

The logo features a large, bold, black 'X' on the left. To its right, the word 'FUSION' is written in a bold, black, sans-serif font. A horizontal line runs through the middle of 'FUSION' and extends to the right. Below this line, the word 'SHOX' is written in a bold, black, sans-serif font.

X FUSION
SHOX

x-fusion-shox
user's manual

Congratulations on your purchase of this x-fusion-shox shock absorber. As a manufacturer and designer of innovative, high-end cycling products, our reputation for quality and performance is built upon the thorough testing of every product to ensure it's function and durability.

Please read this manual carefully as it contains important information about the proper installation, use, care and maintenance of your shock

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Consumer Safety

Before riding, please read this manual's section on proper set-up and use of your new X-Fusion shock. If you are unsure of the proper use or function of your new shock, please call your nearest X-Fusion Shox Service Center for further information.

Should your shock show signs of air or oil leakage, or make any unusual noises during use, please stop using the product immediately and return it to your dealer or authorized X-Fusion Shox Service Center for inspection. Riding with an incorrectly installed, malfunctioning or damaged shock can be dangerous and could cause serious rider injury or damage to the product.

All X-Fusion shocks utilize a high pressure nitrogen charge. Do not attempt to open or service the shock as discharging the pressure is dangerous and can cause serious personal injury or damage to the product.

Service

X-Fusion Shox hasv Authorized Service Centers located in various countries around the World. Please consult the list of our Service Centers located on the back cover of this Manual or for the most up to date list, please visit us on the web at www.x-fusion-shox.com

Glossary

Shock Sag The amount by which the shock compresses with the rider seated in the normal riding position. The recommended amount of sag is generally 20-30% of the total shock travel.

Compression Damping The damping force generated by the shock as it is being compressed. Generally, compression damping is speed sensitive, meaning the faster the shock travels the higher the force of compression damping it produces.

Rebound Damping The damping force generated by the shock as it returns to full extension.

Spring Rate Defined as the amount of force required to compress the spring a given amount. Generally it is referred to in pounds per inch (lbs/in.)

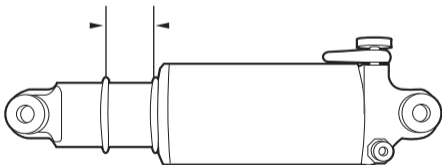
Spring Set-up for Air Shocks and Coil shocks

Shock Sag (all Air and Coil models)

Note: If your Bicycle Manufacturer provided directions on setting the sag, please follow these instructions. Setting the correct sag allows your shock and frame design to work in harmony, ensuring the best possible performance from your rear suspension system. Please follow the instruction for this closely.

Measuring Shock Sag, Air Shocks (O2, O2-Rpv, O2-RL, O2-RC, O2-PVA, Adapt)

First, while the bike is in an unloaded state, slide the o-ring up to the air sleeves dust seal. Now sit on the bike in your normal riding position. The air sleeve will push the o-ring down the damper body and it will stay at the sag position. Let the bike return to an unloaded state. Measure the distance between the o-ring and the dust seal of the air sleeve to obtain the amount of rider sag.



Setting Shock Sag/ Spring Rate, Air Shocks (O2, O2-Rpv, O2-RL, O2-RC, O2-PVA, Adapt)

1. Remove the air valve dust cap
2. Thread on your shock pump onto the valve until the gauge show pressure, be careful not to over tighten the pump.
3. If the sag is greater than that recommended by the bike manufacturer, add air pressure to the shock. If the sag is less than the recommended amount, then release air pressure.
4. Unthread the pump from the shock and measure the sag again.
5. Repeat steps 1 thru 4 until you get the desired amount of sag. The exact air pressure required to achieve the correct sag depends on your weight and the leverage ratio of the frame design. Generally, the range of air pressure needed falls between 100psi and 250psi. Do not exceed 300psi. Make note of the air pressure for easy set up next time.

Negative Spring

Note: The negative spring air pressure for all X-Fusion Air Shocks is set automatically at the time of assembly. There is no need or provision for adjustment.

