

Warning: Prior to the unit should be disconnected from power by removing the resettable fuse on the Positive side of the leadwire or disconnecting the terminals at the battery.

Notice: The Pump can be placed in maintenance mode by holding the pair button for 3 seconds, in maintenance mode the pump will not respond to commands from the remote or the up/down buttons on the pump assembly. To return the pump to operational mode press and hold the pair button for 3 seconds. This is useful if you need the pump assembly powered up but also want to prevent operation.

Case I. Raptor Anchor Mechanism (Arms and Spike) is noisy, clanking, or metal on metal noises in movement or when anchored.

Case II. Raptor has excess play when Stowed or Anchored.

Case III. Oil Leak - drop in oil level or oil residue on the Pump, Hoses, or Mechanism (arms/spike).

Case IV. Raptor Mechanism (Arms/Spike) does not maintain the stowed position (slides down). This is caused by the system not maintaining hydraulic pressure.

Case V. Raptor does not provide expected force when anchoring in Normal Mode.

Case VI. When Active Anchoring is “ON” the pump cycles ON/OFF frequently.

Case VII. No functions from Remote:

Case VIII. Raptor will not fully deploy in normal mode; stops/resumes (is jerky) when deploying in active anchoring mode.

Other Information:

Testing Active Anchor function:

Pairing Procedures:

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Notice: The Pump can be placed in maintenance mode by holding the pair button for 3 seconds, in maintenance mode the pump will not respond to commands from the remote or the up/down buttons on the pump assembly. To return the pump to operational mode press and hold the pair button for 3 seconds. This is useful if you need the pump assembly powered up but also want to prevent operation.

Case I. Raptor Anchor Mechanism (Arms and Spike) is noisy, clanking, or metal on metal noises in movement or when anchored.

Step 1. This indicates bushing failure, worn bushings, or bent anchor arms.

- A. Inspect arms and pivot points. Replace bushings and other components, as needed to restore operation.

Note: Damage from misuse or abuse (hitting overhead objects) is not a Warranty situation.

Case II. Raptor has excess play when Stowed or Anchored.*

* Movement at the upper and lower bracket when in-between stowed and anchored is normal, a diagnosis of excess movement should only be made with the system either stowed or anchored. If unit is not staying in the stow position refer to Case IV.

Step 1. This indicates bushing failure or that the bushings have worn out or could indicate bent anchor arms. Inspect arms and pivot points, replace bushings and other components as needed to restore operation.

Note: Damage from misuse or abuse (hitting overhead objects) is not a Warranty situation.

Case III. Oil Leak - drop in oil level or oil residue on the Pump, Hoses, or Mechanism (arms/spike).

Step 1. If the leak is not obviously a damaged hose; Clean any areas with residue, cycle the Raptor several times observing the cylinder or pump to accurately determine the component that is leaking.

Step 2. Tighten the connector or replace the hose or component that is leaking.

Notice: Never use sealant on the threads of the fittings, this includes Teflon tape, pipe sealant, Loc-Tite, or any other chemical or mechanical sealant. Debris from the sealant entering the hydraulic system can damage the pump or cylinder.

Notice: Fittings should be tightened to 120 inch pounds to properly seat the taper of the fitting and prevent leaks.

Step 3. Refill the reservoir and bleed the system as described in the owner's manual.

Case IV. Raptor Mechanism (Arms/Spike) does not maintain the stowed position (slides down). This is caused by the system not maintaining hydraulic pressure.

Step 1. Check for leaks on the hydraulic hoses. If evidence of a leak is present review **Case III**. If no evidence of a leak is found proceed to **Step 2**.

Step 2. Check the manual release valve to be certain that screw is tight and has not been tampered with, if the release valve is open close it and check the pump for normal operation, if the release valve is not open proceed to **Step 3**.

Step 3. This is evidence of internal pump contamination; the pump assembly must be replaced.

Step 4. If the anchor deployed evaluate the Mechanism (arms/spike) for damage.

Notice: If significant damage to the Mechanism also exists contact Minn Kota prior to repair, as a replacement unit may be the more effective option.

Case V. Raptor does not provide expected force when anchoring in Normal Mode.

Step 1. Check for leaks on the hydraulic hoses. If evidence of a leak is present review Case III, if no evidence of a leak proceed to **Step 2**.

Step 2. Check the manual release valve to be certain that the screw is tight and has not been tampered with, if the release valve is open close it and check the pump for normal operation, if the release valve is not open proceed to **Step 3**.

Step 3. This is evidence of internal pump contamination; the pump assembly must be replaced.

Step 4. If the anchor deployed evaluate the Mechanism for damage.

Note: If significant damage to the Mechanism also exists contact Minn Kota prior to repair, as a replacement unit may be the more effective option.

Case VI. When Active Anchoring is “ON” the pump cycles ON/OFF frequently.

Step 1. Check for leaks on the hydraulic hoses. If evidence of a leak is present review Case III, if no evidence of a leak proceed to **Step 2**.

Step 2. Check the manual release valve to be certain that screw is tight and has not been tampered with, if the release valve is open close it and check the pump for normal operation, if the release valve is not open proceed to **Step 3**.

Step 3. This is evidence of internal pump contamination; the pump assembly must be replaced.

Step 4. If the anchor deployed evaluate the Mechanism for damage.

Notice: If significant damage to the Mechanism also exists contact Minn Kota prior to repair, as a replacement unit may be the more effective option.

