



**POWERDRIVE**  
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.

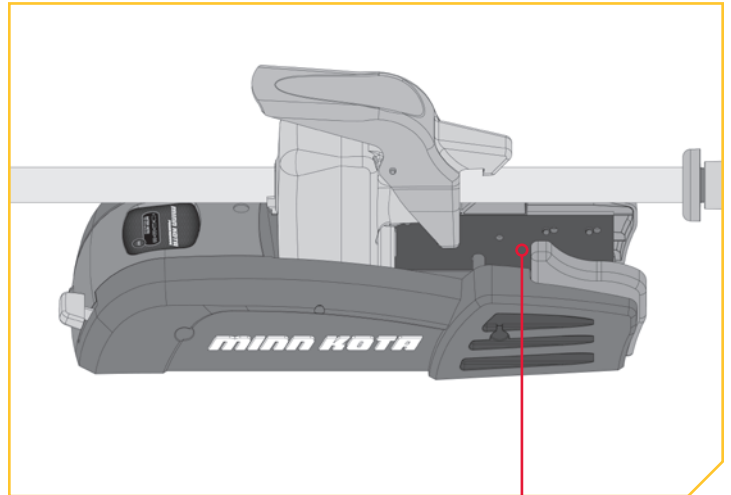
## REGISTRATION

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 PowerDrive 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/sec<sup>2</sup>.

## **WARNING**

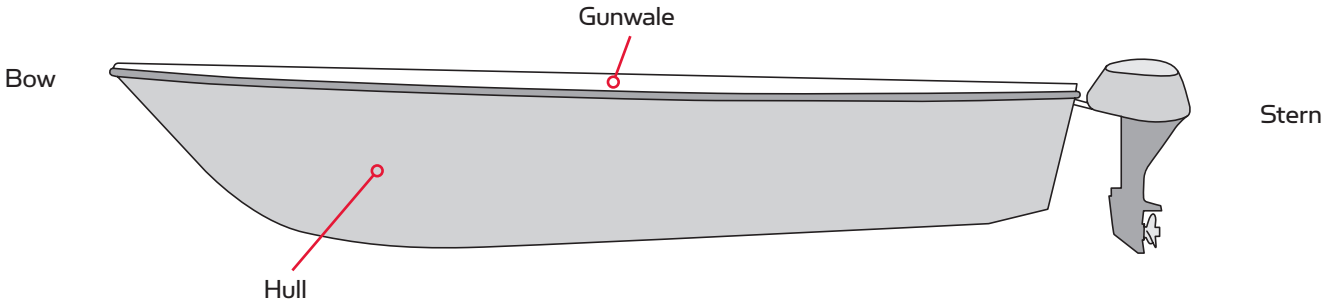
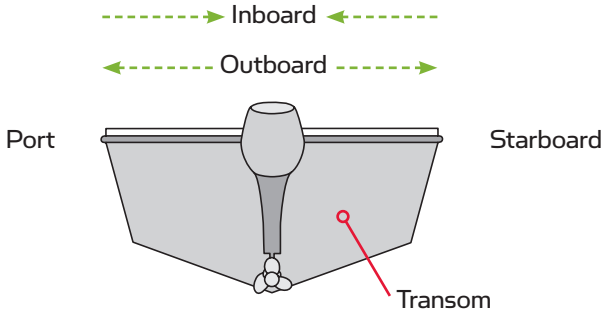
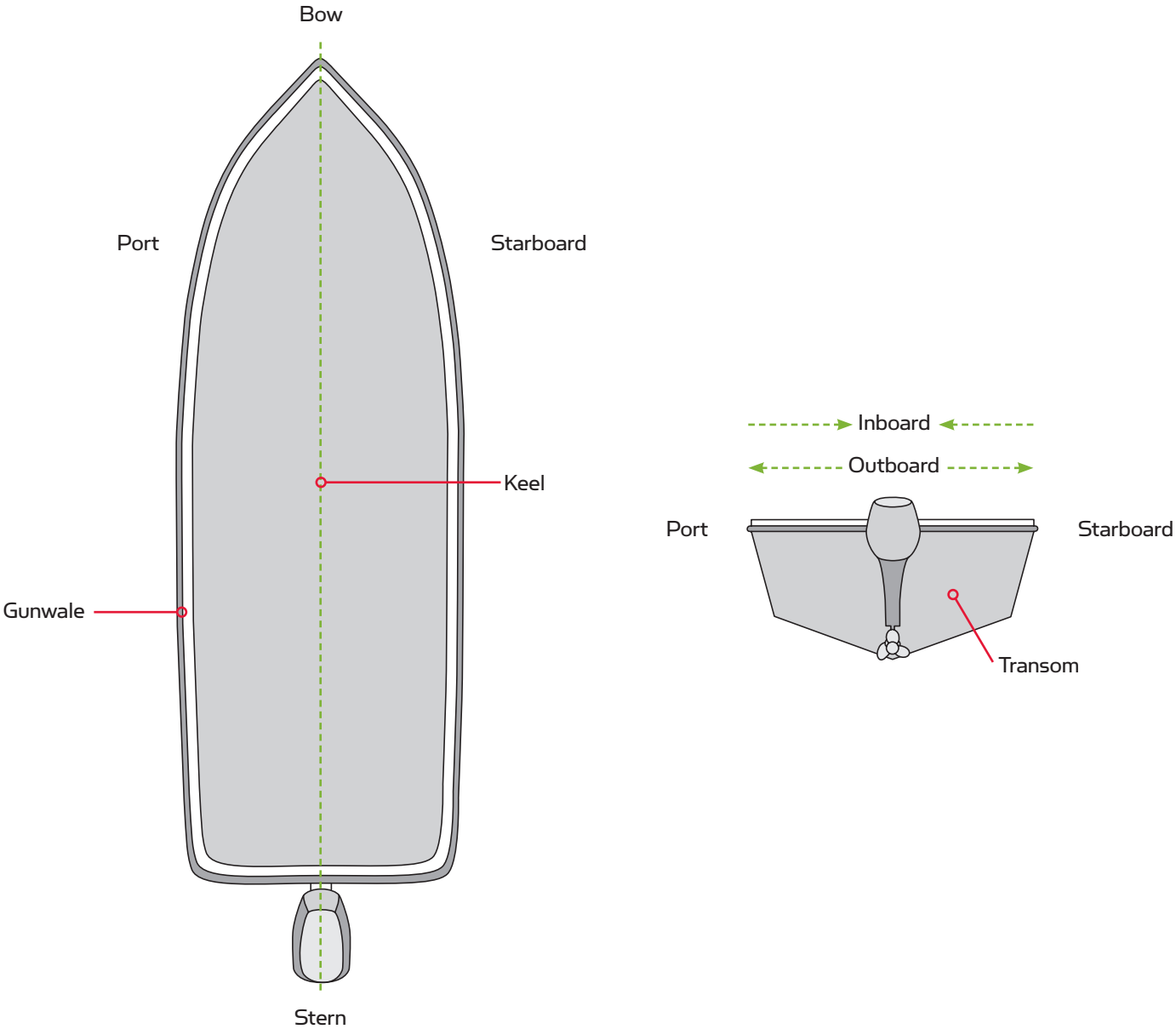
When stowing or deploying the motor, keep fingers clear of all hinge and pivot points and all moving parts. In the event of unexpected operation, remove power leads from the battery.

## **WARNING**

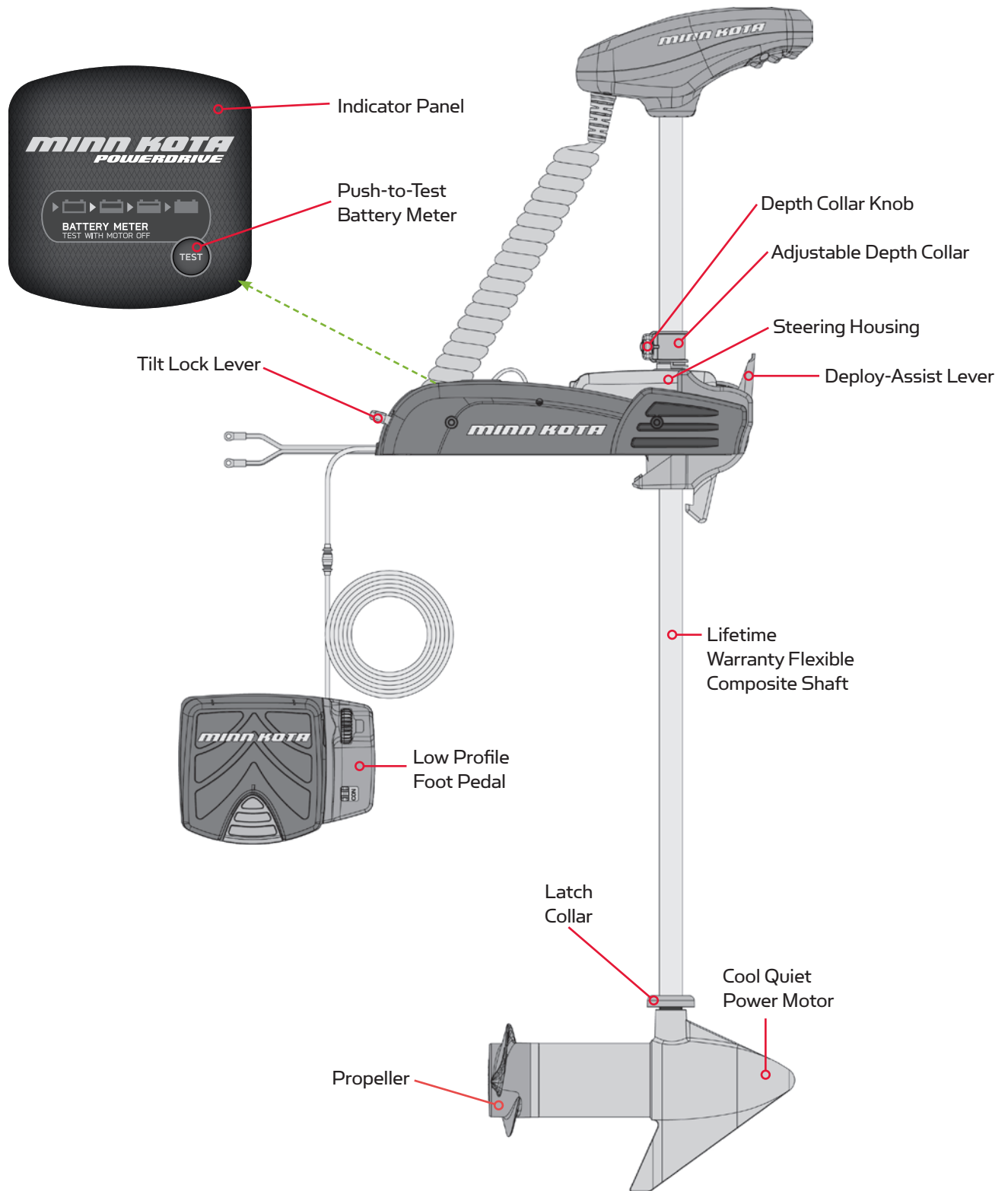
It is recommended to only use Johnson Outdoors approved accessories with your Minn Kota motor. Using non-approved accessories including to mount or control your motor may cause damage, unexpected motor operation and injury. Be sure to use the product and approved accessories, including remotes, safely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

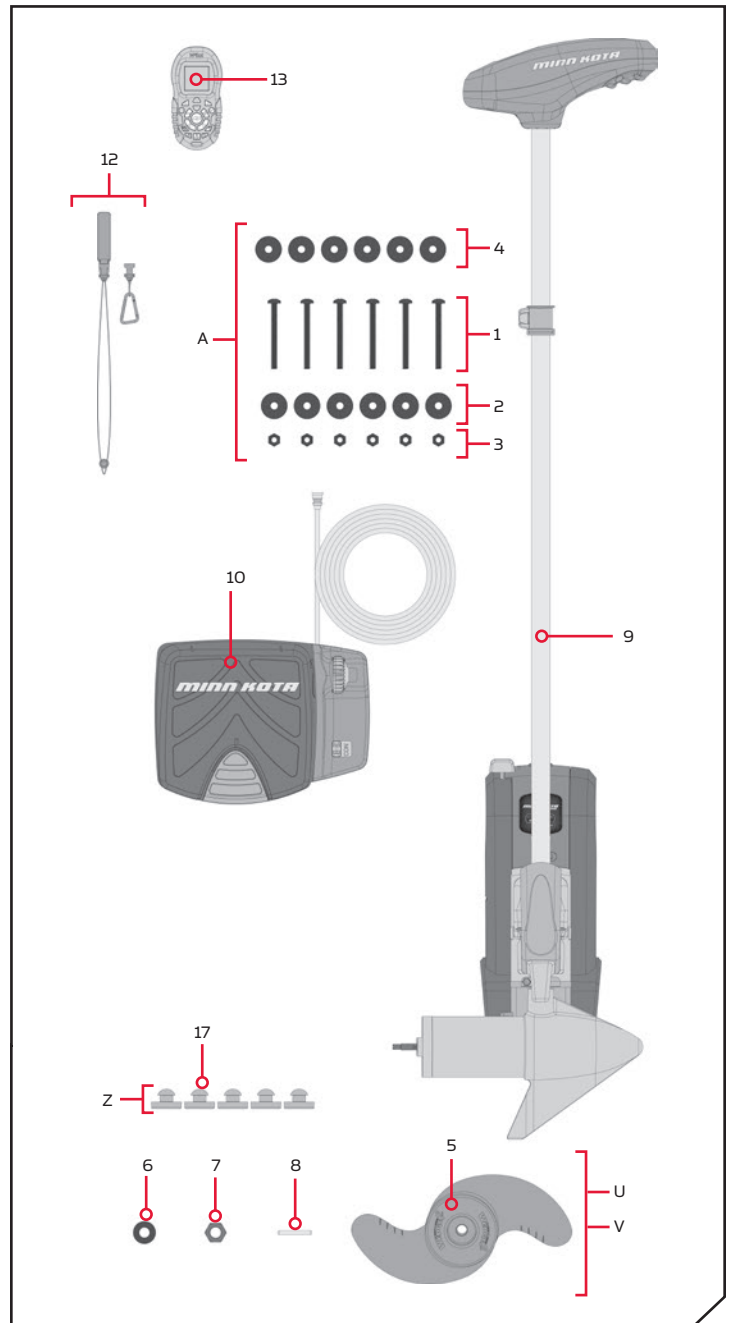
# INSTALLATION

## INSTALLING THE POWERDRIVE

Your new PowerDrive 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. To install the motor directly to the boat, please follow the instructions provided in this manual. Please review the parts list, mounting considerations and tools needed for installation prior to getting started. For additional product support.

