/4", "M"	1
▲	✘	SEAL,BUNG LOWER	1
▲	✘	SEAL,BUNG UPPER,FW	1
4	2321505	DEPTH COLLAR, LIFT ASSIST	1
6	2321702	WASHER-FLAT .375 NYLON	1
8	2260905	KNOB-SOFT GRIP,HG/DR,ZNC	1
10	2292500	CONTROL BOX, ULTREX	1
12	2332102	SCREW-#10-24 X 1-3/4 PPH SS	1
14	2333101	NUT-HEX #10-24 UNC-2B NYL SS	1
16	2065400	WIRE INSULATOR-LGE 1-3/4, BLUE	2
22	2211415	CABLE-EXTENSION, 110" *US2*	1
▲	2256300	TIE WRAP-5.5" BLACK	2
26	2224700	INSERT-PLUG *LARGE HOLE* *i-PILOT LINK*	1
	2224704	INSERT-PLUG, BLK,I PILOT *SMALL HOLE* *i-PILOT*	1
	2224702	INSERT-PLUG, PD/AP *NO HOLE*	1
28	✘	DECAL-GENERIC, PUSH BTN TOP FW	1
▲	9950433	TIE WRAP-4" BLACK	2
34	2218200	FUSE HOLDER ASSEMBLY	1
36	2375400	SHRINK TUBE-1/4OD X 1-3/4	2
38	2290205	COVER,CTRL BOX *AUTOPILOT*	1
39	2290200	CVR, CTRL BX IP	1
40	2325612	DECAL,CTRL BOX SIDE BT FW	2
42	✘	DECAL, DOMED, iPILOT FW	1
	✘	DECAL, DOMED, iPILOT LINK FW	

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

▲ Not shown on Parts Diagram.

◆ May only be available with i-Pilot or i-Pilot Link.



PARTS DIAGRAM & PARTS LIST

Item	Part #	Description	Quantity
52	2372100	SCREW-#8-18 X 5/8 THD (SS)	7
54	2092600	PIN-DRIVE 1.06" LG (SS) *80LB THRUST* *4* *112LB THRUST* *4.5*	1
56	2262658	PIN-DRIVE 1" X 3/16" S/S *55LB THRUST* *3.625*	1
58	2151726	WASHER-5/16 STD (S/S) *55LB THRUST* *3.625*	1
60	2091701	WASHER-PROP (LARGE) *80LB THRUST* *4* *112LB THRUST* *4.5*	1
62	2053101	NUT-PROP,NYLOC (MED) 5/16 SS *55LB THRUST* *3.625*	1
64	2093101	NUT-PROP,NYLOC,LG, 3/8 SS *80LB THRUST* *4* *112LB THRUST* *4.5*	1
66	2091160	PROP-WW2 (3-5/8") REAMED *55LB THRUST* *3.625*	1
68	2341160	PROP-WW2 (4.5) w/ADP.RING *112LB THRUST* *4.5*	1
70	2331160	PROP-WW2 (4") w/ADP.RING *80LB THRUST* *4*	1
72	188-095	BRUSH *4.5* *112LB THRUST*	2
74	188-094	BRUSH W/TERMINAL *4* *80LB THRUST*	2
76	975-040	SPRING - TORSION *3.625* *55LB THRUST*	2
78	975-045	SPRING - TORSION *4.5* *112 LB THRUST*	2
80	975-041	SPRING - TORSION *4* *80LB THRUST*	2
▲	✘	RIVET - .25" *4* *80LB THRUST* *4.5* *112LB THRUST*	6
84	640-038	LEADWIRE BLK 10AWG 69.5"XLP *4.5* *112LB THRUST*	1
	640-049	LEADWIRE BLK 10 AWG 88 GPT *4.5* *112LB THRUST*	1
	640-045	LEADWIRE BLK 10 AWG 76.5" GPT *4.5* *112LB THRUST*	1
	640-023	LEADWIRE BLK 10 AWG 69" GPT *3.625* *55LB THRUST*	1
	640-053	LEADWIRE BLK 10 AWG 82.375 XLP *4* *80LB THRUST*	1
	640-052	LEADWIRE BLK 10 AWG 70.125 XLP *4* *80LB THRUST*	1
	640-027	LEADWIRE BLK 10 AWG 56 1/2 XLP *4* *80LB THRUST*	1
	640-022	LEADWIRE BLK 10 AWG 72.5 XLP *4* *80LB THRUST*	1
86	640-151	LEADWIRE RED 10 AWG 70.375 GPT *3.625* *55LB THRUST*	1
	640-148	LEADWIRE RED 10 AWG 83" GPT *4* *80LB THRUST*	1
	640-152	LEADWIRE RED 10 AWG 69.625 XLP *4* *80LB THRUST*	1
	640-118	LEADWIRE RED 10 AWG 56 XLP *4* *80LB THRUST*	1
	640-145	LEADWIRE RED 10 AWG 75 7/8" GPT *4.5* *112LB THRUST*	1
	640-149	LEADWIRE RED 10 AWG 88 GPT *4.5* *112LB THRUST*	1
	640-126	LEADWIRE RED 10 AWG 71" XLP *4* *80LB THRUST*	1
	640-143	LEADWIRE RED 10 AWG 68 1/2" GPT *4.5* *112LB THRUST*	1
▲	✘	BRUSH HOLDER *4* *80LB THRUST*	2
▲	✘	BRUSH HOLDER *4.5* *112LB THRUST*	2
92	188-036	BRUSH ASSEMBLY *3.625* *55LB THRUST*	2
94	9-738-011	BRUSH PLATE *4.5* *112LB THRUST*	1
96	9-738-004	BRUSH PLATE 4" TERMINAL *4* *80LB THRUST*	1
98	738-036	BRUSH PLATE WITH HOLDER 3.625 *3.625* *55LB THRUST*	1

