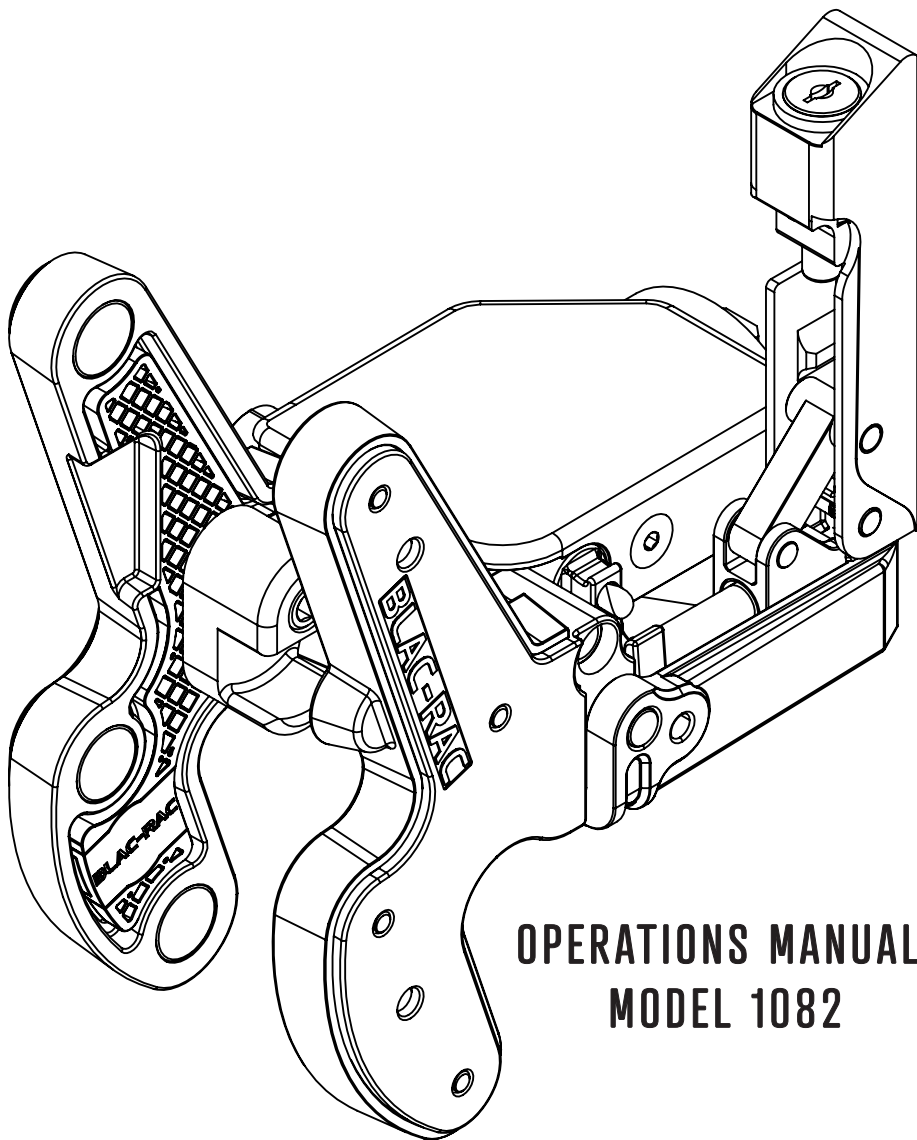
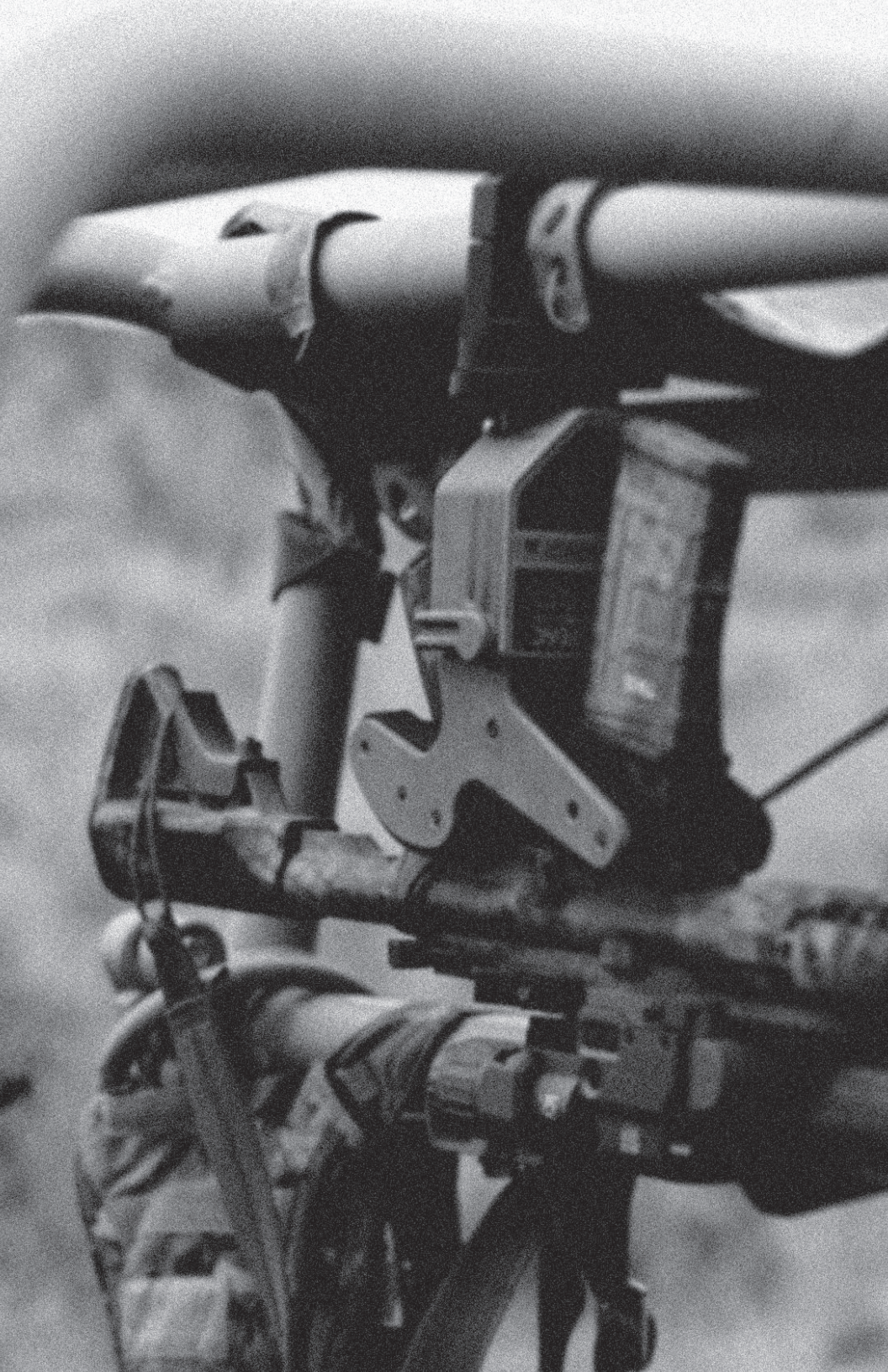


