

Quadbar Flexi™ 501 and 501QR Hand Book 3/19

QB Industries 7 Margaret Street CLIFTON, QLD Australia +61746123100 www.quadbar.com

The 'QUADBAR FLEXI'™ – Crush / Operator Protection Device (CPD) (OPD)

SAFETY

Use the Quadbar Flexi™ in conjunction with other safety measures. Consider using an alternative vehicle suited to the particular task; train riders in the use of the quad with the Quadbar fitted and use of Personal Protection Equipment (PPE) required for safe operation.

Undertake a risk assessment of the implications of fitting a Quadbar and take appropriate steps to avoid any threat to injury. Assess any risks associated with or limitations the Quadbar may place on use of the quad or any accessories and take steps to ensure safe operation. Always be aware of the height of the Quadbar to avoid obstacles (as you would with the width of the quad) the flexible joint is only designed for inadvertent contact with an obstacle. Never use the Quadbar to support a load, including persons or loads on the carry rack and any other loads. Don't use the Quadbar as a tow or pull point. For your safety, QB Industries recommends that you don't tow a trailer or other load with a quad that is fitted with a Quadbar. Safety organisations and some government regulators prohibit or advise not to tow anything with a quad, regardless of whether or not a Quadbar is fitted. They suggest a better suited vehicle for towing be used.

Maintain in sound condition the Quadbar, mounts and mounting points. Replace or refurbish the complete "flexi joint" after heavy contact with an overhead obstacle. Replace or refurbish complete structure after a vehicle rollover.

Upon fitment of a Quadbar, DO NOT:

- use the Quadbar to support a load, including persons, loads on the carry rack and any loads attached to the quad, including any accessories, tools, or other aids.
- make any modifications to the Quadbar without the express permission and sanction (in writing) from QB Industries Pty Ltd Don't modify, repair, drill holes or weld
- Use the quad in a manner that would increase the risk of roll over
- Use the Quadbar for any other purpose
- Use the Quadbar with any operator restraints or seatbelt of any kind
- In the event of a rollover or other damage, always replace the Quadbar and damaged quad parts, or arrange an inspection by a qualified person to certify there is no structural damage.

Specifications and ratings

- Maximum dry vehicle weight 400kg
- 50mm Aluminium tube
- Horizontal variance between tow bar & rack 150 – 260 mm
- Overall height 1400 mm
- Approximate height above seat level 800 mm
- Weight 9.5 kg
- Padding 25mm Polyurethane.
- Fittings laser cut for accuracy and consistency, Fittings zinc plated

