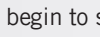


PAIRING THE RAPTOR

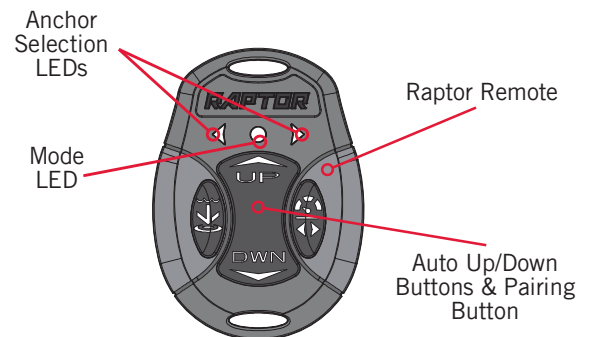
PAIRING A REMOTE TO TWO RAPTORS

In order to Pair a remote to the Raptor, please be sure to first Pair the Raptors together. When two Bluetooth Raptors are paired together, all remotes that were paired to an individual Raptor will unpair. Please see the "Pairing Two Raptors and Programming the Mounting Location" section of this manual. If the two Raptors are already paired together, a remote can be paired to the dual Raptors. Either Raptor in the network can be used to Pair a remote to the dual Raptor. If more remotes are paired to the dual Raptors than the network allows, the Raptor will pair the new remote and remove the remote that was least recently used from the network. When the pairing process is complete, the remote will be able to control both Raptors.

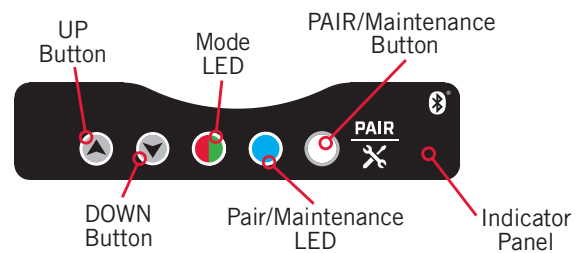
1

- Press and hold the Up  button and the Down  button on the Remote at the same time until the Anchor Selection LEDs and the Mode LED on the Remote begin to scroll  red, green, red and red. Then release them.
- Immediately press the Pair  button on the Indicator Panel located on the Pump Assembly of one of the Raptors. The PAIR/Maintenance LED on both Raptors will begin to flash  blue. The Raptor and Remote will go into Pairing Mode for 30 seconds.
- If a signal with three fast beeps occurs, the Raptor and Remote have successfully paired. If 30 seconds pass while in Pairing Mode and they do not successfully pair, a chirp will sound from the Pump Assembly signaling that the Pairing has timed out.
- If the Pair is unsuccessful, repeat the process.

1a



1b



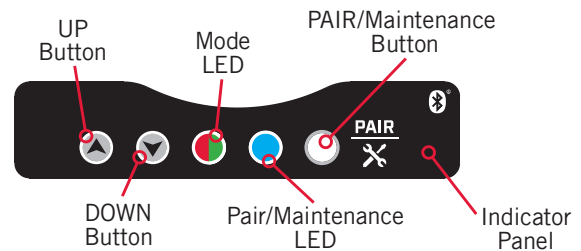
CLEARING PAIRED REMOTES OR DEVICES FROM THE RAPTOR

The Raptor was designed so that all paired devices can be cleared from memory.

1

- Retract the anchor on the Raptor by pressing the Up  button located on the Indicator Panel on the Pump Assembly.

1a



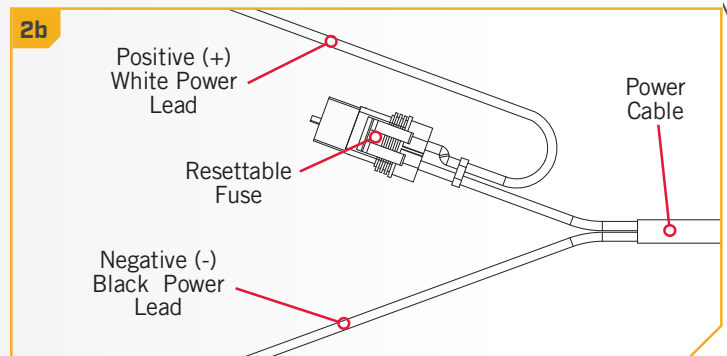
PAIRING THE RAPTOR

2

NOTICE: This may require assistance from another person.

- b. Turn the power to the Raptor "off" by removing the resettable Fuse located on the Raptor Power Cable.
- c. While holding in the Up  button on the Indicator Panel, restore power to the Raptor. You will hear a long steady tone.
- d. After the steady tone stops, release the Up  button.
- e. The Raptor memory is now clear of all previously paired devices.

2b



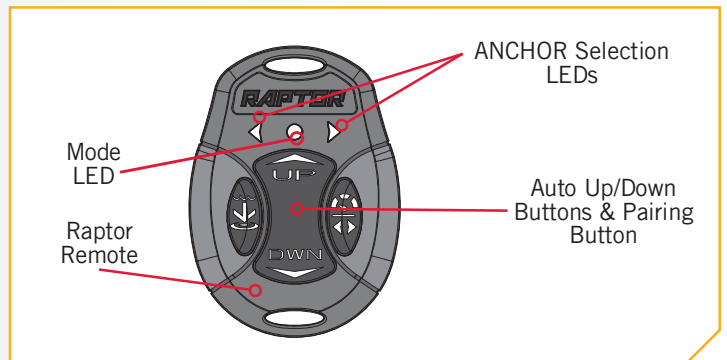
CLEARING A PAIRED RAPTOR FROM THE REMOTE

The Remote was designed so that a paired Raptor can be cleared from memory.

1

- a. Press and hold the Up  button and the Down  button on the Remote at the same time until the Anchor Selection LEDs and the Mode LED on the Remote begin to scroll     red, green, red and red. Then release them. The Remote will go into Pairing Mode for 30 seconds. Once Pairing times out the paired Raptor will be cleared.

NOTICE: Putting the Remote into Pairing Mode, even if it is accidental, without Pairing the Remote to a Raptor will clear a paired Raptor.



THE RAPTOR APP

› Raptor App Home Screen

Minn Kota offers a Raptor app that can be used to control and update the Raptor using a Bluetooth® enabled device. The Raptor app is available for download on iOS devices through the Apple App store or on Android™ devices through the Google Play Store.

HEADER ›



Menu

When selected, the Menu gives additional options to control the Raptor such as anchor speed, software updates, the setup guide, and additional product control and support.