WEAPON RETENTION SYSTEMS



OPERATIONS MANUAL: MODEL 1082



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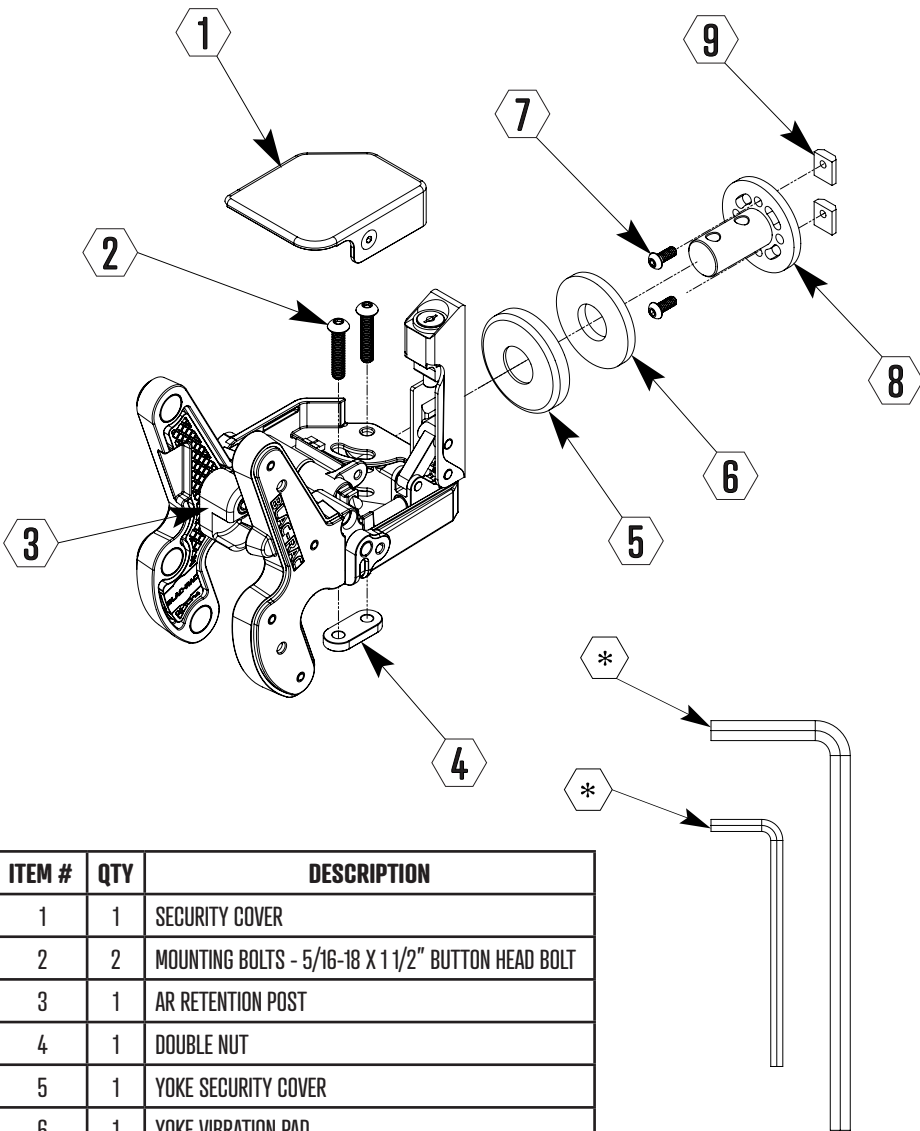
Eccentric Pistol Grip

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Troubleshooting

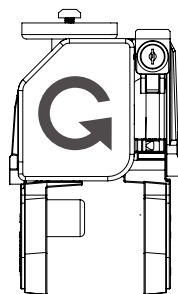
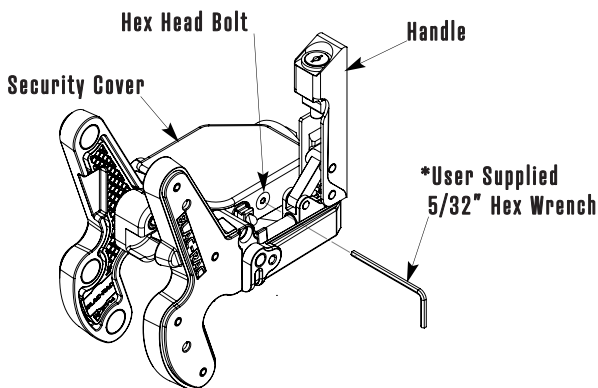


ITEM #	QTY	DESCRIPTION
1	1	SECURITY COVER
2	2	MOUNTING BOLTS - 5/16-18 X 1 1/2" BUTTON HEAD BOLT
3	1	AR RETENTION POST
4	1	DOUBLE NUT
5	1	YOKE SECURITY COVER
6	1	YOKE VIBRATION PAD
7	2	YOKE BOLTS - 1/4-20 X 5/8" BUTTON HEAD BOLT
8	1	YOKE
9	2	T-NUT
*	*	**CUSTOMER SUPPLIED: 3/16 & 5/32 HEX WRENCH**

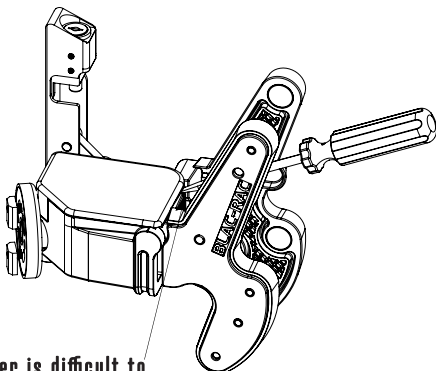
[1] Unlock the BLAC-RAC and place it in the open position.

