TOTAL AIR™ Tuning & Maintenance Guide

For safe use of the product, read all directions, notes and warnings carefully.

Needed for tuning:

4mm allen key
high-pressure shock pump*

*You may also need a no-bleed adapter if your shock pump doesn't make a tight seal with the Total Air cartridge.

Eko Sport, Inc.
™ See reverse for address and contact information.

WHERE TO START

Refer to Table 1 to determine the factory-recommended settings for your weight. We recommend using these settings to set up the fork before making any further adjustments. Most riders find that the factory recommended settings work best for the widest variety of terrain. **NOTE: TA cartridges come already set up with a #2 adjuster at 5 turns out (see table 1). If this matches your weight, all you need to do is inflate the cartridges to the recommended psi.**

As you read this guide refer to the "Glossary of Terms" (see reverse) as well as Figure 1 (below). **NOTE: Always work on the Total Air (TA) cartridges in a clean environment. Always deflate the cartridges prior to removing them from the fork.**

INFLATING TOTAL AIR CARTRIDGES

You will need a high-pressure shock pump to inflate your TA cartridges. If your shock pump does not provide a good connection, you may need a no bleed adapter, such as the Total Air Airtight Adapter. Inflate both cartridges to the recommended psi for your weight as shown above.

In order to further adjust or check the air pressure in already inflated cartridges, you need to determine the "draw down" in your pump. Draw down is the air that is drawn into the pump hose and gauge when the pump is attached. In order to determine the draw down, 1) fill the cartridge, 2) note the pressure on the pump gauge, 3) detach the pump, 4) re-attach the pump and 5) note the new pressure reading. The difference is your pump's draw down. Ex. If the initial fill pressure is 150 psi and the pressure when re-attached reads 130 psi, your draw down is 20 psi. Always add back the draw down when checking the air pressure to obtain an accurate reading. You do NOT need to worry about calculating draw down when you are airing up the cartridges.

Table 1

	Recommended Settings		
	Air Spring	Rebound Damping	Compression Damping
Your Weight	Pressure in PSI	Adjuster Number	Adjuster setting in "turns out"
110	120	#1	6, 6½, or 7
120	125	#1	6, 6½, or 7
130	130	#1	6, 6½, or 7
140	130	#2	5, 5½, or 6
150	140	#2	5, 5½, or 6
160	150	#2	5, 5½, or 6
170	150	#2	4, 4½, or 5
180	155	#2	4, 4½, or 5
190	165	#2	4, 4½, or 5
200	170	#3	3½ or 4
210	174	#3	3½ or 4
220	178	#3	3½ or 4
230	180	#3	3½ or 4

NOTE: In temperatures below 40F, add 10 psi to the above pressure recommendations & check pressure more frequently

ADJUSTING TOTAL AIR CARTRIDGES

Total Air is designed so that the air spring, compression damping and rebound damping are all independently adjustable. This will allow Total Air to be tuned to you and your riding style.

AIR SPRING

The air spring is adjusted by changing the air pressure as set forth above. If the fork feels too soft or firm with the recommended settings, first try changing the air pressure. **NOTE: The air pressure should never exceed the lower of your body weight or 200 psi.**

Tuning Tip

Do this test with normal riding pressure in the cartridges. Straddle the bike and apply the front brake. Lean forward hard on the handlebars using all the weight of your upper body, but don't "jump" on the fork. The fork should move through most of its travel without hitting the bottom out pad. If the fork moves through half its travel or less, reduce pressure and repeat. If the fork bottoms out, more pressure is needed.

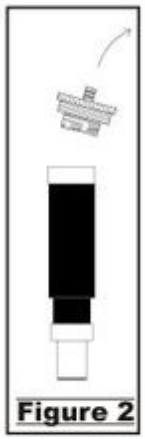

Figure 2

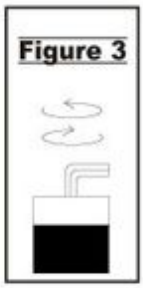

Figure 3

NOTE
The schrader valve is fixed permanently in place and should not be tightened or removed.

