

Quad Link and Height Adjustable Joystick Mounts

Assembly, Installation and Operating Instructions



Model Nos. QL, QLA, ARM250, QLM6 and QLAM6

Yes, you can!

SAVE THESE INSTRUCTIONS

NOTE: Check all parts for shipping damage. In case of shipping damage, DO NOT use. Contact Carrier/Dealer for further instruction.

Safety Summary

To ensure the safe and proper installation of the quad link and height adjustable joystick mounts, these instructions MUST be followed:

⚠ WARNING

DO NOT install this equipment without first reading and understanding this instruction sheet. If you are unable to understand the warnings, cautions and instructions, contact a healthcare professional, dealer or technical personnel if applicable, before attempting to install this equipment - otherwise, injury or damage may occur.

⚠ ACCESSORIES WARNING

Invacare products are specifically designed and manufactured for use in conjunction with Invacare accessories. Accessories designed by other manufacturers have not been tested by Invacare and are not recommended for use with Invacare products.

⚠ INSTALLATION WARNING

After ANY adjustments, repair or service and before use, make sure that all attaching component parts are secure.

Description

NOTE: For this procedure, refer to FIGURE 1 on page 2.

Model Numbers

MODEL	DESCRIPTION	TUBE MOUNT	VAN SEAT MOUNT
QL	Quad Link Retractable Joystick Mount (Fixed Height)	Yes	Yes
QLA*	Quad Link Retractable Joystick Mount	Yes	No
ARM250	Stealth Height Adjustable Joystick Mount	Yes	No
QLM6	Quad Link Retractable Joystick Mount (Fixed Height) for MK6i	Yes	Yes
QLAM6*	Quad Link Retractable Joystick Mount for MK6i	Yes	No

*NOTE: Models QLA and QLAM6 includes Model ARM250.

For more information regarding Invacare products, parts, and services, please visit www.invacare.com

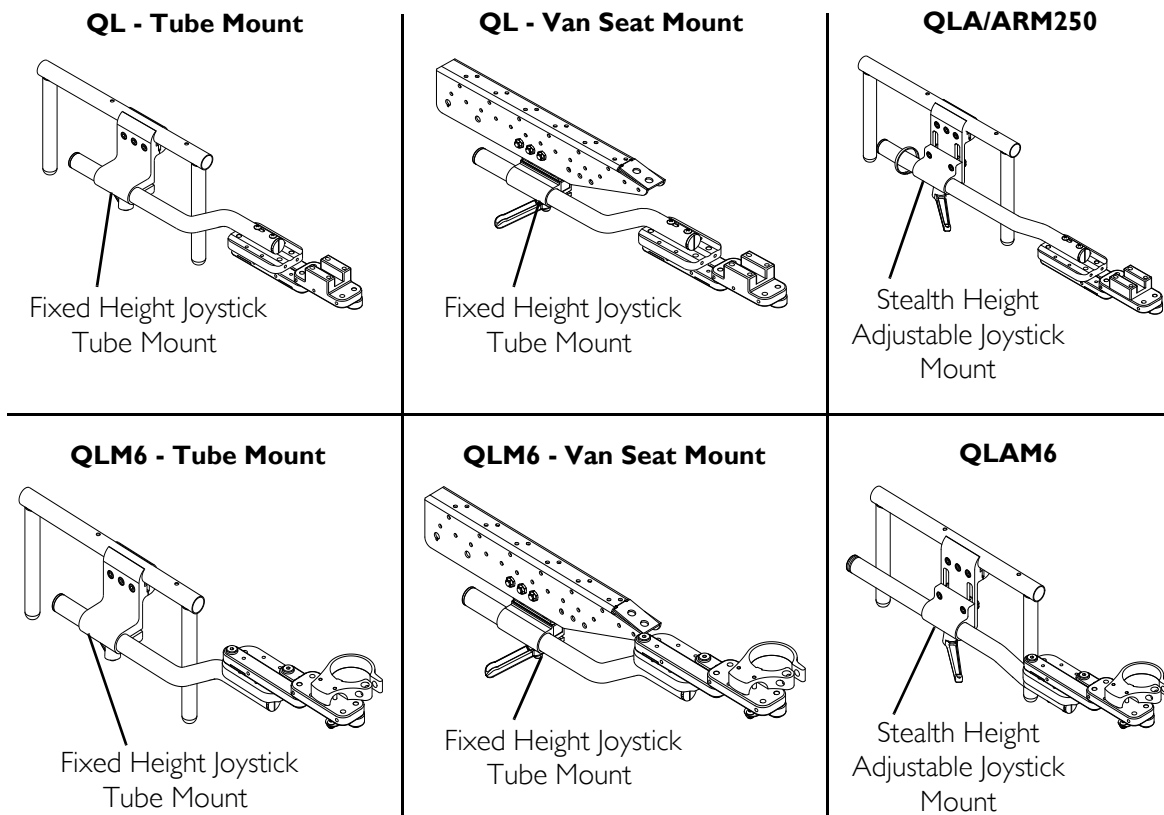
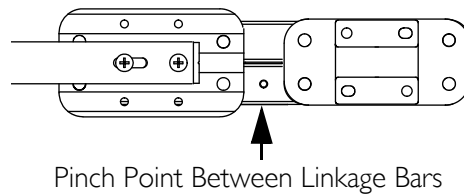


FIGURE 1 Description

Operating the Quad Link Retractable Joystick Mount

⚠ WARNING

Make sure fingers are not between the linkage bars when locking the quad link retractable joystick mount into position. Pinch points will occur between the linkage bars when locking the quad link retractable joystick mount into position.



NOTE: For this procedure, refer to FIGURE 2 on page 3.

