Cane Creek Cloud Nine Instructions

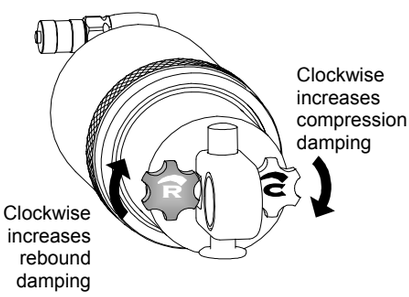
Congratulations on your recent purchase of the Cane Creek Cloud Nine air shock. The Cloud Nine will provide plush, controllable travel to maximize the performance of your full suspension bike. Compressed air is used for both the spring and damper components of the shock providing a simple, effective unit.

The Cloud Nine directs air through various ports and valves to precisely control the compression and rebound action of the shock. Air pressure settings between 70 and 250 psi (4.8 – 17.2 bar) are typical depending on the weight and preferences of the rider; and type of bike. The spring force is generated when the internal air pressure rises due to the decrease in volume during the compression of the shock. Controlling the flow of air between internal chambers determines how quickly the shock will respond to an impact. The Cloud Nine's adjustment features give you the control to tune the shock your way. The instructions below will help you get started. Enjoy the ride.

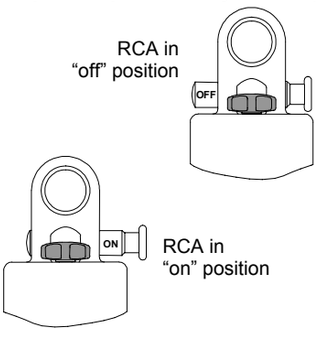
Setup and Adjustments:

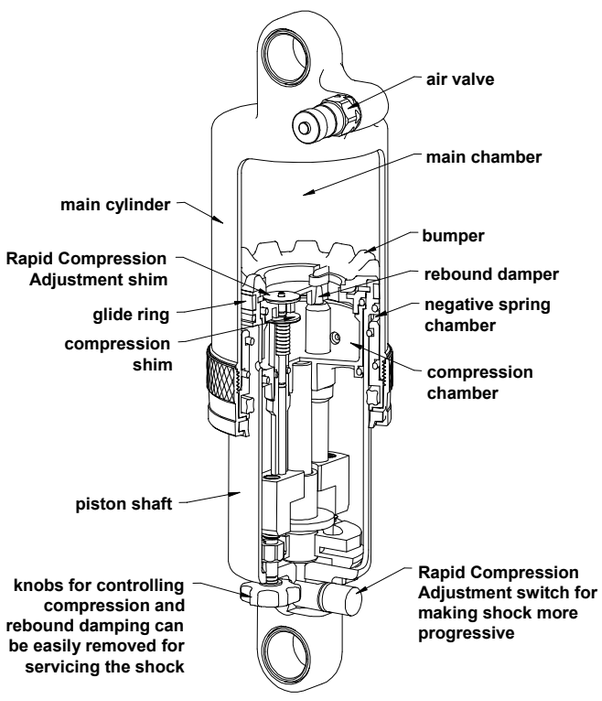
	What it does…	What you should know…	How to set it…
Air Pressure	Air pressure defines the spring curve of the shock. A higher pressure requires more input force to compress the shock. A lower pressure will make the shock easier to compress and allow more travel, but you may also bottom out the shock more frequently.	Air pressure settings can vary widely depending on the suspension design and the preferences of the rider. Refer to the bicycle owner's manual for set-up recommendations if the Cloud Nine was original equipment. **Always pump the shock up when the RCA switch is OFF** (see figure below). If the RCA switch is ON and it is difficult to turn it off, **DO NOT FORCE!** Deflate the shock, turn the RCA off, and re-inflate.	The best method for determining the proper pressure setting is riding. Back out the compression and rebounding adjusters and pressurize the shock 5 - 10 psi (.3 - .7 bar) under your body weight (in lbs.). Ride the bike. If you bottom the shock out frequently increase the pressure in 5 psi increments until you bottom out rarely. If you don't bottom the shock out at all, work the other direction.
Rebound Damping ***blue knob***	The rebound damping adjustment precisely controls the speed at which air returns from the compression chamber to the main chamber of the shock. Increasing the damping will make the shock extend more slowly after a hit.	The rebound damping in the Cloud Nine depends on the size of impact. For small bumps, little air passes through the valves–the shock response is very quick. For larger hits, when full travel is utilized, the rebound damping is more pronounced to ease the return stroke.	Always start with minimum damping and slowly increase it by turning the knob clockwise. You want the shock to return quickly, but not so fast that it launches you from the seat.
Compression Damping ***silver knob***	The compression damping adjustment controls the speed at which air flows from the main chamber to the compression chamber of the shock. Increasing the damping will slow down the compression stroke. This will also make the shock less likely to bottom out.	Compression damping depends on the size of impact as well, offering quick response on the small stuff. On larger hits the damping will kick in, especially toward the end of travel, to absorb more shock.	After setting the rebound damping adjustment tune the compression starting with the minimum setting. Be aware that too much compression damping can have a negative effect on the rebound dampening. If you set the compression too high, very little air will pass through the valving and will begin to starve the rebound dampening.
Rapid Compression Adjustment (RCA) ***silver switch***	Rapid Compression is a quick way to make the shock's spring curve more progressive. Depressing the switch closes a valve that prevents any air from flowing out of the main chamber to the compression chamber. Constraining the air in this way prevents the shock from compressing as much on large hits.	When the RCA is on, the shock will still respond to impacts, but the travel will be reduced. The rebound will be quick as well since the air does not pass through any damping valves.	Rapid compression is useful on hard smooth surfaces and while climbing. Turn on the RCA by depressing the larger end of the switch (the word "ON" will be visible when the RCA is on). Either press on the smaller end of the switch or pull the larger end to turn the RCA off.