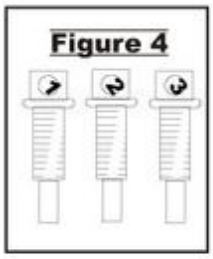

Figure 4

Figure 5

REBOUND DAMPING

Rebound damping is controlled by the size of a small hole in the side of the adjuster (Figure 1). There are 3 different adjusters marked #1 (slow rebound), #2 (medium rebound) and #3 (fast rebound) (Figure 4). **The cartridges are packaged with the #2 adjusters set to 5 turns out.** See Table 1 for the recommended adjuster.

To change an adjuster, **deflate** both cartridges **(WARNING - never remove the cartridges inflated)**, unscrew them from the fork using the cartridge wrench provided (Figure 6, see reverse) and lift them from the fork. Compress each cartridge by pushing the shaft into the cartridge body while depressing the schrader valve core. Grasp each unit by the cartridge body and unscrew the air cap. (Figure 2). **DO NOT** remove the schrader valve to make adjustments. Set the air cap on a **dust free surface**. Unscrew the adjuster in the center of the piston using a 4mm allen key. Lift the adjuster out by tilting the allen key slightly and pulling it upward (Figure 5). DO NOT turn the cartridge upside down as the compression valve and valve spring (Figure 1) may fall out.

Insert the new adjuster into the piston. Push it down firmly to seat the o-ring. Follow Table 1 and the instructions in "Compression Damping" to set the proper depth of the adjuster.

Note: Harsh "top out" is usually NOT the result of fast rebound. Hard top out usually results from too much air pressure. Excessive pressure, in turn, is often used wrongly to compensate for insufficient compression damping (see below).

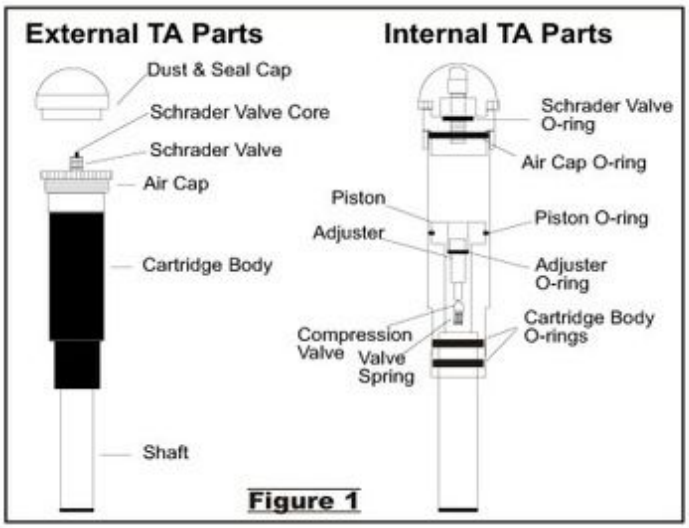

Figure 1

COMPRESSION DAMPING

Compression tuning can be done by resetting the adjusters in the cartridge piston (Figure 1, see Table 1 for the recommended settings). **The cartridges are packaged with the #2 adjusters set to 5 turns out.** Deflate both cartridges **(WARNING - never remove the cartridges inflated)**, unscrew them from the fork using the cartridge wrench provided (Figure 6, see reverse) and lift them from the fork. Compress each cartridge by pushing the shaft into the cartridge body while depressing the schrader valve core. (Figure 1).

Grasp each unit by the cartridge body and unscrew the air cap. (Figure 2). **DO NOT** remove the schrader valve to make adjustments. Set the air cap on a **dust free surface**.

Insert the long end of a 4mm allen key into the adjuster at the center of the piston. While exerting slight downward pressure on the allen key, unscrew the adjuster until you feel a slight click with each rotation. The click indicates the beginning of the piston threads, at 10 turns out. Still pressing down slightly, begin screwing the adjuster back in again, counting backwards from 10 for each rotation. Use the short arm of the allen key as a rotation indicator (Figure 3). **Example**: If you are setting the adjuster at 6 "turns out," after the adjuster is at the beginning of the piston threads (10 "turns out"), turn the adjuster in 4 complete turns.