[2] Loosen the hex head bolt completely as shown; you will not be able to remove the bolt from the security cover. Rotate the security cover counter-clockwise and lift. If it is difficult to remove, use a small flat head screwdriver to lift off the cover.

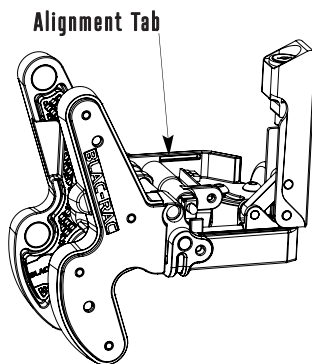
***MAKE SURE WRENCH IS FULLY SEATED IN BOLT TO PREVENT POTENTIAL STRIPPING.**



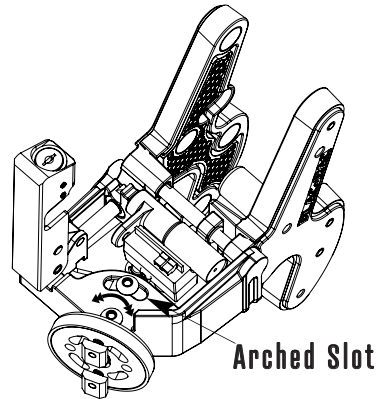
[3] To reinstall, place the security cover on the unit slightly counter-clockwise from square. Rotate the cover clockwise to seat it into the alignment tab. The hex head bolt will align with threads inside the unit, tighten down the bolt securely with a (customer supplied) 5/32" hex wrench



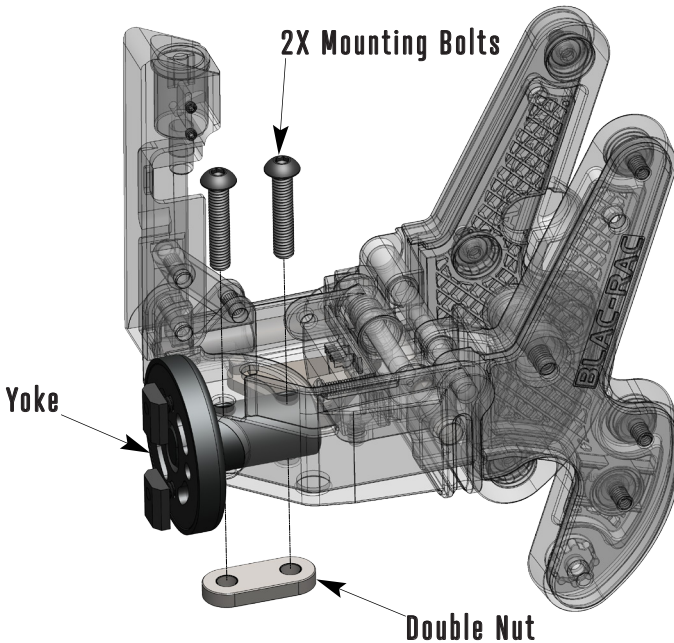
If the cover is difficult to remove, lift with a small flat head screw driver between Security Plate and Frame.

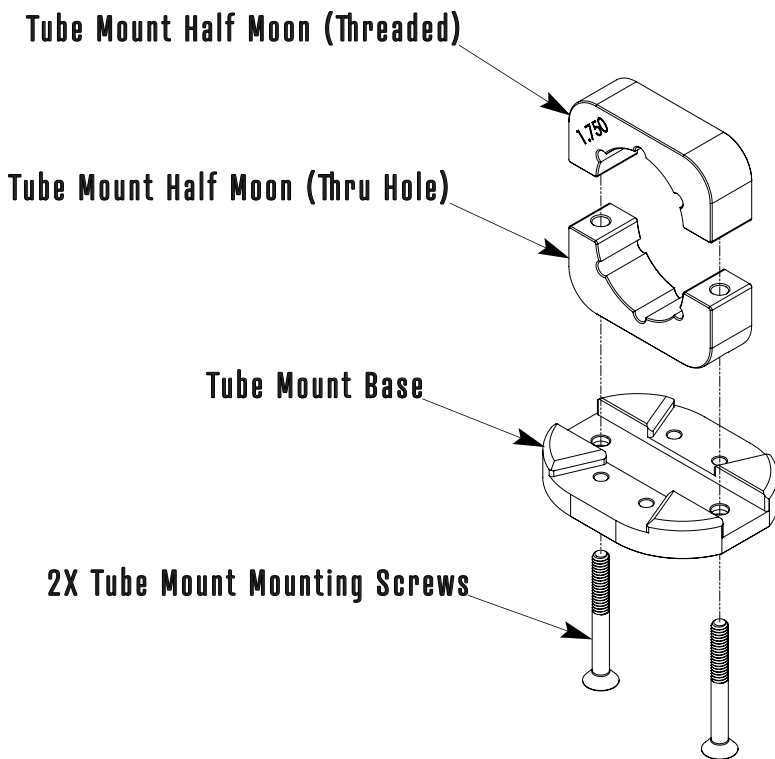


The design of the BLAC-RAC allows it to be installed with up to a 45° angle from center. One of the mounting bolts is inserted through the arched slot. This slot allows for proper positioning depending on the application.

