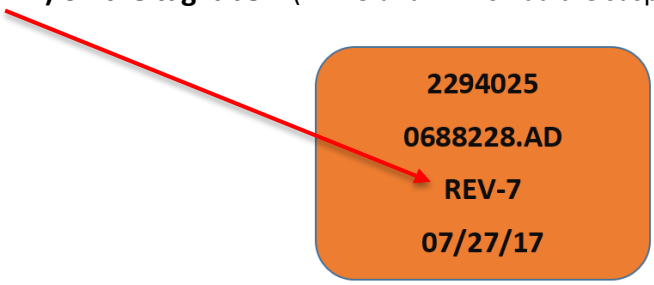
SB08012017

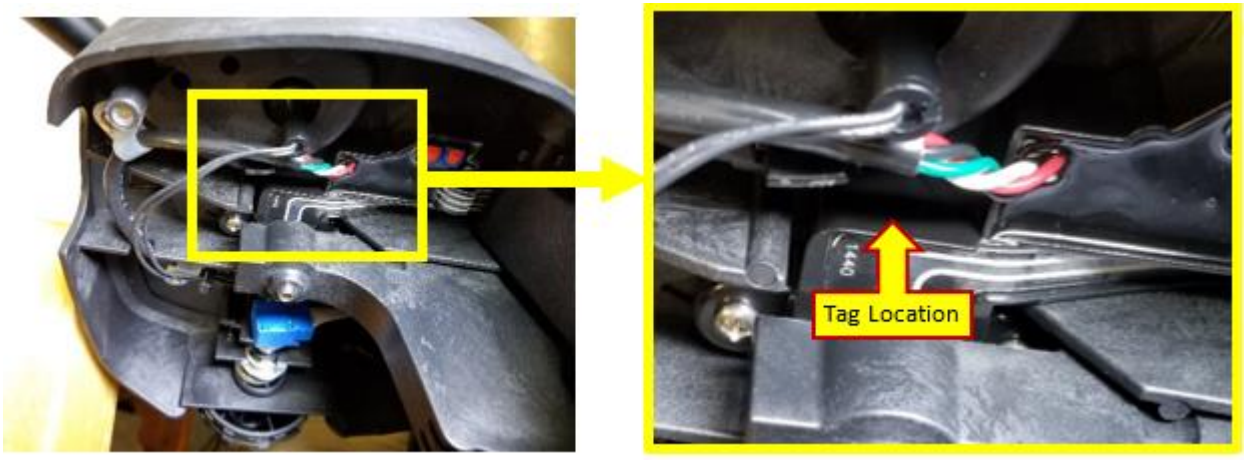
Minn Kota Service Provider - Ultrex Foot Pedal Steering Sensor Board Service Bulletin

We recently discovered a component issue from our supplier regarding the Ultrex Foot Pedal Steering Sensor Board (p/n 2294025). The component may fail after exposure to temperature fluctuations**.** It only affected a small percentage of motors in the field and poses no safety concerns for the user. The failure mode will result in no steering function with either heel or toe, but the customer will still be able to steer the Ultrex with the remote (i-Pilot, i-Pilot Link, or the Bluetooth Micro remote).

Should you receive an Ultrex (all thrusts and shaft lengths) for any warranty service, please replace the Foot Pedal Steering Sensor Board with the latest version. The new part will be identified by the revision 7 (REV-7) on the tag label. (REV-5 and REV-6 had the suspect component)



The tag applied by the board supplier on the suspect boards was on the upper surface of the board so it was not visible while the foot pedal was assembled; for all current revision sensor boards (currently REV-7) the tag will be on the side of the board and will be visible without any disassembly of the pedal. The location of the tag when assembled will be on the surface closest to the momentary switch:



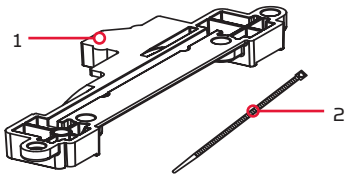
Ultrex motors with serial number R213MK##### and later are manufactured with the corrected component on the Steering Sensor Board.

2294025 will supersede to p/n 2884023 that includes the Sensor Board, a tie wrap, and installation instructions. (Installation instructions also are on the following pages.)