### INSTALLATION PARTS LIST

| Item / Assembly | Part #       | Description                         | Qty. |
|-----------------|--------------|-------------------------------------|------|
| A               | 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    |
| U               | 1378131      | PROP IND 2091160 (WDL5 WDGII)       | 1    |
| V               | 1378121      | PROP IND 2061122 (PWR PROP)         | 1    |
| 5               | 2091160      | PROP-WW2 (3 5/8") REAMED SUB)       | 1    |
|                 | 2061122      | PROP-POWER (3.25")                  | 1    |
| 6               | 2151726      | WASHER-5/16 SS                      | 1    |
| 7               | 2053101      | NUT-PROP NYLOC                      | 1    |
| 8               | 2092600      | PIN-DRIVE 1.06" LG SS               | 1    |
| 9               | ✘            | MOTOR ASSEMBLY                      | 1    |
| 10              | 2994727      | FOOT PEDAL ASSEMBLY, PD             | 1    |
| 12              | 2390800<br>◆ | LANYARD, REMOTE W/ CARABINER        | 1    |
| 13              | 2994075<br>◆ | REMOTE ASSEMBLY, IPILOT             | 1    |
| 15              | 2397101      | MANUAL, QUICK REF., iPILOT 1.6      | 1    |
| 16              | 2317122      | MANUAL-INSTALL GUIDE, POWERDRIVE    | 1    |
| Z               | 2994859      | BAG ASY-TERROVA/V2,RUB.BUMPERS      | 1    |
| 17              | 2325110      | PAD, FOOT PEDAL PD                  | 5    |



✘ This part is included in an assembly and cannot be ordered individually.  
◆ Only available with models factory installed with i-Pilot.

**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**

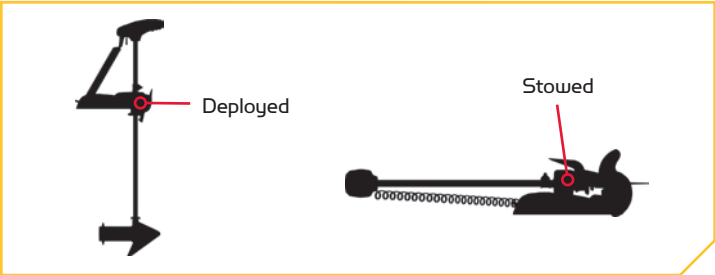
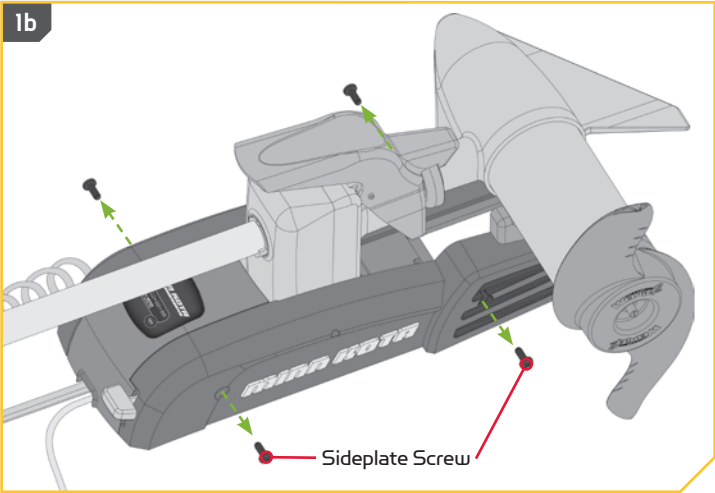
- #3 and #2 Phillips Screw Driver
- Drill
- 9/32" Drill Bit
- 7/16" Box End Wrench
- A second person to help with the installation

**INSTALLATION**

**Installing the PowerDrive**

- 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 or #2 Phillips screwdriver. Two of these screws will be located on each side of the mount.

**NOTE:** This motor weighs approximately 30 lbs. We recommend having a second person help with the installation.

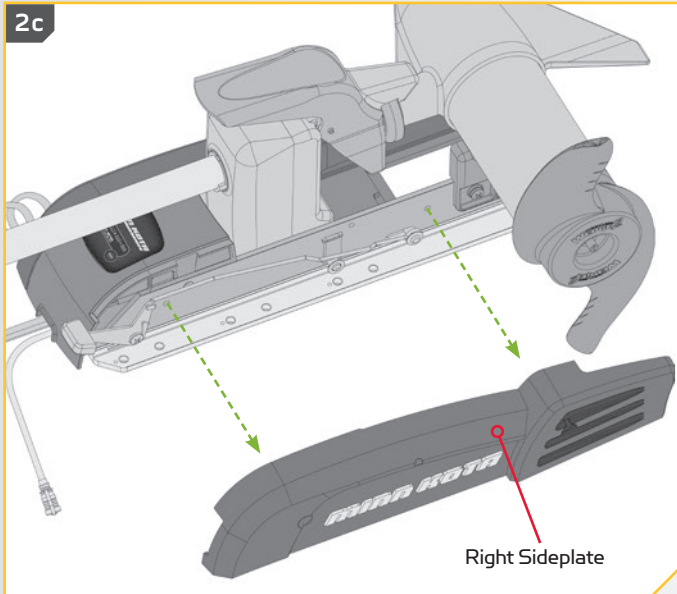


## INSTALLING THE POWERDRIVE

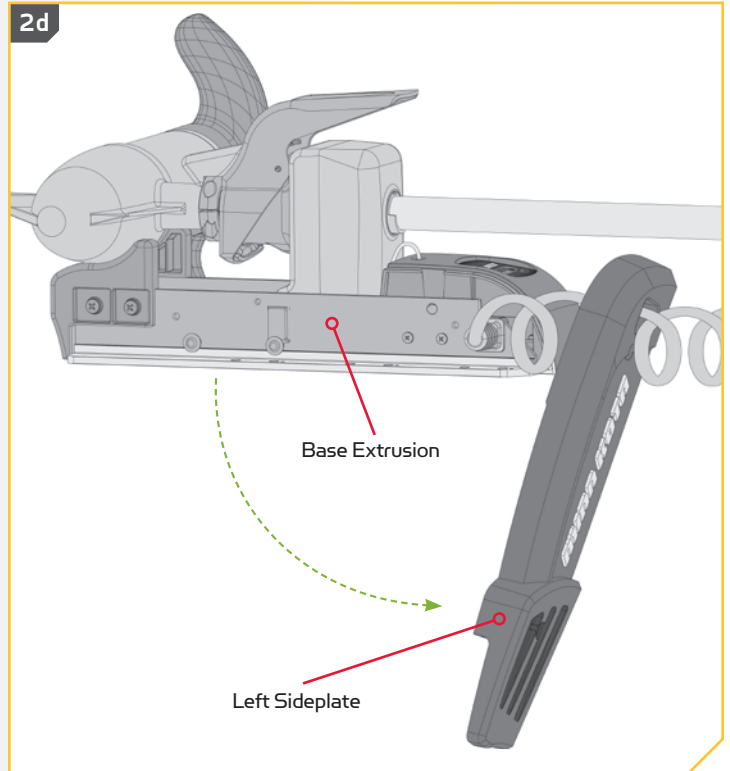
2

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

2c



2d



3

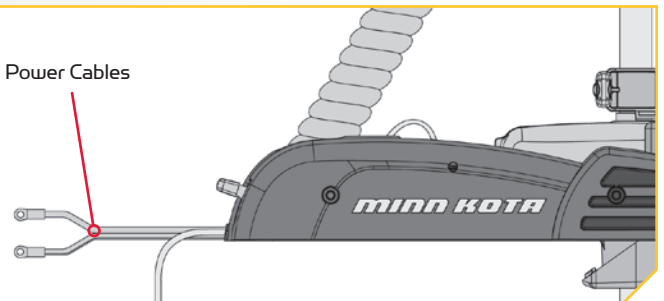
- e. Make sure that the Power Cables from the battery are disconnected, or that the breaker, if equipped, is "off".



### WARNING

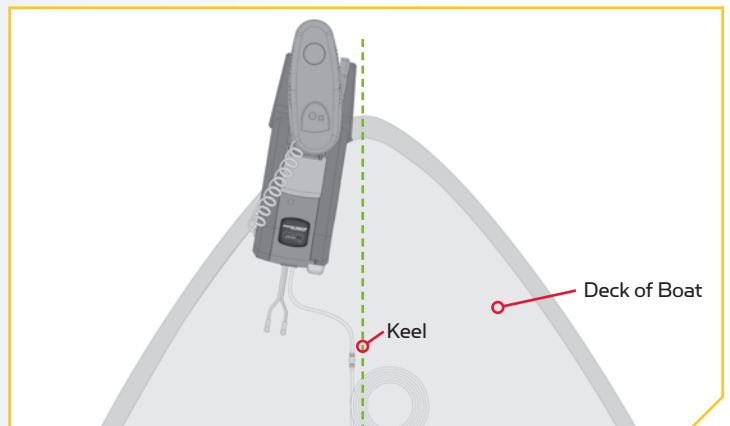
Make sure the motor is mounted on a level surface and is not connected to a power source.

Power Cables



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.



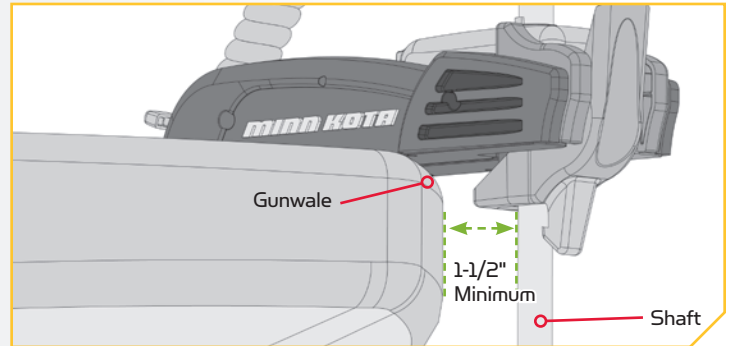


## 5

### ITEM(S) NEEDED

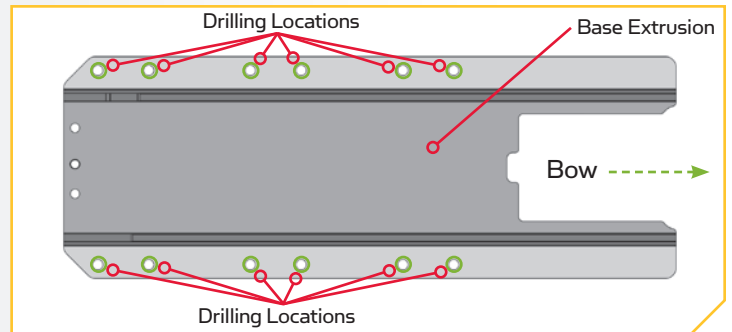
⊙ #4 x 6

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



## 6

- i. It is recommended to mark at least 6 of the 12 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.
- j. Drill through the deck of the boat using a 9/32" Drill Bit on the marked locations.

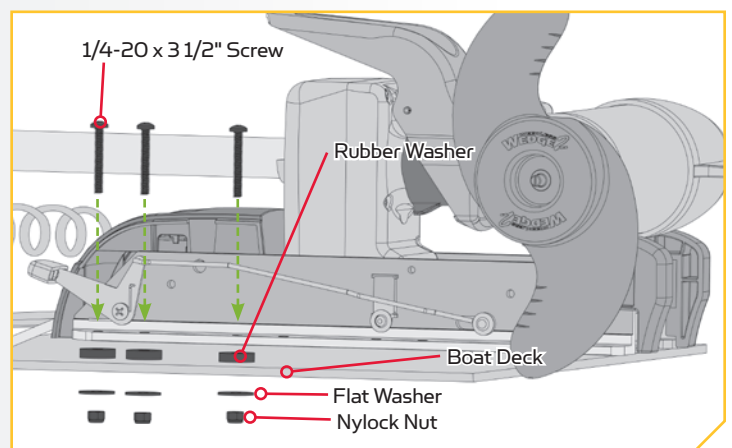


## 7

### ITEM(S) NEEDED

┆ #1 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.



## INSTALLING THE POWERDRIVE

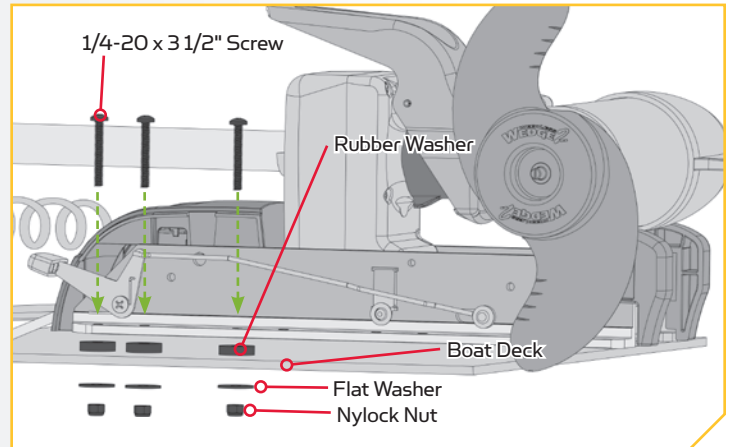
8

### ITEM(S) NEEDED

- #2 x 6
- #3 x 6

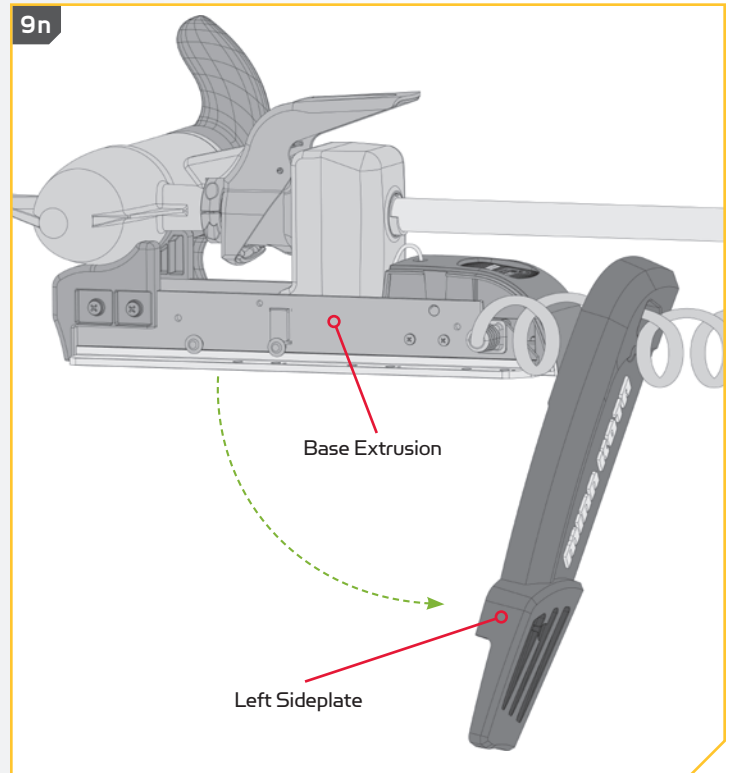
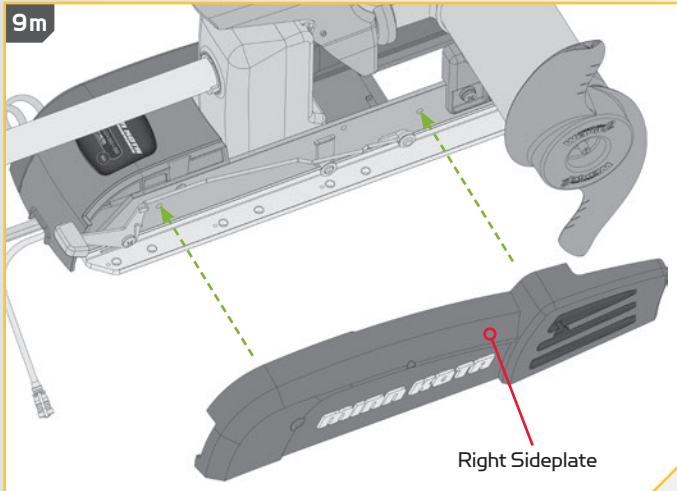
- Place a Flat Washer (Item #2) and then a Nylock Nut (Item #3) at the end of each screw as shown and secure. Make sure all hardware is secure.