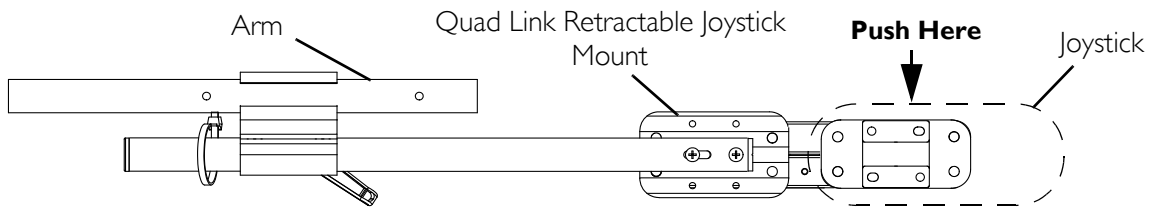
1. To retract the joystick from the normal extended position, push outward on the inside surface of the joystick until the quad link is free.

NOTE: The quad link works the best when the joystick is pushed outward on the inside surface of the joystick, near the armrest pad.

2. Push the joystick outward and rearward until the quad link moves through its complete range and clicks into its fully retracted position.

- To return the joystick to the normal extended position, push outward on the inside surface of the joystick until the quad link clicks free.
- Push the joystick forward and inward until the quad link moves through its complete range and clicks into its fully extended position.

Detail “A” - Quad Link Mount in Extended Position (Top View)



Detail “B” - Quad Link Mount in Retracted Position (Top View)

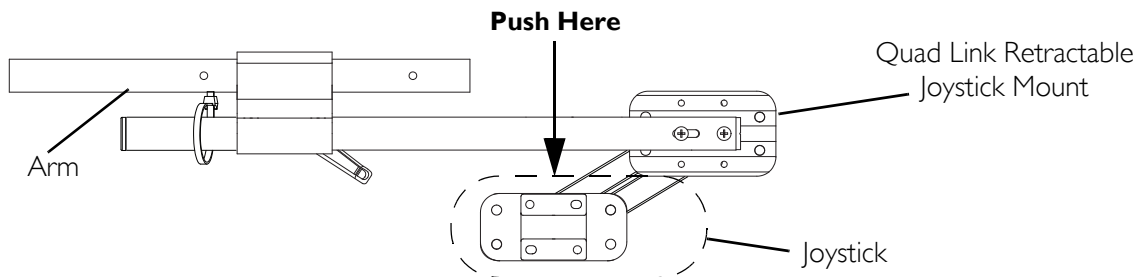


FIGURE 2 Operating the Quad Link Retractable Joystick Mount

Maintenance

NOTE: For this procedure, refer to FIGURE 3.

Every six months, ensure the shoulder screws securing the front and rear portion of the quad link to the linkage bars are tight.

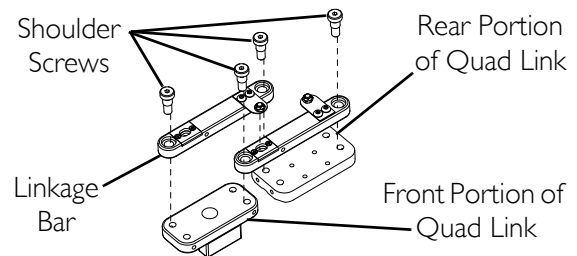


FIGURE 3 Maintenance

Adjusting Lock/Release Tension

NOTE: Adjusting the lock/release tension changes the amount of force required to lock and release the quad link in extended or retracted position.

NOTE: Adjust the linkage bar tension. Refer to [Adjusting the Linkage Bar Tension](#) on page 4. If additional tension is necessary, adjust the spring tab tension. Refer to [Adjusting the Spring Tab Tension](#) on page 4.

Adjusting the Linkage Bar Tension

NOTE: For this procedure, refer to FIGURE 4.

1. Examine the top of the quad link to locate the set screw between the front and rear portions of the quad link.
2. Turn the set screw to adjust the linkage bar tension:
 - Clockwise - Loosens the linkage bar tension and makes the quad link easier to operate.
 - Counterclockwise - Tightens the linkage bar tension and makes the quad link harder to operate.

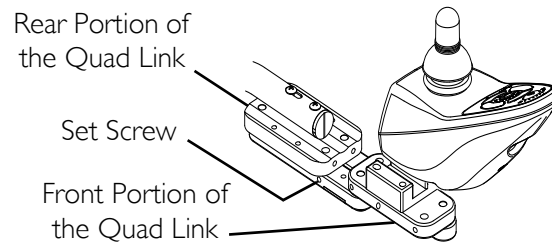


FIGURE 4 Adjusting Lock/Release Tension - Adjusting the Linkage Bar Tension

Adjusting the Spring Tab Tension

NOTE: For this procedure, refer to FIGURE 5.

1. Push outward on the inside surface of the joystick until the quad link is free.
2. If necessary, refer to [Repositioning the Joystick](#) on page 15 to remove the joystick from the quad link.

NOTE: It will be necessary to move the front portion of the quad link to locate both of the set screws.

3. Examine the top of the linkage bars to locate the two set screws between the front and rear portions of the quad link.
4. Turn the set screw to adjust the spring tab tension:
 - Clockwise - Decreases the spring tab tension and makes the quad link easier to operate.
 - Counterclockwise - Increases the spring tab tension and makes the quad link harder to operate.

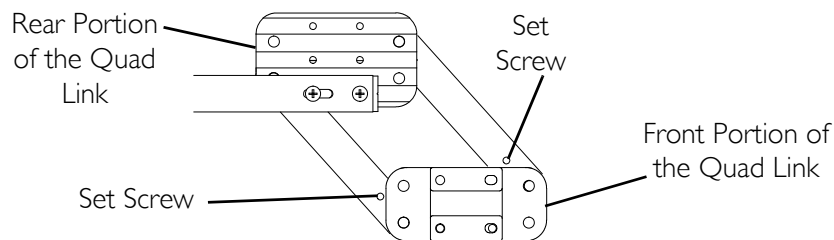


FIGURE 5 Adjusting Lock/Release Tension - Adjusting the Spring Tab Tension

Installing the Joystick Mount

Tube Mount

NOTE: For this procedure, refer to FIGURE 6.