NOTICE: When the device is not connected to a Raptor, the Menu will bring up the option to enter Demo Mode. Once the device is connected to a Raptor, Demo Mode is exited and the option is not available.

APP BUTTONS ›



Auto Up

Single press to auto retract the anchor. Press and hold to continually retract the anchor. The anchor will continue to retract when the button is held until the button is released.



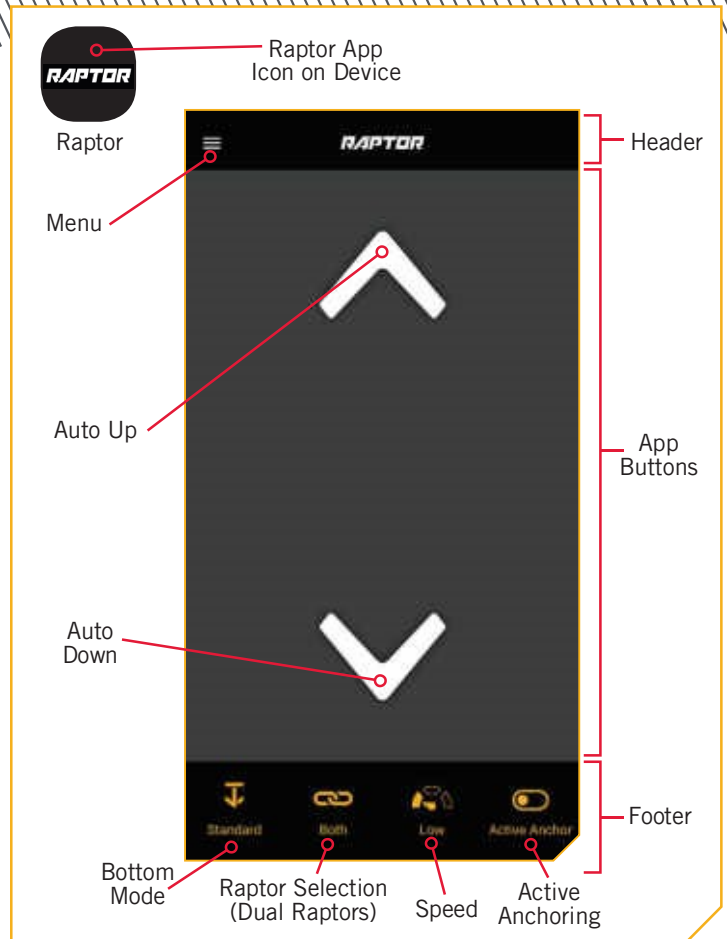
Auto Down

Double press to auto deploy the anchor. Double press and hold the second press to continually deploy the anchor. The anchor will continue to deploy when the button is held until it reaches its full range of operation or until the button is released.



Pause

When pressed it interrupts the current action. The Raptor(s) will remain at the current depth until another command is sent. The action for both deploying and retracting the anchor can be paused. The pause button may appear in place of the Auto Up or Auto Down buttons during deploying or retracting and will disappear when pressed while the unit is paused.



Direction Indication

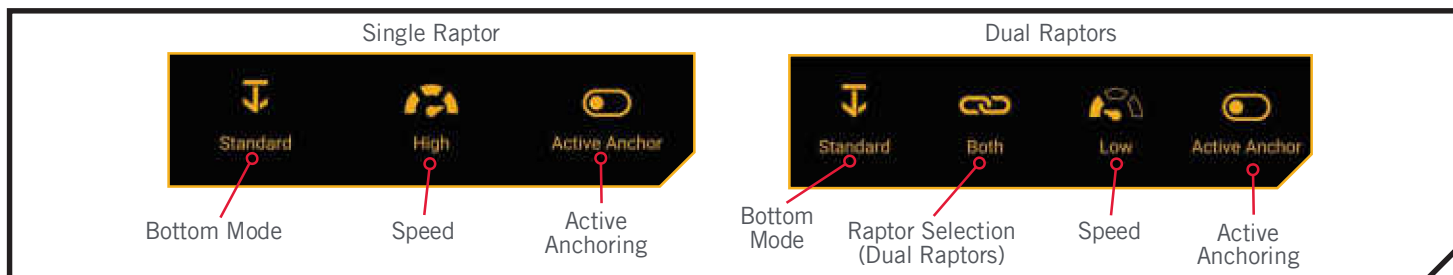
Shows the direction of deployment and retraction when the Raptor is in use.

NOTICE: Specifications subject to change without notice. This diagram is for reference only and may differ from your actual app interface. The Raptor App will only work with Bluetooth® enabled Raptors. Be sure that you download the correct app as other Minn Kota® apps will not work with your Raptor.

NOTICE: Active Anchoring is only available in select models and the selection will be disabled in the Standard Model.

THE RAPTOR APP

FOOTER



Standard Mode

When put in Standard Mode, the Mode Indicator LED in the Indicator Panel will toggle between red and green ●●●● and then turn off.



Rough Water Mode

In Rough Water Mode, the Mode LED on the Indicator Panel will be lit red ●. In Rough Water Mode, the anchor will operate with maximum down-force when anchoring.



Soft Bottom Mode

In Soft Bottom Mode, the Auto Deploy will operate at a reduced power with a single hit. During calm conditions or on water with muddy or soft sandy bottoms, Soft Bottom Mode will prevent the Raptor from over-anchoring. In Soft Bottom Mode, the Mode Indicator LED will flash green ● on the Indicator Panel.



Auto Bottom Mode

In Active Anchoring Mode, the anchor uses pressure readings to determine how best to anchor the Raptor. Auto Bottom Mode is only available on the Pro Model and is identified by a Mode LED ●●●● that flashes slowly from green to green and then red to red when activated.



Raptor Selection - Both

Indicates both the Port and Starboard Raptors are selected and will be controlled while operating. Press to Toggle between having both Raptors selected or controlled individually. This option is only seen when the app is set up to control two Raptors.



Raptor Selection - Individual

Indicates the Raptors will be controlled individually while operating. Press to Toggle between controlling Raptors individually or together.



Speed Button - Low

Toggles the Speed that the anchor retracts and deploys between low, medium and High. The respective speeds can be set in a Range in the App Menu.



Active Anchoring

Enables Active Anchoring and allows the Raptor to adjust to changes in pressure while anchored. Active Anchoring is engaged and disengaged by a single press. When the Mode LED ● displays green it is enabled and when the Mode LED ● displays red it is disabled. If Active Anchoring is not available for your model, the selection will be gray.