**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.



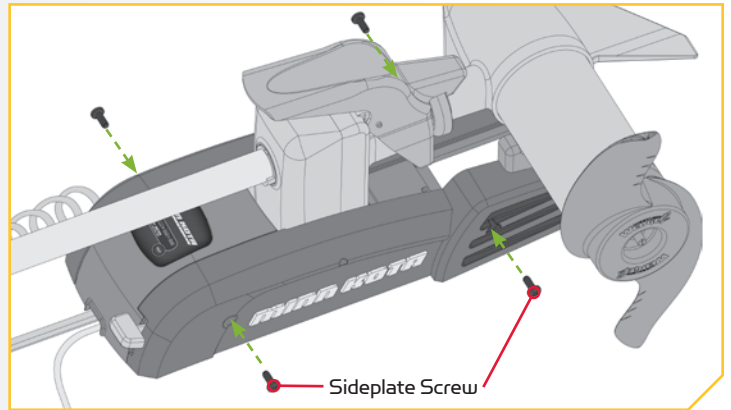
9

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



10

- 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.



11

ITEM(S) NEEDED

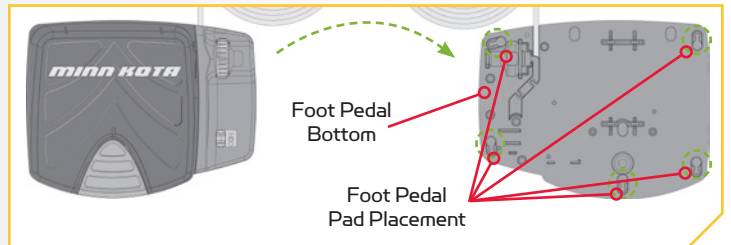
 #17 x 5



#10 x 1

- p. Take the Foot Pedal (Item #10) and turn it over. Put a Foot Pedal Pad (Item #17) in each of the pad locations.

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



## Routing Universal Sonar

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

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. For a current list of compatible fish finders and the correct adapter cable.



## ROUTING UNIVERSAL SONAR

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

Universal Sonar requires cables to be connected to an output device. This connection is present on the trolling motor inside the Control Head. The i-Pilot system does not need an external wired connection. If a connection is present, it is to connect the Universal Sonar. 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.

1

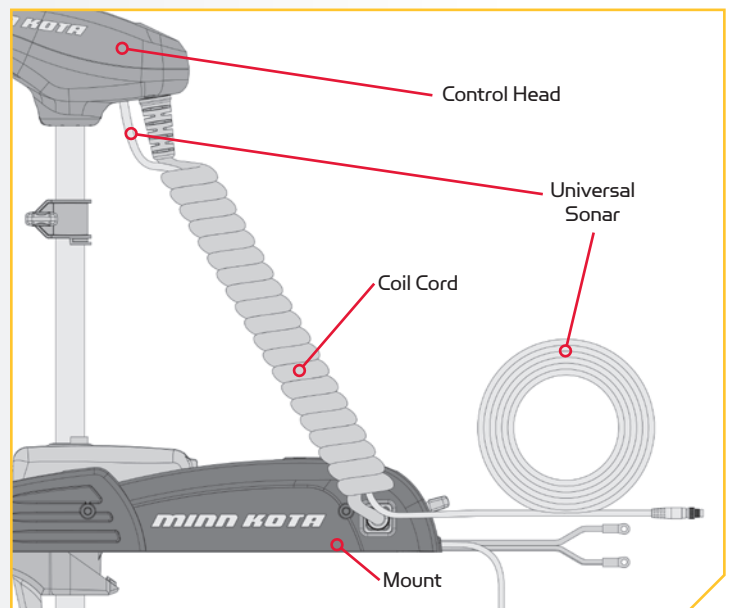
- a. Place the motor in the stowed position.
- b. Locate the Universal Sonar, at the base of the Control Head.



### CAUTION

Not following the recommended wire routing for the Universal Sonar cables, 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 should be fed all the way through the Coil Cord. It should exit the Coil Cord at the bottom of the Coil Cord, where it connects to the Mount.



**NOTE:** After the Universal Sonar 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

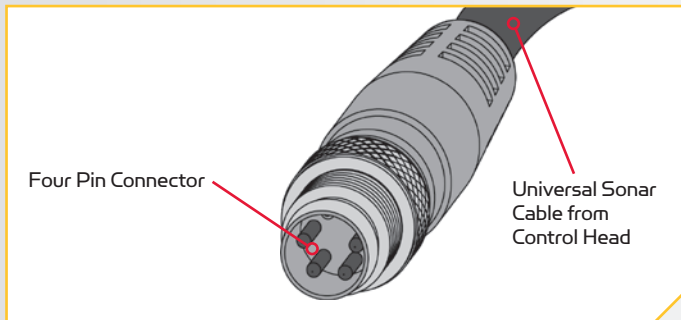
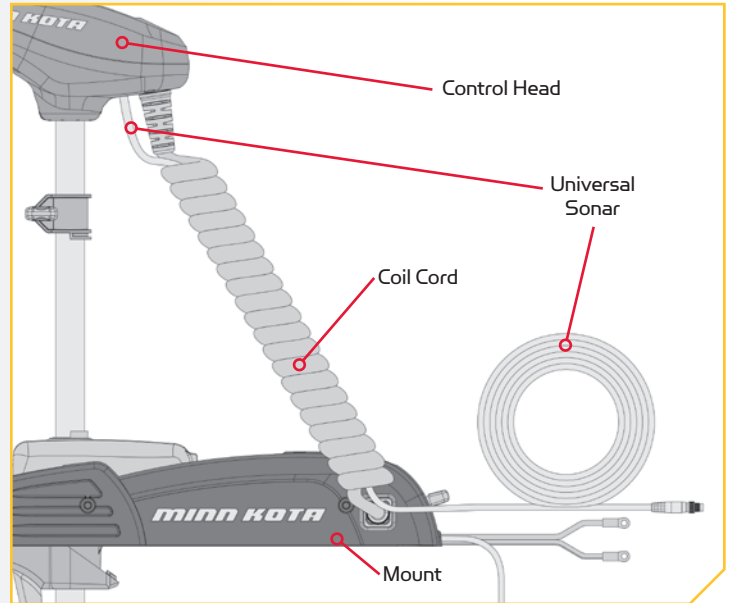
### Connecting a Universal Sonar Extension Cable

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 stowed 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.

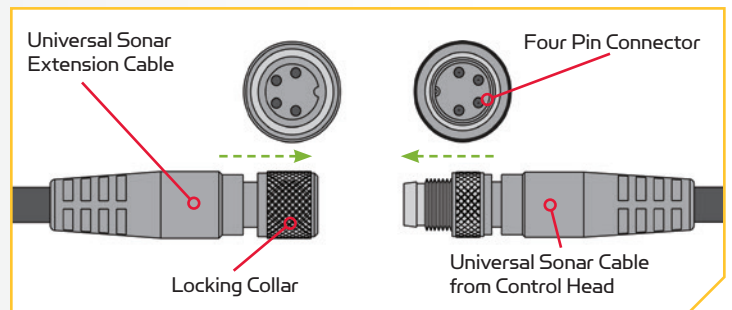
**NOTE:** Your fish finder should be turned off until this procedure is complete.



**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

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.

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## CONNECTING THE BATTERIES

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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.





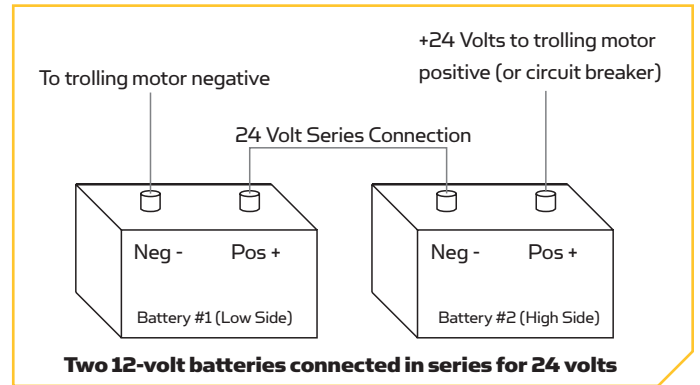
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## CONNECTING THE BATTERIES IN SERIES (IF REQUIRED FOR YOUR MOTOR)