1. If necessary, remove the existing joystick mounting bracket from the wheelchair. Refer to the wheelchair owner's or service manual.
2. Position the joystick mount onto the arm tube.
3. Tighten the three upper set screws to secure the Stealth height adjustable joystick mount to the arm tube.
4. Joystick Mounts Without the Quad Link Installed - Perform the following steps to install a joystick mounting tube into the joystick mount:
 - A. Turn the adjustment lock lever to loosen the joystick mount.
 - B. Insert the joystick mounting tube into the joystick mount to the desired position.
 - C. Turn the adjustment lock lever to tighten the joystick mount.
5. QLAM6, QLA and ARM250 Mounts Only: Adjust the height of the joystick if desired. Refer to Adjusting the Joystick Height (QLAM6, QLA and ARM250 Only) on page 6.
6. Using a tie-wrap, secure the joystick cable to the rear of the joystick mounting tube so that the joystick cable is positioned along the inside of the tube, facing the inside of the wheelchair.

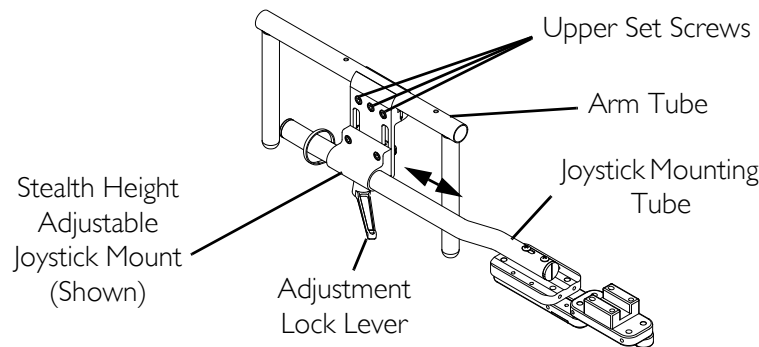


FIGURE 6 Installing the Joystick Mount - Tube Mount

Van Seat Mount

NOTE: For this procedure, refer to FIGURE 7.

1. If necessary, remove the existing joystick mounting bracket from the wheelchair. Refer to the wheelchair owner's or service manual.
2. Position the mounting bracket onto the arm frame.
3. Using the three hex mounting screws, spacers and locknuts secure the mounting bracket to the three mounting holes of the arm frame.
4. Slide joystick mounting tube through the mounting bracket to the desired position.
5. Secure adjustment lock to tube by turning the adjustment lock lever.

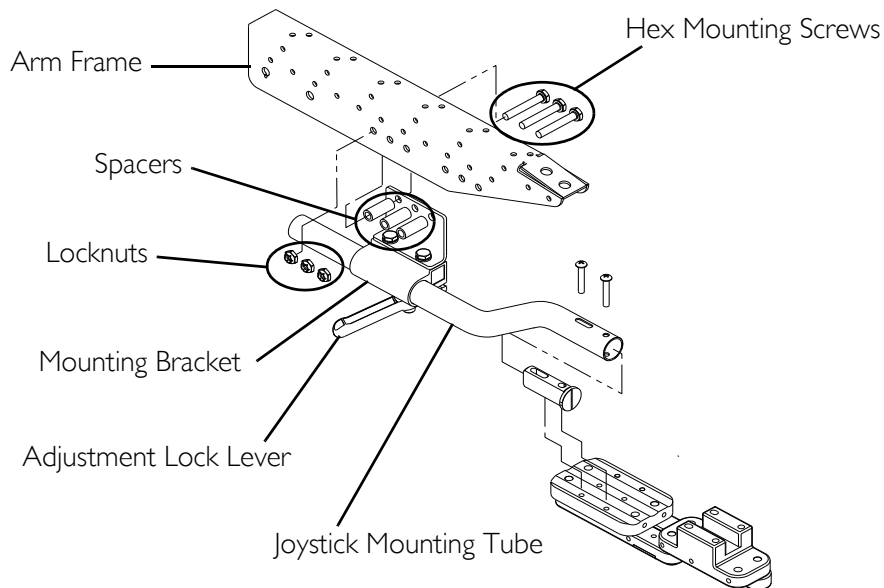


FIGURE 7 Installing the Joystick Mount - Van Seat Mount

Adjusting the Joystick Height (QLAM6, QLA and ARM250 Only)

NOTE: For this procedure, refer to FIGURE 8.

1. Loosen the two set screws on the Stealth height adjustable joystick mount.
2. Push or pull the joystick mounting tube up or down to the desired height.
3. Tighten the two set screws on the Stealth height adjustable joystick mount.

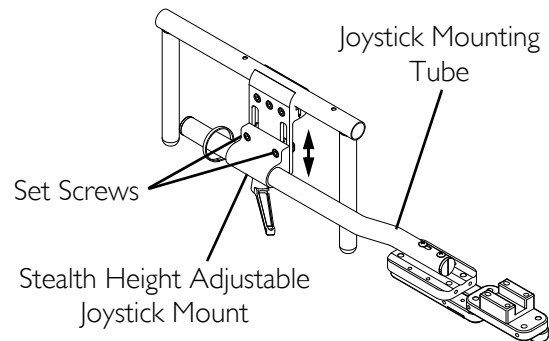


FIGURE 8 Adjusting the Joystick Height (QLAM6, QLA and ARM250 Only)

Installing the Joystick onto the Quad Link

QL and QLA

⚠ WARNING

This procedure MUST be performed by a qualified technician.

NOTE: For this procedure, refer to FIGURE 9 on page 8.

