REDSHIFT

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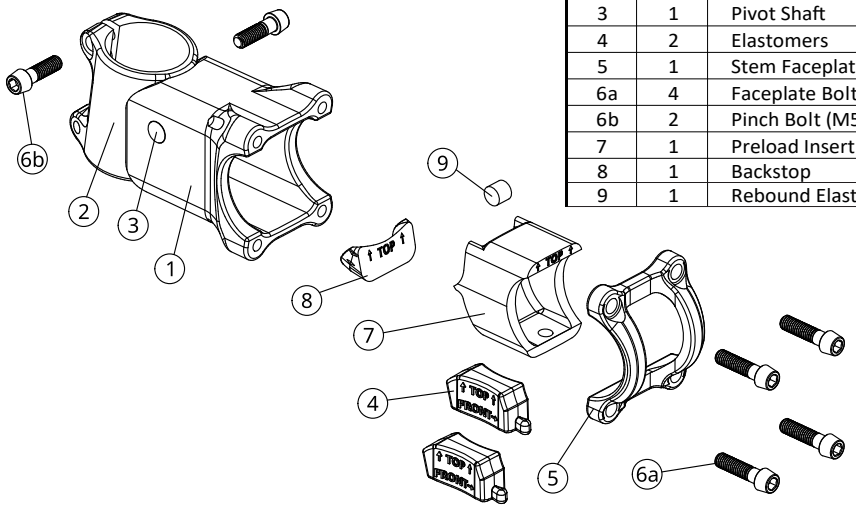
55mm - 70mm SHOCKSTOP SUSPENSION STEM

INSTRUCTIONS

This stem is different than other stems, so please read these instructions and warnings completely before installing or using it. If you are unfamiliar with bike maintenance or stem installation, or if you lack the required tools, please visit your local bike shop or contact Redshift Sports customer service for assistance. Improper installation or use may void the product's warranty policy and may lead to serious injury or death.

Rev. 1



#	QTY	PART NAME
1	1	Stem Tube
2	1	Steerer Tube Clamp
3	1	Pivot Shaft
4	2	Elastomers
5	1	Stem Faceplate
6a	4	Faceplate Bolt (M5 x 20 mm)
6b	2	Pinch Bolt (M5 x 17 mm)
7	1	Preload Insert
8	1	Backstop
9	1	Rebound Elastomer

COMPATIBILITY

- The 55mm, 60mm, & 70mm ShockStop Stem is only compatible with drop handlebars. The ShockStop is not compatible with flat bars or swept back "cruiser" style handlebars.
- The handlebar clamp is 31.8mm and can fit smaller diameter handlebars with appropriately sized shims.
- The ShockStop is designed for use on threadless headsets and is available in 1-1/8" (28.6mm) version (most common) as well as a 1-1/4" (31.8mm) version for oversized steerer tubes.
- If your bike has a quill stem, you will need to install a quill-stem adapter (not included) to use the ShockStop.

TOOLS YOU'LL NEED

- 4mm hex wrench, torque wrench, bicycle grease.

REMOVE YOUR EXISTING STEM

Note: This section describes the removal process for a typical threadless stem. If your bike has a quill stem, you will need to install a quill stem adapter (not included) after removing the stem.

1. Unscrew and remove the faceplate bolts and remove the faceplate to separate the handlebar. You can let the handlebar hang in front of the bike or rest on the front wheel.
2. Loosen the pinch-bolt(s) on your stem's steerer tube clamp.
3. Unscrew and remove the top cap of the steerer tube.
4. Slide the stem off the steerer tube (along with any spacers that are above the stem).

ATTACH THE SHOCKSTOP TO YOUR BICYCLE

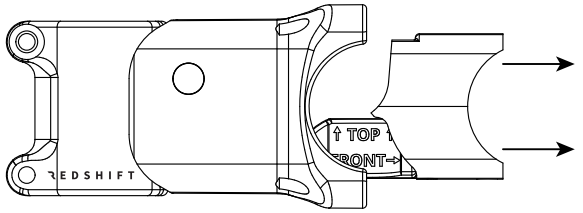
This ShockStop Stem can only be installed in the +6 degree orientation (i.e. tilted slightly upwards).