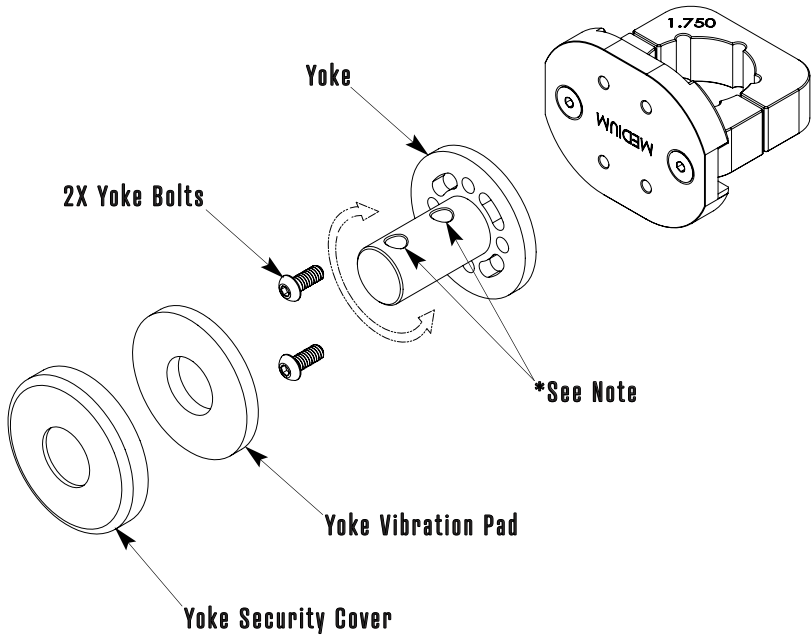


- [1]** Remove the two mounting bolts using a (customer supplied) 3/16" hex wrench. On the bottom side of the unit, there is a double nut, which secures the yoke to the unit. As you remove the mounting bolts, the double nut may fall free.





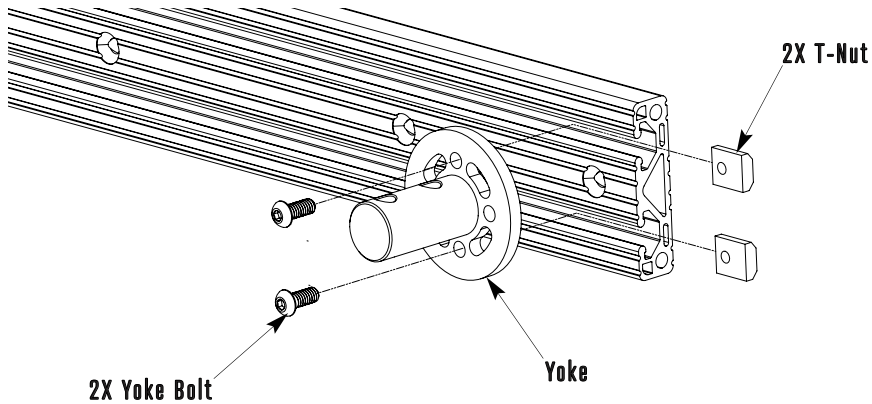
- [1]** The tube mount must be disassembled prior to installation. Disassemble by removing the two screws using a (Customer Supplied) 5/32" hex wrench.
- [2]** Place the non-threaded half on the side of the tube the BLAC-RAC will be installed. Install the base on to the non-threaded side until the two holes align with the holes in the threaded side. Insert the two screws and hand tighten as snug as possible. Using a torque wrench, incrementally tighten to 5-6 foot pounds ensuring the gap on each side is equal.



- [1]** Apply thread-locking fluid to the two 1/4-20 X 5/8" yoke bolts and attach it to the mount base. Use whichever bolt pattern fits your application. Torque to 5 - 6 foot pounds.

***Note:** Orientation of the two through holes in the yoke will typically run parallel to the roll bar or tubing. However, you may orient the Yoke to best serve your desired application.

- [2]** Place the yoke vibration pad followed by the yoke security cover over the yoke.
- [3]** Place the BLAC-RAC over the yoke aligning the two holes on the yoke with the mounting hole and slot of the BLAC-RAC.
- [4]** Apply thread-locking fluid to the two 5/16-18 x 1 1/2" mounting bolts and insert through the hole and slot and into the double nut. Forward pressure may need to be applied to the BLAC-RAC to allow the alignment of the holes. Torque to 9 - 10 foot pounds.
- [5]** Reinstall the security cover.



- [1]** Apply thread locking fluid to the two 1/4-20 X 5/8" yoke bolts and place through the holes on the yoke loosely attaching the T-Nuts. Slide the yoke into the slots of the T-Channel (remember the yoke can be oriented 360°, select the orientation that fits your application). Torque to 5 - 6 foot pounds.

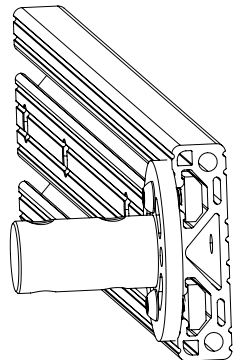
CAUTION: The user is responsible for determining the proper installation location, surface type, and that the mounting hardware used can hold the T-Channel and BLAC-RAC securely.

- [2]** Place the yoke vibration pad followed by the yoke security cover over the yoke.

- [3]** Place the BLAC-RAC over the yoke aligning the two holes on the yoke with the mounting hole and slot of the BLAC-RAC.

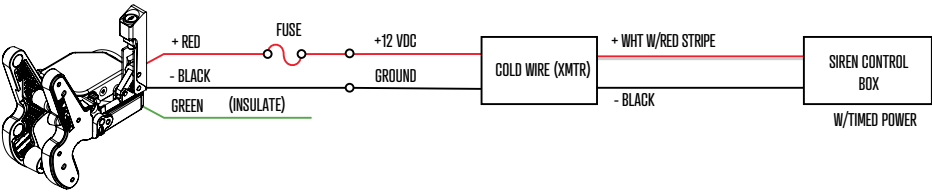
- [4]** Apply thread-locking fluid to the two 5/16-18 x 1 1/2" mounting bolts and insert through the hole and slot and into the double nut. Forward pressure may need to be applied to the BLAC-RAC to allow the alignment of the holes. Torque to 9 - 10 foot pounds.

- [5]** Reinstall the security cover.