1. Examine Detail "A" to determine where the joystick should be mounted to the adjustable joystick tray.
2. If necessary, remove the adjustable joystick tray from the quad link by performing the following steps:
 - A. Loosen the two cap screws securing the adjustable joystick tray to the quad link.
 - B. Remove the adjustable joystick tray from the quad link.
3. Perform one of the following to install the joystick:
 - MPJ™ Joysticks (Detail "B") - Secure the joystick to the adjustable joystick tray using the two screws and t-nuts.
 - Other Joysticks (Detail "C") - Secure the joystick to the adjustable joystick tray using the two screws. Torque the screws to 32 in-lbs.
 - Touch Pad (Detail "D") - Perform the following steps:
 - i. Secure the touch pad to the touch pad plate using the four short screws.
 - ii. Secure the touch pad plate to the adjustable joystick tray using the two screws.
 - Heavy Duty Joystick (Detail "E") - Perform the following steps:
 - i. Secure the heavy duty joystick to the heavy duty plate using the two short screws.
 - ii. Secure the heavy duty plate to the adjustable joystick tray using the two screws.
4. Perform one of the following to install an additional controller:
 - 4-Way Switch (Detail "F") - Perform the following steps:
 - i. Secure the 4-way switch to the 4-way bracket using the two short screws and two washers.
 - ii. Secure the 4-way bracket to the adjustable joystick tray using the two screws and two locknuts.
 - TRSS (Detail "G") - Perform the following steps:
 - i. Secure the TRSS bracket to the adjustable joystick tray using the two screws and two locknuts.
 - ii. Secure the TRSS to the TRSS bracket using the two short screws.
5. Insert the adjustable joystick tray into large hole in the quad link.

6. Adjust the adjustable joystick tray to the desired position. Refer to Adjusting the Joystick Position on page 10.
7. Secure the joystick cable. Refer to Securing the Joystick Cable on page 11.

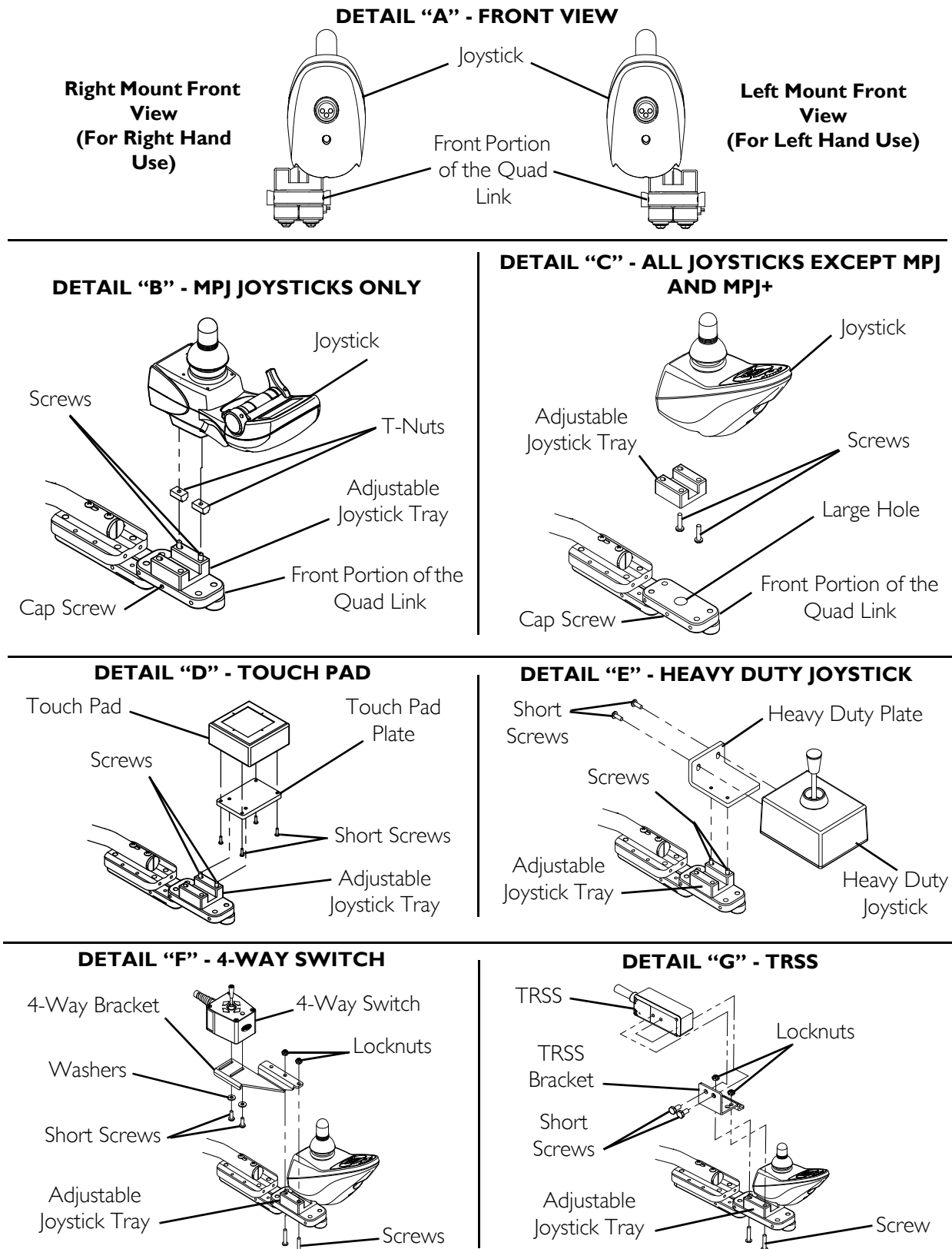


FIGURE 9 Installing the Joystick onto the Quad Link - QL and QLA

MPJ+ on QLM6 or QLAM6 ONLY

⚠ WARNING

This procedure MUST be performed by a qualified technician.

NOTE: For this procedure, refer to FIGURE 10.

1. Examine Detail "A" to determine where the joystick should be mounted to the adjustable joystick tray.

NOTE: If installing a 4-way switch, position the 4-way switch bracket between the joystick clamp and quad link when installing the joystick clamp.