Ultrex Sensor Board Replacement

2884023

Item / Assembly	Part #	Description	Qty.
1	2294025	CONTROL BRD, SENSOR BOARD	1
2	2256300	TIE WRAP-5.5" BLACK	1



TOOLS AND RESOURCES REQUIRED

- Approximately 30 minutes
- #2 Phillips Screwdriver
- Flat Blade Screwdriver
- 1/2" Open-End Wrench
- Wire Cutter
- Hammer
- 3/16" Pin Punch
- 1/8" Hex Key

CAUTION

Always wear safety glasses and gloves. Disconnect all power to the trolling motor before beginning any work or maintenance. Johnson Outdoors Inc. is not responsible for any damage due to improper rigging or installation. If you do not have the skills, experience and tools to perform the following maintenance and repairs, we recommend you seek the help of a Minn Kota Authorized Service Center. A list of Authorized Service Centers can be found at http://www.minnkotamotors.com/Authorized-Service-Providers/. Or contact our Technical Service Department by email at service@minnkotamotors.com or, by dialing 800-227-6433.

STARTING NOTES

WARNING

The motor must be disconnected from power before beginning disassembly.

CAUTION

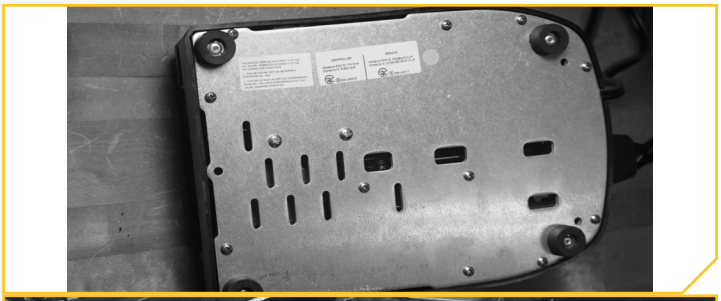
To prevent damage to the new board touch a grounded piece of metal prior to handling the control board.

NOTE: Put the motor in the deployed position so that you can turn the motor lower unit in relation to the steering housing. This allows you to change the postion of the foot pedal and better access the components of the pedal. If the motor cannot be in the deployed position and steered as described a second person will probably be necessary to control the motor as the foot pedal and control board are worked on.

DISASSEMBLY

1

a. Disconnect the motor from power and, with the motor deployed rotate the motor lower unit to place the foot pedal rocker in a level position Turn the foot pedal over and use the #2 Phillips screwdriver to remove the twelve #8-18x5/8" screws and the two #10-32x1/2" machine screws from the bottom plate.



b. Using a small flat blade screwdriver, disconnect the steering sensor board plug (with four wires red, white, green, and black) from the main control board.

NOTE: Be careful not to damage the connector or pull on the wires.

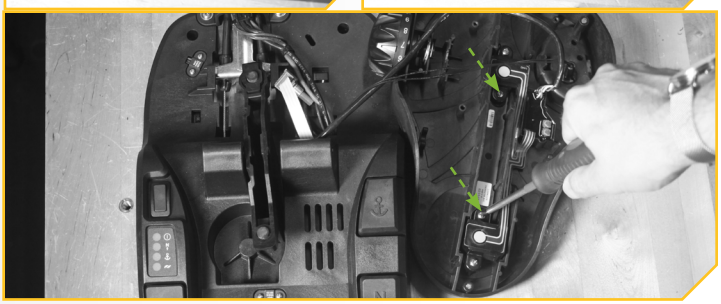
c. Using the #2 Phillips screwdriver, remove the two #8-18x1/2" screws from the cable clamps that hold the steering sensor board cable. Use a small wire cutter to remove the cable tie that holds the two black momentary reed switch leads to the steering sensor board cable.

d. Disconnect the control board potentiometer from the speed control knob, loosen the potentiometer nut completely using a 1/2" open-end wrench and slide it out.

e. Turn the foot pedal back over and locate the knurled side of the pivot pin. Use a hammer and a 3/16" punch to drive the pin out towards the knurled end.

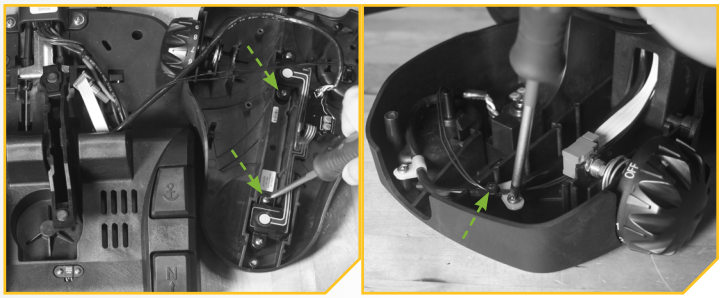
NOTE: Place foot pedal on a flat surface to prevent main control board damage when working on the remaining steps.

f. Remove the foot pedal top with magnets and turn over to expose the steering sensor board. Use a #2 Phillips screwdriver to remove the four #6-20x3/8" screws from the steering sensor board and remove the steering sensor board with cable.