Rebound and Compression Damping



Rapid Compression Adjustment (RCA)





Recommended Maintenance:

Proper care for the Cloud Nine includes checking the pressure periodically (some air will be lost whenever the pressure is checked), keeping the shaft and exposed wiper seal clean, and occasionally lubricating the seals. Lubricating the seals is a fairly simple process requiring only simple tools, and is recommended after approximately 200 hours of use.

Service:

For periodic maintenance or if the shock is not holding pressure, it can be disassembled and serviced easily. If the shock is losing pressure, apply soapy water to the exterior of the shock prior to disassembly. Bubbles will indicate a leak's location. We recommend ordering a seal kit before opening the shock. The kit contains the seals and grease required to properly rebuild the shock. Call a Cane Creek technical service representative at 800-234-2725.

Caution: If the soapy water test indicates that the shock is losing pressure around the adjuster knobs, RCA switch, or bushing where it mounts to the bike then a leak has occurred within the piston shaft. **Do not attempt to disassemble the internal components of the piston shaft by removing the retaining ring below the bumper.** Doing so could be dangerous and will void the warranty. Please call a Cane Creek technical service representative.

Figure 1

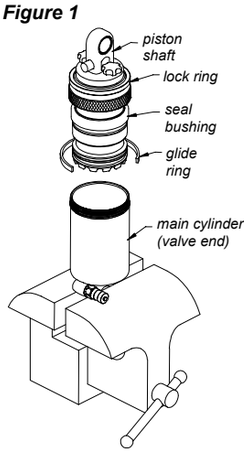


Figure 2

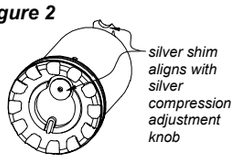


Figure 3

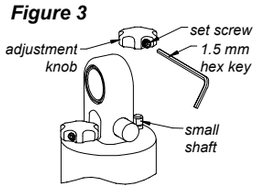


Figure 4

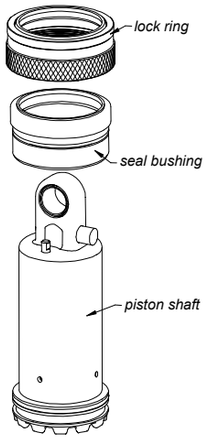
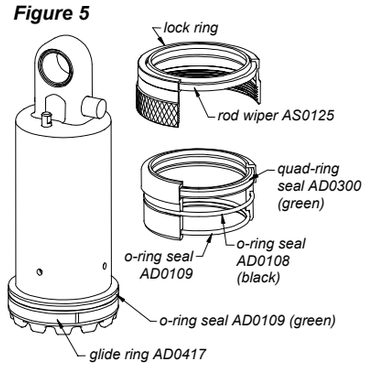
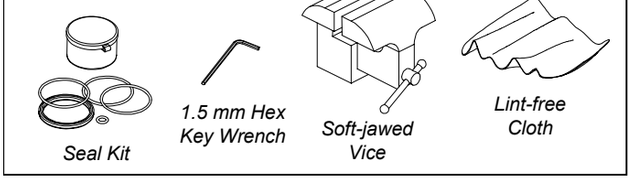