2. Using the two mounting screws secure the joystick clamp, cable bracket and, if necessary, 4-way switch bracket to the quad link.
3. Place the MPJ+ joystick base into the joystick clamp.
4. Rotate the MPJ+ joystick to the desired angle.
5. Using the threaded pin, washer and socket head screw, secure the MPJ+ joystick to the joystick clamp.
6. If necessary, use the two short mounting screws and washers to secure the 4-way switch to the 4-way switch bracket.

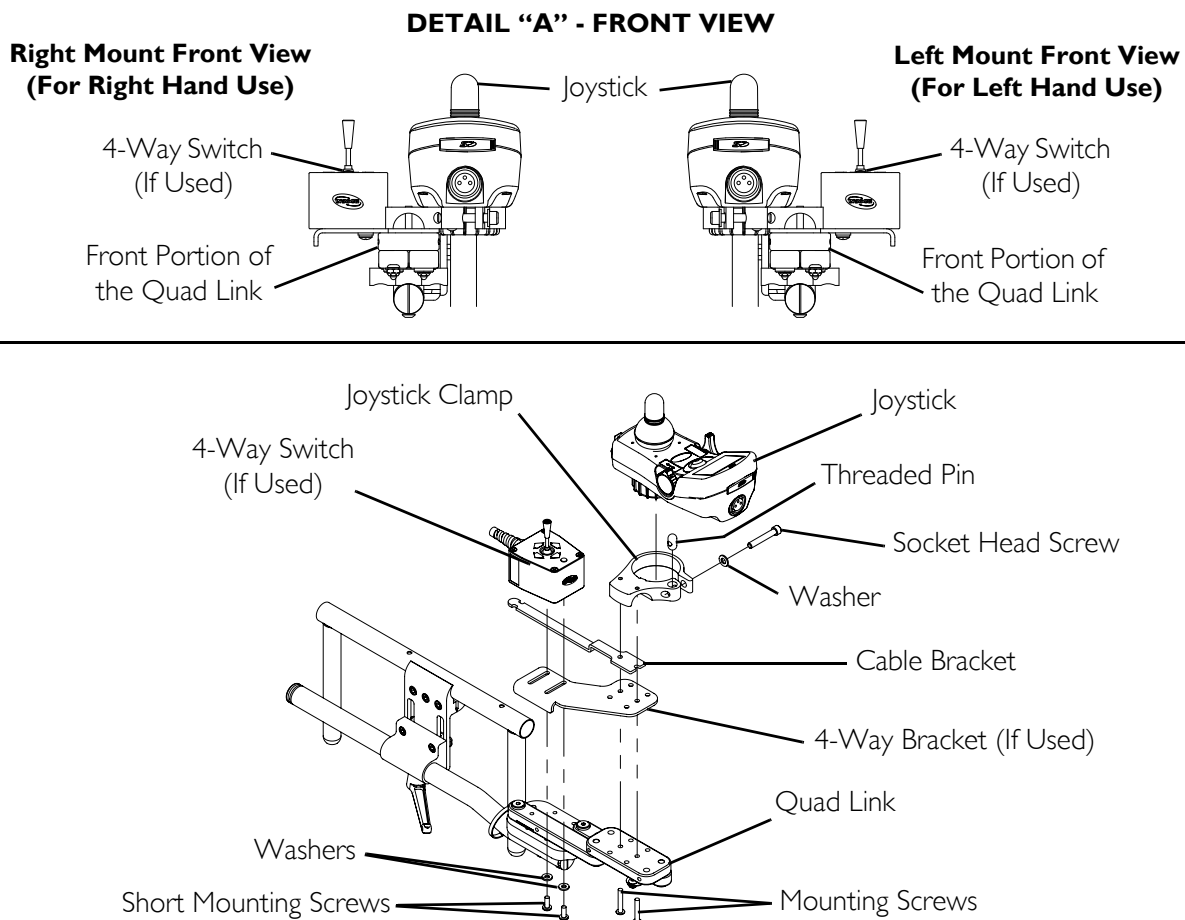


FIGURE 10 Installing the Joystick onto the Quad Link - MPJ+ on QLM6 or QLAM6 ONLY

Adjusting the Joystick Position

QLA Only

NOTE: For this procedure, refer to FIGURE 11.

NOTE: Perform this procedure to adjust the position of the joystick on the quad link. The joystick can be rotated in 45° increments.

1. Loosen the two cap screws securing the adjustable joystick tray to the quad link.
2. Rotate the joystick to the desired position.
3. Tighten the two cap screws to secure the adjustable joystick tray to the quad link.

NOTE: The two cap screws should be tightened flush against one of the sides of the adjustable joystick tray mounting post (NOT SHOWN - located on the underside of the adjustable joystick tray).

DETAIL "A" - ADJUSTABLE JOYSTICK TRAY POST - TOP VIEW

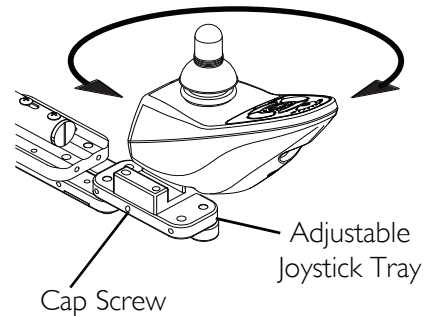
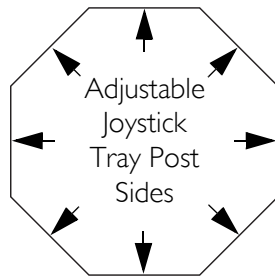


FIGURE 11 Adjusting the Joystick Position - QLA Only

QLAM6 Only

NOTE: For this procedure, refer to FIGURE 12.

NOTE: Perform this procedure to adjust the position of the joystick on the quad link. The joystick can be rotated in 45° increments.

1. Loosen, but DO NOT remove the socket head screw securing the joystick to the joystick clamp.
2. Lift and rotate the joystick to the desired position.
3. Lower the joystick into the joystick clamp.
4. Tighten the socket head screw securing the joystick to the joystick clamp.