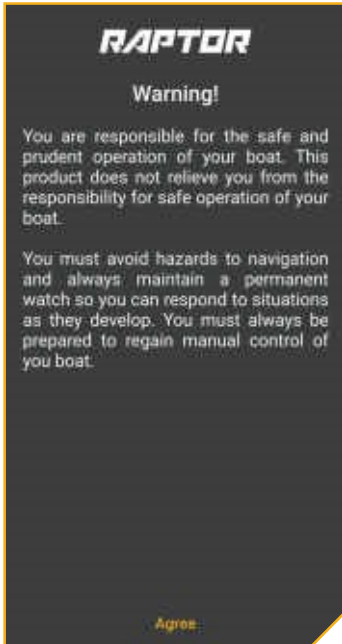
Low Battery

Displayed when the App recognizes that the Raptor is powered by a low battery.

NOTICE: The Raptor Selection options are only visible when the Raptor App is set up to control two Raptors.

LAUNCHING THE APP & DEMO MODE

Launching the app when it is not paired with the Raptor will allow you to try it in Demo Mode. The first time the app is launched, you must agree with the disclaimer in order to continue. Become familiar with the app screens in order to understand how to operate your Raptor with the app.



The Disclaimer screen appears when the app is launched for the first time.



The Setup Guide appears after the Disclaimer when the device is not paired or actively communicating with a Raptor.



The Menu brings up a variety of control options for the Raptor. The options will depend on if and how many Raptors are paired.



The Raptor Control Screen when one Raptor is paired to the device. This screen differs slightly when two devices are paired.

WARNING

You are responsible for the safe and prudent operation of your boat. 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.

THE RAPTOR APP

› Check the Application and Raptor Software Version on the App

When a Raptor is paired with a device, the Raptor app on the device records information about the paired Raptor(s), including the software version installed on each. This information can be used to detect if a Raptor requires a software update. To check the software version on paired Raptor(s), follow the steps below.

1

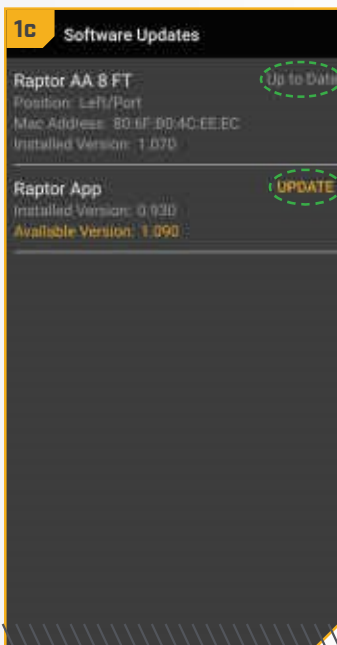
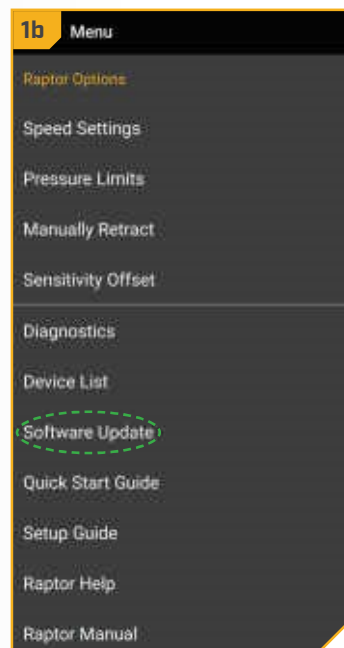
- a. From the Raptor app Home screen, press the Menu  Button.
- b. In the Menu Screen, find the Software Update option and select it.
- c. The Software Updates Screen will appear. The Software List will show any Raptors that are paired with the app and the Raptor App Software Version.

NOTICE: Noting the version of the Raptor and/or App, before and after updates, helps to identify if the updates were successful.

NOTICE: If the App cannot communicate directly with the Raptor, the App will show the version of software that it detected the last time the device was paired and communicating with the Raptor.

- d. If there are no Raptors paired, the list will only show information for the Raptor App. If Raptors are paired and communicating, the name of each device will be colored white. If the Raptors are paired but are not communicating the Raptor name will be colored gray.

NOTICE: If the Raptor App or Raptor software needs an update, the App will list "UPDATE" next to it. If the software is up-to-date, the App will list "Up to Date".



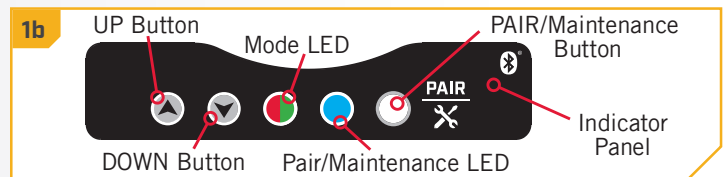
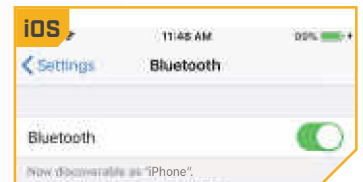
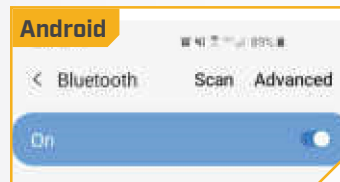
› Pairing a Device with a Single Raptor

The Raptor App can be used to control the Raptor using a device that is paired to the Raptor with a Bluetooth connection. Before pairing the device with the Raptor, the Raptor App should first be successfully downloaded. You can confirm that the app was successfully downloaded by opening it on your device. Once confirmed, close the App to begin the pairing process.

NOTICE: Your device will only be able to connect to a Raptor and be paired if the device is Bluetooth enabled.

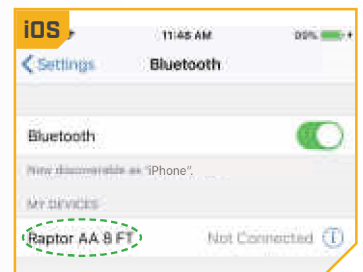
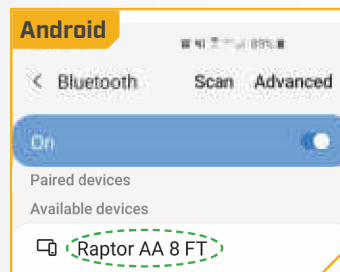
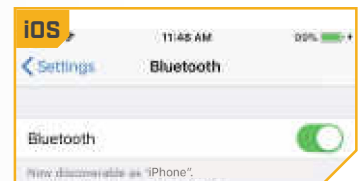
1

- On the device you intend to pair with the Raptor, turn Bluetooth “on” and keep your device on that screen.
- Press the Pair  button on the Indicator Panel located on the Raptor Pump Assembly. The PAIR/Maintenance LED will begin to flash  blue. The Raptor will go into Pairing Mode for 30 seconds.