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

▲ Not shown on Parts Diagram.

◆ May only be available with i-Pilot or i-Pilot Link.



PARTS DIAGRAM & PARTS LIST

Item	Part #	Description	Quantity
▲	2260730	CONNECTOR 1/4" MALE TAB QD *4" *80LB THRUST*	2
102	2260731	TERMINAL 1/4" MALE TAB-THREE *4.5" *112LB THRUST*	2
104	2307312	BEAD-FERRITE *4.5" *112LB THRUST*	1
106	725-050	PAPER TUBE - BRUSH RETENTION *3.625" *55LB THRUST*	1
108	2-100-146	ARM ASY 12V 3.62 55#CB/LS *55LB THRUST* *3.625*	1
110	2-100-214	ARM ASSY 24V 4" 80# (WW2) *80LB THRUST* *4.0*	1
112	2-100-245	ARMATURE ASY 4.5"LWR UNIT *112LB THRUST* *4.5*	1
114	140-010	BEARING - BALL *55LB THRUST* *3.625" *80LB THRUST* *4.0*	1
116	140-014	BEARING-BALL 6000 *112LB THRUST* *4.5*	1
118	✘	CTR HSG ASY 3.62 FW-MAGNET CB *55LB THRUST* *3.625*	1
120	✘	CTR HSG ASY 4.0 FW MGNTZ *80LB THRUST* *4.0*	1
122	✘	CTR HSG ASY 4.5" MAG FW CB *112LB THRUST* *4.5*	1
126	2-300-170	BRUSH END HSG ASY 4.0 FW *80LB THRUST* *4.0*	1
128	2-300-155	BRUSH END HSG ASY 4.5" FW *112LB THRUST* *4.5*	1
130	421-146	BRUSH END HSG PTD *55LB THRUST* *3.625*	1
	421-050	HSG BRSH END FW CB *55LB THRUST* *3.625*	1
132	2-400-101A	PLAIN END HSG ASY *55LB THRUST* *3.625*	1
134	421-276	HSG PLN END 4" PAINTED FW BS *80LB THRUST* *4.0*	1
	421-285	PLAIN END HSG-PNTD-4"US2.5 CB *80LB THRUST* *4.0*	1
138	421-245	PLN END HSG 4.5" US2.5 PNT FW *112LB THRUST* *4.5*	1
140	337-036	GASKET *55LB THRUST* *3.625*	1
142	701-008	O-RING *55LB THRUST* *3.625*	2
144	701-081	O-RING *55LB THRUST* *3.625*	1
146	701-009	O-RING *80LB THRUST* *4.0*	2
148	701-043	O-RING *80LB THRUST* *4.0*	2
150	701-009	O-RING *112LB THRUST* *4.5*	2
152	701-098	O-RING, 98MM X 2MM *112LB THRUST* *4.5*	1
154	701-103	O-RING,103MM X 3.00MM, 70 BUNA *112LB THRUST* *4.5*	1
156	830-007	SCREW, # 8-32 *55LB THRUST* *3.625*	2
158	830-027	SCREW - SELF-THREAD 10-32X2.25 *80LB THRUST* *4.0*	2
160	2053410	SCREW-#8-32 X 1/2 TRI-LOBE HEX *112LB THRUST* *4.5*	2
162	830-008	THRU BOLT 10-32 x 9.205 *55LB THRUST* *3.625*	2
164	830-094	THRU BOLT 12-24 X10.31 *80LB THRUST* *4.0" *112LB THRUST* *4.5*	2
166	830-095	THRU BOLT 12-24 x 9.79 *80LB THRUST* *4.0*	2
168	990-067	WASHER - STEEL THRUST *55LB THRUST* *3.625*	1
170	990-051	WASHER - STEEL THRUST *80LB THRUST* *4.0" *112LB THRUST* *4.5*	1
172	990-070	WASHER - NYLATRON *55LB THRUST* *3.625*	1