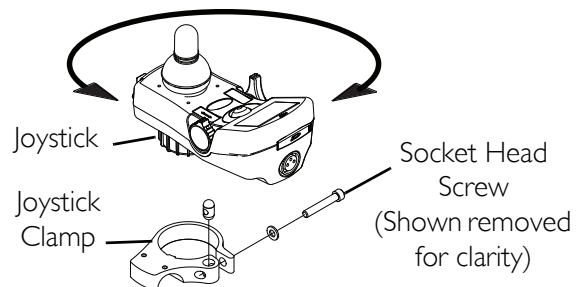


FIGURE 12 Adjusting the Joystick Position - QLAM6 Only

Securing the Joystick Cable

NOTE: For this procedure, refer to FIGURE 13.

NOTE: To ensure proper use and operation of the quad link, the joystick cable must be properly secured.

1. If present, secure the joystick cable to the cable bracket.
2. Position the joystick cable along the joystick mounting tube.
3. Using a tie-wrap, secure the joystick cable to the rear of the joystick mounting tube so that the joystick cable is positioned along the inside of the tube, facing the inside of the wheelchair.

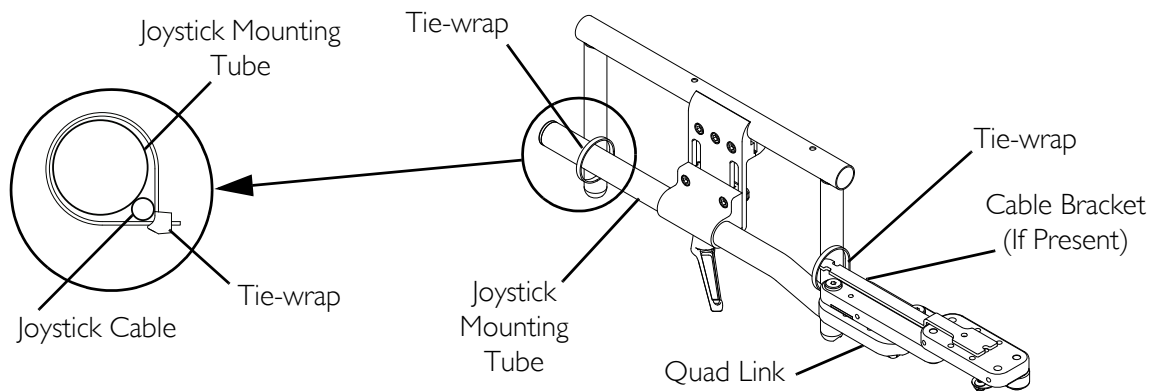


FIGURE 13 Securing the Joystick Cable

Reversing the Mounting Position

⚠ WARNING

This procedure MUST be performed by a qualified technician.

NOTE: Perform this procedure to reverse the quad link from the right side to the left or vice-versa.

NOTE: Take note of position and orientation of mounting hardware for reinstalling the joystick assembly (joystick mount, quad link and joystick).

Repositioning the Joystick Mount

Tube Mount

NOTE: For this procedure, refer to FIGURE 14.

NOTE: This procedure applies to both fixed and adjustable height joystick mounts.

1. Turn the adjustment lock lever to remove the joystick mounting tube from the joystick mount.
2. Loosen the three upper set screws securing the joystick mount to the arm tube.
3. Remove the joystick mount.
4. Install the joystick mount onto the opposite arm tube.
5. Tighten the three upper set screws to secure the joystick mount to the arm tube.
6. Install the joystick mounting tube into the joystick mount.
7. Turn the adjustment lock lever to secure the joystick mounting tube at the desired position.

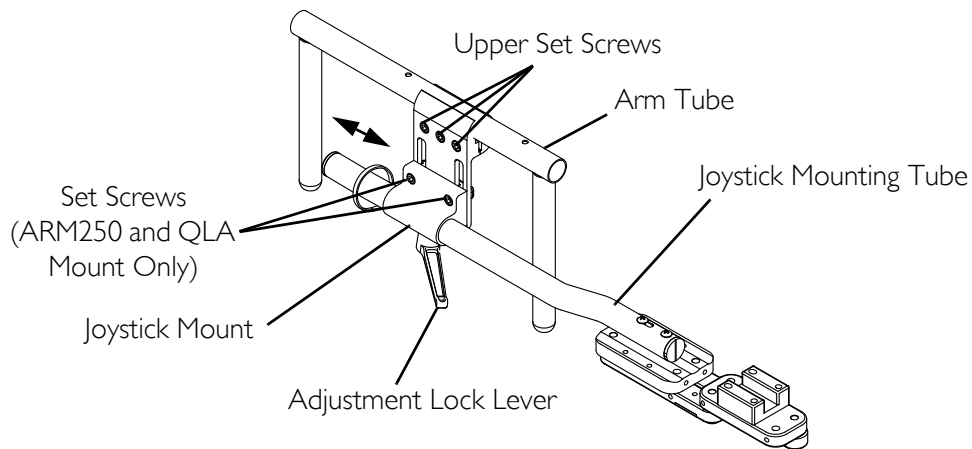


FIGURE 14 Repositioning the Joystick Mount - Tube Mount

Van Seat Mount

NOTE: For this procedure, refer to FIGURE 15.

1. Turn the adjustment lock lever to remove the joystick mounting tube from the mounting bracket.
2. Remove the three hex mounting screws, spacers and locknuts that secure the mounting bracket to the three mounting holes of the arm frame.

NOTE: The mounting bracket is mounted to the inside of the arm frame.

3. Reposition the mounting bracket on the opposite arm frame.
4. Using the three hex mounting screws, spacers and locknuts secure the mounting bracket to the three mounting holes of the arm frame.
5. Slide joystick mounting tube through the mounting bracket to the desired position and securely tighten the adjustment lock lever.