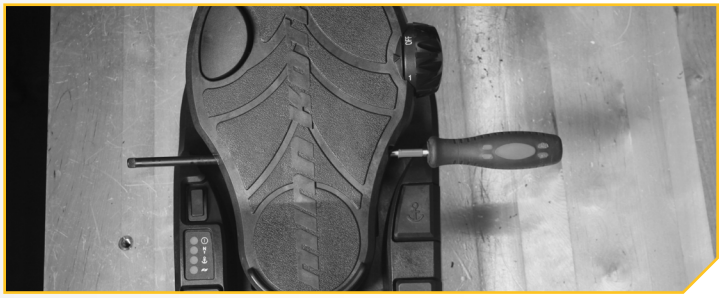


2

a. Install the replacement steering sensor board and secure in place with the four #6-20x3/8" screws with a #2 Phillips screwdriver. Attach the two cable clamps to the steering sensor board cable using a #2 Phillips screwdriver and the two #8-18x1/2" screws. Use the supplied Tie Wrap to secure the two black reed switch wires to the steering sensor board cable indicated by the arrow in the image to the right. Route the steering sensor board cable through the small opening where the potentiometer ribbon cable and reed switch wires are located.

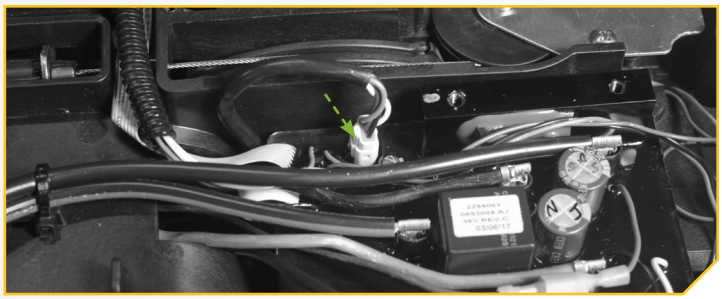


b. Place the foot pedal top with magnets in position and align lower rocker, using a #2 Phillips screwdriver as a guide pin. Insert the pivot pin, tapered end first, and tap into place with the hammer and 3/16" punch until the knurled portion is flush with the foot pedal top with magnets.



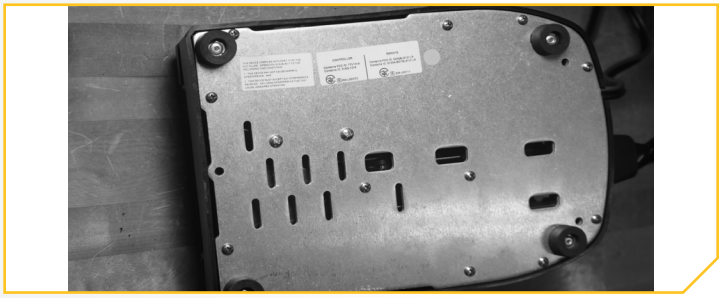
c. Insert the potentiometer back into the speed selector knob, with the ribbon cable facing the heel side of the foot pedal. Ensure that the lock washer is on the same side as the nut. Tighten the potentiometer nut in place using a 1/2" open-end wrench.

d. Turn the foot pedal back over and connect the steering sensor board connector to the main control board, making sure it clicks into place.



e. Position the bottom plate onto the foot pedal base and install the two #10-32x1/2" machine screws with a #2 Phillips screwdriver to secure the main control board to the bottom plate.

f. Install the remaining twelve #8-18x5/8" screws into the bottom plate with a #2 Phillips screwdriver.



NOTE: Ensure that the wires in the foot pedal are properly routed and will not be pinched or damaged when installing the bottom plate.

Adjusting the Foot Pedal Free Play

The Ultrex foot pedal assembly comes factory tuned for optimal mechanical and electronic performance. It is possible for these settings to vary slightly over the life of the product. Under normal circumstances, Minn Kota does not recommend making adjustments to factory settings, and would recommend consulting with one of Minn Kota's Authorized Service Providers. For a listing of these, please go to www.minnkotamotors.com.

⚠ CAUTION

Use extreme caution when adjusting the Set Screw. Over tightening this screw may cause significant and irreparable damage to the electrical components of the unit and will severely diminish the expected range of performance.