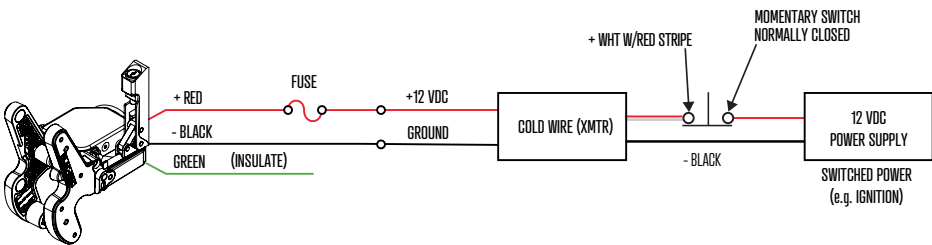


BLAC-RAC Manufacturing, Inc. accepts no liability of any kind or extends any warranty for any type to user defined and installed mounting schemes or materials used in mounting the product to any surface whether stationary or mobile.

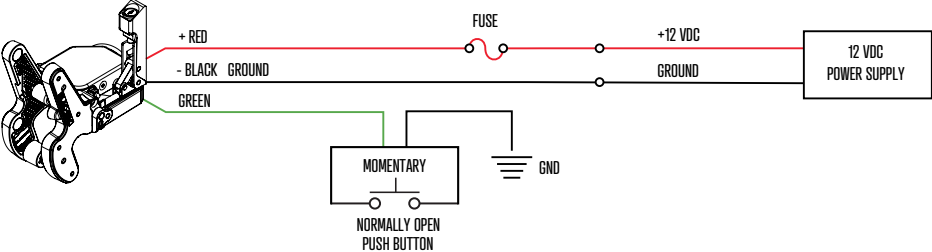
COLD-WIRE™ (XMTR) WIRED THROUGH CONTROL / SIREN



COLD-WIRE™ (XMTR) USING MOMENTARY SWITCH ONLY



ELECTRONIC MODEL WIRED TO MOMENTARY SWITCH



WIRE CHART	
GROUND [-]	BLACK
POWER [+]	RED
POWER [+]	WHITE/RED
TRIGGER	GREEN

Dimensional: 3.0" X .655" X .250"

Electrical: 12 VDC 20 Amps Max.

Wire: 6.0" Red+ and Blac-
7.5 White w/Red Stripe+ and Black-
TXL-18 UL1013, CSA 600V 105C

These instructions apply to all Blac-Rac electronic models Version V4 and above.

There are three TXL-22 Gauge wires exiting through the bottom of the frame. They are Red + Power, Black – Ground and Green used for a Momentary Switch. The TXL-22 is a 22 Gauge automotive primary wire. It is rated up to 60 VDC. Temperature range is -51C to +125C. The Red wire is fused with a 6 x 20 mm size, Littlefuse 3.15477, 500V fuse, the exact same fuse is required. Failure to do so will result in the Warranty **BEING VOIDED**. Fuse can be ordered from Blac-Rac using Part Number 04773.15MXP. Longer wires may be required. Check the Wire Chart at the bottom of this page for requirements.

Blac-Rac contains a timer operation that is integral. It is set at the factory for 8 seconds. If you are installing to a programmable timer and set the power “on” for longer than 8 seconds, the Blac-Rac will time out and close at the 8 second mark. To increase the timer “on” duration the Blac-Rac can be programed (at the factory) for a longer period. Contact your Distributor, Installer or Blac-Rac customer service for additional information.

Blac-Rac is a 12 VDC system and requires a power source of 10 Amps for one unit and 12 VDC at 20 Amps for operating two units simultaneously. Two units can be operated from a single Blac-Rac Power Source.

Proper wiring includes a clean ground. Use of an external star washer will ensure that it is grounded properly with a metal-to-metal contact for painted or plated surfaces.

A momentary switch is NOT provided. The end user must define how the Blac-Rac will be wired and activated. The electrical rating of a momentary switch we have supported in the past is rated at 125VAC, 15 Amps, Push Button from Carling Technologies.

IMPORTANT! If the green wire is not used, it is highly recommended that it be completely insulated from any possible conductive surface.

IMPORTANT! If the Blac-Rac is to be used/wired to a 125VAC power source, it must be converted to a 12VDC source. A licensed electrician is recommended to complete this type of installation.

IMPORTANT! The 3.15 Amp Slow Blow Fuse must remain installed on the RED Power Wire extending from the Blac-Rac AT ALL TIMES

Electronic models of the BLAC-RAC come factory equipped with standard wire lengths. If installation requires longer wire, please refer to the following WIRE LENGTH CHART for correct wire length and gauge needed to ensure proper functionality of the BLAC-RAC system.

WIRE LENGTH CHART

8 FT.	#18 AWG
13 FT.	#16 AWG
20 FT.	#14 AWG

Wiring COLD-WIRE® (XMTR) to electronic Blac-Rac via Control/Siren box with Timed Power

The Transmitter is compatible only with an electronic Blac-Rac equipped with a V4.0 Receiver (RCVR). All electronic models manufactured after January 1, 2020, are equipped with V4.0 RCVR. End users with units produced prior to this date must contact Customer Service at 1.800.855.9388 for conversion details.

Each Transmitter (XMTR) can power up to 2 weapon mounts that must be individually wired to its own power wire and ground extending from the Blac-Rac electronic cable assembly. Power must be capable of 12VDC at 20 AMPS. And must be fused on each unit powered.

To connect; attach the RED (+) and BLACK (-) wires from the COLD-WIRE® (XMTR) to the RED (+) and BLACK (-) wires extending from the Blac-Rac unit. The Green wire is not used, and must be cut entirely and insulated to avoid connectivity.

The WHITE w/Red Stripes is the Positive (+) and the BLACK wire is Ground (-).

The outgoing wires from the COLD-WIRE® (XMTR) are RED Positive (+) and BLACK Negative (-) and must be connected to the electronic Blac-Rac cable assembly in line with the RED Power (+) that includes the Slow Blow fuse (Supplied) one each for each Blac-Rac. Slow Blow fuses are required for each of the two Blac-Rac's being wired.

NOTICE: Once the Transmitter (COLD-WIRE®) is installed and connected to a 4.0 Receiver model integral in a 4.0 version or above, and power is applied, the 4.0 Receiver will permanently install the COLD-WIRE® firmware. It WILL ALWAYS be necessary to have the Transmitter (COLD-WIRE®) connected in order to operate all Blac-Rac electronic models with COLD-WIRE® equipped units. Removing the Transmitter (COLD-WIRE®) WILL NOT ALLOW the Blac-Rac to be opened by electronic means. At this point, a key override must be used.