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

▲ Not shown on Parts Diagram.

◆ May only be available with i-Pilot or i-Pilot Link.



PARTS DIAGRAM & PARTS LIST

Item	Part #	Description	Quantity
174	990-052	WASHER - NYLATRON *80LB THRUST* *4.0* *112LB THRUST* *4.5*	1
178	640-316	LEADWIRE BROWN 18 AWG 71" GPT *55LB THRUST* *3.625* *80LB THRUST* *4.0* *112LB THRUST* *4.5*	1
	640-315	LEADWIRE BROWN 18 AWG 62" GPT *80LB THRUST* *4.0*	1
	640-317	LEADWIRE BROWN 18 AWG 86" GPT *80LB THRUST* *4.0* *112LB THRUST* *4.5*	1
182	582-013	CLIP, RETAINING SHORT *80LB THRUST* *4.0*	1
184	582-016	CLIP-RETAINING, SONAR *112LB THRUST* *4.5*	1
186	973-025	SPACER - BRUSHPLATE *80LB THRUST* *4.0*	2
188	992-010	WASHER - BELLEVILLE *80LB THRUST* *4.0*	2
190	992-011	WASHER - BELLEVILLE *112LB THRUST* *4.5*	2
192	990-045	SPACER - THRUST *80LB THRUST* *4.0*	1
194	2302104	SCREW-#6-20 X 3/8 THD CUTS *80LB THRUST* *4.0* *112LB THRUST* *4.5*	1
195	2302102	SCREW-#6-20 X 1/2 THD CUTS	1
196	230-038	CABLE CLAMP *80LB THRUST* *4.0* *112LB THRUST* *4.5*	1
198	990-011	WASHER-SHIM OD 1",ID.630"SS *112LB THRUST* *4.5*	1
200	788-040	RETAINING RING	1
202	2390800 ◆	LANYARD, REMOTE W/ CARABINER	1
204	2375901 ◆	ADAPTER, USB DC POWER *LINK ONLY*	1
206	2373241 ◆	CABLE, USB REMOTE CHARGER *LINK ONLY*	1
208	490389-1 ◆	CABLE, ETHERNET, 30' * LINK ONLY*	1
210	2996400	HEADING SENSOR ASSEMBLY	1
212	880-025	SEAL	2
214	725-095	PAPER TUBE, SEAL	1
216	144-017	BEARING, FLANGE	1
218	2324034	CTRL BRD ASY, AP COMPASS *AUTOPILOT*	1
220	2302960	GROMMET-COMPASS *AUTOPILOT*	3
222	3393450	SCREW-#6-19 X.75 PPH HI-LOW SS	4
224	2372103	SCREW #6 X .375 PLASTITE SS	1
226	2325615	DECAL, COVER, T2 55 *55LB THRUST*	1
	2325616	DECAL, COVER, T2 80 *80LB THRUST*	1
	2325618	DECAL, COVER, T2 112 *112LB THRUST*	1
228	788-015	RETAINING RING *3.625*	1
230	2321520	COLLAR-FRONT, LIFT ASSIST, FW	1
232	2321525	COLLAR-BACK, LIFT ASSIST, FW	1

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

▲ Not shown on Parts Diagram.

◆ May only be available with i-Pilot or i-Pilot Link.



