AD-5 Shock Instructions

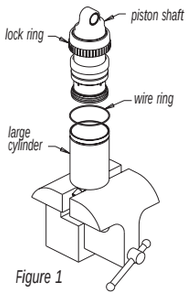


Figure 1

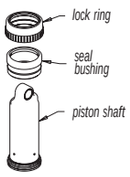


Figure 2

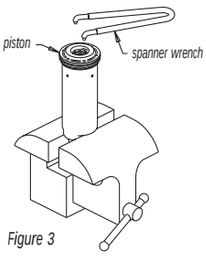


Figure 3

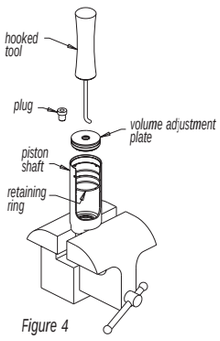


Figure 4

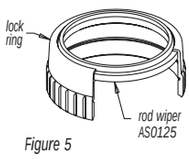


Figure 5

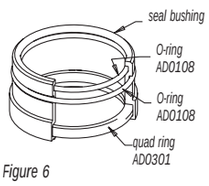


Figure 6

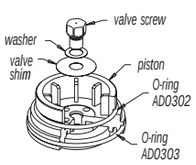


Figure 7

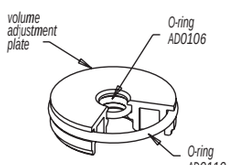


Figure 8

The Cane Creek AD-5 rear shock is a combined spring and damper system for rear suspension mountain bikes. The shock utilizes pressurized air as both the springing and damping medium. The unit is typically filled with air to a pressure between 110 and 250 psi (7.6 - 17.2 bar), depending on the weight and preferences of the rider. The springing system is like a conventional air spring, where the spring force is generated by reducing the volume of the pressurized air chamber, thereby increasing its internal pressure. The damping forces are generated by flowing the pressurized air into and out of several internal chambers through valves as the shock is compressed and extended. This valving is tuned specifically for each frame design. The AD-5 system also incorporates a negative spring air chamber which assists the initial travel and provides very smooth performance.

Rider's Weight lbs. (kilos)	Shock Pressure psi (bars*)	Rider's Weight lbs. (kilos)	Shock Pressure psi (bars*)	Rider's Weight lbs. (kilos)	Shock Pressure psi (bars*)
100 (45)	110 (7.6)	150 (68)	160 (11.0)	200 (91)	210 (14.5)
110 (50)	120 (8.3)	160 (73)	170 (11.7)	210 (95)	220 (15.2)
120 (54)	130 (9.0)	170 (77)	180 (12.4)	220 (100)	230 (15.9)
130 (59)	140 (9.7)	180 (82)	190 (13.1)	230 (104)	240 (16.5)
140 (64)	150 (10.3)	190 (86)	200 (13.8)	240 (109)	250 (17.2)

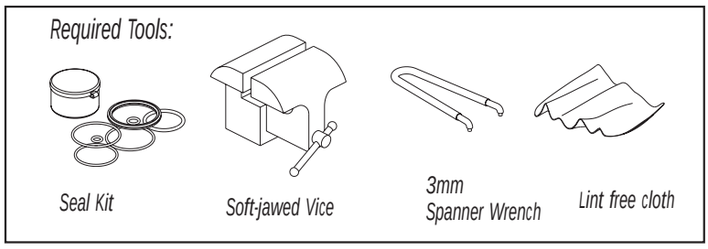
*** 100 kPa = 1 bar**

Setup and adjustments:
The springing and damping characteristics of the AD-5 shock are controlled by air pressure. The air pressure is set based on the weight of the rider and the desired performance characteristics. Pressure is controlled with a standard shock pump, which should be capable of over 200 psi (13.8 bar) and have a pressure gauge. The shock should be inflated as indicated on the following chart (above). After some riding, this initial pressure setting can be adjusted up or down to suit the rider's preferences. Reduced pressure will provide a smoother, more "plush" ride, but with a greater tendency to bottom out. Increased pressure will give a firmer ride with somewhat quicker rebound.