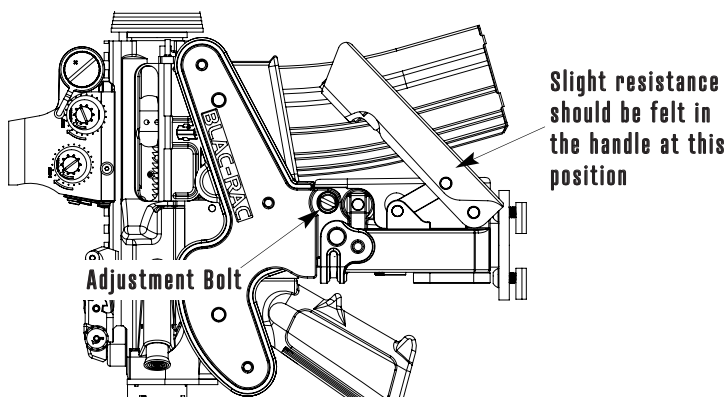
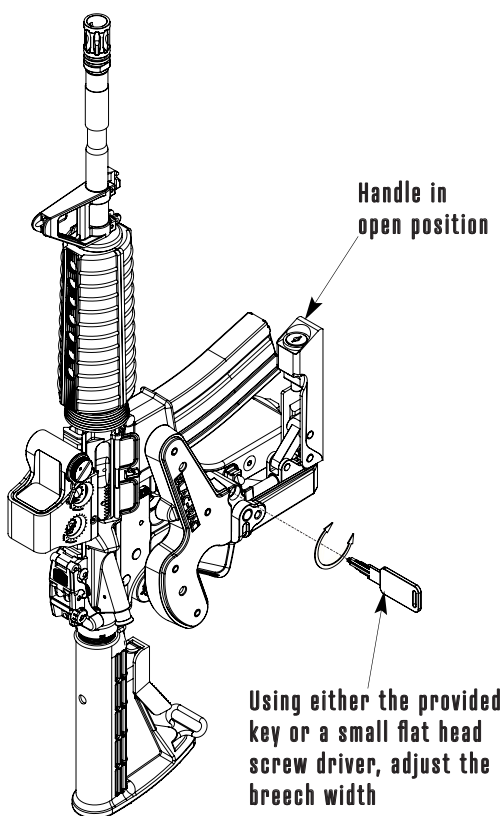
To factory reset the Integral Receiver Module, contact Blac-Rac Customer Service at 1.800.855.9388



COLD-WIRE®
technology

The Breech Adjustment is used to adjust the width and/or pressure of the BLAC-RAC, depending on the receiver width of the firearm being secured. The BLAC-RAC will accommodate most weapon's platforms in use by law enforcement today.

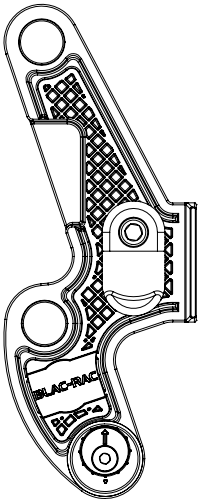
- [1]** In the open position, place your firearm into the grip pad as shown.
- [2]** Close the BLAC-RAC using the handle until it engages the firearm. When closing the handle, the user should feel slight resistance half way through the handle stroke for maximum security and stability. Continue to adjust the breech adjustment until the firearm does not move or shift in the device. If the clamping action is too loose or tight, or does not engage the firearm, adjust the bolt as shown. Clockwise to increase clamp pressure and counter clockwise to decrease clamp pressure.



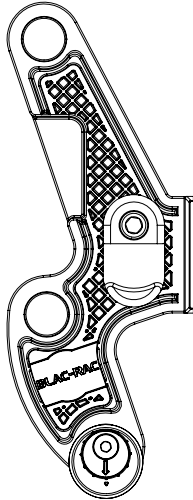
All BLAC-RAC models come equipped with the Eccentric Pistol Grip Rest. This feature provides greater flexibility for positioning the weapon in the BLAC-RAC when using third party grip sets that differ from the standard mil-spec grips that come from many manufacturers of M4's & AR15 equivalents.

The function of the Eccentric Pistol Grip Rest is the ability to adjust the "length of pull" from the trigger guard to the back of the pistol grip. This useful functionality allows your customized weapon to always "sit" properly within the rack.

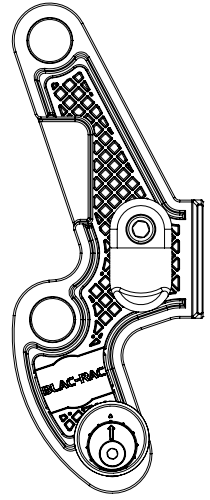
The Eccentric Pistol Grip Rest is shown below in various configurations



For mil-spec grips the arrow is facing up with the thinnest part of the outer shell facing up towards the trigger post.

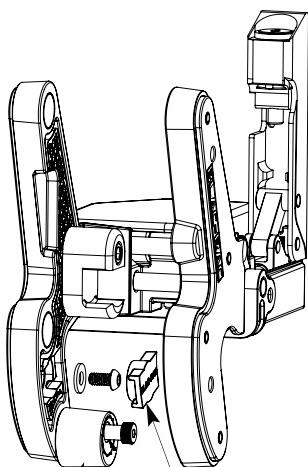


When using large third party grip sets, the Eccentric Pistol Grip Rest should be adjusted with the arrow facing down, for maximum length of pull distance.



In this picture, the grip rest is set to the shortest length of pull. The arrow is facing up to the trigger post and the thickest portion of the outer shell is up towards the trigger post.

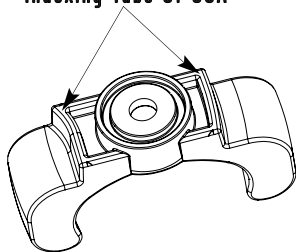
The Eccentric Pistol Grip Rest is field adjustable. In most cases, it only requires adjusting the outer shell by hand. If you need to modify the arrow direction, use a 5/32" hex wrench and remove the grip rest. Reposition it where desired. Please note the "star" pattern for location of the grip rest into the pads.