Measuring Shock Sag, Coil Shocks (Glyde-Rpv, Glyde-RL, Vector-Rpv, Vector-PVA, Vector-DH)

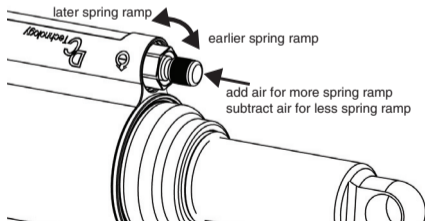
First, while the bike is in an unloaded state, measure the distance between the shock's mounting bolts. Now sit on the bike in your normal riding position. Measure the distance between the mounting bolts again. The difference between the first and second measurement is the amount of rider sag.

Dual Chamber (DC) Shocks

02 Shocks can be equipped with a Dual Chamber air sleeve. This is called DC Technology. DC Technology provides several advantages over conventional air sleeves.

Setting up a shock with DC Technology is easy.

1. Follow the instructions for setting sag found on page 5.
2. When the correct sag is set, attach the pump to the Schrader valve on the minor chamber.
3. Start with an air pressure about half of the pressure in main chamber. Check for full travel.
4. If full travel is achieved too easily, add air pressure in 5psi increments until full travel is just barely achievable.
5. Next, adjust where in the stroke the spring ramp occurs by rotating the hex behind the Schrader valve with a 13mm open end wrench. Turn it clockwise to cause the ramp to occur earlier, counter-clockwise for later.



The DC air sleeve can be rotated 360° to allow for an interference free frame fit. To rotate the air sleeve simply let the air out of the main air chamber, turn the air sleeve to the desired location and re-pressurize the shock.

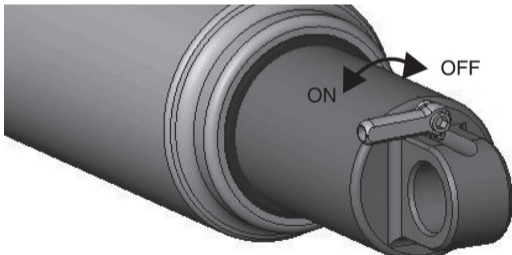
ADAPT Shocks

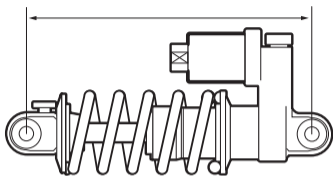
The ADAPT shock allows the rider to change the eye to eye length of the shock. This changes the travel and the geometry of the bike.

Set sag on the ADAPT shock by following the instructions on page 5.

When the desired sag is achieved, adjust the travel by flipping the lever at the end of the shock body.

1. To shorten the shock and make the geometry more slack, weight the shock to compress it. When the desired travel and geometry is achieved, flip the switch to ON.
2. Flip the lever to OFF to extend the shock to its original length.





Setting Shock Sag, Coil Shocks (Glyde-Rpv, Glyde-RL, Vector-Rpv, Vector-PVA, Vector-DH)

1. Adjust the threaded spring pre-load collar to zero by turning the threaded collar away from the spring until all pressure is released from the spring. Adjust the threaded collar towards the spring until it touches the spring but adds no pressure.
2. While the rider is seated in a normal riding position, measure the sag.
3. If the sag is greater than that of the manufacturer's recommendation, tighten the threaded pre-load collar until the correct sag is obtained. If the sag is less than the manufacturer's recommendation, a softer spring rate is needed.

If the spring rate is a correct fit to the rider's weight, the proper amount of sag can be achieved within the first 3 complete turns of the thread pre-load collar. If after 3 complete turns, the proper sag is not achieved, then this is a good indication that a stiffer spring rate is needed. Never attempt to compensate for too soft a spring rate by over pre-loading a spring. This will damage the spring and could result in injury to the rider.

Changing Springs

1. Remove the shock from your bicycle
2. Loosen the threaded pre-load collar and remove the spring retainer'
3. Slide the spring over the shaft eyelet. Remove the mounting spacers if necessary.
(Note: For the Glyde-RL, remove the threaded pre-load collar from the shock body and slide the spring off the bottom of the shock. For the Vector DH, you must remove the rebound damping adjust knob.)
4. Install new spring and reinstall the spring retainer (and threaded collar)

Damping

Rebound: The rebound damping adjustment is a feature that allows the rider to fine tune the rebound damping characteristics of the shock to better match their spring rate, riding style and the terrain being ridden.

Compression damping is the force generate by the shock while being compressed. Compression damping aids in the overall firmness of the suspension system as well as offers stability to enhance rider control.

