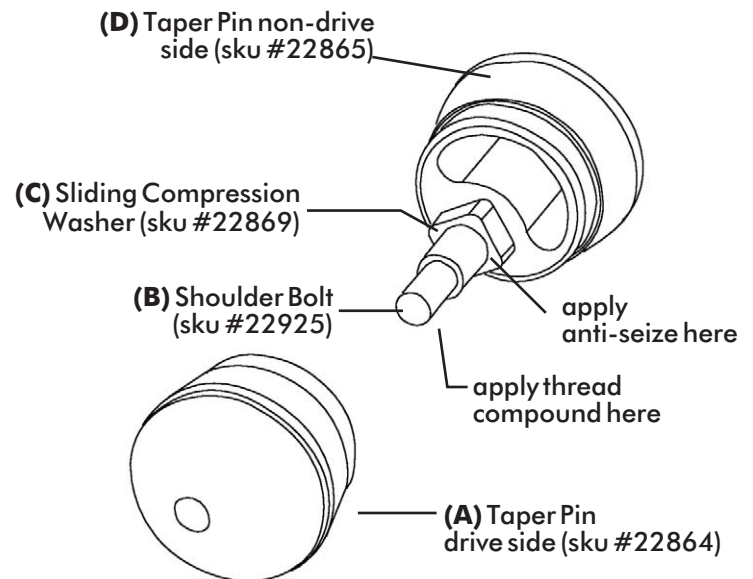
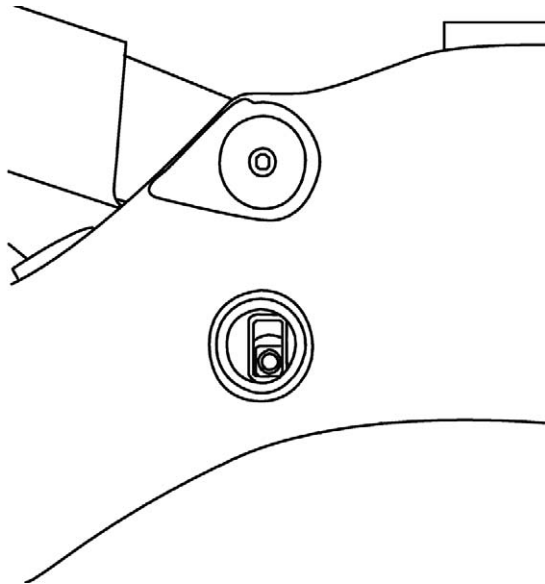


# ROCKET BEAM LOWER PIVOT ASSEMBLY & MAINTENANCE

SOFTTRIDE, Inc.

4201 Meridian Street, Bellingham, WA 98226

(360) 647-7420



## TOOLS NEEDED:

- Torque wrench in inch/pounds with 4mm Allen attachment.
- Loctite 242 or Vibra-tite thread compound
- Silver grade anti-seize
- Rocket Pivot Diagram

## PARTS TO BE REPLACED EVERY 2 YEARS or 5000 MILES

(or every 5000 miles):

22925	Shoulder bolt M8x.1x30m	1
22869	ROCKET 109 pin	1

## ASSEMBLY INSTRUCTIONS:

1. Start removing the taper pins (A/D) assembly by loosening the shoulder bolt (B) three complete turns with a 4mm Allen key. Once loose, break the "seal" between the taper pins (A/D) and the frame tapers (Diagram 2, E) by applying firm inward pressure on the head of the shoulder bolt. Tapping the handle of the wrench lightly may help free the pin. Once the "seal" is broken, unthread the shoulder bolt (B) completely and remove Taper Pin (A) from the frame. Then, making sure not to drop the sliding compression washer (C) into the frame, carefully remove taper pin D along with the shoulder bolt (B) and the sliding compression washer (C) from the frame. Once removed from the frame, treat both taper pins (A/D) with care to insure that they are not damaged or chipped in any way.
2. Thoroughly clean and dry frame tapers (Diagram 2, E), taper pins (A/D), sliding compression washer (C), and shoulder bolt (B) with isopropyl alcohol. Inspect the tapers and taper pins for chips or other damage that could lead to improper function.
3. Before reassembly, apply a light film of Silver grade anti-seize lubrication on the sliding compression washer (C) inside and out. **DO NOT grease the frame tapers (Diagram 2, E) taper pins (A/D) or shoulder bolt's (B) threads.**
4. Apply a coat of Loctite 242 or Vibra-tite on the shoulder bolt's (B) threads and the threads on the taper pin A. **DO NOT** use grease. Allow the locking compound to dry. Then, take all prepped parts

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and begin reinstallation by placing the shoulder bolt (B) through the non-threaded taper pin (D). Fit the lubricated Sliding Compression Washer (C) onto the shaft of the shoulder bolt (B) before following Step 5.