PARTS DIAGRAM & PARTS LIST

Steering Housing Parts List

Assembly	Part #	Description	Quantity
SS	2997060	STEERING HSG ASM 12V FW	1
TT	2997061	STEERING HSG ASM 24V FW	1
UU	2997062	STEERING HSG ASM 36V FW	1
VV	2992720	LIFT ASSIST, 55# FW	1
WW	2992721	LIFT ASSIST, 80# FW	1
XX	2992722	LIFT ASSIST, 112# FW	1
CCC	2776561	STEERING HSG TOP FW/GEAR KIT	1
GGG	2777060	STEERING MOTOR KIT, 12V T2	1
HHH	2777061	STEERING MOTOR KIT, 24V T2	1
JJJ	2777062	STEERING MOTOR KIT, 36V FW T2	1
Item	Part #	Description	Quantity
270	2326566	HOUSING-STEERING, BTM, FW	1
272	✘	PIN-ROLL 5/16" X 1/2"	4
274	✘	SHAFT-GEAR, FIRST CLUSTER	1
276	✘	SHAFT-GEAR, INTERMED. CLUSTER	1
278	✘	SHAFT-GEAR, THIRD CLUSTER	1
280	2322210	GEAR & PINION, DR. HSG, STAGE 2	1
282	2302250	GEAR & PINION, DR. HSG, STAGE 3	1
284	2302255	GEAR & PINION, DR. HSG, STAGE 4	1
286	2321730	SPACER, GEAR CLUSTER	1
288	✘	MOTOR, STEERING 12V FW T2	1
	✘	MOTOR, STEERING 24V FW T2	1
	✘	MOTOR, STEERING 36V FW T2	1
290	2322215	GEAR-PINION, DR. HSG, STAGE 1	1
292	2322520	CASE-MOTOR, STRG HSG, TOP	1
294	2322525	CASE-MOTOR, STRG HSG, BTM	1
296	2372103	SCREW-X6 X 3/75 PLASTITE SS	2
298	2051710	SPLIT LOCK WASHER 3MM	2
300	2043412	SCREW-#8-18 X 3/4 TY AB SS PPH	1
302	2320605	LEADWIRE, STEERING MOTOR	1
304	2308601	BREATHER FILTER, DR. HOUSING	1
306	2322030	TUBE-OUTPUT, MACHINED	1
308	2322200	GEAR-OUTPUT	1
310	2327308	BEARING-BALL, SEALED	2
316	2321704	WASHER-THRUST, STEERING	2
318	2321510	COLLAR-DRIVE, BOTTOM	1

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

▲ Not shown on Parts Diagram.

◆ May only be available with i-Pilot or i-Pilot Link.



PARTS DIAGRAM & PARTS LIST

Item	Part #	Description	Quantity
322	2321720	SHIM,O-RING	2
324	2324608	O-RING,224, STR HSG	2
326	2321530	LINER OUTPUT TUBE,LFT AST	1
328	2324604	O-RING, CASE SEAL	1
330	✘	HOUSING-STEERING, TOP, FW	1
332	2323408	SCREW-#8-32 X 2.0 SHCS SS	7
334	2322600	PIN-LATCH, ZP	1
336	2321702	WASHER-FLAT .375 NYLON	2
338	2263011	E-RING 3/8 DIA. SHAFT*	2
340	2322702	SPRING, LATCH PIN SS	2
342	2323410	SCREW-#8-32 X .75 SHCS SS	1
344	2326545	HOUSING-RIGHT,LIFT ASSIST	1
346	2326540	HOUSING-LEFT, LIFT ASSIST	1
348	2997900	ASM-HUB/SPRING, 55# SS	1
	2997901	ASM-HUB/SPRING, 80# SS	1
	2997902	ASM-HUB/SPRING, 112# SS	1
350	2322300	GUIDE,DR.DOG, LIFT ASSIST	1
352	2328605	ENGAGEMENT DOG, LIFT ASST	1
354	2322725	SPRING,COMPRESSION,.360" OD SS	1
356	2322610	PIN-AXLE, LIFT ASSIST	1
358	2323430	SCREW-#10-24 X 1-3/8, PPH	5
360	2333101	NUT-HEX #10-24 UNC-2B NYL SS	5
362	2372103	SCREW-#6 X .375 PLASTITE SS	4
364	2321955	BRACKET, LIFT ASSIST	2
366	3393450	SCREW-#6-19 X .75 PPH HI-LO	2
368	2327310	BUSHING, PIVOT PIN	2
488	✘	LEADWIRE, STEERING MOTOR	1

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

▲ Not shown on Parts Diagram.