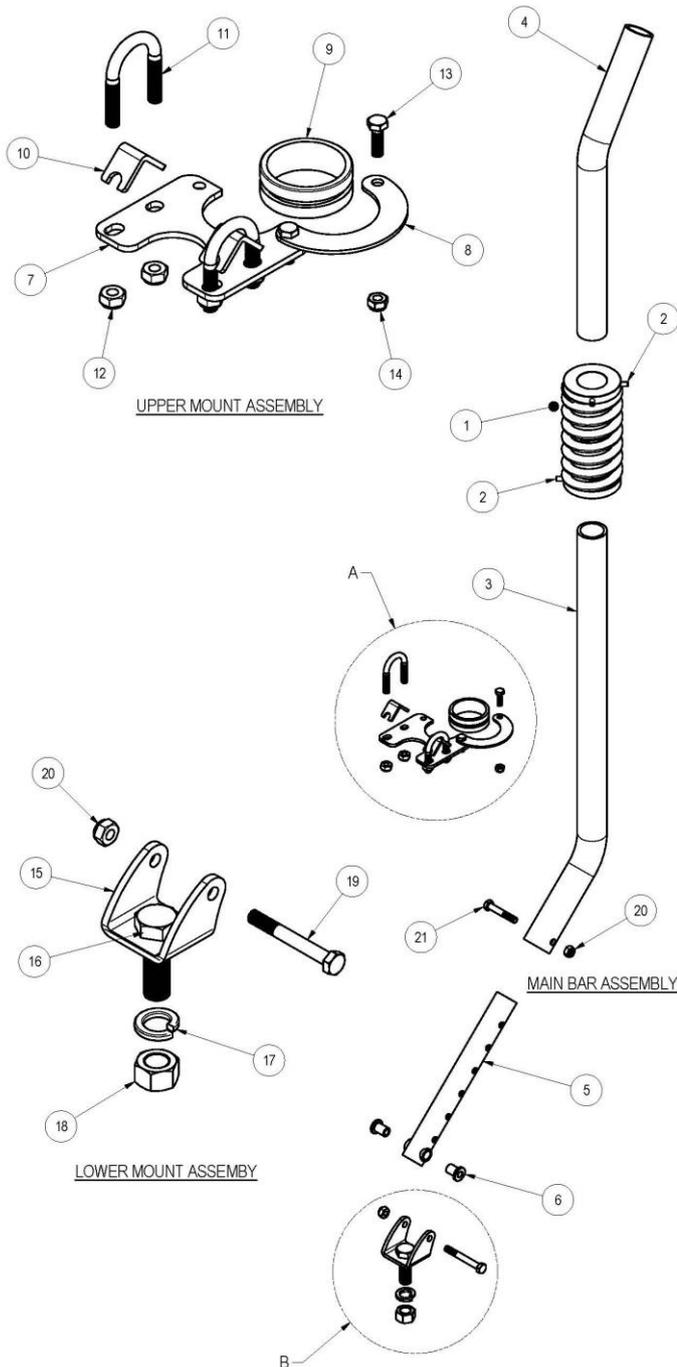
Maintenance

1. Update safety and maintenance advice via Quadbar.com (Quadbar Manual)
2. Keep Quadbar clean and free of abrasive material
3. Lubrication – may be applied if required to bushes provided the lubricant materials does not attract and retain abrasive material such as sand
4. Weekly – visual inspection for damage, wear, structure corrosion, cracks and any sign of potential structure failure. Any defective part must be replaced immediately. Ensure warning labels are clean, replace if destroyed, missing, painted over or unreadable
5. 6 months – Inspect parts wear. Movement is allowed however replace any part of the component that exceeds the following tolerances:
 - Bolt (#19) and bushes (#6) 1 mm of wear or clearance.
 - Tube (#3) minimum diameter 49.7mm and Bush (#9) inside diameter no greater than 53mm

Operation- As per the quad owner's manual and as set out in "safety" section above

Decommissioning The major components of the Quadbar constitute steel and aluminium which are easily separated and readily recyclable. Not to be disposed of via landfill.

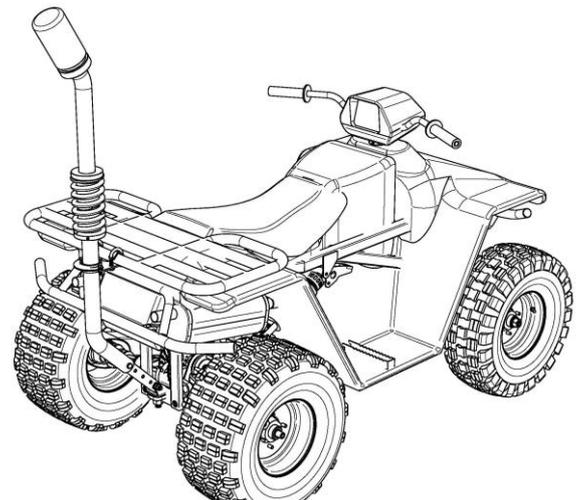
Mechanical parts drawing



Mechanical parts list

#	PART	DESCRIPTION	QTY
1	FLEXI01	FLEXI JOINT ASSEMBLY	1
2	M815GS	M8 SET / GRUB SCREW	4
3	FMS01	MAIN STRUCTURE	1
4	FUS01	UPPER STRUCTURE	1
5	FBT01	BOTTOM INNER TUBE	1
6	FNB10	10 x 16 NYLON BUSH	2
7	FUMP01	UPPER MOUNT PLATE	1
8	FRET01	RETAINER PLATE	1
9	FNB50	MAIN NYLON BUSH	1
10	STI 01	STIFFENER PLATE	2
11	UB1028	M10 HT U-BOLT	2
12	M10NN	M10 NYLOCK NUT	4
13	M820HT	M8 HT BOLT 20mm	2
14	M08NN	M8 NYLOCK NUT	2
15	FLMP01	LOWER MOUNT PLATE	1
16	3/4HT2	3/4 HT BOLT UNF 60mm	1
17	SW3/4	3/4 SPRING WASHER	1
18	NUT 3/4	3/4 UNF NUT	1
19	M1080HT	M10 HT BOLT 80mm	1
20	M10NN	M10 NYLOCK NUT	2
21	M1065HT	M10 HT BOLT 65mm	1
	WPLATE	Warning PLATE	1
	FP501	FOAM PADDING	1
	HB501	HAND BOOK	1

Constructed view



Quadbar Fitting Instructions

Strongly recommended *Fitting Instructions video* <https://www.quadbar.com/the-quadbar/fitting-specifications.html>

It is recommended that a qualified tradesperson fit a Quadbar, however we recognise that in some circumstances qualified tradespersons may not be readily available. Therefore, a suitably experienced person with appropriate mechanical knowledge and experience may fit the Quadbar. Note that a suitable person will be fitting the Quadbar, details of how to perform some tasks are not described for instance how to correctly and safely cut the tubing. First read the section "Warranty and sales contract" particularly reading the "Installer" section. It is the responsibility of the person assembling the Quadbar to ensure that fitment of the Quadbar is sound and secure.