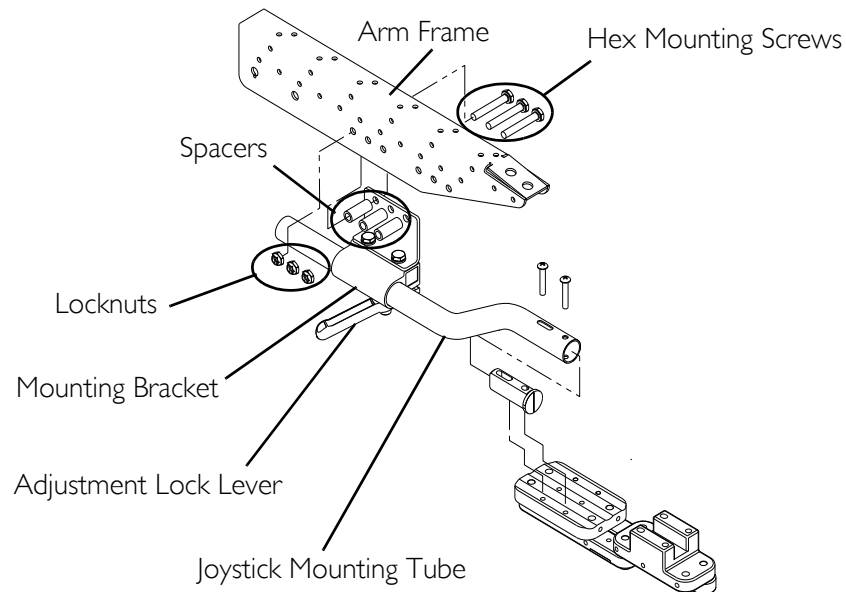


FIGURE 15 Repositioning the Joystick Mount - Van Seat Mount

Repositioning the Quad Link

NOTE: For this procedure, refer to FIGURE 16.

1. Remove the four set screws securing the four shoulder screws to the quad link (Detail "A").

NOTE: Each corner mounting hole in the front or rear portion of the quad link has a corresponding set screw mounting hole. The set screw mounting hole will be along the edge of the quad link near the corners (Detail "A").

2. Remove the four shoulder screws securing the linkage bars to the front and rear portions of the quad link.

NOTE: The linkage bars will disconnect from each other and the quad link.

3. Rearrange the linkage bars to the desired position shown in Detail "B".

NOTE: The linkage bars will align to a different set of mounting holes than the ones previously used.

NOTE: Ensure the tab is aligned with a tab mounting hole (Detail "A").

4. Secure the linkage bars to the front and rear portions of the quad link using the four shoulder screws.

5. Secure the four shoulder screws to the quad link using the four set screws.

NOTE: Each corner mounting hole in the front or rear portion of the quad link has a corresponding set screw mounting hole. The set screw mounting hole will be along the edge of the quad link near the corners (Detail "A").

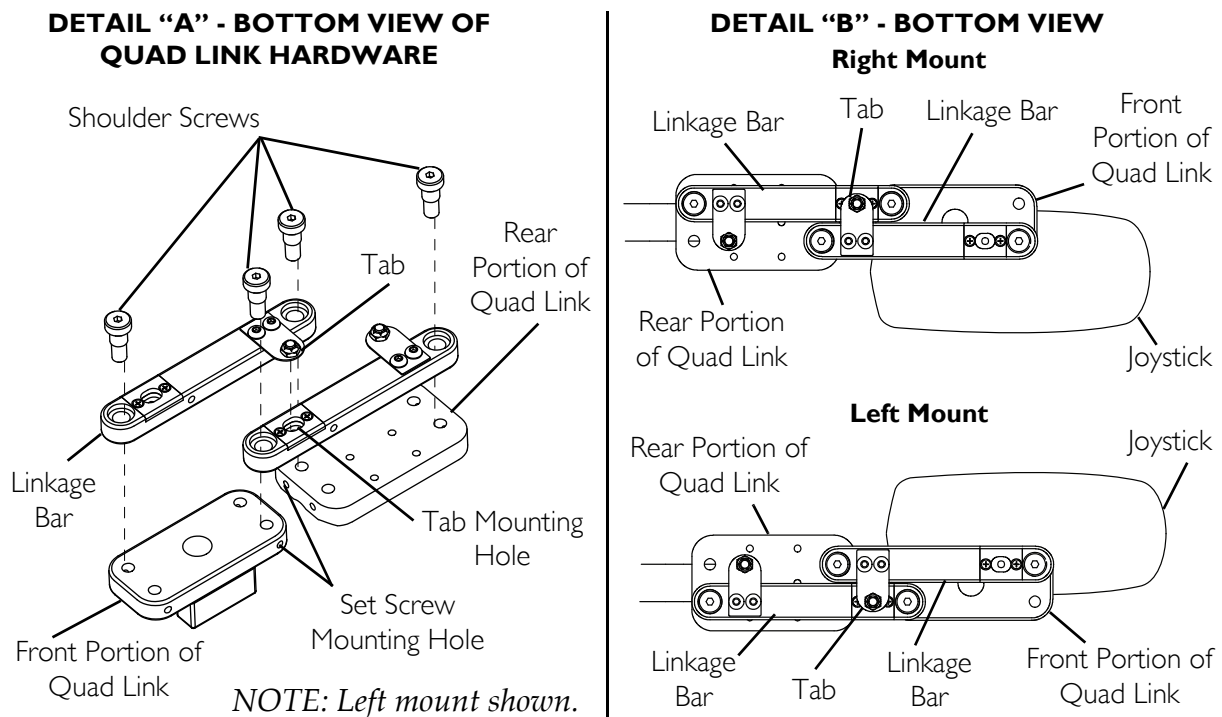


FIGURE 16 Repositioning the Quad Link

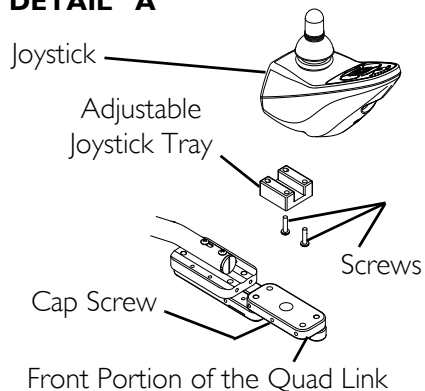
Repositioning the Joystick

NOTE: For this procedure, refer to FIGURE 17 on page 15.