2

- If on an Android device, select the Scan button to begin the process on your device. On an iOS device, as soon as the Bluetooth menu is opened, the scan starts automatically. The Raptor will appear on the list of available devices once it is recognized by the device.
- Select the Raptor from the list of available devices. This will pair the Raptor to the device. Once you hear the beeps, the Raptor is successfully paired.



NOTICE: When the device Bluetooth is scanning for the Raptor, the Raptor must be in Pairing Mode. If the Raptor or the device time out, the process on both will need to be re-initiated.

3

- In order for the device and your Raptor to stay connected, Bluetooth needs to remain "on". Once the device is paired with the Raptor, the device will connect and begin communicating with each other. When the Raptor is paired to the device and communicating with it, the Raptor App will automatically recognize that the Raptor is paired.

NOTICE: When a device is paired with the Raptor, the paired device and Raptor know each other. When a paired device and a Raptor are connected they can actively communicate with each other. In order for the Raptor App to detect the Raptor, it needs to be paired and communicating with the Raptor.

- If the pair is unsuccessful, repeat the process.

THE RAPTOR APP

› Pairing a Device with Two Raptors

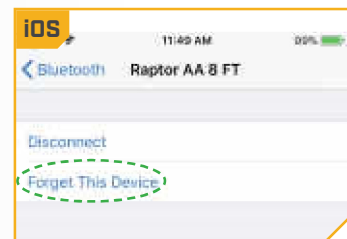
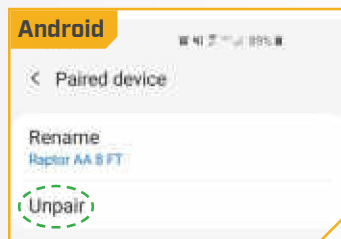
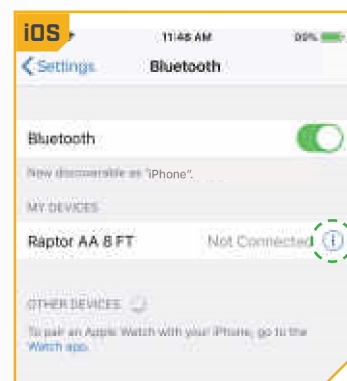
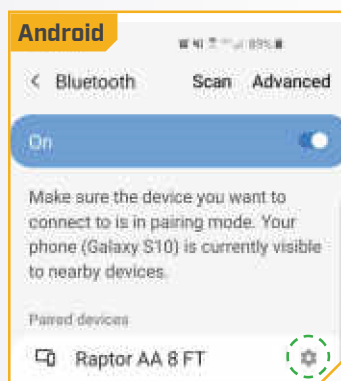
In order for the Raptor App to pair two Raptors to the device, the Raptors first need to be paired together. To learn how to pair two Raptors together, read the "Pairing Two Raptors and Programming the Mounting Location" section of the Raptor Manual. Once the Raptors are paired together, follow the directions for "Pairing a Device with a Single Raptor". Only one Raptor needs to be paired with the device where the Raptor App is installed.

› Forgetting a Raptor on a Device

Once a device is paired to a Raptor, it will remember the device, even if the device and the Raptor are not actively communicating. In some cases, it may be necessary to clear the memory on the device and forget any paired Raptors. To do this, use the Bluetooth settings on the device.

1

- Open the Bluetooth settings on the device.
- A list of paired devices will appear. The appearance of the list from an Android to an iOS device will look different.
- On an Android device, select the Settings  icon next to the device in the list of Paired Devices. When the next screen appears, find the option to Unpair the device and select it.
- On an iOS device, select the "i"  icon next to the device in the list of My Devices. When the next Screen appears, find the option to Forget this Device and select it.
- Once the device is unpaired or forgotten, the device is no longer paired or communicating with the device and will not be visible to the Raptor App or device.



› Raptor Control and Disable Auto-Lock

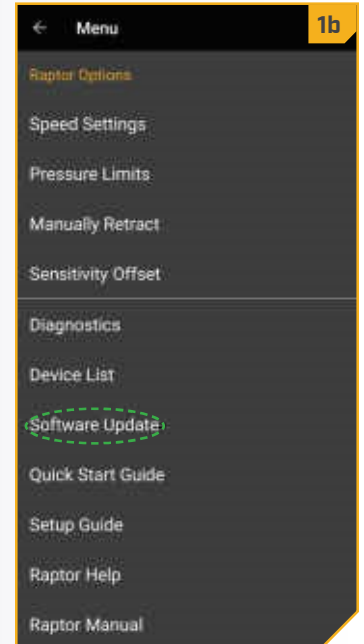
Most devices are programmed to Auto-Lock the device screen after a certain amount of time has lapsed where the device has been inactive. In these cases, when the user had the Raptor app open to control the Raptor and returns to the device, the screen may be locked. In order to control the Raptor, the device will first need to be unlocked to control the Raptor with the app. This Auto-Lock feature can be disabled from the Raptor app in order to immediately control the Raptor after the device has been inactive. To turn Auto-Lock "on", open the Raptor app and navigate to the Menu. Scroll to the bottom of the Menu and find the Disable Auto-Lock setting. When the toggle is slid "on" and appears yellow, the Disable Auto-Lock is engaged and will prevent the device screen from locking when the device experiences moments of inactivity. With this feature enabled, the device will immediately control the Raptor.

► Update the Raptor from the Raptor App

Raptor software updates are performed through the Raptor app. The Raptor must be paired and communicating with the device through a Bluetooth connection in order for the Raptor to be updated.

- 1
 - a. Open the Raptor App. From the Raptor Home Screen select the Menu  Button.
 - b. With the Menu open, select "Software Update".