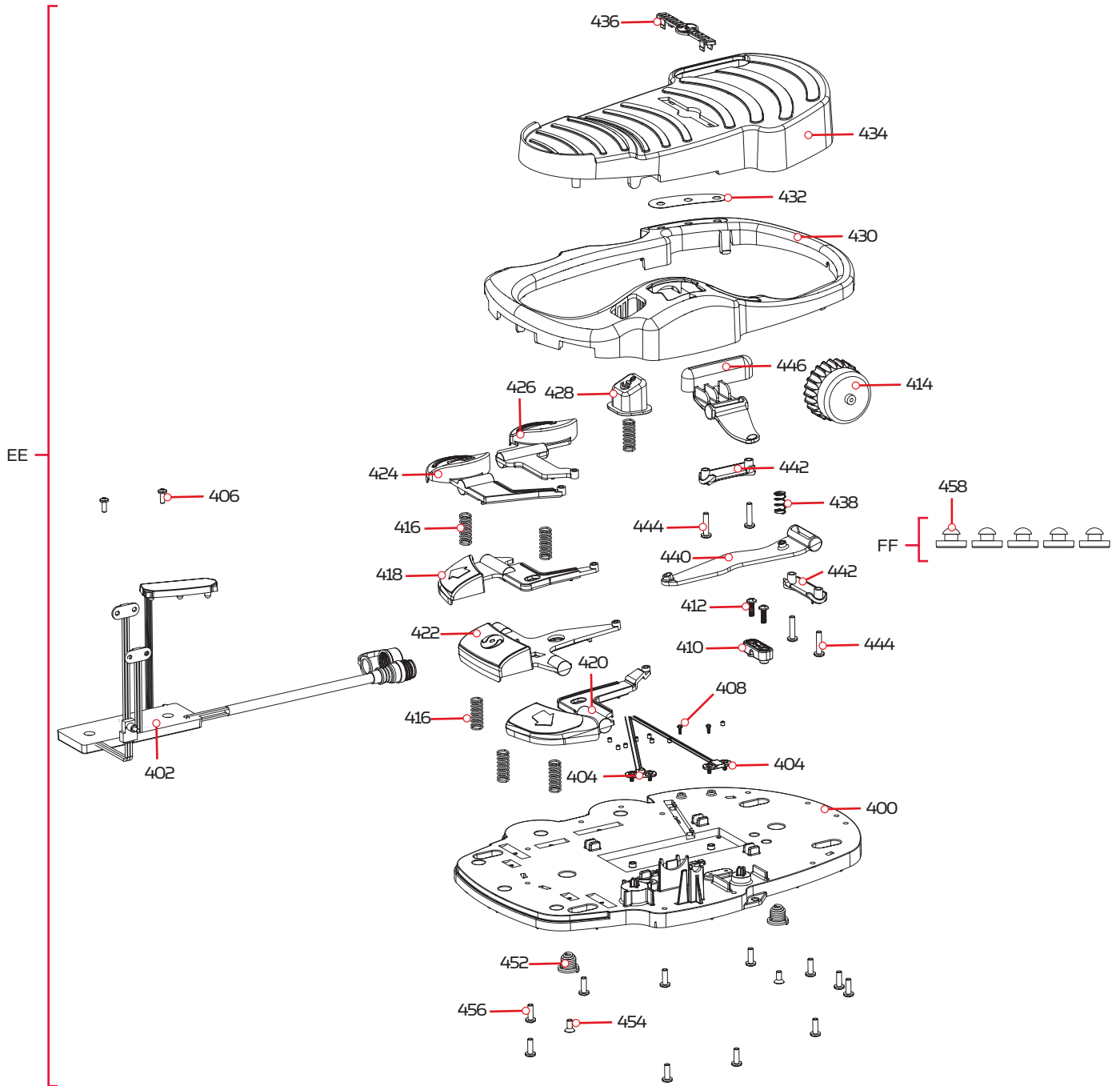
◆ May only be available with i-Pilot or i-Pilot Link.