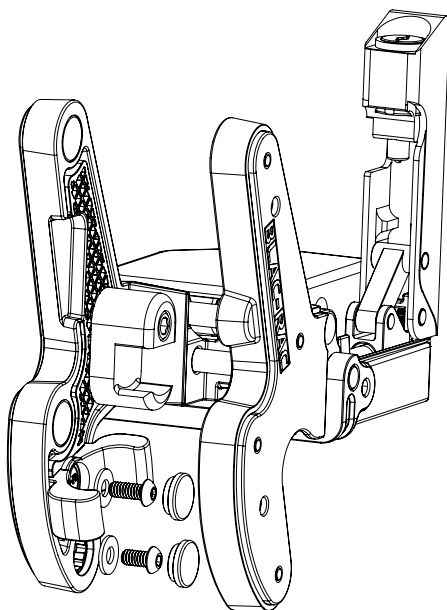
Eccentric Rest

BLAC-RAC Plug

Indexing Tabs Of CSA



- [1]** Remove the small plug marked with BLAC-RAC and the Eccentric Pistol Grip Rest.
- [2]** Remove the screw and washer behind the BLAC-RAC marked plug.
- [3]** Place the CSA in the cavity left by the BLAC-RAC marked plug, using the indexing tabs for proper fit.



- [4]** Install the washer and screw into the CSA. Insert CSA rubber cap over top screw to prevent marring of weapon finish.
- [5]** Install the extra screw, washer, and rubber cap into the Eccentric Pistol Grip Rest cavity.
- [6]** Place your conventional stock weapon into the BLAC-RAC and make adjustments to the Breech Adjustment Bolt to change the width of the clamping action to accommodate the weapon.

An undersized post is available if needed as well as a post for weapons equipped with the Magpul BAD lever. The modified post for the Magpul will not work with other BAD type devices from other manufactures.

Note: For firearms with a pistol grip, the Eccentric Post can be used if desired by user. The Eccentric Post can also be removed when the AR Trigger Post has been installed.

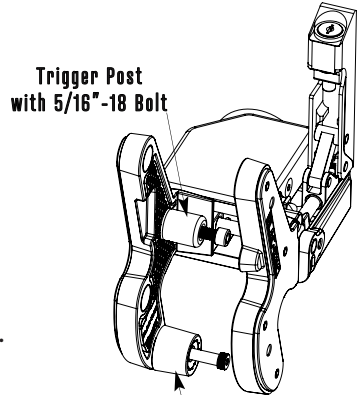
- [1]** Open BLAC-RAC unit and remove weapon. For ease of removal of existing hardware and installation of the new **AR Retention Post**, it is recommended to adjust the BLAC-RAC to its widest point. (Refer to the "Breech Width Adjustment" section of this install for instructions)

- [2]** Using a (Customer Supplied) 1/4" hex wrench, remove the 5/16"-18 bolt. Remove the Trigger Post once the bolt is out. The 5/16" bolt will be used to install the AR Retention Post.

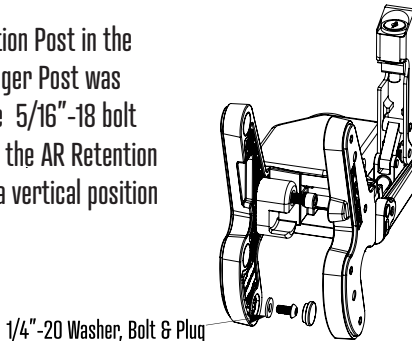
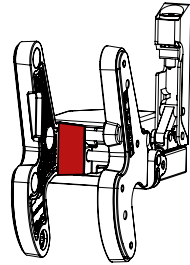
(If the user chooses to remove Eccentric Post: Use a customer supplied 5/32" hex wrench, remove the 1/4"-20 shoulder bolt. Remove the Eccentric Post once the bolt is out. Replace the Eccentric Post with 1/4"-20 bolt with washer and plug as shown.)

- [3]** If you have a drop down trigger guard, it may be required to cut and remove the rubber section shown in Red from the pad with a utility knife to ensure proper clearance.

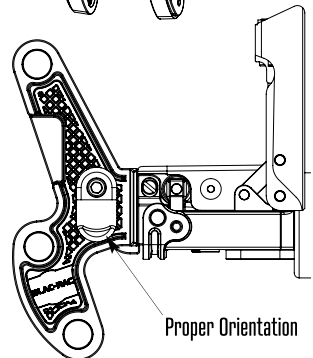
- [4]** Place the AR Retention Post in the hole where the Trigger Post was removed. Insert the 5/16"-18 bolt and tighten. Ensure the AR Retention Post is installed in a vertical position as shown.



**Eccentric Post
with 1/4"-20 Bolt**



1/4"-20 Washer, Bolt & Plug



Proper Orientation

Use of the The BLAC-RAC ALTA trigger guard replacement allows the user to enjoy all the benefits of the BLAC-RAC system while significantly improving the security of the system.

Below are steps required to ensure your weapon is safe and secure in the BLAC-RAC.

Use of the BLAC-RAC ALTA Trigger Guard is recommended for improved security. Trigger guard **MUST** be installed with both roll pins on M4 style lowers with removable trigger guards.

WARNING! BEFORE STARTING, MAKE SURE THE WEAPON IS UNLOADED, THE CHAMBER IS EMPTY AND THE SAFETY IS ENGAGED. ALWAYS OBSERVE SAFE FIREARM HANDLING AT ALL TIMES.

Tools Required:

- 1/8" Punch
- Small Hammer
- Electric Drill
- No. 30 (.128") Drill Bit
- ALTA Trigger Guard Kit



- [1]** Remove the current trigger guard using a 1/8" punch; depress the front detent spring and rotate the trigger guard down, clear of the receiver. Using the same punch, drive out the rear roll pin for use in the re-installation of the replacement trigger guard.



- [2]** Installation of the replacement guard requires you to support the underside of the trigger guard, carefully drive in the rear roll pin using the 1/8" punch. Verify the hole alignment is correct before proceeding.



- [3]** Align the front hole of the trigger guard with the existing hole in the receiver. Using a No. 30 drill bit, drill through the entire trigger guard hole until the drill bit passes through the bottom side of the receiver. Make sure the trigger guard holes align. This will ensure a straight hole from top to bottom.