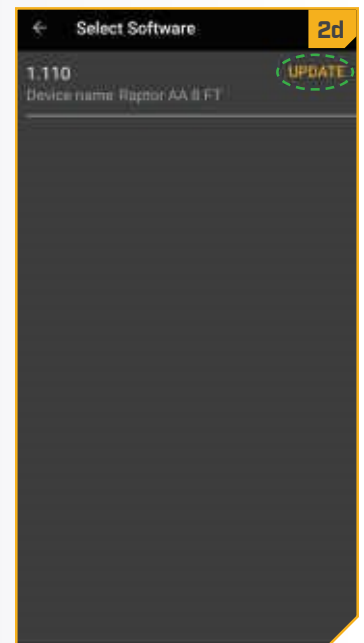
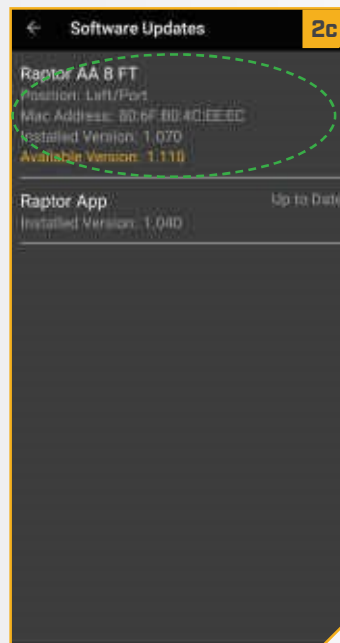
NOTICE: The Raptor App will be updated on iOS devices through the Apple App store or on Android™ devices through the Google Play Store.



- 2
 - c. The Software Update screen will list all Paired Raptors. If a software update is available for a Raptor, an "Available Version" will be listed. If the App detects that the Raptor(s) is/are up to date, it will list "Up to Date".

NOTICE: If there is a single Raptor in the system, only one Raptor will be listed. If two Raptors are paired together, both Raptors will be listed. If the App is not actively communicating with the Raptor(s), the Raptor App will list the last known software installed on the Raptor. The App must be paired and actively communicating with the Raptor in order to install the update.

- d. After the Raptor is chosen, select "UPDATE" to begin the update.



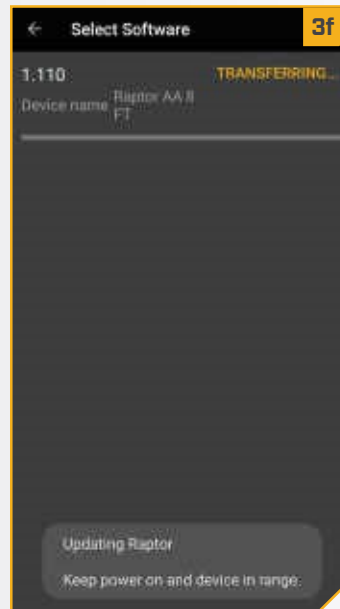
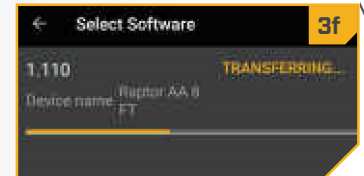
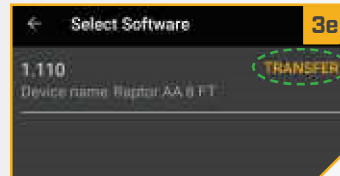
THE RAPTOR APP

3

- e. By selecting "UPDATE" the software will load and prepare. When ready, the app will read "TRANSFER". Select "TRANSFER" to push the update to the Raptor.
- f. The app will transfer the software to the Raptor. Keep the device in range to allow communication via the Bluetooth enabled devices so that all the software transfers.

NOTICE: While transferring, the App on an Android device will read, "Updating Raptor - Keep power on and device in range." The App on the Android will then read "TRANSFERRING..."

NOTICE: If you have a dual Raptor system, the App will push the software update to one of the Raptors. The first Raptor to receive the update will push the Raptor to the paired Raptor in the dual System. When the software transfer to the second Raptor in the system is complete, both Raptors will reboot simultaneously.

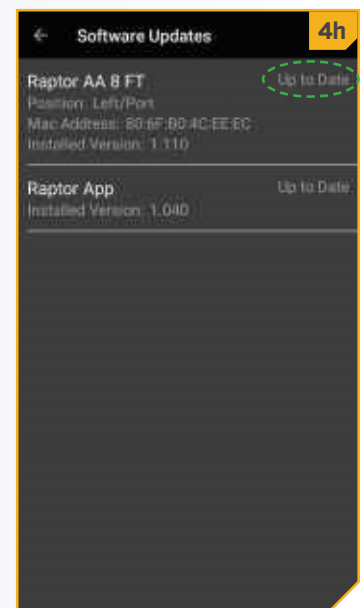
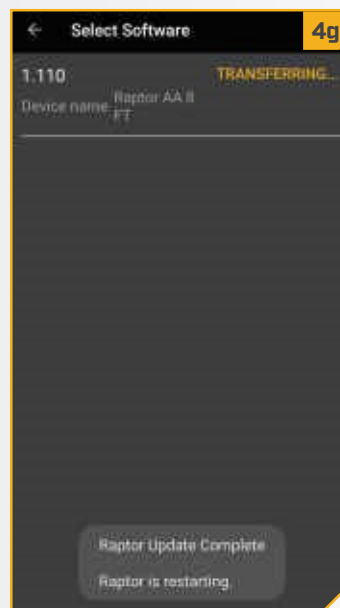


4

- g. When the transfer is complete, the Raptor App on an Android will flash a message "Raptor Update Complete. Raptor is restarting."
- h. When the App returns to the Software Update Screen, the Raptor will read "Up to Date"

NOTICE: On an iOS device, the App will close when the software update is complete. To confirm that the update worked, reopen the App, and select the Menu  Button. With the Menu open, select "Software Update" to check the update Status.

NOTICE: All paired remotes must be repaired to the Raptor when the Raptor software is updated. When the paired remotes are repaired, the software updates will be pushed to the remote. For details on how to Pair the remote to the Raptor, see the "Pairing the Raptor" section of this manual.



SERVICE & MAINTENANCE

⚠ CAUTION

Before beginning any maintenance work, disconnect the Raptor from the battery or if connected to a battery selector switch or power disconnect switch, make sure that it is turned to the "off" position. Failure to disconnect power during maintenance work may result in shock, unexpected operation and/or injury. Minn Kota recommends having the Raptor serviced by an qualified marine technician at an Authorized Service Center.