8 "turns out" (2 turns in) is the "plushest" or softest setting. Fewer turns out (more turns in) will stiffen the fork, particularly in the lower part of the travel. Fine tuning may be achieved by using half turns. **DO NOT** tighten the adjuster past 2 turns out (8 turns in) or the ***compression spring may be damaged.***

After inserting both adjusters to the same setting, replace the air caps on the cartridge bodies. Replace the cartridge in the fork using the cartridge wrench and re-inflate to the appropriate pressure.

Eko Sport, Inc.

GENERAL MAINTENANCE

WARNING: Cartridges should always be deflated before being removed from the fork. Only work on the cartridges in a clean environment.

Total Air cartridges have a normal seepage rate requiring them to be topped off after approximately 10 hours of normal riding (more often in the case of racing or very aggressive riding), or if the bike has not been ridden for more than two weeks.

Once a year (depending on riding style and frequency) the cartridge should be removed for routine maintenance. **DEFLATE THE CARTRIDGE.** Remove the air cap from the body of the cartridge (Figure 2) and push the shaft and piston assembly through the top of the cartridge. Inspect the air cap o-ring, cartridge body o-ring and piston o-ring (Figure 1) for damage or dirt. If the o-rings are damaged see your dealer or contact Eko Sport, Inc. for an o-ring rebuild kit. Clean and lubricate the o-rings (and negative spring, if present) with Slick Honey. Re-assemble the cartridge **making sure that the air cap is snug on the body but not overtightened.** Inflate the cartridge (outside the fork) to 150 psi and immerse in water. Check for any slow bubbling from around the air cap or where the shaft enters the cartridge body. If you witness bubbling consult the Trouble-shooting Section.

TROUBLE-SHOOTING

LOSS OF AIR PRESSURE (in excess of normal seepage)

Deflate the cartridge and remove it from the fork. Re-inflate the cartridge to 150 psi and immerse in water. Check for any slow bubbling. **If you see slow bubbling:**

Around the Air Cap – deflate cartridge – remove the cartridge from the fork and check the tightness of the air cap – it should be firm but not overtight. If this does not correct the problem, remove the air cap and inspect the air cap o-ring for damage, a fiber, hair or large dirt or sand particle. If there is no visible damage to the o-ring, clean and re-lube the o-ring with Slick Honey. Re-inflate the cartridge to 150 psi and check for bubbles. If there is damage to the o-ring or if bubbling continues contact Eko Sport, Inc. for technical support.

Where the Shaft Enters the Cartridge Body – deflate cartridge – remove the cartridge from the fork and remove the air cap and push the shaft and piston assembly through the top of the cartridge body. Check the cartridge body o-ring for damage, a fiber, hair or large dirt or sand particle. If there is no visible damage to the o-ring, clean and re-lube the o-ring with Slick Honey. Re-inflate the cartridge to 150 psi and check for bubbles. If there is damage to the o-ring or if bubbling continues contact Eko Sport, Inc. for technical support.

From the Top of the Schrader Valve – deflate cartridge – This could be caused by three (3) things, a loose valve core, a sticky valve core or a defective valve core (a valve core is the small core that screws inside the schrader valve). Try tightening the valve core with a standard valve core tool (from any auto parts store). If this does not correct the problem, remove the valve core, put a drop of oil in the schrader valve and replace the valve core. If this does not correct the problem, replace the valve core with a standard short schrader valve core.

If no bubbling occurs–contact Eko Sport, Inc. for technical support.

LOSS OF REBOUND DAMPING

Deflate the cartridge - remove the cartridge from the fork and remove the air cap. Make sure the adjusters, compression valves and compression springs are intact, clean, and correctly assembled in the piston (Figure 1). If these parts are clean and properly installed, loss of damping is probably due to a worn piston o-ring. Contact your dealer or Eko Sport, Inc. for an o-ring rebuild kit.