The Ultrex foot pedal comes factory set with no Free Play for ideal steering responsiveness in all conditions. Free Play referrs to any rocking that may be detected when testing the pedal by hand. Free Play in the foot pedal can affect the quality of the motors responsiveness. An adjustment Set Screw, located under the Toe Free of the Foot Pedal, is factory set to maintain the proper amount of contact pressure between the foot pedal and the steering sensors that control the electric functions of the foot pedal.

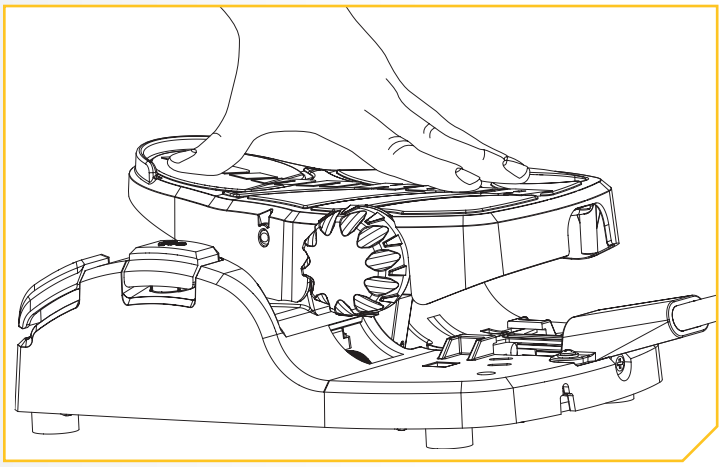
Before determining if the Free Play of the Foot Pedal needs adjusting, make sure that the cables controlling steering are under proper tension. To review how to check cable tension please review the "Adjusting the Steering Cable" portion in the user manual.

3

a. To determine if excessive Free Play has developed in the foot pedal, test the top of the foot pedal by rocking the pedal back and forth (heel-to-toe) by applying minimal pressure using only your fingertips.

NOTE: This test should NOT be performed using your foot, as it will not accurately detect Free Play.

b. In the most severe cases, the foot pedal will rock no more than 1/16 of an inch when tested. If your foot pedal exceeds 1/16" of movement when rocked, please contact a Minn Kota Authorized Service Provider, or contact Minn Kota customer service at www.minnkotamotors.com



⚠ CAUTION

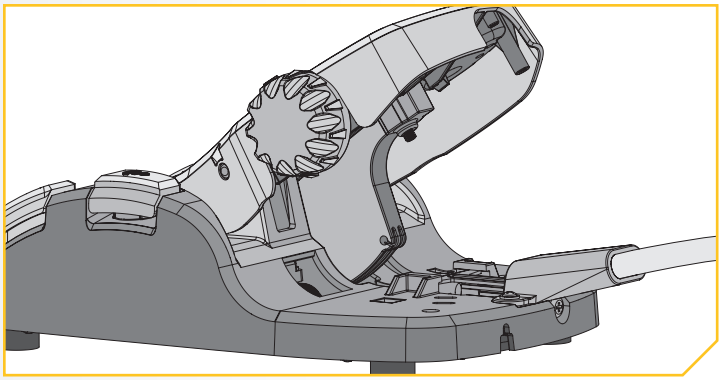
Use extreme caution when adjusting the Set Screw. Over tightening this screw may cause significant and irreparable damage to the electrical components of the unit and will severely diminish the expected range of performance.

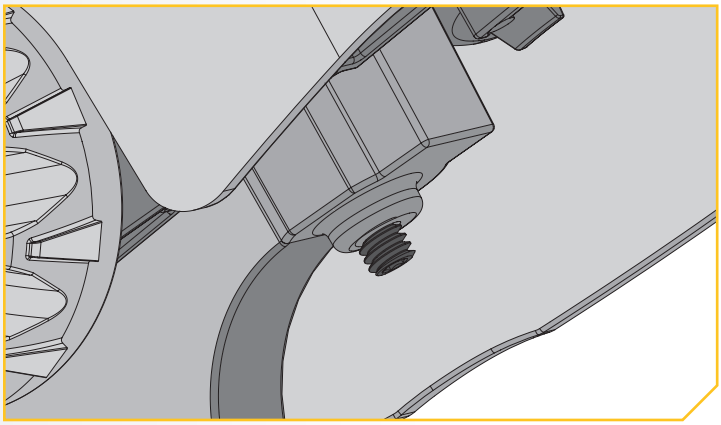
4

d. If Free Play is detected when tested, put the motor in the deployed position. Position the foot pedal so that the toe end is raised.

e. Locate the Set Screw and adjust it using an 1/8" Hex Key. When turning the Set Screw, tighten by turning clockwise using 1/8 turns incrementally. Manually test the Free Play on the top of the Foot Pedal with your fingertips between each 1/8 turn, as described in the test procedure above.

f. Only tighten the Set Screw so that the Free Play of the foot pedal is removed.