REPLACING THE REMOTE BATTERY

TOOLS AND RESOURCES REQUIRED >

- Large Coin

INSTALLATION >

1

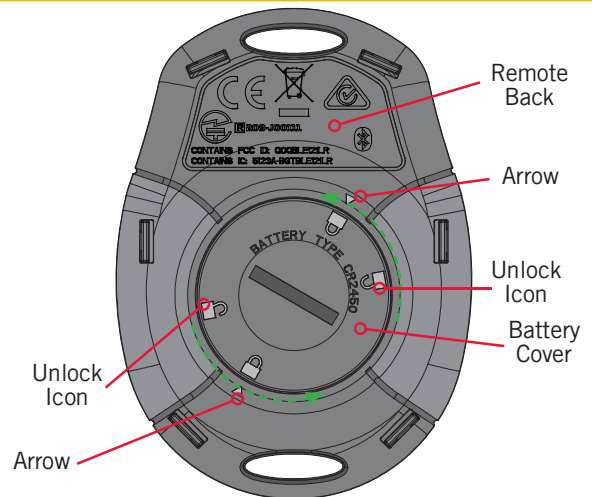
- Make sure your hands are clean, dry and static free. Temporarily ground yourself by touching a grounded metal object in order to discharge any static electricity in your body.

⚠ CAUTION

Static electricity can cause damage to the circuit board. Discharge any static electricity by touching a metal object that is grounded before beginning the remote battery replacement.

- With the back of the Remote facing you, use a large coin to rotate the Battery Cover counterclockwise until either of the Unlock Icons align with the Arrow.

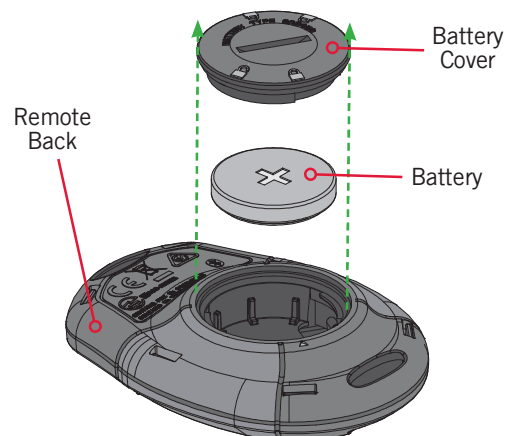
1b



2

- Remove the Battery Cover and old battery and replace with a new CR2450 coin cell battery. Note the proper polarity of the battery.

NOTICE: The replacement battery must be a model CR2450 coin cell type. It is strongly recommended that a high quality battery is used. The positive (+) of the battery should be facing towards the Battery Cover.

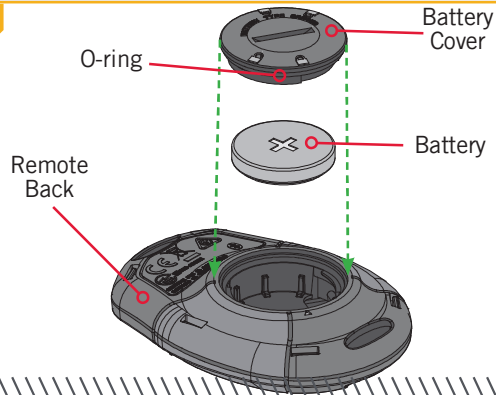


SERVICE & MAINTENANCE

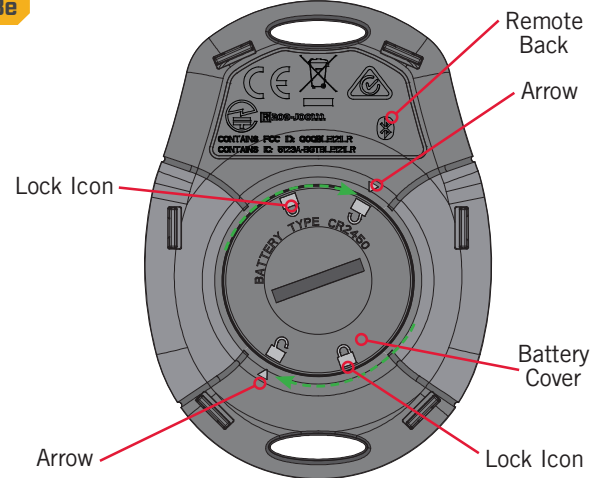
3

- d. Ensure the rubber O-ring is properly seated in the underside of the Battery Cover. Replace battery cover by aligning either of the Unlock icons with the arrow, and pressing the cover down.
- e. Rotate the Battery Cover clockwise using the large coin until the Lock Icon aligns with the Arrow.

3d



3e



MAINTENANCE MODE AND OPENING THE BYPASS VALVES

In the event that you ever need to manually move the Raptor for the purpose of stowing, deploying, or perform maintenance work it is important to put the Hydraulic Pump in Maintenance Mode and open the Hydraulic Circuit. The Pump Assembly contains Bypass Valves on the side of the Manifold marked with a "BP". They are used to relieve pressure with the Pressure Wrench after the Pump is put into Maintenance Mode. The Pump Assembly is placed into Maintenance Mode and then the pressure on the Hydraulic Lines is released, this allows the anchor to be stowed and deployed manually if the need should arise. When both the Hydraulic Pump is placed into Maintenance Mode AND the Bypass Valves are opened, the Raptor can be controlled manually and Hydraulic Pressure is relieved and able to move. To do this, follow the procedure below.



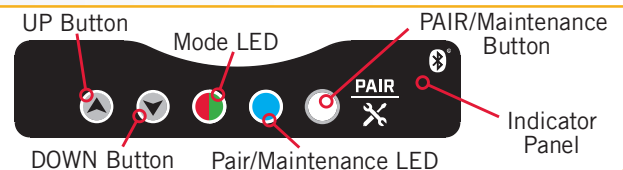
WARNING

Never disconnect hydraulic components while power is applied and bypass valves are not open.

1

- a. Press and hold the Pair/Maintenance button on the Indicator Panel, located on the Pump Assembly. The Pump will beep three times consecutively to confirm that the Pump is in Maintenance Mode. The Pair/Maintenance LED will illuminate blue and will stay lit while in Maintenance Mode.

1a



NOTICE: When a Hydraulic Pump is put in Maintenance Mode, it disables the control of any devices or remotes that were paired and able to control the Pump. When two Raptors are Paired together, the disabled control is specific to the Hydraulic Pump placed in Maintenance mode. If the second Raptor, in a Paired system is not placed in Maintenance mode, the devices and remotes are still able to control the Raptor not placed in Maintenance Mode. The Maintenance Mode status is independent for Two Raptors paired together.