5. Using a 4mm hex wrench, loosen the two pinch bolts (#6b), and slide the ShockStop steerer tube clamp (#2) onto the steerer tube in the +6 degree orientation such that the REDSHIFT logo on the side of the steerer tube clamp (#2) is upright. Position your bicycle's headset spacers above or below the stem, as desired.
6. Make sure that the top headset spacer (or top of the stem if all spacers are positioned below the stem) is slightly above (about 2-3mm) the top of the steerer tube.
7. Very lightly tighten the 2 pinch bolts (#6b) on the ShockStop in order to keep it from easily sliding back and forth on the steerer tube.
8. Lightly screw the top cap onto the steerer tube until it begins to tighten (you will finish tightening in steps 21-24).

ADJUST ELASTOMER STIFFNESS

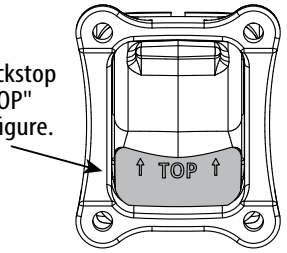
Note: The stem comes with elastomers pre-configured at a medium-stiffness setting that most riders find to be a good fit. You may want to try riding with this default configuration before adjusting stiffness.

9. Using a 4mm hex wrench, loosen and remove the four faceplate bolts (#6a) and remove the faceplate (#5) and handlebar (if installed).
10. Remove the preload insert/elastomer (#7/#4) assembly.



You may need to hook the small end of your 4mm hex wrench in the hole at the bottom of the preload insert (#7) in order to pull the insert out. It may be helpful to push down on the end of the stem tube (#1) to force the preload insert slightly outwards.

11. After removing the preload insert and elastomers, ensure that the backstop (#8) is sitting flush at the back/bottom of the stem tube. The word "TOP" should be visible, with the arrows pointing upward, as shown in the figure.



WARRANTY

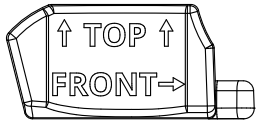
We stand behind the products we sell and want you to have an amazing experience with your Redshift components. Warranty details and return instructions for all Redshift products can be found at www.redshiftsports.com/warranty.

⚠ WARNING

- Failure to follow these instructions and warnings may result in malfunction or breakage of this component, possibly causing serious injury or death.
- Always use a torque wrench when installing or adjusting fasteners, and always tighten to Redshift torque specifications (or the bike manufacturer's torque specification). Periodically check all fasteners for tightness using a torque wrench, since fasteners can loosen under the influence of road vibration.
- Periodically clean and inspect all surfaces of this component for hairline cracks or signs of damage. If you find any cracks or damage, immediately cease using the part and contact Redshift Sports customer service.
- Using the ShockStop stem can affect a bicycle's handling characteristics. Following installation, practice using the ShockStop at low speed in a safe area to get used to the bicycle's responsiveness and steering.
- This stem is intended for use only on paved or unpaved roads. Off-road use may lead to slippage or breakage of the component, possibly causing serious injury or death.

SELECTING ELASTOMERS

The ShockStop can be used with one or two elastomers of varying stiffness in order to tune the feel of the suspension. Each elastomer has a number marking on the side, and higher numbers correspond to a stiffer feel. Below, you'll find charts that show various elastomer configurations ranked in order of effective stiffness. There are many factors that can affect what feels right for a given rider, including rider weight, rider position, handlebar geometry, stem length, riding style, and expected road conditions.



12. Select an elastomer combination from the charts below based on your stem length and rider weight.
Note: These charts should be used as a starting point. Once you have tried the Shockstop, you may wish to change the elastomer combination to fit your preferred ride feel.

55mm & 60mm Stem

Rider Weight lbs	Rider Weight kg	Elastomer 1	Elastomer 2
< 115	< 52	70	none
115 - 135	52 - 61	60	50
135 - 155	61 - 70	70	50
155 - 185	70 - 84	70	60
185 - 205	84 - 93	80	50
> 205	> 93	80	70

70mm Stem

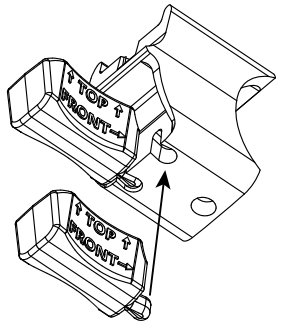
Rider Weight lbs	Rider Weight kg	Elastomer 1	Elastomer 2
< 115	< 52	80	none
115 - 135	52 - 61	70	60
135 - 155	61 - 70	80	60
155 - 185	70 - 84	80	70
185 - 205	84 - 93	90	60
> 205	> 93	90	80

Notes:
- In configurations where Elastomer 2 is "none", do not install a 2nd elastomer (leave it empty).
- Additional combinations are possible. For a full chart of possible elastomer combinations, visit www.redshiftsports.com
- There may be a slight "breaking-in" or softening of the suspension feel during the first ride(s) as the elastomers settle into place.