5. With the Upper Pivot Assembly and beam in place (see Upper Pivot Assembly Instructions), insert the beam into the frame slot and allow the beam to pivot down until it is visible through the frame tapers Diagram 2, E) Install the built taper pin D assembly from Step 4 through the non-drive side of the frame taper (Diagram 2, E) while making sure that the shoulder bolt (B) shaft and sliding compression washer (C) fit completely within the beam's 1 1/9 Ring (Diagram 2, F). Sighting your progress through the drive side Frame taper (Diagram 2, E) makes the process easier. A discrepancy of a millimeter or so between the edges of the 1 1/9 ring (Diagram 2, F) and sliding compression washer (C) is fine because the parts will align when the assembly is tightened. Insert **taper pin (A) into the drive side frame taper** (Diagram 2, E) and loosely thread (being careful not to cross-thread or strip) the shoulder bolt (B) into the threaded taper pin (A).
6. Follow adjustment instructions below to obtain proper seat height before tightening the shoulder bolt (B) with a torque wrench to 75 inch/pounds. After the initial tightening, load the beam by applying your full body weight to the top of the saddle several times. Doing this will allow the pin tapers (A/D) to properly seat in the frame tapers (E). After weighting the beam, return to your tools and re-tighten the shoulder bolt to 75 inch/pounds. Repeat this until the bolt maintains 75 inch/pounds of tightness. Skipping this step can lead to incorrectly seated tapers and incorrect torque specifications, which can lead to the beam slipping due to road vibrations. If the beam is removed, loosened or re-positioned for any reason, the tightening procedure in Step 6 **MUST** be repeated to insure proper function of the assembly.

## **SEAT HEIGHT ADJUSTMENT:**

1. Loosen the shoulder bolt (B) within the height adjustment unit with 3 revolutions as described earlier in step 1, but do not completely remove the shoulder bolt. With both pins free, the beam can be adjusted into the needed position.
  2. Even if you have ridden a SOFTRIDE Classic beam before, your seat height measurements on your Rocket beam will probably differ. If you already know your seat height measurement (center of the bottom bracket to the center of the top of the saddle), you can find your exact Rocket Beam height. This can be accomplished by measuring the amount you pre-load the beam and adding it to your correct traditional height. To accurately measure pre-load follow step 3 below and set the saddle height and fore-aft position on the beam to the same specifications you ride a rigid post with. Place the bike in a trainer or have someone hold the bike perpendicular to the ground, measure the distance from the center of your crank bolt to a marked point on the saddle. Record this number. Then, leaving the bike in the trainer or keeping someone holding the bike perpendicular to the ground, sit and place a normal distribution of weight on the saddle. While weighting the beam (saddle), repeat the measurement from the center of the crank bolt to the marked point on the saddle. Record this number. Find the difference in the two measurements by subtracting the second weighted/pre-loaded number from the first number (example: unweighted measurement = 76.2cm, weighted measurement = 74.93cm, difference is 1.27cm). The difference is how much you pre-load the
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beam and the amount that needs to be added to your correct traditional seat height when setting up the saddle height on your beam. Adjust the beam height (per step 3 below) by the difference and ride. If you do not already know your seat height on a traditional bike, you can start by subtracting three inches from your inseam and set your beam (center of crank bolt to top of saddle) to that height. There are no absolutes here and the only true way to find the end position is to ride and do micro-adjustments until it feels correct.

3. To move the beam up or down, it is best to make large changes in height by manually moving the beam while dialing (twist) the taper units (A/D) in the desired direction of travel. To micro-adjust the height, do not move the beam directly with your hand, instead, just slowly dial the taper pins (A/D) in the direction you wish the beam to move. Even when the shoulder bolt (B) is loose, the weight of the beam will hold the taper pins (A/D) in place, allowing you to use both hands freely to find the proper beam height. Once the height is accomplished, follow Step 6 above.
4. Most riders like to place the nose of the saddle lower than normal because when the beam is loaded, the nose rises up.

## NOTES & HELPFUL HINTS:

- With the exception of routine maintenance for cleaning, SOFTRIDE does not recommend removing or moving the beam once the proper seat adjustment has been achieved. Constant adjustment of the mechanisms can weaken the hardware. If the assembly must be adjusted or removed often, the hardware should be replaced at least once a year to guarantee its integrity.
- Switching taper pin D to the non-drive side is based on the same reasoning that non-drive side pedals are reverse threaded. Load on the beam can slowly work the bolt loose when it is on the drive-train side and could lead to the beam slipping.
- Locktite or Vibra-Tite should be used on the shoulder bolt's (B) thread. **DO NOT** use grease on the bolt threads or on the taper pins (A/D) because it can encourage over-tightening and taper pin (A/D) slippage. Use Silver Grade Anti-seize on the Sliding Compression Washer (C) helps stock friction induced creaking or popping noise between the washer and beam.
- **DO NOT** skip any of Step 6. Every time the pivot bolt is loosened or removed, complete Step 6 or beam slippage will occur.
- At 75 inch/pounds there will still be some slight side-to-side play at the beam-frame junction. Do not fret! It is supposed to be there and was designed into the beam to help encourage better hip alignment for the rider. **DO NOT** keep tightening until all the play is gone, you will jeopardize the integrity of the bolt and eliminate the alignment feature. 75 inch/pounds is the only torque specification recommended by SOFTRIDE and can only be accurately set up with a torque wrench. **DO NOT OVERTIGHTEN.**

Questions?

Call Technical Support from 8 to 5 Pacific at 1-800-557-6387 or visit [www.softride.com](http://www.softride.com)