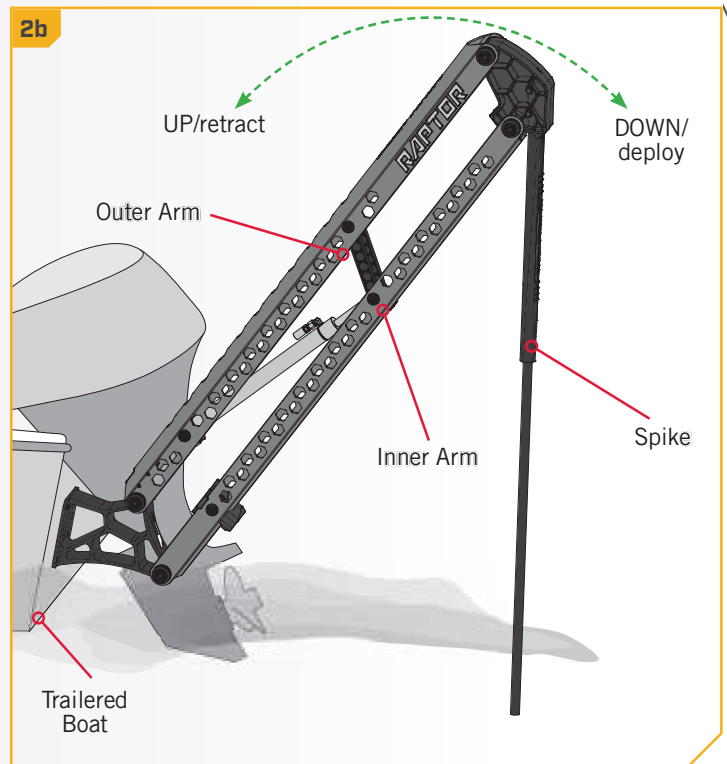
2

- b. If the Raptor is retracted, even if only partially, secure the Spike and/or make sure the path of travel for the Raptor is clear so that the Raptor will not pose a striking hazard when the Bypass Valves are opened. Keep fingers clear of pinch points and moving parts.

CAUTION

Be sure that the Raptor is clear of obstructions and persons while deploying or retracting. The spaces between the Outer Arm, Inner Arm, Spike and brackets of the Raptor can create a pinch point. Do not come in contact with an area of the Raptor that may cause a pinch point while it is moving in any direction to avoid the risk. Stay clear of the anchor if it is not held in place under the power of the Hydraulic Circuit or physical restraint. Lack of Hydraulic Pressure when the Hydraulic Circuit is open can result in a striking hazard created by the force of gravity on an unsecured anchor. Secure the Spike to avoid the risk.

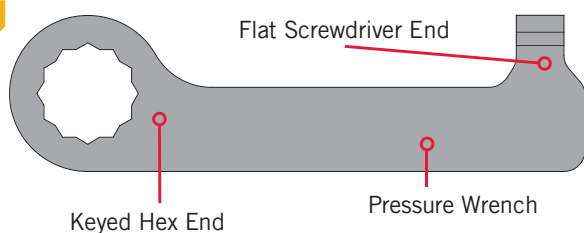
2b



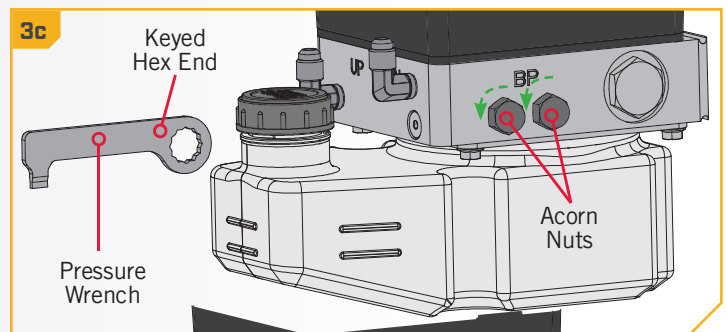
3

- c. The Pressure Wrench (Part No. 2358800) will be used to open the Bypass Valves on the Hydraulic Pump. The Pressure Wrench has two ends. The Keyed Hex End is used to loosen the Acorn Nuts covering the Bypass Valves on the side of the Pump Manifold and the Flat Screwdriver End is used to open the valves. Locate the Acorn Nuts on the side of the Hydraulic Pump Manifold. The Acorn Nuts are marked with "BP". Use the Keyed Hex End of the Pressure Wrench to loosen and remove both Acorn Nuts covering the Bypass Valves by turning counterclockwise. With the Acorn Nuts removed, set them aside in a secure location for reinstallation later.

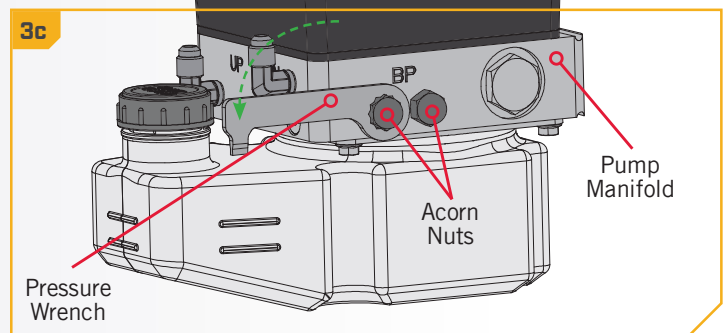
3c



3c



3c



SERVICE & MAINTENANCE

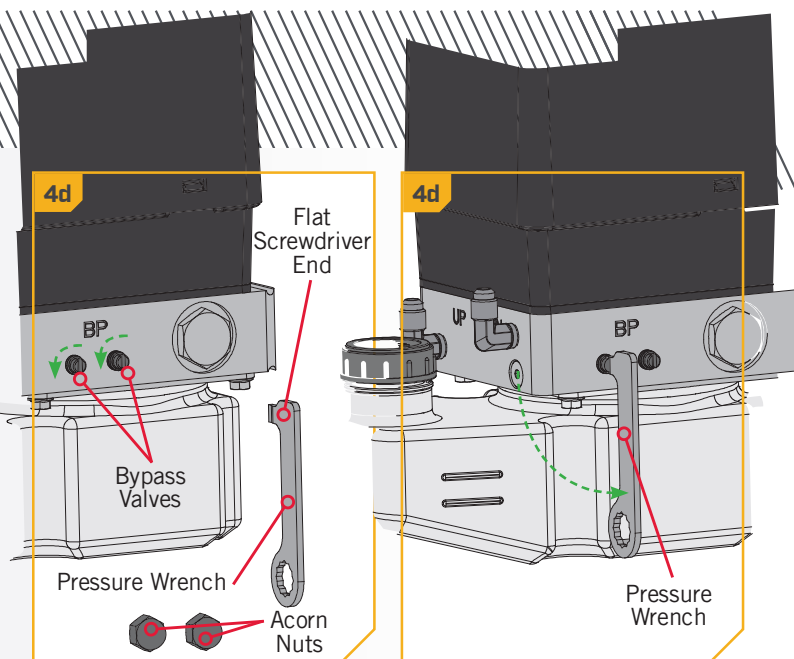
4

- d. Flip the pressure Wrench over and use the Flat Screwdriver End of the Wrench to turn both Bypass Valves one turn in a counterclockwise direction to open the Hydraulic Circuit. Turning the Bypass Valves more than one turn, or continuing to turn the Bypass Valves counterclockwise will not increase the degree to which the Hydraulic Circuit is opened. Do not turn the Bypass Valves so much that they become removed. Additional turning of the Bypass Valve will not increase the amount of relief on the Hydraulic Circuit. Once the Circuit is relieved, the Raptor anchor can be manually adjusted into the desired position.