### 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.

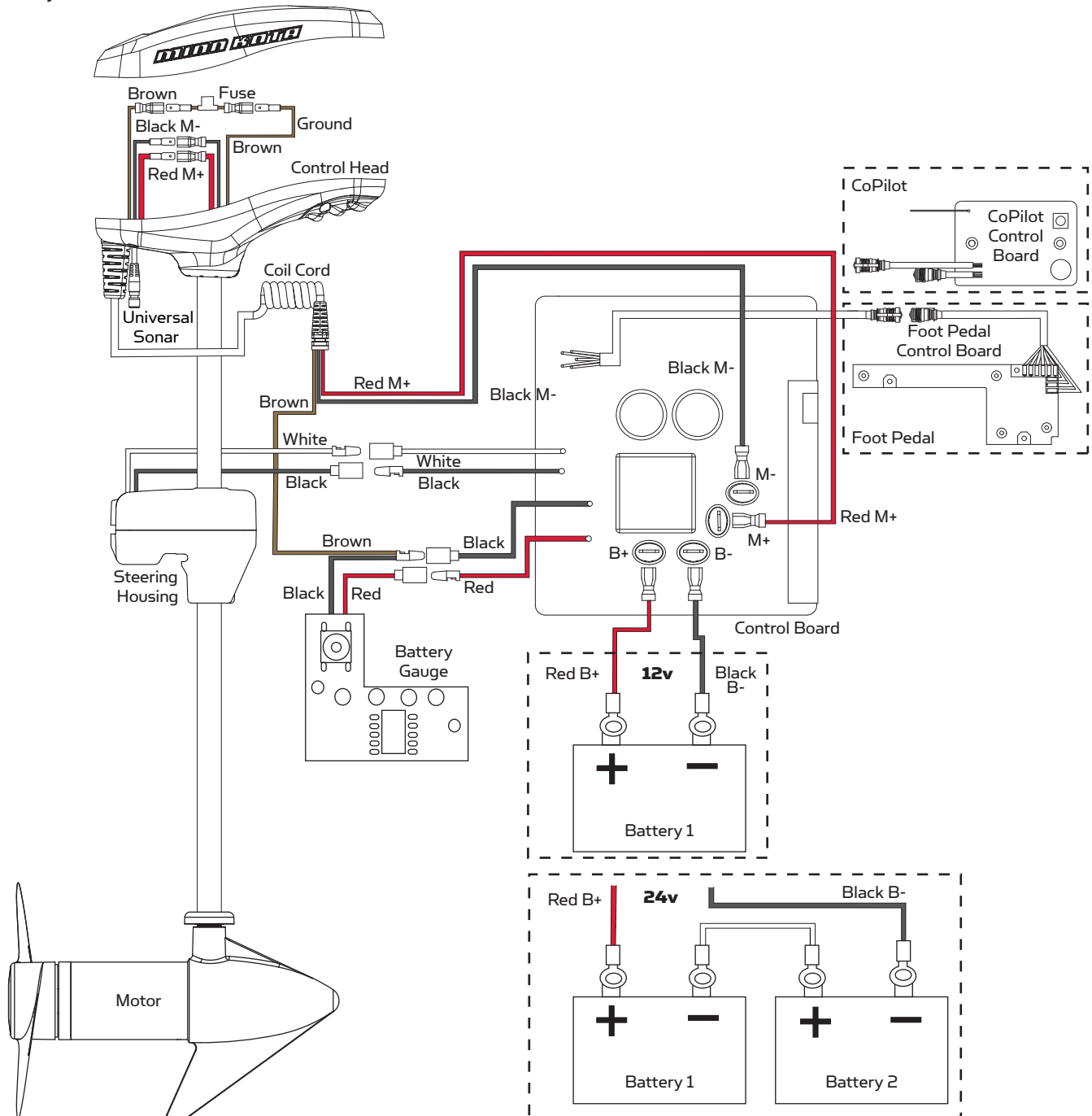
## WARNING

- 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.
-

# MOTOR WIRING DIAGRAM

## POWERDRIVE

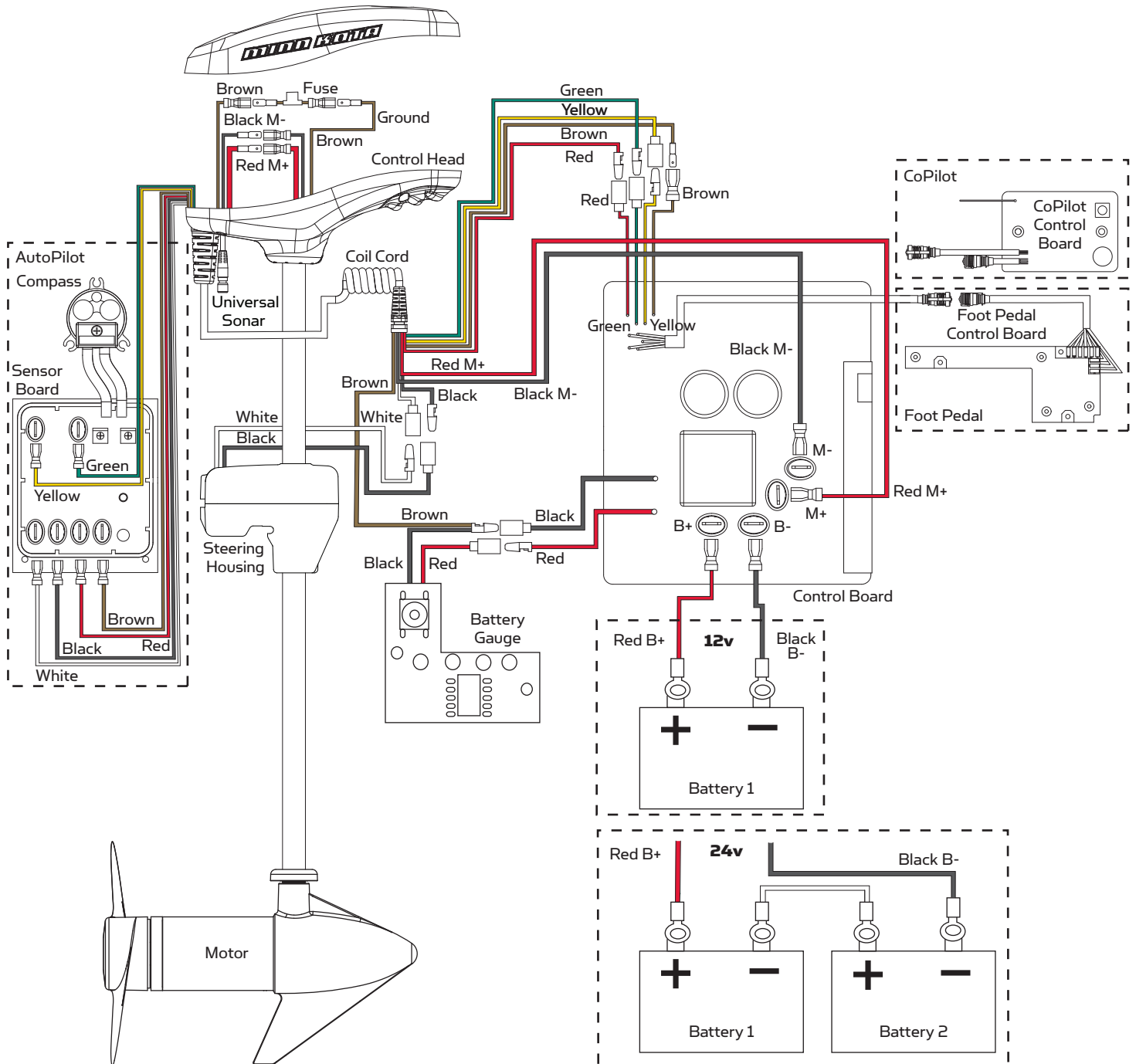
The following Motor Wiring Diagram applies to all PowerDrive models that do not come factory installed with AutoPilot or i-Pilot. CoPilot and Universal Sonar are optional features that may come factory installed. CoPilot can be installed as an after market accessory.



**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.

## POWERDRIVE WITH AUTOPILOT

The following Motor Wiring Diagram applies to all PowerDrive models that come factory installed with AutoPilot. CoPilot and Universal Sonar are optional features that may come factory installed. CoPilot can be installed as an after market accessory.

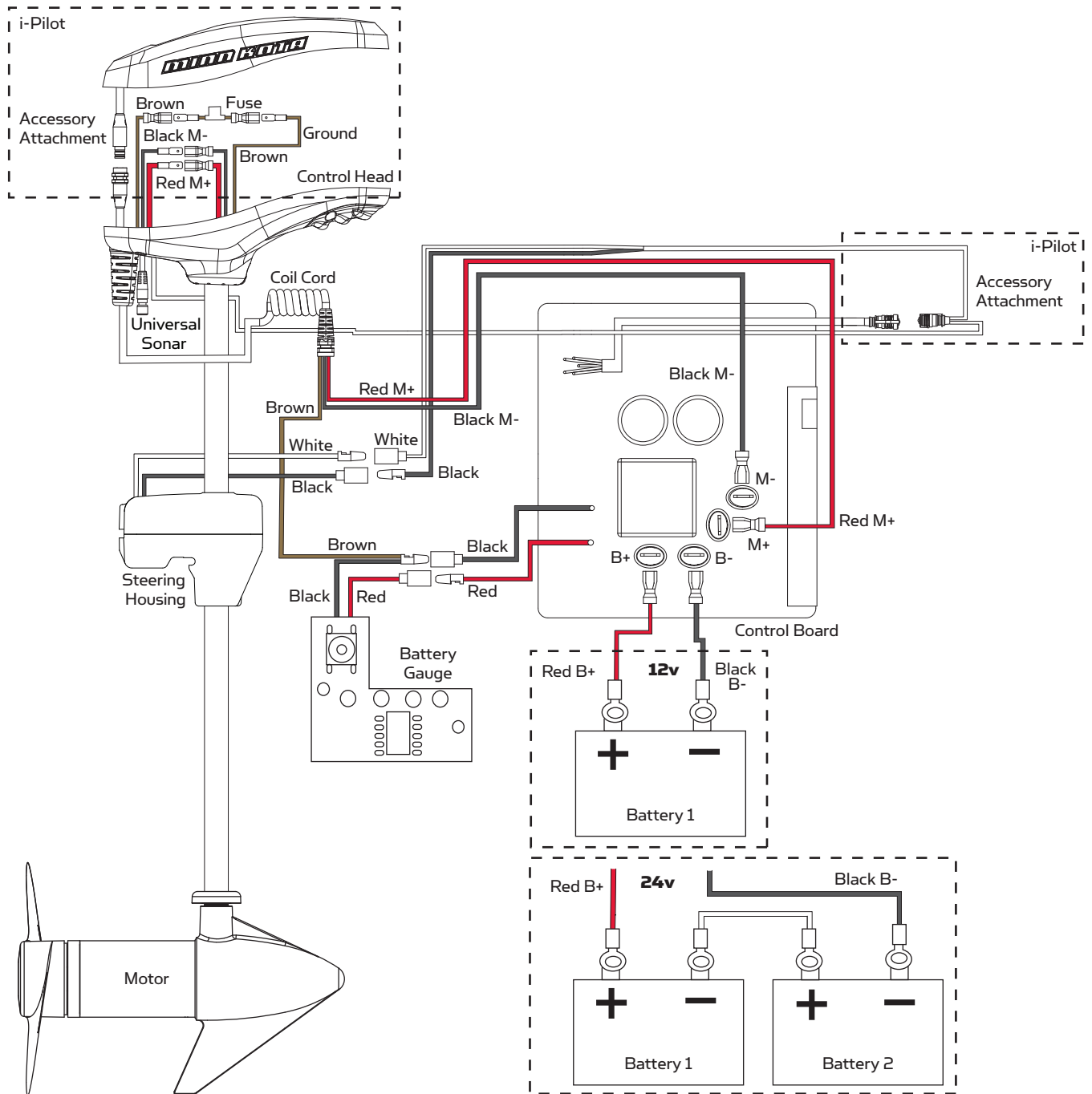


**NOTE:** This is a multi-voltage diagram. Double-check your motor's voltage for proper connections. Over-Current Protection Devices are not shown in this illustration.

## POWERDRIVE WITH i-PILOT

### POWERDRIVE WITH i-PILOT

The following Motor Wiring Diagram applies to all PowerDrive models that come factory installed with i-Pilot. Universal Sonar is an optional feature that may come factory installed.

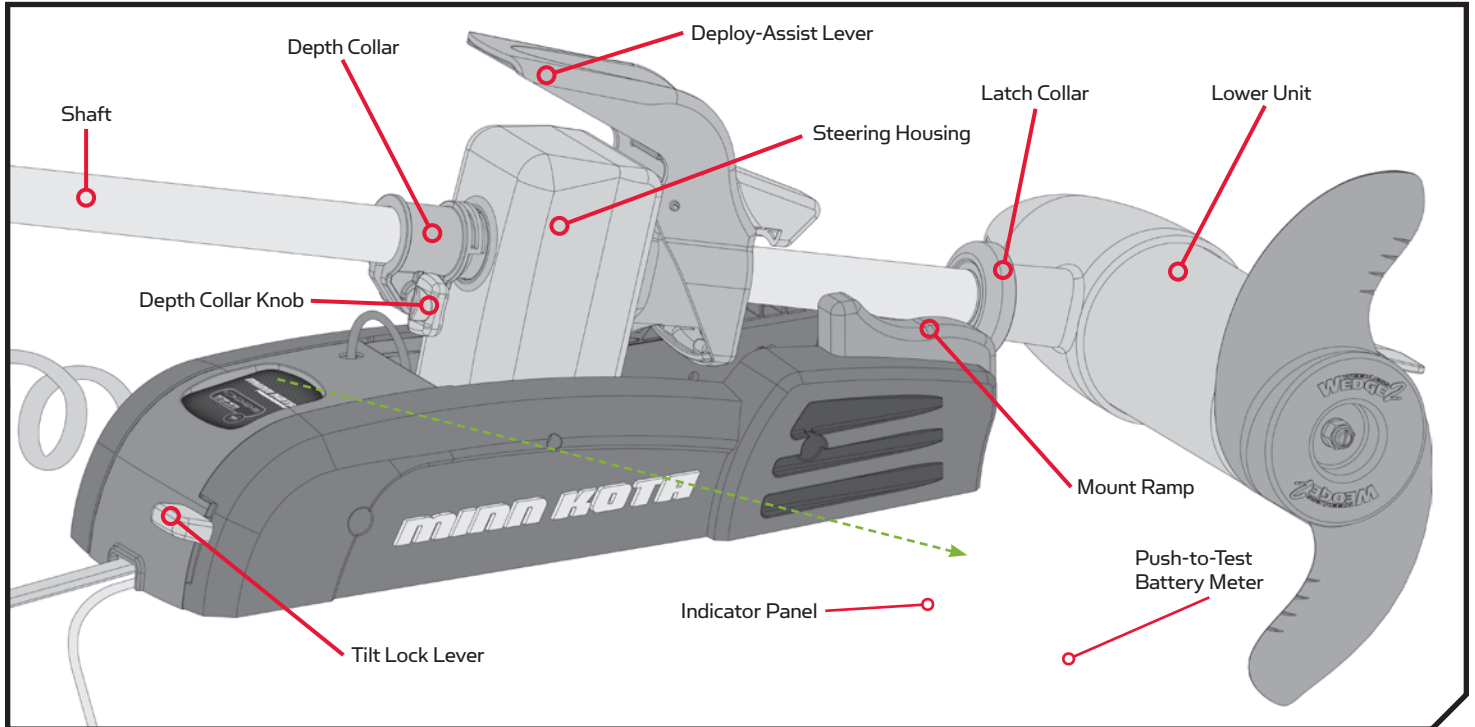


**NOTE:** This is a multi-voltage diagram. Double-check your motor's voltage for proper connections. Over-Current Protection Devices are not shown in this illustration.

# 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 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 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.

### Deploy-Assist Lever

The Deploy-Assist Lever is located at the top of the mount when the motor is in the stowed position. The Deploy-Assist Lever functions to unlatch the motor when it is stowed and press on the Latch Collar to assist in deploying the motor. The Deploy-Assist Lever also captures the Latch Collar when the motor is stowed, holding the motor in place so it can be secured with the Depth Collar.

### Latch Collar

The Latch Collar is located on the motor shaft just above the Lower Unit. It functions to help secure the motor in place while it is stowed. When stowed the Latch Collar is captured in the Deploy-Assist Lever.

## WARNING

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



## ADJUSTING THE DEPTH OF THE MOTOR

### Tilt Lock Lever

The Tilt Lock Lever is located at the base of the mount opposite of the Lower Unit. The Tilt Lock Lever is used to unlatch the Steering Housing from the stowed position so the motor can be tilted, pulled upwards and stowed.

### Mount Ramp

The Mount Ramp functions to hold the Lower Unit in place when the motor is stowed. The Lower Unit will rest on the Mount Ramp when stowed, helping to secure it in place.

## 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.

## STOWING AND DEPLOYING THE MOTOR

### To Deploy the Motor

Loosen the Depth Collar, then push firmly down on the Deploy-Assist Lever to release the Latch Collar and slide the motor forward, out from the Mount 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 Tilt Lock Lever and raise the motor by pulling up on the composite shaft or control head. Pull the motor toward the stern until it rests securely on the Mount Ramp and the Deploy-Assist Lever captures the Latch Collar. 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.

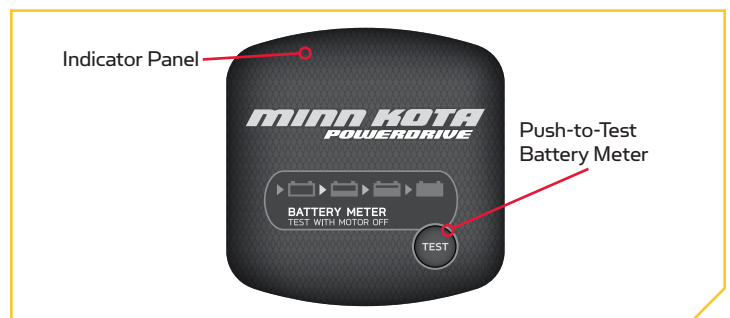
## WARNING

When stowing or deploying the motor, keep fingers clear of all hinge and pivot points and all moving parts. Practice proper ergonomics when stowing and deploying the motor to prevent injury.

## PUSH-TO-TEST BATTERY METER

This motor is equipped with a Push-to-Test Battery Meter. The LED lights are 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.