LOSS OF AIR PRESSURE ON THE TRAIL

If for any reason one of the cartridges loses pressure on the trail, the remaining cartridge will allow for riding at a slower speed. In the unlikely event that both cartridges suffer air loss, the fork can be locked out **temporarily** by using the lockout peg provided. **On one side only -** release **any remaining air pressure.** Remove the cartridge from the fork. Unscrew the air cap. Insert the lockout peg provided or any rigid object about 2-1/2" (6 cm)* long into the cartridge and screw the air cap on. Lift up on the handlebars to allow the fork to re-extend, and reinstall the cartridge (Figure 8). Do not ride the bike with the lockout peg any longer than necessary before making repairs. Follow Trouble-shooting section to diagnose the problem or contact Eko Sport, Inc. for technical support.

*the Rock Shox Jett-C fork lockout is 1 ¾".

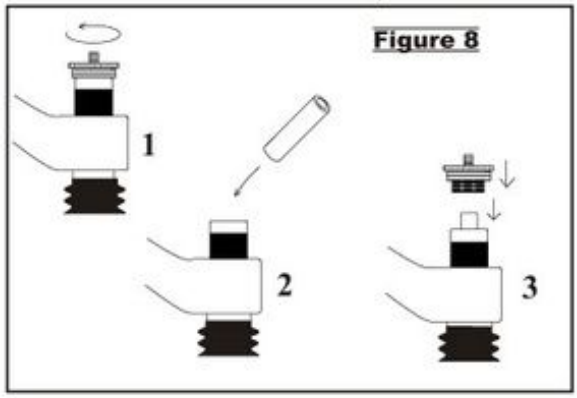

Figure 8

TOTAL AIR™

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How to contact us
Tel. 970-241-3518
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Using the TA Cartridge Wrench

After screwing the cartridge down by hand, push the cartridge wrench into the cap as far as it will go (it should go in very snug) and tighten firmly by inserting a screwdriver. If the wrench doesn't seem to seat tightly enough inside the air cap, rock it back and forth as you press down, and apply a slight downward force on the handle as you tighten. Check tightness before each ride.

Carry the cartridge wrench along in your tool kit while on any extended rides

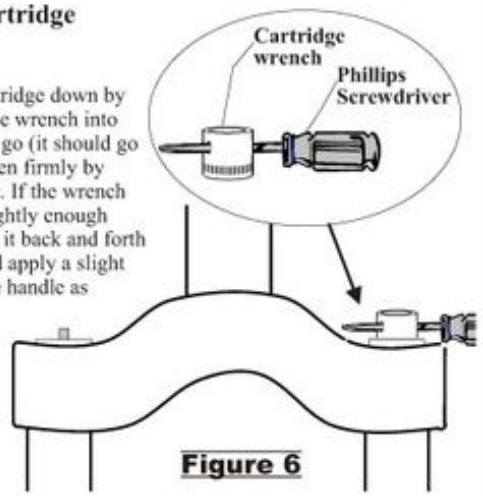

Figure 6

Caution

Do not use conventional grease in lubricating either Total Air cartridges or your fork. Only use a grease specifically designed for bike suspension, such as Slick Honey or Rock Shox Judy Butter.

For More tech support info check out our website: ekosport.com

Glossary of Common Suspension Terms Used in this Guide

Compression Damping

Compression damping controls the speed at which the fork will compress when absorbing a shock. Total Air's patented valve system allows easy, ultra-fine adjustments independently of rebound damping.

Rebound Damping

Rebound damping governs how fast the fork rebounds after a hit. Total Air rebound damping is easily tuned independently of compression damping and without the mess, weight, inconvenience and cost of oil damping.

Spring

Spring is whatever "suspends" you off the ground. In Total Air the spring is compressed air: lightweight, completely adjustable, extraordinarily responsive. Total Air's spring is matched to a precision negative spring allowing it to respond well to small bumps as well as big hits. It's a performance ride that's also plush.