CAUTION

When making changes to the Hydraulic Circuit, it is recommended to secure the Raptor for transport. This includes when taking the Raptor in and out of Maintenance Mode. Securing the Raptor will prevent unexpected deployment that may result from changes to pressure in the Hydraulic Circuit.



5

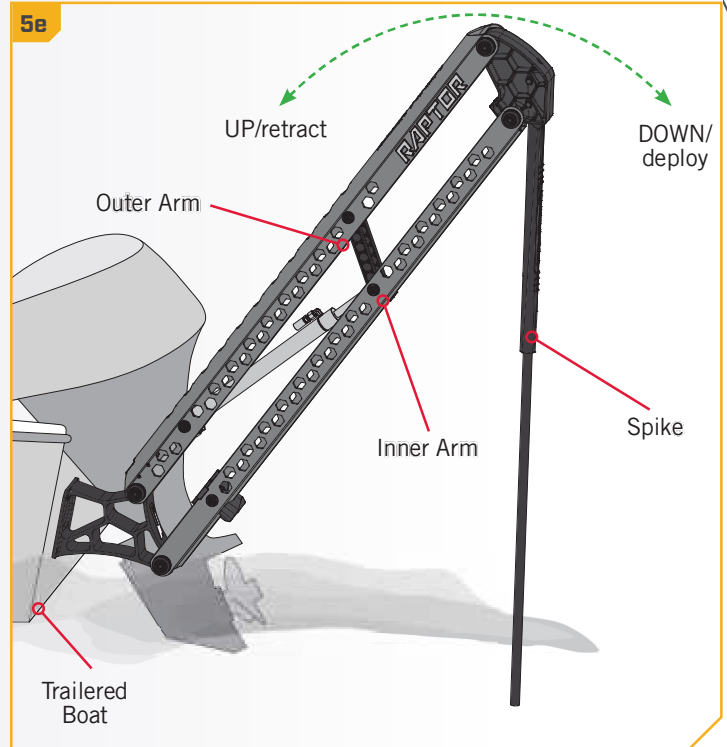
- e. The anchor can now freely move into the desired position. Move the Anchor into the desired position and secure it. It may be necessary to have a second person help you move and secure the anchor.

⚠ CAUTION

Be sure that the Raptor is clear of obstructions and persons while deploying or retracting. The spaces between the Outer Arm, Inner Arm, Spike and brackets of the Raptor can create a pinch point. Do not come in contact with an area of the Raptor that may cause a pinch point while it is moving in any direction to avoid the risk. Stay clear of the anchor if it is not held in place under the power of the Hydraulic Circuit or physical restraint. Lack of Hydraulic Pressure when the Hydraulic Circuit is open can result in a striking hazard created by the force of gravity on an unsecured anchor. Secure the Spike to avoid the risk.

NOTICE: Placing the Hydraulic Pump into Maintenance Mode disables other methods of control for the Pump including paired remotes and devices through Bluetooth connections. If two Raptors are paired together, placing one Raptor into Maintenance mode will NOT place the other paired Raptor into Maintenance Mode. If two Raptors are Paired, they each need to be placed into Maintenance Mode in order for paired devices and remotes to be disabled for both Raptors.

5e

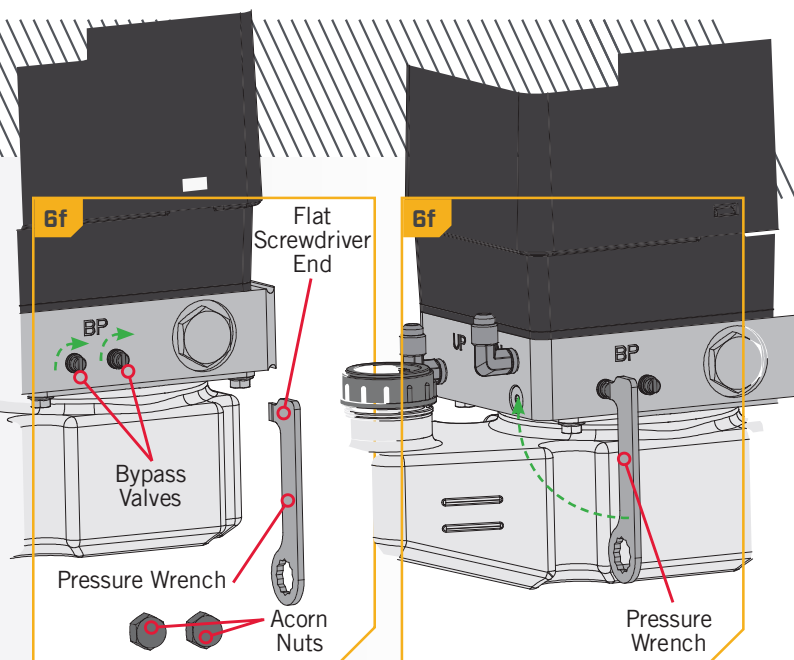


NOTICE: Removing power from the Hydraulic Pump takes it out of Maintenance Mode. If power is re-applied to a Hydraulic Pump that was in Maintenance Mode before power was removed, when power is restored, the Hydraulic Pump will no longer be in Maintenance Mode.

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- f. With the anchor in the desired position, use the Flat Screwdriver End of the Pressure Wrench to turn both Bypass Valves one turn in a clockwise direction to close the Hydraulic Circuit. Use the Pressure Wrench to hand tighten the Bypass Valves until they are tight. Once the Circuit is closed, the Raptor is held in position from the Hydraulic pressure and should not move freely.



7

- g. Replace the Acorn Nuts over the Bypass Valves. Use the Keyed Hex End of the Pressure Wrench to tighten and replace both Acorn Nuts covering the Bypass Valves by turning clockwise. Tighten the Acorn Nuts to 120 in-lbs.