It is important to ensure correct tension on the nuts and bolts is achieved. Bolt (16) and Nut (18) Torque setting is 170Nm [125ft-lb]. Bolts (19) (21) and nuts (20) should be "tightened to the point where there is no slack left in the bolt" (i.e. the flanges of the bolt and the nut are just firm against their respective surfaces) then tighten a further 3/4 to

1 full turn. Ensure bolts and nuts (13-14) are tightened securely with a hand wrench/spanner. Set/grub screws (2) must be tightened ½ a turn after firm contact with the tube. U-bolts and nuts (11 and 12) in conjunction with Stiffener plate (10) and the Upper Mounting Plate (7) should be tightened to the point where there is no slack left (the Upper Mounting Plate is stiff to move up or down with one finger on round tube) ; then tighten both nuts on each leg of the each U-bolt a further 1 full turn to 1½ each.

The Aim is to securely mount the Quadbar as close as possible to vertically (90° to the horizontal plane on the quad) as shown above. **This also means** -For quad with a swing axle design, the Quadbar must be adjusted so that the suspension can move through its **full travel** without interference of the Quadbar sliding bush with the main structure. This is achieved by the vertical adjustment and the alignment of the bush to the Quadbar. Vertical adjustment in the longitudinal direction is achieved by a) selecting the correct adjustment holes in the (5) bottom inner tube and b) the orientation (forward or rearwards) of (15) Lower mounting plate. This will require some skill and thought. If the adjustment requires the use of the lower holes in the bottom inner tubes (5) it will need to be removed and cut to an appropriate length. Ensure it is absolutely necessary to cut prior to cutting and that at least 50mm -100mm of tube remains above the hole that is to be used. **Tip:** change the orientation of (15) Lower mounting plate too achieve adjustment before cutting.

- I. **To Start:** Place quad on level flat surface.
- II. **Upper Mount Assembly (A):** assemble 7,8,9,13,14 and tighten nuts (14) securely. Using the U-bolts (11) and Nuts (12) with Stiffener Plates (10 round tube only), evenly secure the assembly loosely (nuts contact their surfaces but not tight) to the rear cargo rack directly above the to hitch point. The most structurally sound part must be used. For some models, an adaptor plate is available and must be used to connect the Upper Mount Assembly to the frame of the quad.
- III. **Lower Mount Assembly:** Place the lower mount plate (15) on top of the tow bar/ hitch and secure loosely with bolt, washer and nut (16, 17, 18). Fit the small nylon bushes (6) into Bottom inner tube (5) and attach to the lower mounting plate (15) with bolt and nut (19 & 20) ‘finger tight’.
- IV. **Main structure:** Insert the long end of main structure tube (3) up from below into the main nylon bush (9) and slide the other end over the Bottom inner tube (5) and use bolt (21) to identify the correct adjustment hole required. Insert the bolt (21) to secure the Main structure tube (3) too Bottom inner tube (5). Check that the vertical alignment is correct and adjust using the holes and the orientation of the Lower mounting plate (15) as described above. You may need to cut the Bottom inner tube (5) if needed to make use of the bottom holes, ensuring there is at least 50mm of tube remaining above the hole. If in doubt, cut through the centre of the upper most hole and refit, if more adjustment is required, cut off at the next hole down, and so on.
- V. **Adjust to vertical:** Check and adjust so that the Quadbar is vertical, and on swing axle quads suspension, that the full movement of the suspension without fouling of the main bush (7) on the main structure (manually **fully** move the suspension both down and up) Don’t tighten bolts at this stage.
- VI. **Adjust the height:** Place the Flexi joint (1) over the Main structure (3) (the label- “TOP REAR” upwards and to the approximate back/ rear direction) and insert the long end of the Upper structure (4) into the Flexi joint ensuring they are both fully ‘home’. The optimum height is between eye level and the top of the average operators / rider’s head when seated in the normal operating position. Check the height of the top of the Upper structure and measure the distance from the bottom of the Flexi Joint to the Main bush. The long end of the Main structure (3) can be cut down to achieve the desired height, however there must be a minimum of 75mm* and a maximum of 150mm from the bottom face of the Flexi Joint to the top face of the Main bush. ***Note that 80mm of the Main structure is inserted into the Flexi joint so 80+75= 155mm is the minimum above the top of the Main bush.** Remove the Main structure (3) and trim as needed and reassemble.
- VII. **Orientate the Flexi joint and the Upper structure (4).** Rotate the Flexi joint (1) on the main structure so the at so that the two chamfered facers in the middle of the spring ends are facing rearwards. Orientate the bend in Upper structure rearwards. Tighten as described above, the grub / set screws (2) to lock in position. For Quick release modes; the Upper structure is removable, a bolt and collar is used to tighten it into position.
- VIII. **Secure the main structure:** Evenly tighten, as described above, the Nuts (12) of the U-bolts (11) ensuring the requirements of V. above are met. Tighten all bolts (16, 19, 21,) and nuts to their required tension as described above
- IX. **Recheck:** Go through all the details in this document in full including I -VIII above and check everything is correct and tighten all bolts as required
- X. **Fit protective foam:** tubing over the upper structure (4) [not shown].
- XI. **Store safely the paperwork [Hand book] and advise the customer and future users or this document and the details it contains**