ATTENTION: Use a metal cap with seal to prevent leakage of air from the valve. Inflate or deflate shock only while it is installed on the bike.

Recommended Maintenance:
Proper care for the AD-5 rear shock includes checking the pressure periodically, keeping the shaft and exposed rod wiper clean, and occasionally lubricating the seals. Remember that some air will be lost whenever the pressure is checked. Lubricating the seals is a fairly simple process requiring only a few simple tools, and is recommended after approximately 200 hours of use.

Servicing the AD-5:
Section A: Shock Disassembly and Seal Replacement
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. The bubbles formed will indicate the 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.



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 (counterclockwise) the black, 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.

3. Carefully pull the piston shaft out of the large cylinder. Prevent contamination of the seals by keeping all parts clean and free of dirt.

4. Remove the lock ring from the piston shaft by sliding it over the eyelet end. The seal bushing can also be removed in the same manner (Figure 2).

5. Remove the rod wiper from the lock ring (Figure 5), the seals from the seal bushing (Figure 6), and the AD0303 o-ring seal from the piston (Figure 7). 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 Defriction Lube to the seal grooves and the new seals. Install the seals as shown in Figure 5, 6, and 7. In order to modify the shock's valving setup, please refer to section B.

6. If the "soapy water" test revealed a leak around the bushing (AD0127) in the piston shaft eyelet, then the volume adjustment plate must be removed to replace the seals. If the test did not show a leak around the bushing you can skip to step 10.

7. To remove the volume adjustment plate, clamp the piston shaft eyelet in the vice, and use a spanner wrench to unscrew (counterclockwise) and remove the piston (Figure 3). With the piston shaft still clamped in the vice, remove the white plug in the center of the volume adjustment plate. Insert the hooked tool into the plate's opening and carefully pull it upward being careful not to damage the plate. Work from side to side not allowing the plate to become jammed within the shaft (Figure 4).

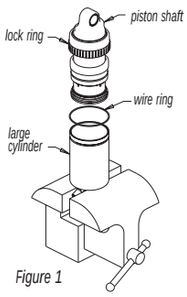


Figure 1

8. Before reinstalling the volume adjustment plate, inspect the seals (Figure 8) for cuts or dirt that may allow leaks. Replace seals if necessary. Lubricate the seals and push the plate carefully down into the shaft, keeping it level. If it gets stuck, remove it, and start over. Be careful not to cut or pinch the seals while reinstalling the volume adjustment plate. When properly installed, the groove (or four side holes in the shaft if the plate is in the highest position) will be barely visible just above the plate.

9. Replace the white plug in the center of the volume adjustment plate. Screw (clockwise) the piston back onto the shaft and tighten it using the spanner wrench.

10. Reinstall the seal bushing on the piston shaft by sliding it over the eyelet end of the piston shaft. The bushing's smaller end is to be toward the piston. Be careful not to cut or pinch the seals while reinstalling the seal bushing.

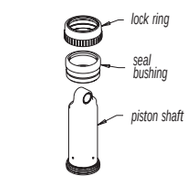


Figure 2

11. Apply Cane Creek Defriction Lube to the interior of the large cylinder and carefully insert the piston shaft assembly into the large cylinder.

12. Slide the seal bushing down the shaft and into the open end of the large cylinder as far as it will go. Now slide the lock ring over the seal bushing and screw it (clockwise) onto the large cylinder. The lock ring should capture the wire ring at the end of the threads leaving half of it exposed. Be sure that the wire ring is evenly in place all the way around the shock.

13. Align the eyelets by turning the piston shaft (clockwise). Inflate the AD-5 with a shock pump to about 150 psi (10.3 bar). 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.