To much compression damping will make the shock stiff and noncompliant to bumps. To little compression damping results in a soft ride and excessive bottoming of the suspension system

Rebound Damping Adjustment (Adapt, O2-Rpv, O2-RC, O2-PVA, Glyde-Rpv, Vector-Rpv, Vector-PVA, Vector DH)

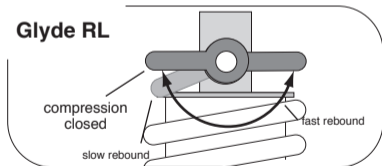
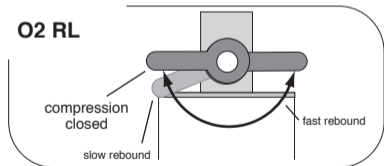
Turning the red adjuster knob clockwise until it stops is the max rebound damping setting (slowest). As you adjust the knob in a counterclockwise direction from the max position, the damping rate decreases allowing the shock to return quicker. When rebound damping is set correctly the shock will return quick enough to keep time with the bumps of the trail.

If a shock is returning too slowly, the shock will compress upon bump impact but will not return to full extension in time for the next bump impact. This will result in a harsh ride due to the fact that the rebound damping is holding the shock down into a stiffer part of the spring curve.

If a shock is returning too quickly, the rear wheel will “hop” off the ground after bump impact.

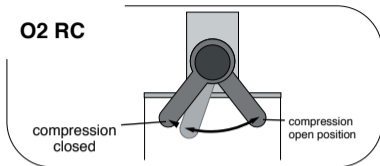
Rebound Damping and Firmness Adjustment (Glyde-RL, O2-RL)

Move the lever in a counterclockwise direction until you contact a positive stop. This is the minimum rebound damping setting (quick returning). Moving the lever in a clockwise direction from the 3 o'clock position (positive stop) toward the 8 o'clock position will increase the amount of rebound damping (slowing the return). Adjusting the lever further from the 8 o'clock position to the 9 o'clock position will increase compression damping to the point of firmness



Compression Damping/Firmness Adjustment (O2-RC)

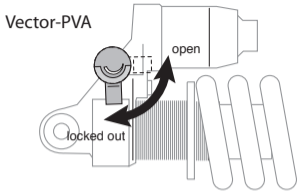
To adjust the compression damping, turn the blue compression adjuster lever in a counterclockwise direction until you contact a positive stop. This is the minimum compression damping setting (softest). From this point, as you turn the lever in a clockwise direction, the compression damping force will progressively increase to a point of firmness at the end of the lever's stroke.



Compression Damping/ PowerValve Adjust (O2-PVA, Vector-PVA)

The PowerValve damping system controls rider induced suspension movement and delivers a firm, stable pedaling platform, ensuring a higher level of rider efficiency. The PowerValve adjustment feature is the external adjustment of the PowerValve system. This adjustment gives the rider the ability to increase or decrease the damp threshold of the PowerValve to best optimize the shock performance for specific riding conditions.

O2-PVA Turn the blue knob counterclockwise until you contact a positive stop. This is the max threshold damping position (firmest). As you turn the blue knob in a clockwise direction from the max position, you will progressively decrease the amount of threshold damping, making the shock softer in the initial part of the stroke.



Vector-PVA Turn the blue lever clockwise until you contact a positive stop. This is the max threshold damping position (firmest). As you turn the blue lever in a counterclockwise direction from the max position, you will progressively decrease the amount of threshold damping, making the shock softer in the initial part of the stroke.

Compression Damping Adjustment (Vector-DH)

Turn the blue knob clockwise until you contact a positive stop. This is the max compression damping position (firmest). As you turn the blue knob in a counterclockwise direction from the max position, you will progressively decrease the amount of compression damping, making the shock softer in compression (bump impact). Do not operate the Vector DH with less than 120psi or more than 180psi in the reservoir.

Maintenance

X-Fusion shock absorbers are high performance products. The hydraulic dampers are not designed to be serviceable by the end user. **DO NOT PUNCTURE, EXPOSE TO HIGH TEMPERATURES or DISSASSEMBLE.** The Manufacturer's warranty will be VOID if the hydraulic damper is opened by an unauthorized person. Improper assembly of a shock could result in an accident or serious injury.