PARTS DIAGRAM & PARTS LIST

TERROVA FOOT PEDAL

Foot Pedal Parts Diagram



Foot Pedal Parts List

Assembly	Part #	Description	Quantity
EE	2994721	FT PED ASY,TRV W/SPOT LCK	1
FF	2994859	BAG ASY-TERROVA/V2,RUB.BUMPERS	1
Item	Part #	Description	Quantity
400	2204500	BASE PLATE-ULTERRA / TERROVA	1
402	✘	MAIN ASSY, FOOT PEDAL, TERROVA	1
404	2373440	SCREW-#4-24 X 1/4 PHCR SS TY B	4
406	2332103	SCREW-#6-20 X 3/8 THD*(SS)	2
408	2302100	SCREW-#6-20 X 1/2 THD CUTS	2
410	2322900	STRAIN RELIEF, FOOT PEDAL	1
412	2372100	SCREW-#8-18 X 5/8 THD* (SS)	2
414	2320100	KNOB-SPEED, FOOT PEDAL	1
416	2322704	SPRING, LARGE SHORT SS	6
418	2323730	BUTTON, LEFT STEER, TERROVA	1
420	2323731	BUTTON, RIGHT STEER, TERROVA	1
422	2323735	BUTTON, MOMENTARY, TERROVA	1
424	2323715	BUTTON,MOM/CON,FT PEDAL	1
426	2323725	BUTTON,AP,FT PEDAL	1
428	2203720	BUTTON, SPOT LOCK,ULTERRA/TRRV	1
430	2320206	NRES-COVER,HEEL TOE FT PED,TRV	1
432	2325655	DECAL, 3 INDICATORS, TERROVA	1
434	2324400	PEDAL,HEEL/TOE FOOT PEDAL	1
436	2326710	PLUG, FOOT PEDAL	1
438	2322714	SPRING SS	1
440	2328600	FLEX FINGER, FOOT PEDAL	1
442	2321300	CLAMP-LEFT, FT PEDAL	2
444	2223430	SCREW-#8x3/4 PPH,TYPE 25,SS	4
446	2323710	BUTTON,MOM LEFT,FT PEDAL	1
452	2322706	SPRING-BARREL SS	2
454	2323420	SCREW-#8-18 X 3/8" PFH SS TY B	2
456	2301310	SCREW-#8-18 X 1/2 (SS)*	11
458	2325110	PAD, FOOT PEDAL	5

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

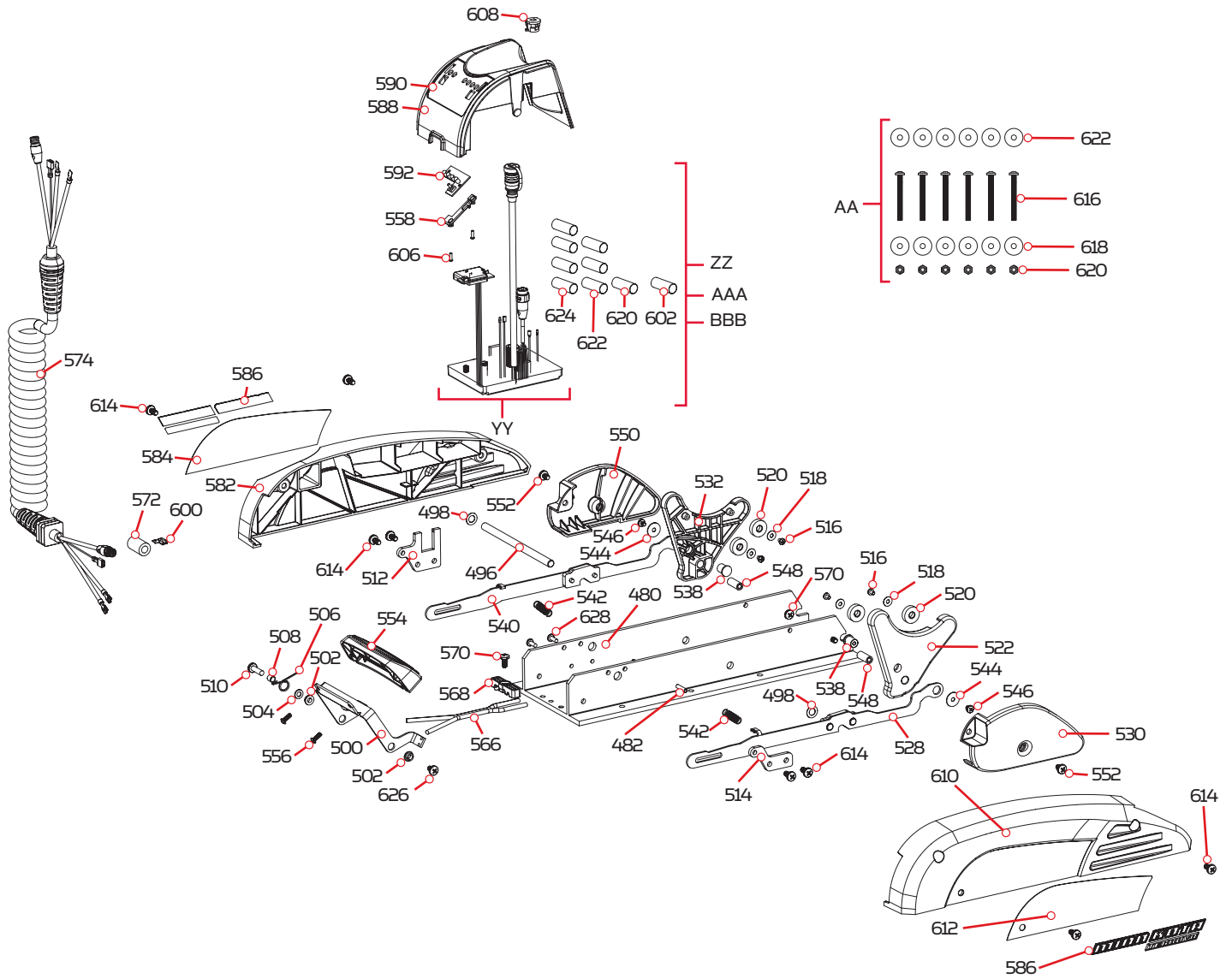
▲ Not shown on Parts Diagram.