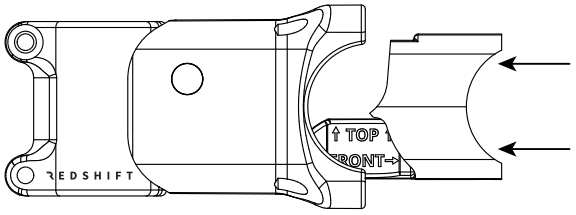
13. Remove the installed elastomer(s) from the preload insert (#7) by pushing them downward.

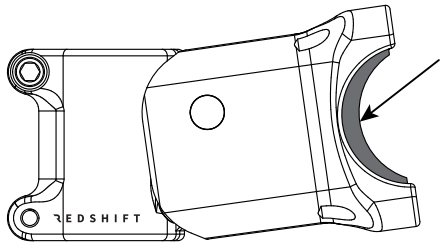
14. Insert the chosen elastomer(s) into preload insert (#7).

    Ensure that the small protrusion at the front of the elastomer is pressed fully into the pocket on the bottom of the preload insert. The "Front" arrow on the elastomers should point towards the preload insert.

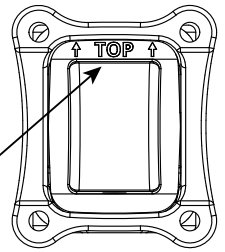


15. Insert the preload insert/elastomer assembly into the stem tube. The elastomers should be on the bottom.





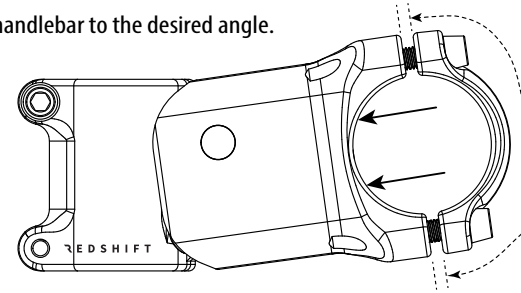
When initially inserted, the preload insert will protrude slightly from the stem tube.



The arrows and the word "TOP" should be oriented so they are at the top of the stem.

INSTALL HANDLEBAR AND FACEPLATE

16. Apply grease under the bolt head and to the threads of the four faceplate bolts (#6a).
17. Center the handlebar in the stem and install the stem faceplate (#5) by lightly tightening the four faceplate bolts (#6a).
18. Ensure that the gap between the faceplate (#5) and the stem tube (#1) is roughly equal above and below the handlebar.
19. Rotate the handlebar to the desired angle.



As you install the faceplate, the handlebar will compress the preload insert into place.

Equal faceplate gap above and below handlebar

WARNING! When tightening the faceplate bolts, you are also preloading the suspension by compressing the handlebar into the preload insert. Because of this, you will notice some resistance to turning the bolts in well before the handlebar is fully clamped. It is critical to gradually tighten the bolts in an X-pattern and also to use a torque wrench to ensure you have achieved the full 5.0 N-m of torque.

20. Tighten the four faceplate bolts (#6a) gradually (1/4 turn at a time) in an X-pattern to a torque of 5.0 N-m, ensuring an equal gap above and below the faceplate, as shown in the figure above.

TIGHTEN THE HEADSET

Note: Refer to your bike's user manual for guidance on tightening the headset and checking for play.

21. With the bike on the ground and able to roll, check the headset tightness by holding the front wheel brake with one hand and placing the other hand at the top of the headset. Rock forward and back and feel for any movement of the steerer tube relative to the headset.
22. If you can feel motion, loosen the pinch bolts (#6b) on the ShockStop, tighten the top cap (approx. ¼ turn), and re-tighten the pinch bolts (#6b).
23. Repeat Steps 21 and 22 until there is no longer any rocking movement felt at the top of the headset during Step 21. Afterwards, check that the steering freely moves left and right with no sense of friction. If it is too tight, loosen the two pinch bolts (#6b) and the top cap and go back to Step 21.
24. Once the headset is properly tightened, torque the 2 pinch bolts (#6b) on the ShockStop to 5.0 N-m.

QUESTIONS?

If you encounter any issues while using the ShockStop, please visit www.redshiftsports.com for the most up to date instructions and answers to frequently asked questions. You can also contact us directly at support@redshiftsports.com.