Always keep you shock clean. Use warm water, mild soap and a soft scrub brush to clean your shock. **NEVER USE A HIGH POWERED WASHER FOR CLEANING YOUR SHOCK!** After cleaning apply a light film of grease or oil the shock shaft and pivot hardware.

Air Sleeve Service

The seals of the air sleeve are top quality, high pressure seals. The function of these seals is to contain the high air pressure required for the air spring system to deliver the proper spring rate. It is very important that these seals are cleaned and lubricated on scheduled intervals. The air sleeve service can be performed by the consumer, a dealer or an authorized X-Fusion Service Center.

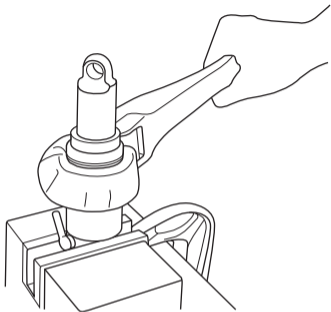
Service Intervals

Conditions	Frequency	Activity
Normal	Before each ride	Clean shock body
Mud & Wet	Every 15 hours	Air sleeve service
Dry	Every 50 hours	Air sleeve service
All	Every 200 hours	Complete shock rebuild

Air Sleeve Service Procedure

- Wash shock with mild detergent and dry with a clean cloth
- Release the air pressure of the air spring by removing the valve core from the air valve
- Clamp the air sleeve eyelet in a vise taking care not to damage the air valve or adjustment knobs. Grab the air sleeve with a strap wrench and unthread it (counterclockwise) from the air sleeve eyelet. Slide the air sleeve off the main shock body

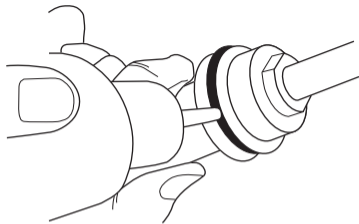
- Clean the air sleeve and the exposed piston of the main shock body with mild detergent or cleaning solvent. Blow dry with compressed air or use a clean, lint free rag.
- Check the glide rings and seals for obvious scoring or other damage. Parts that show any kind of imperfections will not hold high air pressure and will need to be replaced. Note; Inspect the shock damper shaft for signs of excessive oil leaking from the main body seal head. If excessive oil is present, the shock will have to be sent to an authorized X-Fusion Service Center for a complete rebuild.



- Add lubrication to the main piston, piston rings and seals. "Slick Honey" or a non-lithium grease should be used. A light smear of grease on the air sleeve threads will help on assembly.

- Slide the air sleeve over the main shock body and then clamp the eyelet of the main body in a vise. Slide the air sleeve towards the air sleeve eyelet as far as you can. At this point the negative air is trapped and building pressure. Insert a 12mm steel bar into the air sleeve eyelet and push down as you continue to pull up on the air sleeve. Engage the threads of the air sleeve and eyelet, then tighten while compressing both parts.

- Turn the assembly over and clamp the air sleeve eyelet in the vise. Tighten the air sleeve with the strap wrench.
- Insert valve core into air valve
- Charge shock with 170psi. Install air valve cap
- Reinstall shock onto bike and set air pressure and sag to previous settings.
- It is normal after an air sleeve service to see signs of the fresh grease on the shock body after the first few rides. This is a temporary condition.



Manufacturer's Warranty

In compliance with the decision 1999/44/CE for the sale and guarantee of consumption, starting from 23rd March 2002, the products of
X-FUSION SHOX
will be covered by following

GUARANTEE

The warranty period for all X-Fusion shocks is 24 month starting from the original date of purchase and is valid for all countries of the European Community. A copy of the original purchase receipt must accompany each shock that is sent for repair under these warranty terms.

The acceptance of a warranty claim during the 24 month warranty period is up to the discretion of X-Fusion Shox or any Authorized Service Centre acting on its behalf. X-Fusion or its agents will determine if the failure is due to workmanship or product abuse. The warranty guarantee will be void if the buyer does not inform the seller of the damage after its discovery within 60 days.

X-FUSION SHOX applies only the terms of guarantee mentioned in this contract of guarantee and in the legal bill of the 2nd February 2002, no. 24 and reserves the right to judge if the product is subject of the following terms.

X-Fusion Shox and its agents reserve the right to all final warranty or non-warranty decisions.