## 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.

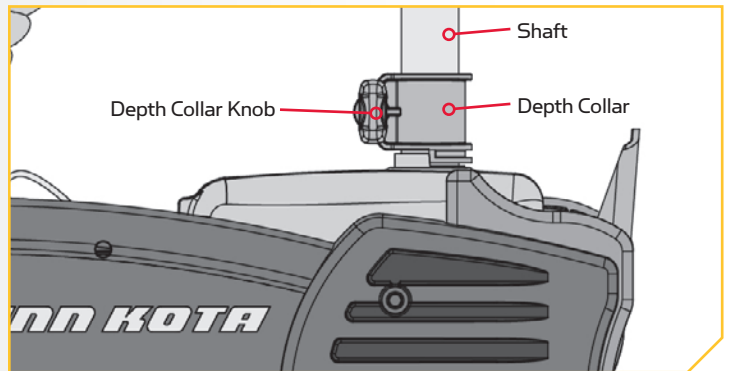
1

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



### WARNING

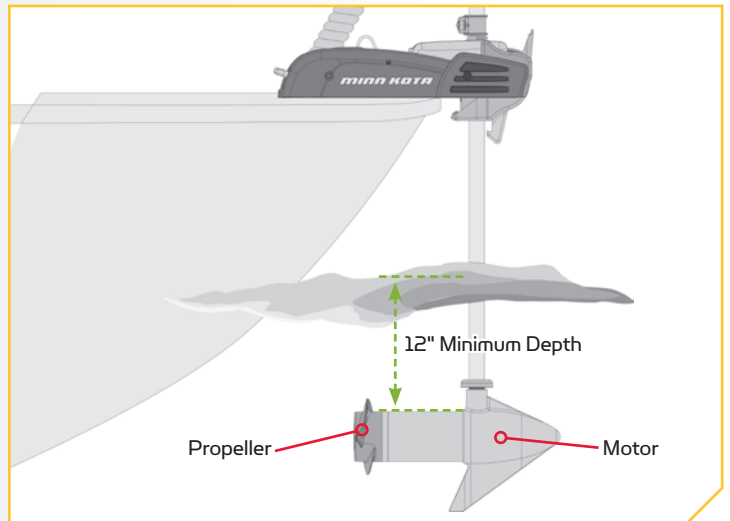
The Control Head will create a pinch point if the Depth Collar Knob is loosened and the Control Head slides to the top of the Depth Collar. Grasp the Shaft and prevent it from sliding all the way down to prevent the pinch point.



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.

**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.

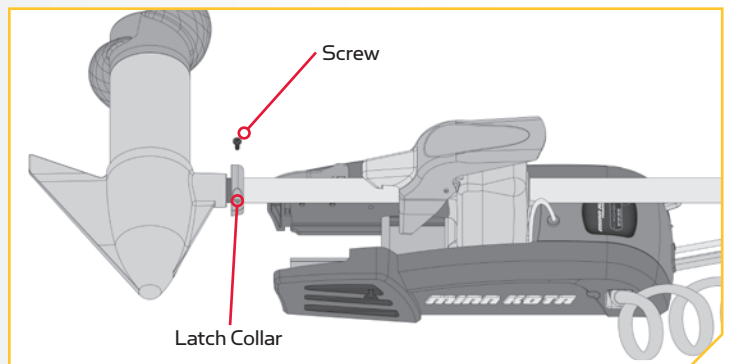


## Adjusting the Latch Collar

Once the motor has been used, it may be necessary to adjust the Latch Collar up or down. The ideal adjustment is a slightly loose fit that completely captures the Latch Collar in the Deploy Assist Lever when stowed.

1

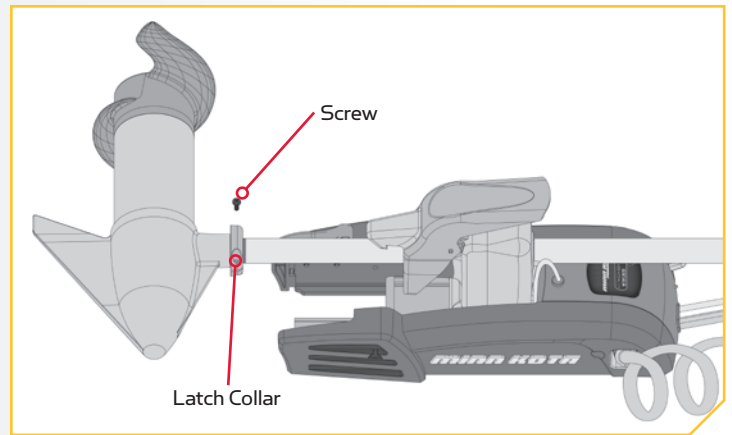
- a. With the motor in the stowed position, locate the Latch Collar.
- b. Using a #2 Phillips Screwdriver, loosen the screw securing the Latch Collar in place.



## INSTALLING AN EXTERNAL TRANSDUCER

2

- c. Rotate the Latch Collar so it fits comfortably within the hold of the Deploy Assist Lever.
- d. Re-tighten the screw to secure the Latch Collar in place.



### Installing an External Transducer

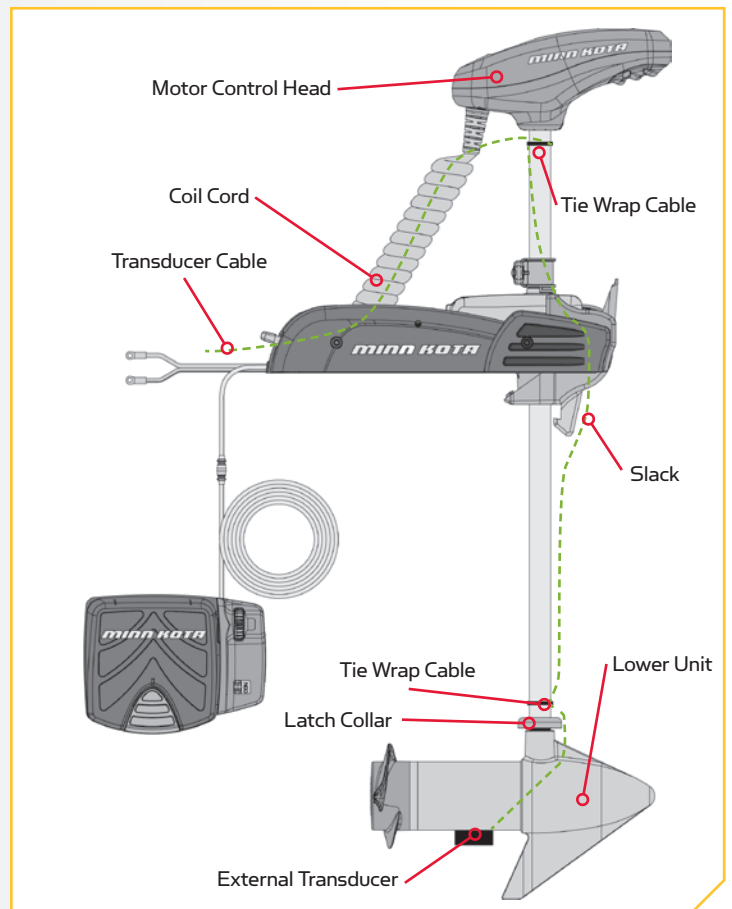
Your trolling motor may be pre-installed with a Universal Sonar transducer system. For compatibility and more information on Universal Sonar. An external transducer is not included with your trolling motor. An external transducer can be installed onto the motor.

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 Motor 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 Latch Collar and just below the Motor Control Head.
- d. Run the Transducer Cable through the Coil Cord to the fish finder.

### CAUTION

Not following the recommended wire routing for the External Transducer 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.





### Adjusting the Lower Unit for a Secure Stow

When the Motor is stowed, the Lower Unit should rest on the Mount Ramp, 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

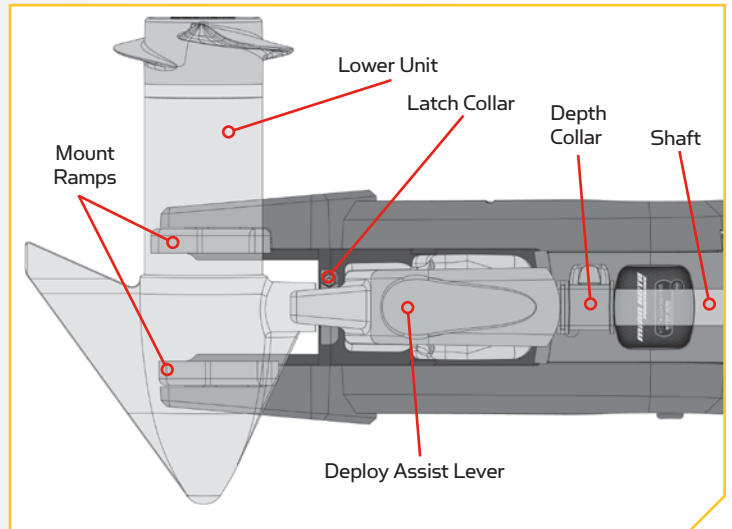
- a. Before transporting the boat over water or land, stow the motor to determine where the Lower Unit rests on the Mount Ramp.

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

- b. If the Lower Unit does not sit on the Mount Ramps, refer to the Adjusting the Latch Collar section of this manual. Making adjustments to the Latch Collar will help the Lower Unit stay on the Mount Ramps as it is captured by the Deploy Assist Lever.

#### 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.

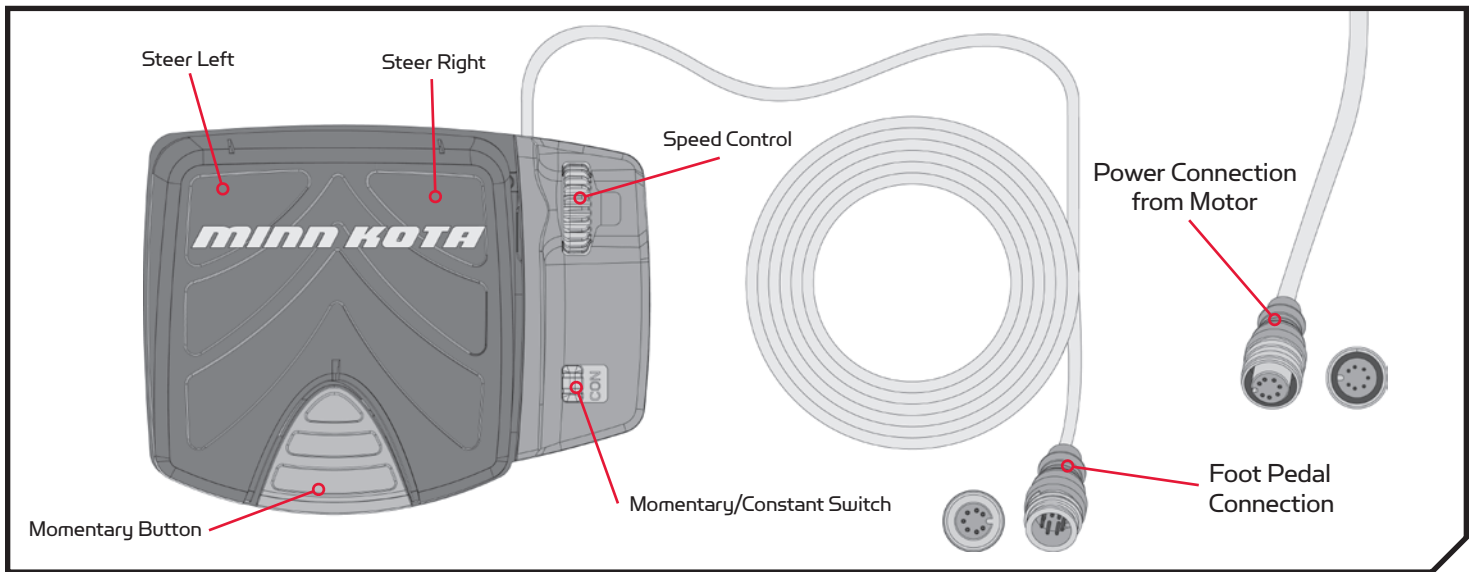


**NOTE:** Slide the Depth Collar down and secure it against the top of the Steering Housing when stowed to secure the motor in place and prevent accidental deployment.

# 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. The motor can also be controlled by an i-Pilot remote, or a compatible Minn Kota remote if applicable. Please refer to the i-Pilot or compatible remote manual on how the remote controls the motor. To learn more about accessories that are compatible with the PowerDrive.



### Momentary Button

The Momentary Button is located at the heel end of the foot pedal and is used to turn the propeller on.

### Momentary/Constant Switch

The Momentary/Constant Switch is used to toggle between Momentary and Constant Mode. During Momentary Mode (MOM), the propeller only turns while pressure is applied to the Momentary Button. While in Constant Mode (CON), the propeller will run continuously regardless of pressure being applied to the Momentary Button.

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.

### Speed Control

The Speed Control dial is on the upper right side of the toe end of the Foot Pedal. Turn the Speed Knob forward to increase speed and backward to decrease speed. Speed can also be adjusted using the remote, if applicable.

### Steer Right and Steering Left

The main button on the foot pedal is to control steering. Steer Right by applying pressure to the right side of the button and Steer Left by applying pressure to the left side of the button. The position and direction of the Steering 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.



## CAUTION

The steering system is designed to turn your motor 360°. Be careful to avoid over-wrapping the coil cord around the composite shaft. Damage to the coil cord can occur when it is over-wrapped, which will prevent the motor from operating correctly.

### Steering in Reverse

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

**NOTE:** The motor will not auto correct to drive straight.

### **WARNING**

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

### **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.

### **WARNING**

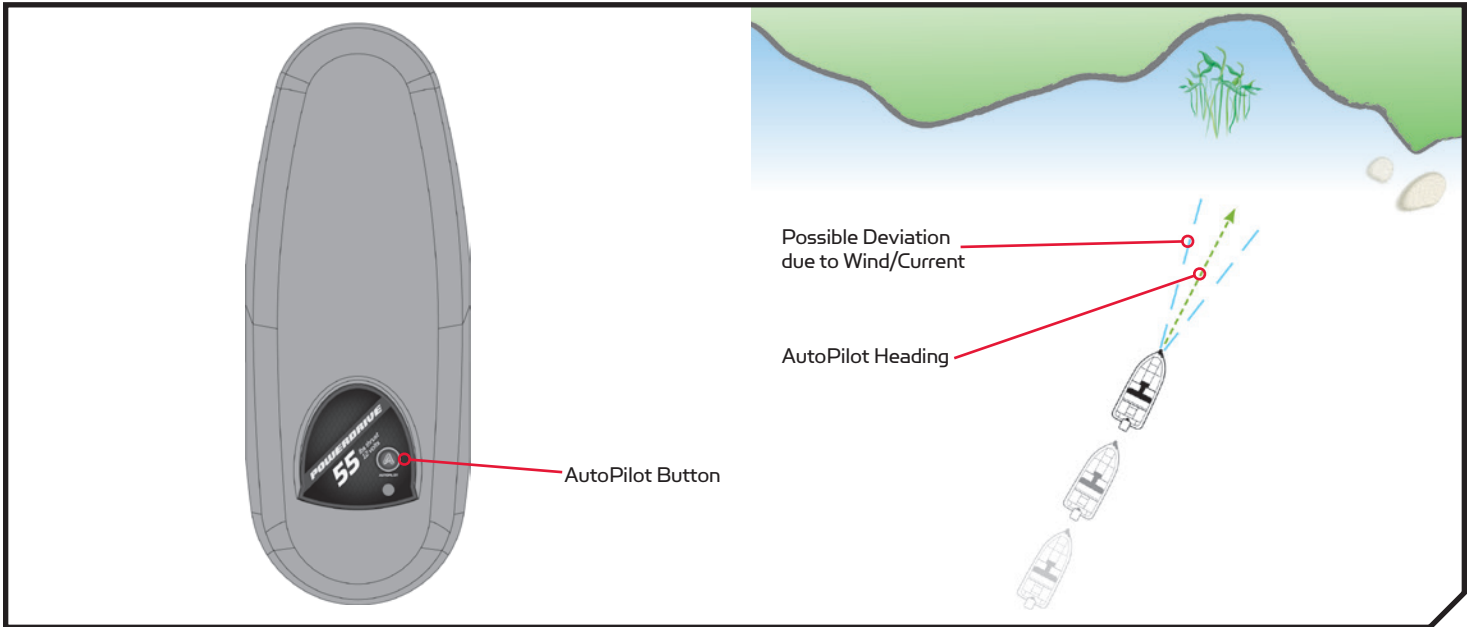
Practice proper ergonomics when operating the foot pedal to prevent injury.