◆ May only be available with i-Pilot or i-Pilot Link.

PARTS DIAGRAM & PARTS LIST

TERROVA MOUNT

Mount Parts Diagram



Mount Parts List

Assembly	Part #	Description	Quantity
YY	2774065	CONTROL BRD, 12V TERROVA BT *NO SHRINKS*	1
ZZ	2774066	CTRL BRD, 24/36V TRV BT w/SHRNK *SHRINK TUBES*	1
AAA	2774067	CTRL BRD, 12V IP TRV BT w/SHRNK *SHRINK TUBES* *i-PILOT/i-PILOT LINK*	1
BBB	2774069	CTRL BRD, 24/36V IP TRV BT, SHRNK *SHRINK TUBES* *i-PILOT/i-PILOT LINK*	1
AA	2994864	BAG ASSY-TERROVA/V2,MNTG HDW	1
Item	Part #	Description	Quantity
480	2321907	BASE, EXTRUSION, MACHINED	1
482	2322912	PIN-ROLL .1875 X 1.000 SS	2
▲	2325501	DECAL, STOW / DEPLOY, T2	1
496	2322602	PIN-PIVOT, ZP	1
498	2013100	NUT-SPEED	2
500	2320405	HANDLE, RELEASE, FW	1
502	2322604	BUSHING,HANDLE,GOBEIL	2
504	2071716	WASHER-FLAT SS .253 x .470	1
506	2322701	SPRING, TORSION	1
508	2301700	SPACER-RELEASE LEVER-BRASS	1
510	2073408	SCREW-1/4-20 X 7/8 PPH S/S	1
512	2321940	BRACKET, STRAIN RELIEF FW	1
514	2321950	BRACKET, SIDEPLATE FW	1
516	2323412	SCREW-#8-18 X .25 PPH SS TY B	4
518	2321706	WASHER-FLAT #8 .50 OD/.188 SS	4
520	2325115	PAD, RUBBER REST, BLACK	4
522	2323910	RAMP-MOTOR, RIGHT 3-5/8"	1
	2323931	RAMP-MOTOR, RIGHT 4.5"	1
	2323930	RAMP-MOTOR, RIGHT 4"	1
528	2994204	ARM/SUPPORT BLOCK ASSY,R,FW	1
530	2321920	PLATE-SKID, RIGHT FW	1
532	2323915	RAMP-MOTOR, LEFT 3 5/8"	1
	2323935	RAMP-MOTOR, LEFT 4"	1
	2323936	RAMP-MOTOR, LEFT 4.5"	1
538	2324705	INSERT-MOTOR RAMP,METAL,ZP	2
540	2994202	ARM/SUPPORT BLOCK ASSY,L,FW	1
542	2322716	SPRING, EXTENSION, T2	2
544	2321700	WASHER #10 SS	2
546	2323422	SCREW-#10-24 X .25" PPH SS MCH	2

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

▲ Not shown on Parts Diagram.