To maintain valid the general guarantee conditions for all X-FUSION SHOX, air shocks, it is absolutely necessary that the buyer executes the periodical maintenance and that cleaning and maintenance are carried out according to the following time table

Before each ride: clean the shock body

Each 15 hours: maintenance and cleaning of the sleeve if the shock is used in mud and/or rain

All 50 hours: maintenance and cleaning of the sleeve if the shock is used in dust and dryness.

To maintain valid the general guarantee conditions, it is also necessary for all products to be set up and used in accordance with the X-Fusion user manual and the Bicycle Manufacturer's user manual. Proper spring rates and damping adjustment are crucial for maintaining the proper function of the shock over the life intended life of said product.

At 200 hours or 12 months from original purchase date:

Send shock to an Authorized Service Centre for an oil change and general inspection of the replacement parts

To keep your shock performing at its best we strongly recommend using only X-Fusion Authorized Service Centres.

General exclusions from this warranty shall include but are not limited to any failures caused by:
Installation of parts or accessories that are not qualitatively equivalent to genuine X-Fusion Shox parts.

Abnormal strain, neglect, abuse and/or misuse.

Accident or collision damage.

Modification of original parts.

Lack of proper maintenance. (very important - see Maintenance Schedule)

Any attempt to disassemble damper assembly.

Shipping damages or loss (purchase of full value insurance is recommended).

Damage to interior or exterior caused by improper cable routing, seatpost, rocks, crashes or improper installation.

Oil changes or service not performed by X-Fusion Shox or an Authorized Service Center.

Coil bind / Excessive spring preload (two turns maximum) Unless otherwise specified.

Specific exclusions from this warranty shall include:

Parts replaced due to normal wear and tear and/or routine maintenance.

Parts subject to normal wear and tear and/or routine maintenance: Bushings and reducers,

Seals, Suspension fluids

Vector shocks damaged by riding with less than 120psi or more than 180psi in the reservoir.

X-Fusion Shox makes no other warranty of any kind, expressed or implied. All implied warranties of merchantability and fitness for a particular purpose which exceed the obligations and time limits stated in this warranty are hereby disclaimed by X-Fusion Shox and excluded from this warranty.

Warranty Q & A

Q. What costs are my responsibility during the warranty period?

A. The customer is responsible for all costs of maintenance services, non-warranty repairs, accident and collision damages, oil, seals, bushings and reducers, and mounting hardware.

Q. What are some examples of “abnormal” strain, neglect or abuse?

A. These terms are general and overlap each other in areas. Specific examples are: Hucking, ghost riding, big drop, stunt / dare-devil riding, riding with broken parts, riding without oil in shock, too much preload, wrong spring rate, etc.

Q. Does the warranty cover incidental costs such as shipping or transportation?

A. No. The warranty is limited to repair of materials and/or workmanship.

Q. May I perform any or all of the recommended maintenance shown in the owner’s manual?

A. You may perform FLOAT Air Sleeve, bushing and reducer maintenance only. Oil changes, damper service and repairs must be performed by X-Fusion Shox or an Authorized Service Center.

Disclaimer

X-Fusion Shox is not responsible for any damages to you or others arising from riding, transporting, or other use of your shock or bicycle. In the event that your shock breaks or malfunctions, X-Fusion Shox shall have no liability or obligation beyond repair or replacement of your shock, pursuant to the terms outlined in the warranty provisions of this manual.

Worldwide Service Centers

Please note that this list is subject to change. Please refer to www.x-fusion-shox.com for the most up to date list of Service Centers.

Japan Aki Corporation Ltd.	+81 72 887 5515	johnny@akiworld.co.jp
Great Britain Super Shox	(0)115 9415972	mjpoyzer@onetel.net.uk
Germany Toxoholic's GmbH	06331 25 81 60	toxoholics@t-online.de
Korea MBS Corporation	82 55 261 3412	kncco@kornet.net
Belgium & France Sabma GmbH	+32 87 63 19 80	sabma@skynet.be
Italy Bicycle Suspension Center	+39 0473-563107	info@pepi.it
Spain/Portugal FunSports Express	+34 932 050 528	funsport@arrakis.es
Switzerland Suspension Center	+41 31 809 30 20	www.suspensioncenter.ch
U.S.A. U.S. Service Center	208 724 8949	service@x-fusion-shox.com
U.S. Service Center	303-545-6400	info@x-fusion-shox.com