Figure 5



Required Tools:



1. Deflate the shock and clamp the valve end of the shock in a soft-jawed vice, being careful not to damage the shock's eyelet (Figure 1).

2. Unscrew the lock ring in the middle of the shock. **Do not use tools** (pliers, vice grips, etc.) Wrapping a cloth or large rubber band around the ring will improve your grip. If you still cannot loosen the lock ring re-pressurize the shock to 200 psi and decrease the rebound damping by turning the knob counter clockwise. Again release the pressure from the shock. It may shorten slightly, but should not compress fully on its own. Try loosening the lock ring again.

3. Carefully pull the piston shaft out of the main cylinder (Figure 1). The glide ring will fall off the piston as it exits the cylinder. Prevent contamination of the seals by keeping all parts clean and free of dirt.

4. Look at the end of the piston shaft where the black bottom out bumper is attached. Note that the silver compression knob corresponds with the small silver shim on the bumper end of the piston shaft (Figure 2). Loosen the set screws on the compression and rebound knobs and remove the knobs (Figure 3).

5. Now remove the lock ring and seal bushing from the piston shaft by sliding them off the end of the shaft (Figure 4).

6. Remove seals shown in Figure 5 (be very careful not to scratch the seal grooves while removing the seals). Wipe all the surfaces using a clean lint-free cloth (Do not use solvent). Liberally apply Cane Creek De-friction Lube to the seal grooves and the new seals. Install the seals as shown in Figure 5. The small AD0111 o-ring included in the kit is used on the air valve. If the leak test indicated a leak around the base of the air valve, remove it using a 3/8" wrench. Replace the o-ring and reinstall.

7. Reinstall the seal bushing (smaller end first) on the piston shaft. Be careful not to pinch the o-rings.

8. Reinstall the lock ring on the piston shaft.

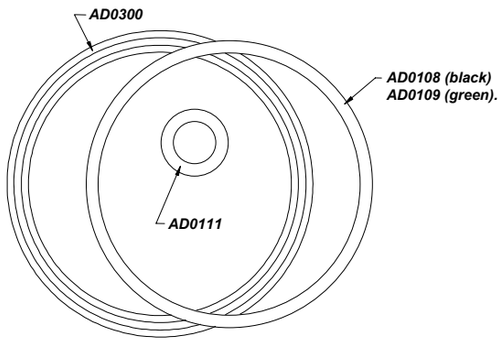
9. Gently pull up on the small shafts to insure they are fully extended before you replace the compression and rebound knobs. Align the set screw with the flat on the shaft and tighten securely. Be sure that the silver compression knob is assembled on the shaft that corresponds with the small silver shim at the other end of the piston (Figure 2).

11. Apply Cane Creek De-friction Lube to the interior of the main cylinder and to the glide ring. Hold the glide ring in place on the piston and carefully slide the assembly into the main cylinder.

12. Slide the seal bushing down the shaft and into the open end of the main cylinder as far as it will go. Now slide the lock ring over the seal bushing and screw it onto the main cylinder.

13. Align the eyelets by turning the piston shaft. Inflate the shock with a hand shock pump to about 150 psi. Submerge it in water to see if any bubbles come from the shock indicating leaks. If a leak is detected, disassemble the shock again and check the appropriate seal for cuts or dirt. If there are no leaks, the shock can be remounted on the bike and inflated to riding pressure. It may be difficult to compress the shock the first time since the negative air spring chamber has not been charged. It is charged when the shock is compressed about ½ inch (13 mm). Once it is filled the shock will function normally.

Seal Size Reference



Cane Creek Cycling Components
355 Cane Creek Road
Fletcher, NC 28732
800-234-2725
www.canecreek.com

.AD1020
02/12/04