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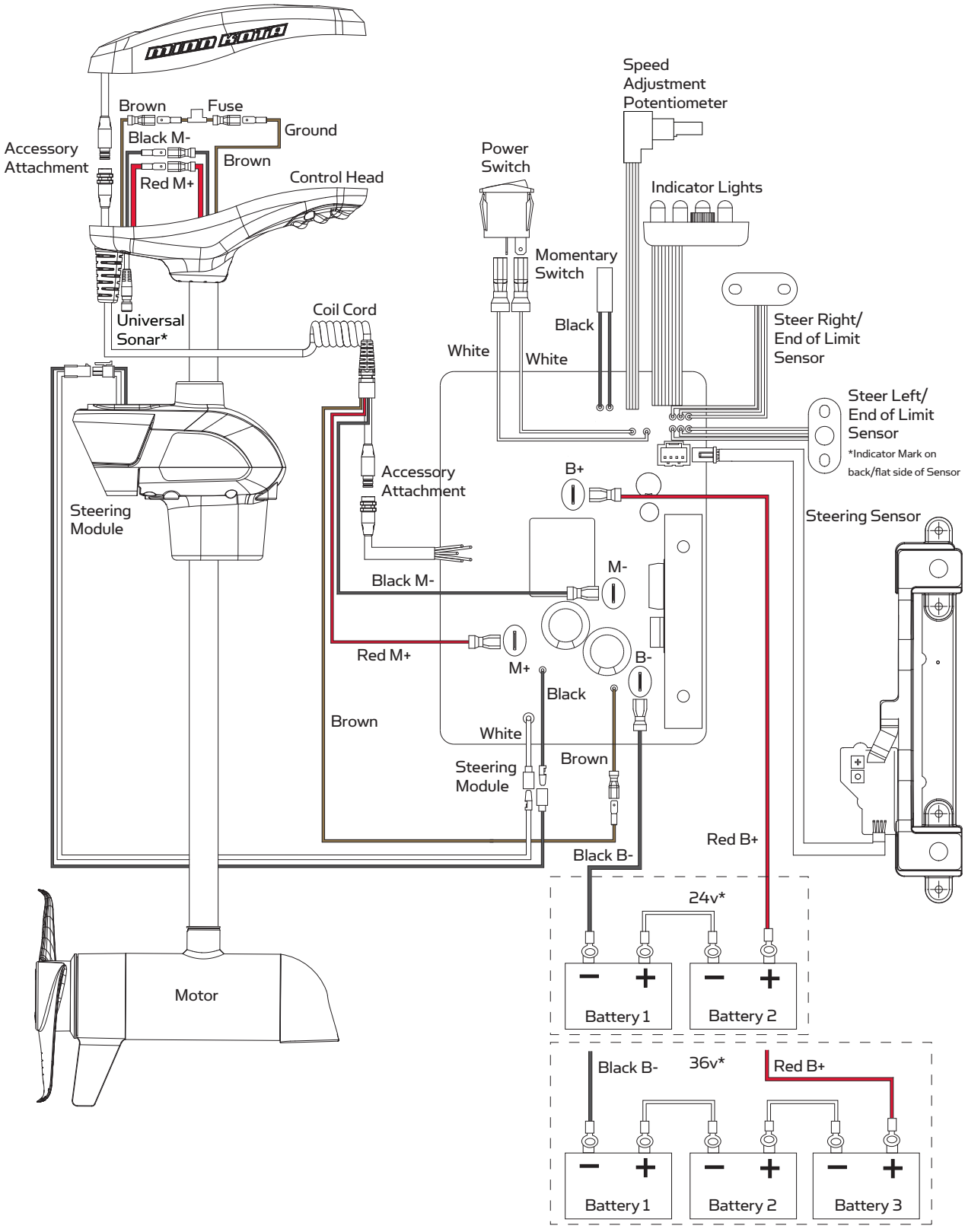

For warranty information please visit minnkotamotors.com

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

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