# AUTOPILOT™

## AUTOPILOT™ CONTROLS

Your PowerDrive 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.



### 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.

## 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 the AutoPilot switch to stop the steering 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.

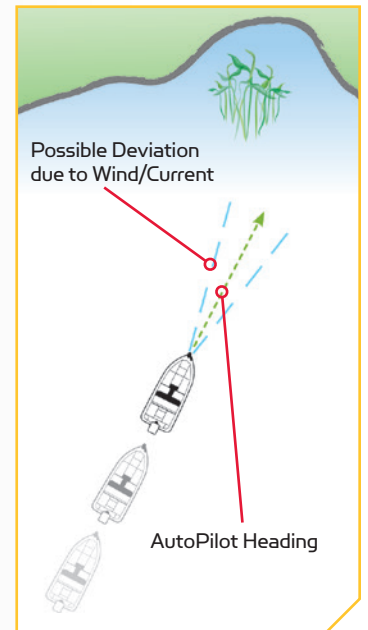
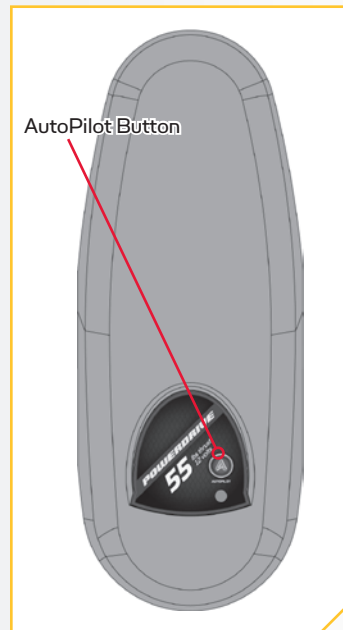
1

- a. While the motor is running, AutoPilot can be toggled on by pressing the AutoPilot Button located at the top of the Motor control head.
- b. While AutoPilot is on, drive the boat as desired.

**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.

- c. To toggle 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

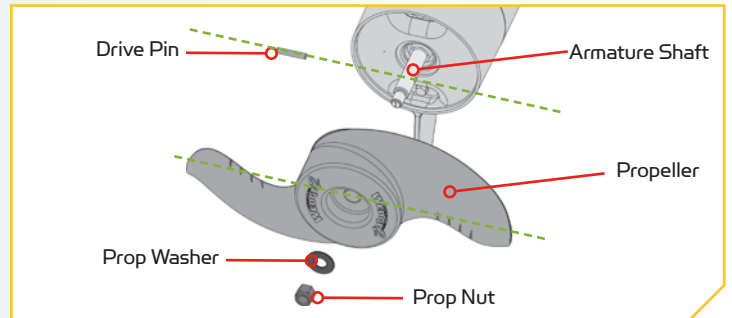
### TOOLS AND RESOURCES REQUIRED

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

### INSTALLATION

- 1
  - a. Disconnect the motor from all sources of power prior to changing the propeller.
  - b. Hold the propeller and loosen the Prop Nut with a pliers or a wrench.
  - c. Remove the Prop Nut and Prop Washer.

**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.



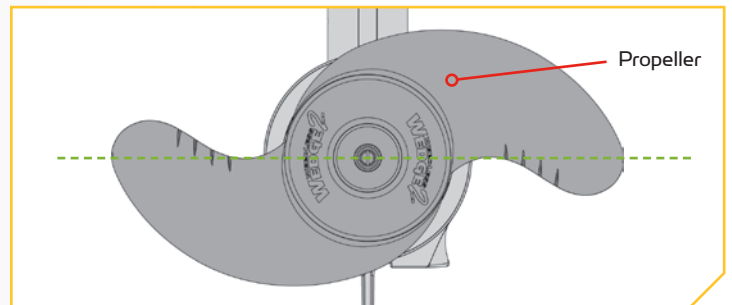
### CAUTION

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

- 2
  - d. Turn the old prop to horizontal and pull it straight off. If drive pin falls out, push it back in.

### CAUTION

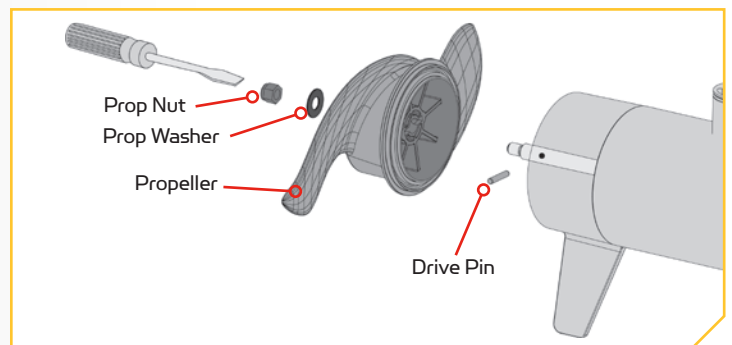
If the prop does not readily slide off, take care to not bend the Armature Shaft while removing the prop by pulling the prop evenly off the Armature Shaft.



- 3
  - e. Align the new Propeller with the Drive Pin.
  - f. Install the Prop Washer and Prop Nut.
  - g. Tighten the Prop Nut 1/4 turn past snug at 25-35 inch-lbs.

### CAUTION

Do not over tighten as this can damage the prop.



### 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.
- Stow the motor after each use to allow water to drain from the steering housing. Water that sits in the steering housing when the motor is not in use may cause damage.

### 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. You experience prop vibration during normal operation:
  - Remove and rotate the prop 180°. See removal instructions in the Propeller Replacement Section.
4. Experiencing interference with your fish finder:
  - You may, in some applications, experience interference in your depth finder display. We recommend that you use a separate deep cycle marine battery for your trolling motor and that you power the depth finder from the starting/cranking battery. If problems still persist, call our service department .

**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 on-line 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.





## FCC COMPLIANCE

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### 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

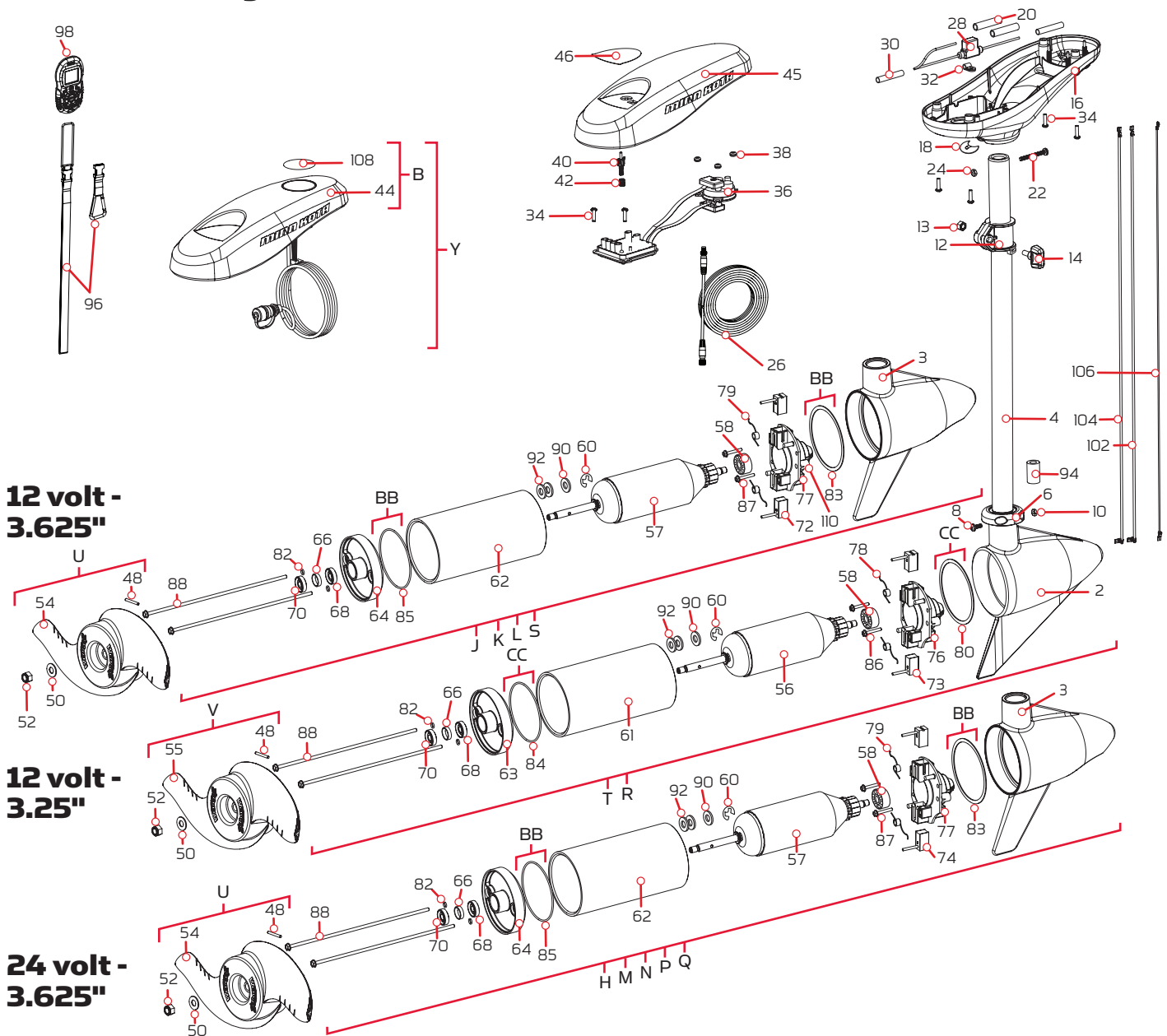
## POWERDRIVE

**45/50/55/70 LBS THRUST - 12/24 VOLT - 48"/54"/60" 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.

### POWERDRIVE MOTOR

#### Motor Parts Diagram



## PARTS DIAGRAM & PARTS LIST

### Motor Parts List

| Assembly | Part #    | Description  | Quantity |
|----------|-----------|--|----------|
| B        | 2770202 ◆ | COVER KIT, POWERDRIVE *i-PILOT COVER & DECALS ONLY*              | 1        |
| H        | 2106046   | MTR ASY US2.5 24V 3.62 70# *FRESHWATER* *60"* *UNIVERSAL SONAR*  | 1        |
| J        | 2097090   | MTR ASY 12V 3.62 VS FW 55# *FRESHWATER* *54"*                    | 1        |
| K        | 2107098   | MTR ASY US2.5 12V 3.62" 55# *FRESHWATER* *54"* *UNIVERSAL SONAR* | 1        |
| L        | 2097074   | MTR ASY 12V 3.62 VS FW 55#*FRESHWATER* *48"*                     | 1        |
| M        | 2096051   | MTR ASY 24V 3.62 VS 70# FW *FRESHWATER* *54"*                    | 1        |
| N        | 2096032   | MTR ASY 24V 3.62 VS 70# *FRESHWATER* *60"*                       | 1        |
| P        | 2106045   | MTR ASY US2.5 24V 3.62 70# *FRESHWATER* *54"* *UNIVERSAL SONAR*  | 1        |
| Q        | 2096050   | MTR ASY 24V 3.62 VS 70# FW *FRESHWATER* *48"* *PONTOON 68*       | 1        |
| R        | 2069283   | MTR ASY 12V 3.25 VS FW 45 *FRESHWATER* *48"*                     | 1        |
| S        | 2097034   | MTR ASY 12V 3.62 VS 50# *FRESHWATER* *48"* *54"*                 | 1        |
| T        | 2069233   | MTR ASY 12V 3.25 VS FW 40# BB *FRESHWATER* *54"*                 | 1        |
| U        | 1378131   | PROP IND 2091160 (WDL5 WDGII)                                    | 1        |
| V        | 1378121   | PROP IND 2061122 (PWR PROP)                                      | 1        |
| Y        | 2774063 ◆ | MOTOR KIT, iPLT 1.6 POWERDRIVE *i-PILOT RECEIVER*                | 1        |
| BB       | 2888460   | SEAL & O-RING KIT *3.625*  | 1        |
| CC       | 2883460   | SEAL & O-RING KIT *3.25*   | 1        |
| Item     | Part #    | Description  | Quantity |
| 2        | 421-132   | HSG BRUSH END 3.25   | 1        |
| 3        | 9421-171  | BRUSH END HSG TRANSDUCER 3.625, US2.5 *54"* *UNIVERSAL SONAR*    | 1        |
|          | 9421-173  | BRUSH END HSG TRANSDUCER 3.625, US2.5 *60"* *UNIVERSAL SONAR*    | 1        |
|          | 421-065   | HSG BRUSH END 3.625  | 1        |
| 4        | 2032074   | TUBE COMPOSITE 60" PD/AP   | 1        |
|          | 2032076   | TUBE COMPOSITE 54" PD/AP   | 1        |
|          | 2032075   | TUBE COMPOSITE 48" PD/AP   | 1        |
| 6        | 2301555   | COLLAR-LATCH, PD/AP  | 1        |
| 8        | 2303434   | SCREW-#8-32 X 5/8 MACH PHCR SS                                   | 1        |
| 10       | 2303112   | NUT-#8-32 NYLOCK SS  | 1        |
| 12       | 2031522   | COLLAR DRIVE (W/INSERT)  | 1        |
| 13       | 2323104   | HEX NUT 1/4 -20 SS   | 1        |
| 14       | 2011365   | SCREW-COLLAR/NEW KNOB *FRESHWATER*                               | 1        |
| 16       | 2292505   | CONTROL BOX (PD/AP) *FRESHWATER*                                 | 1        |
| 18       | 2224704   | INSERT-PLUG, BLK, I PILOT *LARGE HOLE* *FRESHWATER*              | 1        |
|          | 2224702   | INSERT-PLUG *NO HOLE* *FRESHWATER*                               | 1        |
|          | 2224700   | INSERT-PLUG US2 *SMALL HOLE* *FRESHWATER*                        | 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.