◆ May only be available with i-Pilot or i-Pilot Link.

PARTS DIAGRAM & PARTS LIST

Item	Part #	Description	Quantity
548	2322920	STAND-OFF, ALUMINUM PLAIN	2
550	2321925	PLATE-SKID, LEFT FW	1
552	2323403	SCREW-1/4-20 X.375 MCH SS CRPH	3
554	2320217	COVER, HANDLE COSMETIC FW	1
556	2383446	SCREW-#8-16 X .50" PLASTITE SS	2
558	2320830	LOCKING TAB,PWR/BAT.METER	1
560	2383428	SCREW-#4-24 X 3/8 HI-LO SS	2
562	2320203	CAP-DUST,CONNECTOR,FEMALE	1
▲	2323406	SCREW-#10-24 X .50 CRPH SS	2
566	2090651	LEADWIRE,10 GA	1
568	2321310	STRAIN RELIEF	1
570	2323405	SCREW-1/4-20 X 1/2" MCH SS	3
572	2307312	BEAD-FERRITE	1
574	2991272	COIL CORD ASY 54"/60" U.SONAR	1
	2991273	COIL CORD ASSY 45"/48" NON-US2	1
	2991274	COIL CORD ASSY 45"/48" U.SONAR	1
	2991271	COIL CORD ASY 54"/60" NON-US2	1
582	2323925	SIDEPLATE-LEFT, TERROVA	1
584	2325646	DECAL,MTR REST,T2/ST LEFT	1
586	2325648	DECAL,MOTOR REST, TERROVA	2
588	2326530	HOUSING-CENTER, TERROVA	1
590	2325652	DECAL,BM/CN/PWR STATUS FW	1
592	2074072	BATTERY METER, 36V, FW	1
	2074071	BATTERY METER, 24V, FW	1
	2074070	BATTERY METER, 12V, FW	1
▲	2321721	SHIM, 2 X 4 X .025"	1
600	2320710	TERMINAL-AMP (T-TAB)	1
602	2325401	SHRINK TUBE-3/4 ID X 2" W/ADHS	1
▲	2321315	HOLDER-CONNECTOR,NYLON,BLACK	1
606	2332103	SCREW-#6-20 X 3/8 THD*(SS)	2
608	2322901	STRAIN RELIEF, HEYCO P/N 1852	1
610	2323920	SIDEPLATE-RIGHT, TERROVA	1
612	2325645	DECAL,MTR REST,T2/ST RGHT	1
614	2323404	SCREW-1/4-20 X 1/2" T-L ZP	8
616	2263462	SCREW-1/4-20 X 2" S/S PPH ADJT	6
620	2263103	NUT-1/4-20 NYLOCK SS	6
622	2301720	WASHER-MOUNTING - RUBBER	6
618	2261713	WASHER-1/4 FLAT 18-8 SS	6

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

▲ Not shown on Parts Diagram.

◆ May only be available with i-Pilot or i-Pilot Link.



PARTS DIAGRAM & PARTS LIST

Item	Part #	Description	Quantity
620	2305415	SHRINK TUBE-.472 ID X 2.25"	1
622	2305410	SHRINK TUBE-.315 OD X 2.25"	3
624	2305401	SHRINK TUBE-.374 ID X ` 1.5"	4
626	2332104	SCREW-1/4-20 X 5/8 S/S	1
628	2323402	SCREW-1/4-20 X .375 T-L, ZP	2

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

▲ Not shown on Parts Diagram.

◆ May only be available with i-Pilot or i-Pilot Link.



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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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- Vertical, Multi-Stage Deployment
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 - Auto Up/Down
 - Triple Debris Shields
 - Built-In Wave Absorption
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-

MINN KOTA ACCESSORIES

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- Mounting Brackets
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- Battery Connectors
- Battery Boxes
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