- [4]** While supporting the underside of the trigger guard, carefully drive in the front roll pin using the 1/8" punch. Verify the hole alignment is correct before proceeding. Roll pin should be equally flush on both sides of the weapon.

General Information:

The BLAC-RAC requires a 12-volt DC power source capable of providing up to 10 amps to operate a single BLAC-RAC and a 12V power source with up to 20A to operate two. The BLAC-RAC can be opened by a stand-alone momentary switch or by a siren control switch that provides timed power. The type of momentary switch used must be “normally open” for a standard BLAC-RAC and “normally closed” if using a BLAC-RAC with COLD-WIRE®.

Installations that are using a stand-alone momentary switch can be wired directly to the battery (always on) or a power source controlled by the vehicle’s ignition switch. If the BLAC-RAC is wired to ignition power, the BLAC-RAC will cycle one time for its 8-second cycle and then return to the locked position each time the ignition switch is placed in the on position. This ensures the BLAC-RAC is functioning normally. The BLAC-RAC will not cycle each time the key is turned on if it is wired directly to battery power. It should be noted that the BLAC-RAC will have constant power even while the vehicle is unattended if it is wired directly to battery power.

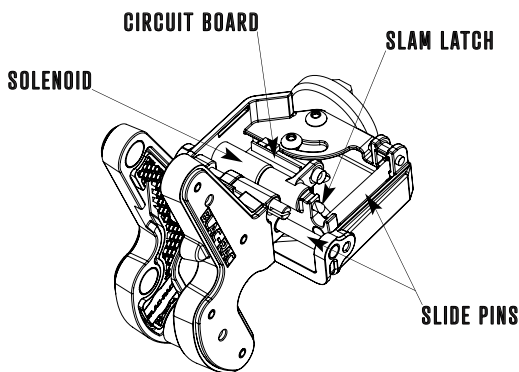
The standard delay time for the BLAC-RAC is 8 seconds. If using a siren box, the gun lock switch must provide timed power for at least 8 seconds. BLAC-RAC electronic units can be ordered with specific delay time depending on the application. Special orders could have a longer than normal lead time.

***Special timing requirements can only be ordered from the factory**

The BLAC-RAC opens by using a negative ground trigger. If a control box or timer is used that uses a positive ground trigger, a relay will be necessary to reverse polarity to a negative trigger to open the BLAC-RAC. COLD-WIRE® prevents the BLAC-RAC from being opened if the power wires feeding the unit are cut and an external power source is applied to the wires. COLD-WIRE® uses a transmitter to send a digital signal to a receiver that is part of the circuit board installed in the BLAC-RAC. A COLD-WIRE® equipped BLAC-RAC will not open if it does not receive a signal from the transmitter after the command to open is initiated. To operate correctly, COLD-WIRE® must be used with a BLAC-RAC that has a V4 circuit board installed. All new production electronic models will ship with the V4 circuit board. Earlier models, pre-2019, will have earlier firmware which will need to be upgraded and can be done in the field. A single COLD-WIRE® transmitter can be used with two units. Once a BLAC-RAC has been paired with a transmitter, that unit must be used with a transmitter or it will not open. Any transmitter can be used with any BLAC-RAC. The circuit board must be replaced to use it without a COLD-WIRE® transmitter.

PROBLEM	CHECK	POSSIBLE	ACTION
BLAC-RAC does not Open Electronically	Vehicle Power Supply	Output is not 12 Volts	If wired power comes from Control Box, check control box programmable switch. Reset to 12 Volts DC if Necessary
	Wires	Bad Ground	Ground BLAC-RAC To Negative Power Supply Terminal
		Pinched Wires	Inspect For Pinching Connecting BLAC-RAC To Power Supply
			Inspect For Pinching Inside Lid Cover
		Wires Not Connected	Confirm Connectors Are Plugged Into Circuit Board
	Fuse	Blown Fuse	Replace with 6 x 20 mm size, Littlefuse 3.15477
		Fuse Not In Contact With Fuse Housing	Unscrew Housing And Ensure Fuse Is Making Contact
	Switch	Switch Not Functioning	Replace Switch
		Incorrect Switch Selection (If Using COLD-WIRE®)	COLD-WIRE® Requires A Normally-Closed Momentary Switch
	Slam Latch Pin	Pin Has Seized Inside Solenoid	Return Unit To BLAC-RAC Factory for Warranty
	Circuit Board	Circuit Board Has Failed	Field Repair With New Circuit Board
			Return Unit To BLAC-RAC Factory for Warranty
	Solenoid	Solenoid Wires Pinched Or Damaged	Return Unit To BLAC-RAC Factory For Warranty
		Solenoid Has Failed	

PROBLEM	CHECK	POSSIBLE	ACTION
BLAC-RAC Loose on T-Channel	T-Channel (Page 6)	Vibration	Apply Medium Strength Thread-locker To Bolts
		Improper Torque Applied To Yoke Bolts	Torque Bolts To 5 - 6 ft-lbs
BLAC-RAC Loose On Yoke	Yoke (Page 3)	Vibration	Apply Medium Strength Thread-locker To Bolts
		Improper Torque Applied to 5/16-18 x 1 1/2" mounting bolts	Torque Bolts To 9 - 10 ft-lbs
Weapon Rattles Or Is Loose When In BLAC-RAC	Breech Width (Section 8)	Breech Width Is Not Adjusted Correctly	Adjust Breech Width Correctly
	Weapon	Weapon Does Not Fit	Do Not Use BLAC-RAC To Secure Weapon
Delay Timer Not Working Or Requires The Switch To Be Held Down To Open	Circuit Board	Circuit Board Has Failed	Field Repair With New Circuit Board
			Return Unit To BLAC-RAC Factory for Warranty
Rough Handle Operation When Opening Or Closing BLAC-RAC (RECOMMENDED YEARLY MAINTENANCE)	Slide Pins	Contaminants Have Settled On Pins	Clean Rods And Apply A Liberal Amount Of Lithium Grease
		Rods Are No Longer Lubricated	Clean Rods And Apply A Liberal Amount Of Lithium Grease



[illegible]

[illegible]

**We have your six
contact us at:**

Website: www.blac-rac.com

Phone: 1.208.855.9388

Email: info@blac-rac.com

FAX: 1.800.528.8040

LOCATION

**274 N Maple Grove Rd #104
Boise, ID 83704**