## PARTS DIAGRAM & PARTS LIST

| Item | Part #    | Description                                | Quantity |
|------|-----------|--|----------|
| 20   | 2065400   | WIRE INSULATOR-LGE 1-3/4,BLUE *FRESHWATER* | 2        |
| 22   | 2033400   | SCREW-#10-24 X 1-3/4 PPH Z/P *FRESHWATER*  | 1        |
| 24   | 2013110   | NUT-HEX #10-24 UNC-2B (ZCP) *FRESHWATER*   | 1        |
| 26   | 2211415   | CABLE-EXTENSION, PD/AP 110" *US2 ONLY*     | 1        |
| 28   | 2218200   | FUSE HOLDER ASSEMBLY *FRESHWATER*          | 1        |
| 30   | 2375400   | SHRINK TUBE-1/4OD X 1-3/4 *FRESHWATER*     | 2        |
| 32   | 2052510   | CABLE CLAMP, 3/16", NYLON                  | 1        |
| 34   | 2372100   | SCREW-#8-18 X 5/8 THD* (SS)                | 7        |
| 36   | 2994100   | CTRL BRD/COMPASS ASY AP *AUTOPILOT*        | 1        |
| 38   | 2302960   | GROMMET-COMPASS *AUTOPILOT*                | 3        |
| 40   | 2302830   | ACTUATOR-SWITCH,ON/OFF A/P *AUTOPILOT*     | 1        |
| 42   | 2302752   | SPRING-ACTUATOR, PD/AP, S/S *AUTOPILOT*    | 1        |
| 44   | ✘         | MOTOR KIT, iPLT 1.6 POWERDRIVE             | 1        |
| 45   | 2290207   | CVR, CTRL BOX, V3 PRINTED                  | 1        |
| 46   | 2315698   | DECAL-GENERIC, PUSH BTN TOP FW             | 1        |
| 48   | 2092600   | PIN-DRIVE 1.06" LG (SS)                    | 1        |
| 50   | 2151726   | WASHER-5/16 STD (S/S)                      | 1        |
| 52   | 2053101   | NUT-PROP,NYLOC (MED) 5/16 SS               | 1        |
| 54   | 2091160   | PROP-WW2 (3.625") REAMED (SUB)             | 1        |
| 55   | 2061122   | PROP-POWER (3.25")                         | 1        |
| 56   | 2-100-202 | ARMATURE AS SY 12V 3.25 *FRESHWATER*       | 1        |
| 57   | 2-100-119 | ARMATURE AS SY 24V 3.62 70# *FRESHWATER*   | 1        |
|      | 2-100-117 | ARM ASY 12V 3.62 55#2.88"                  | 1        |
| 58   | 140-010   | BALL BEARING *FRESHWATER*                  | 1        |
| 60   | 788-015   | RETAINING RING *3.625* *3.25*              | 1        |
| 61   | 2-200-079 | CTR HSG ASY 3.25 TX-MAGNT                  | 1        |
| 62   | 2-200-005 | CTR HSG ASY 3.625 FW-MAGNET *24 VOLT*      | 1        |
|      | 2-200-101 | CTR HSG ASY 3.625 TX-MAGNETIZED *12 VOLT*  | 1        |
| 63   | 2-400-128 | PLAIN END HSG ASY 3.25                     | 1        |
| 64   | 2-400-101 | PLAIN END HSG ASY 3.625                    | 1        |
| 66   | 144-049   | BEARING - FLANGE (SERVICE ONLY)            | 1        |
| 68   | 880-003   | SEAL                                       | 1        |
| 70   | 880-006   | SEAL WITH SHIELD                           | 1        |
| 72   | 188-036   | BRUSH ASSEMBLY 3.625                       | 2        |
| 73   | 188-052   | BRUSH ASSEMBLY 3.25                        | 2        |
| 74   | 188-037   | BRUSH ASSEMBLY 3.625 *70LB THRUST ONLY*    | 2        |
| 76   | 738-030   | BRUSH PLATE 3.25                           | 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.



## PARTS DIAGRAM & PARTS LIST

| Item | Part #    | Description  | Quantity |
|------|-----------|--|----------|
| 77   | 738-036   | BRUSH PLATE 3.625  | 1        |
| 78   | 975-032   | SPRING - COMPRESSION 3.25                                      | 2        |
| 79   | 975-040   | SPRING - TORSION 3.625   | 2        |
| 80   | 701-041   | O-RING MEDIUM 3.25   | 1        |
| 82   | 701-008   | THRU BOLT O-RING 3.25  | 2        |
|      | 701-007   | O-RING 3.25 *45LB THRUST*                                      | 2        |
| 83   | 337-036   | GASKET   | 1        |
| 84   | 701-039   | O-RING SMALL 3.25  | 1        |
| 85   | 701-081   | O-RING 3.625   | 1        |
| 86   | 830-001   | SCREW-#8-32x1.75 SELF-THRD                                     | 2        |
| 87   | 830-007   | SCREW, # 8-32  | 2        |
| 88   | 830-078   | THRU BOLT 8-32 X 8.96 *45LB THRUST*                            | 2        |
|      | 830-008   | THRU BOLT 10-32 x 9.205 *70LB THRUST*                          | 2        |
|      | 830-042   | THRU BOLT 10-32 X 8.83 *55LB THRUST*                           | 2        |
| 90   | 990-067   | WASHER - STEEL THRUST  | 1        |
| 92   | 990-070   | WASHER - NYLATRON  | 2        |
| 94   | 2307314   | BEAD-FERRITE *70LB THRUST*                                     | 1        |
| 96   | 2390800 ♦ | LANYARD, REMOTE W/ CARABINER                                   | 1        |
| 98   | 2994075 ♦ | REMOTE ASSY, IPILOT 1.6  | 1        |
| 102  | 640-316   | LEADWIRE BROWN 18 AWG 71" GPT                                  | 1        |
|      | 640-315   | LEADWIRE BROWN 18 AWG 62" GPT                                  | 1        |
| 104  | 640-104   | LEADWIRE RED 10AWG 48" *45LB THRUST*                           | 1        |
|      | 640-105   | LEADWIRE RED 10AWG 48" 54" *55LB THRUST* *68LB THRUST PONTOON* | 1        |
|      | 640-106   | LEADWIRE RED 10AWG 54" 60" *70LB THRUST*                       | 1        |
|      | 640-107   | LEADWIRE RED 10AWG 65-1/2" GPT *55LB THRUST*                   | 1        |
|      | 640-109   | LEADWIRE RED 10AWG 48" 54" *55LB THRUST*                       | 1        |
| 106  | 640-004   | LEADWIRE BLK 10AWG 48", 54" *55LB THRUST*                      | 1        |
|      | 640-007   | LEAD WIRE BLK 10AWG 60" *70LB THRUST*                          | 1        |
|      | 640-005   | LEADWIRE BLK 10AWG 48" *PONTOON* *68/70LB THRUST*              | 1        |
|      | 640-008   | LEADWIRE BLK 10 AWG 54", 60" *70 LB THRUST*                    | 1        |
|      | 640-010   | LEADWIRE BLK 10AWG 48" 54" *55LBS THRUST*                      | 1        |
|      | 640-003   | LEADWIRE BLK 10AWG 48" *45LB THRUST*                           | 1        |
| 108  | ✘         | DECAL, DOMED IPILOT FW   | 1        |
| 110  | 2307314   | BEAD-FERRITE   | 1        |

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

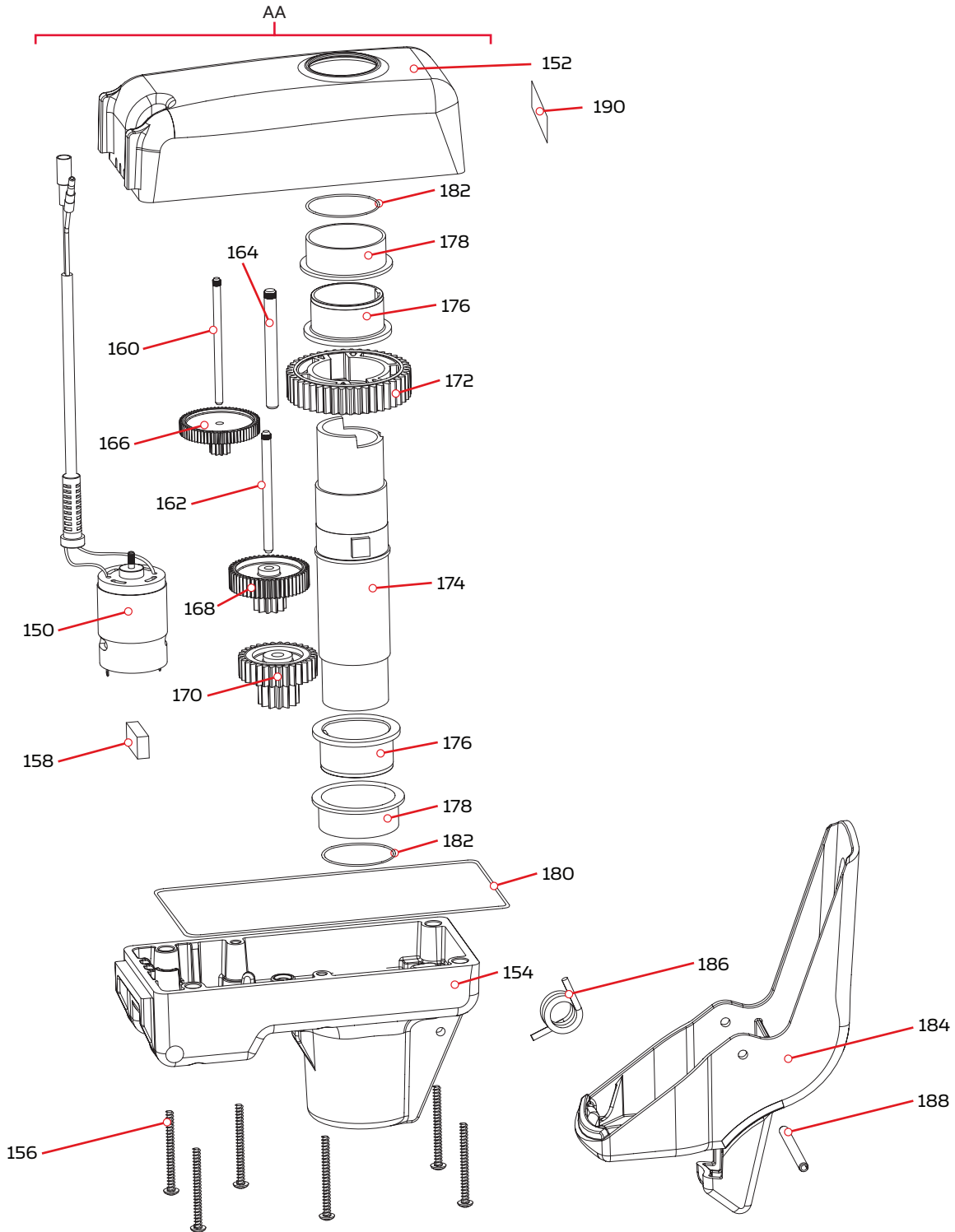
▲ Not shown on Parts Diagram.

♦ May only be available with i-Pilot.



POWERDRIVE STEERING HOUSING

Steering Housing Parts Diagram



## PARTS DIAGRAM & PARTS LIST

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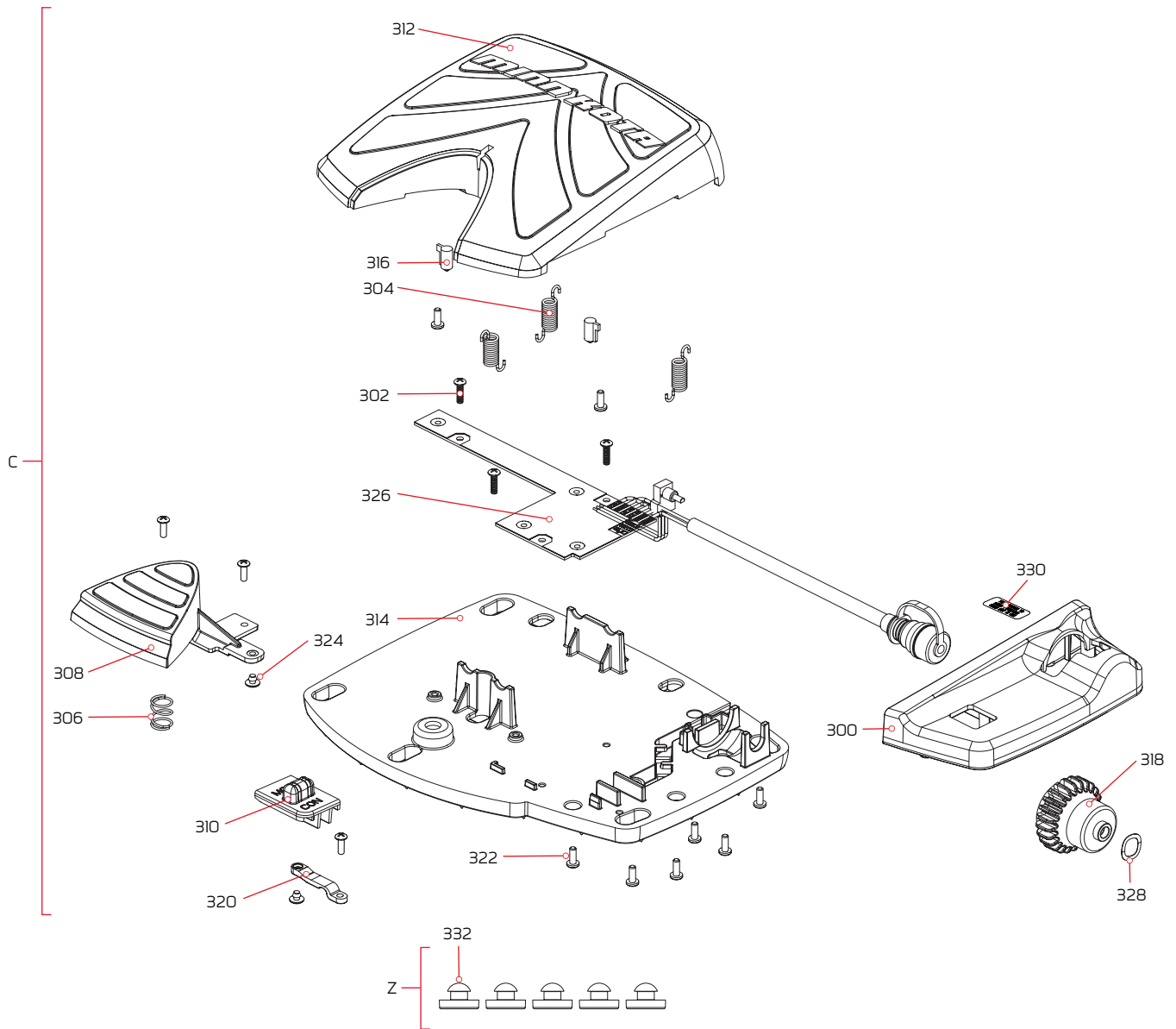
### Steering Housing Parts List