Case VII. No functions from Remote:**A. Remote buttons do not function, but buttons on the Pump Assembly do function (light on pump react to pressing Mode or Pair as indicated in the owner's manual).**

Step 1. Cycle power to the Raptor by disconnecting a leadwire from the pump to the battery, then reconnect.

A. Test all Remote functions. If still not functioning, proceed to **Step 2**.

Step 2. Pair the remote to the Raptor Pump assembly.

A. If remote will not go into pair mode check battery in remote, replace if necessary.

B. If remote will not enter pairing mode with a good battery, replace the remote.

C. If remote will enter pairing mode but will not pair to the pump assembly this infers a defective control board in the pump assembly. If possible, verify by pairing the remote to a known good pump assembly or by repeating the pairing process on this pump assembly with a known good remote.

Step 3. Once remote is paired test all remote functions, disconnect Raptor from power for a few minutes, then reconnect power and test all functions again; if all functions are now functional then “unpairing” was likely due to a software update or similar event.

B. Remote buttons do not function nor do the buttons on the Pump Assembly (no tones, no lights on any button presses).

Step 1. Cycle power to the Raptor by disconnecting a leadwire from the pump to the battery, then reconnect.

A. Test all Remote functions. If still not functioning, proceed to **Step 2**.

Step 2. Check power supply battery. Verify Raptor Leadwire negative (-/black) is connected to the negative Terminal and Leadwire positive (+, red) is connected to Battery + through a circuit breaker or fuse. Load Test the battery.

Step 3. Check all installed fuses and circuit breakers. If any were blown or tripped, replace or reset and then recheck operation.

Step 4. Remove the Pump Housing cover. Check for voltage on the incoming power wires, if no voltage present repair or replace the leadwire. If voltage is present watch the voltage while attempting button presses, if the voltage fails on a button press repair or replace the leadwire.

Step 5. Steps 2-4 confirm good power to the control board, if function is still not present the control board must be replaced. Prior to control board replacement test for pump function by connecting the pump motor wires to 12v +/-, reverse operation by reversing polarity, if the pump does not function when tested directly replace the pump assembly rather than just the control board.

Case VIII. Raptor will not fully deploy in normal mode; stops/resumes (is jerky) when deploying in active anchoring mode.

At 14° F/-10° C and below this is typical behavior at the standard bottom sensitivity setting*. Adjusting that setting to a lower sensitivity will restore normal function.

Notice: Sensitivity should be increased again when the temperature increases to avoid over-aggressive anchoring.

Notice: *Sensitivity adjustments can only be accessed via a connected Humminbird unit or via the OBN App.

Testing Active Anchor function:

- Step 1.** Turn off auto bottom and verify that the anchor is in Normal mode, Active Anchoring is not active in Soft Bottom Mode.
- Step 2.** Make sure it is safe to deploy the anchor and position yourself so you can stop the anchor with your hands short of it contacting ground.
- Step 3.** Send a deploy command and stop the anchor short of the ground by pushing on the upper bracket with your hand. Do not grab the arms or interact with them, keep your hands clear of any pinch points! Once initially stopped you must retain pressure through a second “hit”.
- Step 4.** After the two “hits” release the pressure on the upper bracket, if the anchor stays in place active anchoring is not functional, if it deploys further after releasing the active anchor function is working.

Pairing Procedure:

Pair two Raptors together

- Step 1.** Clear memory of both pump assemblies.

- A. Disconnect power.
- B. Press and hold the UP button on pump assembly.
- C. Reconnect power while continuing to hold the button (the pump will beep).
- D. After 1 or more beeps release the UP button. The lights will flash on the pump.
Do not remove power from the pump assembly, leave connected for at least 30 seconds after the release of the up button.
- E. Repeat for the other pump.



- Step 2.** Clear the memory of the remotes connected to the pump assemblies

- A. Press and hold the UP and DOWN buttons on the remote simultaneously until the left, mode, and right lights begin to scroll (you can do this to all remotes at the same time).
- B. Wait until the lights have stopped scrolling on all remotes.

- Step 3.** Press the Pair/Maintenance button on each pump assembly, they will enter pair mode, blue light will blink on the pump assemblies.

- A. If the pump assemblies do not pair in 30 seconds they will emit an error tone. If this happens try the process again.
- B. When the pump assemblies do pair they will emit 4 quick beeps.

- Step 4.** After the pumps are paired they will enter left/right designation mode, the green mode lights will blink on both pumps.

- A. Press the UP button on the right/starboard Raptor to designate it.
- B. The green mode light will illuminate on the pump assembly you pressed the UP button on, the red mode light will illuminate on the other pump assembly.
- C. Port/starboard Raptor designation happens automatically upon successful pairing of the 2 pumps together.

Pair a remote or foot switch to a Raptor

- Step 1.** Press the Pair/Maintenance button the pump assembly to put it in pair mode until blue light blinks on the pump assembly (for dual Raptors press the Pair/Maintenance button on either pump assembly, both will enter pair mode together).
- Step 2.** Press and hold the UP and DOWN buttons simultaneously on the remote/foot switch until the left, mode, and right lights scroll on the remote/foot switch
- A.** If pairing is unsuccessful after 30 seconds the remote and pump will time out, lights stop scrolling on the remote, the pump emits an error tone. If this happens try the process again.
 - B.** Upon successful pairing, the pump will emit 4 quick beeps.