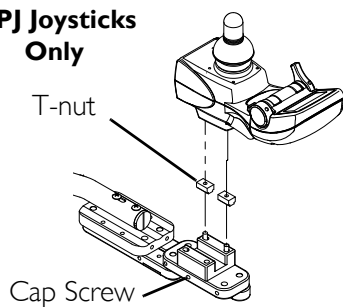
1. For QL or QLA ONLY perform the following (Detail "A"):
 - A. Loosen the two cap screws securing the adjustable joystick tray to the front of the quad link.
 - B. Remove the joystick with the adjustable joystick tray attached.
 - C. Remove the two screws securing joystick to the adjustable joystick tray.

NOTE: MPJ Joysticks Only - The two t-nuts installed between the joystick and adjustable joystick tray will fall out during screw removal. Retain the t-nuts for proper reinstallation.
2. For MPJ+ on QLM6 or QLAM6 ONLY perform the following (Detail "B"):
 - A. Loosen but DO NOT remove the button head screw and threaded pin securing the joystick to the joystick clamp.
 - B. Remove the joystick from the joystick clamp.
 - C. Remove the two mounting screws securing the joystick clamp (and 4-way switch bracket if installed) to the quad link.
3. Install the joystick on the opposite side of the adjustable joystick tray. Refer to Installing the Joystick onto the Quad Link on page 7.

DETAIL "A"



MPJ Joysticks Only



DETAIL "B"

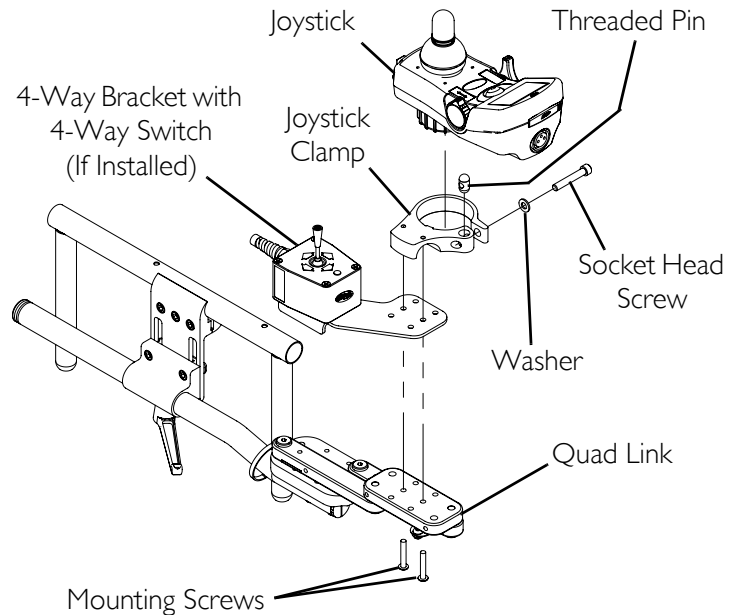


FIGURE 17 Repositioning the Joystick

LIMITED WARRANTY

PLEASE NOTE: THE WARRANTY BELOW HAS BEEN DRAFTED TO COMPLY WITH FEDERAL LAW APPLICABLE TO PRODUCTS MANUFACTURED AFTER JULY 4, 1975.

This warranty is extended only to the original purchaser/user of our products.

This warranty gives you specific legal rights and you may also have other legal rights which vary from state to state.

Invacare warrants its product to be free from defects in materials and workmanship for two years for the original purchaser. If within such warranty period any such product shall be proven to be defective, such product shall be repaired or replaced, at Invacare's option. This warranty does not include any labor or shipping charges incurred in replacement part installation or repair of any such product. Invacare's sole obligation and your exclusive remedy under this warranty shall be limited to such repair and/or replacement.

For warranty service, please contact the dealer from whom you purchased your Invacare product. In the event you do not receive satisfactory warranty service, please write directly to Invacare at the address on the back cover. Provide dealer's name, address, model number, and the date of purchase, indicate nature of the defect and, if the product is serialized, indicate the serial number.

Invacare Corporation will issue a return authorization. The defective unit or parts must be returned for warranty inspection using the serial number, when applicable, as identification within thirty (30) days of return authorization date. **DO NOT** return products to our factory without our prior consent. C.O.D. shipments will be refused; please prepay shipping charges.

LIMITATIONS AND EXCLUSIONS: THE FOREGOING WARRANTY SHALL NOT APPLY TO SERIAL NUMBERED PRODUCTS IF THE SERIAL NUMBER HAS BEEN REMOVED OR DEFACED, PRODUCTS SUBJECTED TO NEGLIGENCE, ACCIDENT, IMPROPER OPERATION, MAINTENANCE OR STORAGE, COMMERCIAL OR INSTITUTIONAL USE, PRODUCTS MODIFIED WITHOUT INVACARE'S EXPRESS WRITTEN CONSENT INCLUDING, BUT NOT LIMITED TO, MODIFICATION THROUGH THE USE OF UNAUTHORIZED PARTS OR ATTACHMENTS; PRODUCTS DAMAGED BY REASON OF REPAIRS MADE TO ANY COMPONENT WITHOUT THE SPECIFIC CONSENT OF INVACARE, OR TO A PRODUCT DAMAGED BY CIRCUMSTANCES BEYOND INVACARE'S CONTROL, AND SUCH EVALUATION WILL BE SOLELY DETERMINED BY INVACARE. THE WARRANTY SHALL NOT APPLY TO PROBLEMS ARISING FROM NORMAL WEAR OR FAILURE TO ADHERE TO THESE INSTRUCTIONS.

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THIS WARRANTY SHALL BE EXTENDED TO COMPLY WITH STATE/PROVINCIAL LAWS AND REQUIREMENTS.

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