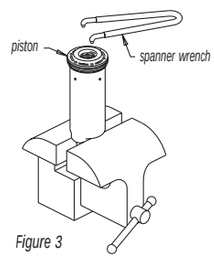
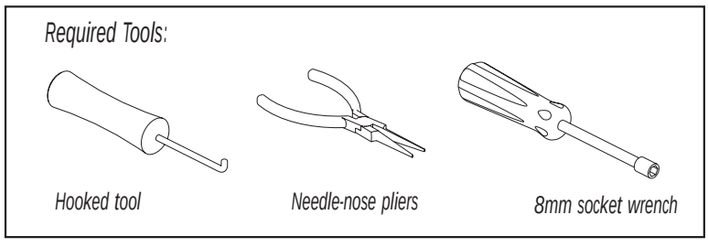


Figure 3

Section B: Tuning Modifications

The AD-5 Rear Shock is designed to be used with a wide variety of bike frames. The shocks are built and tuned at the factory for a particular bike. If the factory settings are not appropriate for your preferences or riding abilities you can change the factory setting relatively easily. There are four different factors involved in tuning the AD-5. First, air pressure is the easiest to vary and is usually based on the rider's weight. A higher pressure is recommended for heavier riders. Second, compression damping is determined by the thickness of a small round valve shim in the piston. Using a thicker valve shim increases the compression damping, slowing the rate at which the shock compresses. Third, rebound damping is controlled by the passage of air through a small hole in the piston. This hole is located in the valve screw on the piston. If a screw with a larger hole is used, then the rebound will be faster. Lastly, the volume of the shock can be varied to change the shape of the spring curve. The volume is set by a plate located in the piston shaft. Moving the plate to a position deeper inside the shaft will increase the shock's air volume and make the spring curve more linear. A smaller shock air volume will make the spring curve more progressive causing the shock to bottom-out less frequently. Changing these settings is described in the following instructions. If you want to know the settings on your shock or if you have other questions prior to disassembling it, please call a technical-service representative at 800-234-2725.



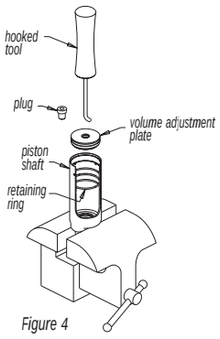


Figure 4

1. Clamp the piston shaft eyelet in the vice, and use a spanner wrench to unscrew (counterclockwise) and remove the piston (Figure 3). To change either the compression damping or rebound damping, the brass screw in the piston must be removed using a socket wrench. You can replace the valve shim or brass screw with components from the Tuning Kit. Be sure to reassemble the parts as shown in Figure 7. Tighten the screw snugly—do not use excessive force.

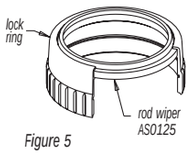


Figure 5

2. To change the shock's volume the black volume adjustment plate within the piston shaft must first be removed. This is described in step 7 of section A. Once you have removed the volume adjustment plate from the shaft, you will see a small, metal retaining ring in one of three internal grooves. This ring positions the volume adjustment plate within the shaft. Remove the retaining ring from its groove using your fingernail. Do not use tools that could scratch the inside of the shaft. Move the ring to the desired groove and snap it back in place.

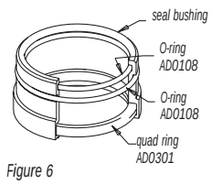


Figure 6

3. The shock is ready for reassembly. Return to step 8 of Section A.

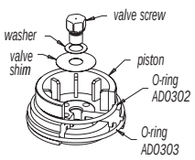


Figure 7

WARRANTY

Cane Creek Cycling Components warrants its bicycle components for a period of two years from the original date of purchase. Any Component that is found to be defective in materials or workmanship will be repaired or replaced at the discretion of Cane Creek. This warranty applies to the original owner only. This warranty does not cover damage or failure resulting from misuse, abuse, alteration, neglect, wear and tear, crash or impact, lack of maintenance or other conditions judged by Cane Creek to be abnormal, excessive, or improper. It is mandatory that a Return Authorization Number (RA#) is obtained by calling Cane Creek before any product is returned. Additionally, a dated Proof of Purchase must accompany the product when returned.
(Revised 5.12.2003)

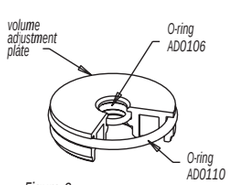


Figure 8

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