| Assembly | Part #  | Description                    | Quantity |
|----------|---------|--------------------------------|----------|
| AA       | 2771826 | DRIVE HOUSING ASSY, PD         | 1        |
| Item     | Part #  | Description                    | Quantity |
| 150      | 2307050 | MOTOR DR.HSG PD/AP 12,24V      | 1        |
| 152      | 2302541 | CASE-UPPER,ALUM,FW,PAINTED     | 1        |
| 154      | 2302561 | CASE-LOWER, ALUM, FW, PAINTED  | 1        |
| 156      | 2303408 | SCREW-#8-32 TYPE F TORX PH SS  | 6        |
| 158      | 2308601 | BREATHER FILTER, DR.HOUSING    | 1        |
| 160      | ✘       | SHAFT-GEAR, FIRST CLUSTER      | 1        |
| 162      | ✘       | SHAFT-GEAR,INTERMED.CLUSTER    | 1        |
| 164      | ✘       | SHAFT-GEAR, THIRD CLUSTER      | 1        |
| 166      | 2302245 | GEAR & PINION,DR. HSG, STAGE 2 | 1        |
| 168      | 2302250 | GEAR & PINION,DR. HSG, STAGE 3 | 1        |
| 170      | 2302255 | GEAR & PINION,DR. HSG, STAGE 4 | 1        |
| 172      | 2302260 | GEAR-OUTPUT SHAFT,STG 5        | 1        |
| 174      | 2302010 | SHAFT-OUTPUT, DR.HOUSING       | 1        |
| 176      | 2307304 | BUSHING-INNER, UPPER/LOWER     | 2        |
| 178      | 2307305 | BUSHING-OUTER, UPPER/LOWER     | 2        |
| 180      | 2304603 | O-RING-SHAFT SEAL UPPER/LOW    | 2        |
| 182      | 2304604 | O-RING-CASE SEAL               | 1        |
| 184      | 2307201 | LEVER,GRIP GLIDE II            | 1        |
| 186      | 2302750 | SPRING-LATCH,TORSION,PD/AP,S/S | 1        |
| 188      | 2302627 | PIN-ROLL,3/16 X 2.5" ZP        | 1        |
| 190      | 2305564 | DECAL - STOW/DEPLOY            | 1        |



POWERDRIVE FOOT PEDAL

Foot Pedal Parts Diagram





## PARTS DIAGRAM & PARTS LIST

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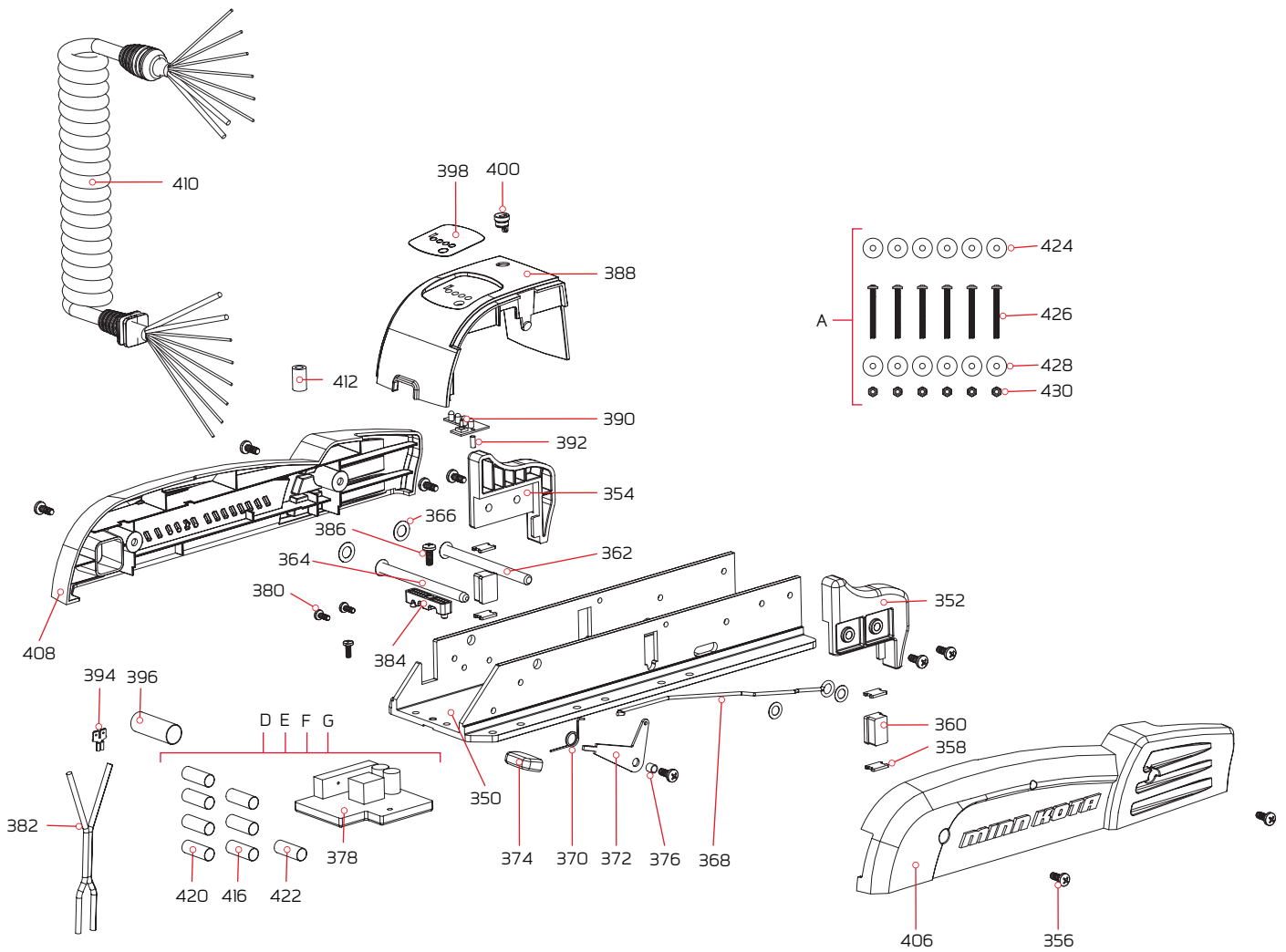
### Foot Pedal Parts List

| Assembly | Part #  | Description                    | Quantity |
|----------|---------|--------------------------------|----------|
| C        | 2994727 | FOOT PEDAL ASSEMBLY, PD        | 1        |
| Z        | 2994859 | BAG ASY-TERROVA/V2,RUB.BUMPERS | 1        |
| Item     | Part #  | Description                    | Quantity |
| 300      | 2300275 | COVER-SPEED SELECTOR,PD FP,BLK | 1        |
| 302      | 2302100 | SCREW-#6-20 X1/2 THD CUTS      | 3        |
| 304      | 2302730 | SPRING-LONG-UPPER PEDAL        | 3        |
| 306      | 2302732 | SPRING-LOWER PEDAL S/S         | 1        |
| 308      | 2303725 | BUTTON-MOMENTARY, PD FP, BLK   | 1        |
| 310      | 2303730 | BUTTON-MOM/CON, PD FP, BLK     | 1        |
| 312      | 2304405 | PEDAL, STRG ROCKER, PD FP, BLK | 1        |
| 314      | 2304508 | BASE, PEDAL PD                 | 1        |
| 316      | 2305136 | BUMPER,STRG RCKR,PD FP,RUBBER  | 2        |
| 318      | 2307905 | WHEEL-SPEED, PD FP, BLK        | 1        |
| 320      | 2308609 | SWITCH LEVER, SINGLE           | 1        |
| 322      | 2332103 | SCREW-#6-20 X 3/8 THD*(SS)     | 11       |
| 324      | 2335130 | BUMBER ACTUATOR                | 2        |
| 326      | 2994053 | PCB/CTRL CORD, PD FT PEDAL     | 1        |
| 328      | 2301750 | WASHER, WAVE, PD V3 FP         | 1        |
| 330      | 2316600 | DECAL-ON/OFF SWITCH/PD V2 PED  | 1        |
| 332      | 2325110 | PAD, FOOT PEDAL PD             | 5        |



POWERDRIVE MOUNT

Mount Parts Diagram



## PARTS DIAGRAM & PARTS LIST

### Mount Parts List

| Assembly | Part #  | Description  | Quantity |
|----------|---------|--|----------|
| A        | 2994864 | BAG ASSEMBLY - (BOLT, NUT, WASHERS)                      | 1        |
| D        | 2884058 | CONTROL BOARD-24V V2 W AP W/SHRNK *AUTOPILOT*            | 1        |
| E        | 2884055 | CONTROL BRD-12V V2 W/O AP W/SHRNK                        | 1        |
| F        | 2884057 | CONTROL BOARD-12V V2 W/AP W/SHRNK *AUTOPILOT*            | 1        |
| G        | 2884056 | CONTROL BRD-24V V2 W/O AP W/SHRNK                        | 1        |
| Item     | Part #  | Description  | Quantity |
| 350      | 2301936 | EXTRUSION BASE PD V2 *FRESHWATER*                        | 1        |
| 352      | 2303932 | MOTOR REST-RIGHT, 3 5/8"                                 | 1        |
|          | 2303930 | MOTOR REST-RIGHT, 3 1/4"                                 | 1        |
| 354      | 2303937 | MOTOR REST-LEFT, 3 5/8"                                  | 1        |
|          | 2303935 | MOTOR REST-LEFT, 3 1/4"                                  | 1        |
| 356      | 2303430 | SCREW-1/4-20 X 5/8-SELFTAP ZP *FRESHWATER*               | 9        |
| 358      | 2305110 | PAD-PIVOT SUPT ZINC *FRESHWATER*                         | 4        |
| 360      | 2305103 | PIVOT PAD,559 FB DUROMETER 90A                           | 2        |
| 362      | 2300500 | PIN-LATCH (PD BASE) *FRESHWATER*                         | 1        |
| 364      | 2300510 | PIN-PIVOT (PD BASE) *FRESHWATER*                         | 1        |
| 366      | 2013100 | NUT-SPEED *FRESHWATER*                                   | 4        |
| 368      | 2303612 | ROD-RELEASE (RT/AP) S/S                                  | 1        |
| 370      | 2322700 | SPRING-TORSION   | 1        |
| 372      | 2303710 | LEVER-RELEASE *FRESHWATER*                               | 1        |
| 374      | 2300101 | RELEASE-KNOB   | 1        |
| 376      | 2301700 | SPACER-RELEASE LEVER-BRASS                               | 1        |
| 378      | 2304067 | CONTROL BOARD-24V V2 W/AP *AUTOPILOT*                    | 1        |
|          | 2304064 | CONTROL BRD-12V V2 W/O AP                                | 1        |
|          | 2304066 | CONTROL BOARD-12V V2 W/AP *AUTOPILOT*                    | 1        |
|          | 2304065 | CONTROL BRD-24V V2 W/O AP                                | 1        |
| 380      | 2303434 | SCREW-#8-32 X 5/8 MACH PHCR SS                           | 3        |
| 382      | 2090651 | LEADWIRE,10 GA   | 1        |
|          | 2266730 | LEADWIRE w/PLUG,12/24V,PD,TRKR *TRACKER BOATS EXCLUSIVE* | 1        |
| 384      | 2321310 | STRAIN RELIEF  | 1        |
| 386      | 2323405 | SCREW-1/4-20 X 1/2" MCH SS                               | 1        |
| 388      | 2306570 | HOUSING-CENTER, *FRESHWATER*                             | 1        |
| 390      | 2074071 | BATTERY METER, 24V *FRESHWATER*                          | 1        |
|          | 2074070 | BATTERY METER, 12V *FRESHWATER*                          | 1        |
| 392      | 2383428 | SCREW-#4-24 X 5/8 HI-LO SS                               | 1        |
| 394      | 2320710 | TERMINAL-AMP (T-TAB)                                     | 1        |
| 396      | 2325401 | SHRINK TUBE-3/4 ID X 2" W/ADHS                           | 1        |
| 398      | 2305503 | DECAL-BATTERY METER PD V2 FW *FRESHWATER*                | 1        |
| 400      | 2302935 | STRAIN RELIEF-DR. HOUSING                                | 1        |

## PARTS DIAGRAM & PARTS LIST

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| Item | Part #  | Description                                  | Quantity |
|------|---------|--|----------|
| 406  | 2303970 | SIDEPLATE-RIGHT PD MK *FRESHWATER*           | 1        |
|      | 2303971 | SIDEPLATE-RIGHT, PONTOON                     | 1        |
| 408  | 2303975 | SIDEPLATE-LEFT PD MK *FRESHWATER*            | 1        |
|      | 2303976 | SIDEPLATE-LEFT, PONTOON                      | 1        |
| 410  | 2991284 | COIL CORD W/STRAIN RLF,PD 60"                | 1        |
|      | 2991280 | COIL CRD W/STRN RLF, PD 48"/54"              | 1        |
|      | 2991283 | COIL CORD W/STRN RLF, PD 48"/54"             | 1        |
|      | 2991285 | COIL CORD W/STRN RLF, AP 48"/54" *AUTOPILOT* | 1        |
|      | 2991287 | COIL CORD W/STRN RLF, AP 60" *AUTOPILOT*     | 1        |
| 412  | 2307313 | BEAD-FERRITE                                 | 1        |
| 416  | 2305410 | SHRINK TUBE-.315 OD X 2.25" *FRESHWATER*     | 3        |
| 420  | 2305403 | SHRINK TUBE-.500 IDX1.0" ADHSV *FRESHWATER*  | 4        |
| 422  | 2375400 | SHRINK TUBE-1/4OD X 1-3/4                    | 1        |
| 424  | 2263462 | SCREW-1/4-20 X 2" S/S PPH ADJT               | 6        |
| 426  | 2261713 | WASHER-1/4 FLAT 18-8 SS                      | 6        |
| 428  | 2263103 | NUT-1/4-20 NYLOCK SS                         | 6        |
| 430  | 2301720 | WASHER-MOUNTING - RUBBER                     | 6        |



# RECOMMENDED ACCESSORIES

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## ON-BOARD & PORTABLE BATTERY CHARGERS

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



MK212PC



MK210D



MK110P

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- Vertical, Multi-Stage Deployment
  - User-Selectable Anchoring Modes
  - 2x Anchoring Force
  - Fast Deploy
  - Auto Up/Down
  - Triple Debris Shields
  - Built-In Wave Absorption
  - Noise Dissipation
  - Versatile Adjustments
- 

## 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