Warranty and sales contract

By purchasing and fitting a Quadbar, the purchaser enters into this contract agreement with the manufacturer of the Quadbar. The Manufacturer supplies a multifit model Quadbar in good faith but does not guarantee that it will fit all makes and models, or that the points used to mount the Quadbar or the Quadbar have sufficient strength to withstand the forces of all rollovers. The Purchaser is responsible for determining the suitability of the Quadbar to the specific use, make and model of quad bike that Purchaser intends to fit the Quadbar to, and understands there may be some risks of increased injury in some cases

Manufacturer (Principal)

The Manufacturer claims, subject to the conditions below, that the Quadbar is designed to reduce the overall risk of injury in the event of a rollover, when the quad bike is used in a responsible manner and in accordance with the quad manufacturer's recommendations, having regard to all changes including vehicle dynamics arising from the fitting of the Quadbar.

The Quadbar Manufacturer provides warranty only on the replacement of parts including delivery to the Installer or, if there is no Installer, the reseller, when the parts are deemed by the Manufacturer in the Manufacturer's absolute discretion, when undue wear and tear occurs (not resulting from misuse) within a 12-month period after the sale of the product.

Warranty does not include the Manufacturer accepting any liability for all or any damage to the Quadbar, quad, persons, property or third party of any type. Furthermore, warranty excludes liability for, but not restricted to the following:

1. corrosion of any type.
2. abuse or misuse.
3. damage in any event, including roll over.
4. incorrect or poor instillation, construction or fitment.
5. fitting of the Quadbar for inappropriate use.
6. changes in vehicle dynamics.
7. breach of conditions, maintenance and safety requirements.
8. damage in transport.
9. injury of any type.

If, despite the above, the manufacturer is found liable to pay damages to any property or person, that liability shall, to the full extent allowed at law, be limited to the cost of replacing the defective part or parts or the sum of AU\$600.00 whichever the Manufacturer in its absolute discretion shall elect.

Installer

The Quadbar is supplied in kit form. The person or entity fitting the Quadbar is referred to as the "Installer" and is responsible for:

1. assessing the suitability and soundness of the quad bike to which the Quadbar is to be fitted.
2. the suitability, strength and soundness of the mounting points.
3. the correct and secure fitment.
4. ensuring all components are in sound order prior to fitment.
5. Replace (at Installers cost) any safety labels/ decals obstructed by the fitting of the Quadbar in an appropriate visible position

The Installer is responsible for all labour costs of construction and fitting. In the event of a warranty claim or recall the Installer is responsible for all labour costs and must return any suspected defective parts to the place of purchase (at Installer own cost) for assessment by the Manufacturer or its agents of the warranty claim.

The Installer may in writing assign the role of Installer to the Purchaser. The Purchaser may often also be the Installer.

Purchaser

The Purchaser (and other users) of the Quadbar agree to the Warranty and Sales Contract Terms as set out above.

The Purchaser (and other users) of the Quadbar agrees to:

1. abide by any safety directions printed on the Quadbar, the owner's manual or any other safety directions.
2. assess any benefits, risks and limitations which may occur from use, including the use of other attachments and towed accessories.
3. include any other safety measures appropriate to use, such user training, personal protective equipment (PPE) etc.
4. not take unnecessary risks that may increase the likelihood of rollover because a Quadbar is fitted.
5. maintain the Quadbar in sound condition.
6. replace the Quadbar in the event of an event that might case damage; including and contact or rollover.
7. agree that the Quadbar is supplied (not withstanding manufacturing, testing and distribution lag time) with the design, materials, current available technology and knowledge available at the time of manufacture.

The Purchaser warrants with the Principal that the Purchaser shall ensure that each user of the Quadbike to which the Quadbar has been fitted is the agent of the Purchaser when using the Quadbike and uses the same subject to the Warranty and Sales Contract and the Purchaser will indemnify and save harmless the Principal for all and any liability the Principal may have to any such user as a result of any alleged failure of the Manufacturer, the Distributor or the Constructor in respect of the manufacture, assembly, distribution, sale and/or installation of the Quadbar.

- In the event of any incident/ loss of control event please contact the manufacturer regarding the details of the event including and damage or injuries and the circumstances of the event. Email info@quadbar.com.au