

stratos

Rear Shock Absorber

OWNER'S MANUAL

*STRATASHOCK PRO
AR-1
A.N.A.*

*HELIXPRO-DH
HELIXPRO
HELIXEXPERT
HELIXSPORT
STRATASPORT*

ONSPORT LLC.

893 S. Queensland St. Santa Barbara, CA 93103
Tel (805) 966-2500 Fax (805) 966-3062
e-mail: tech@stratashock.com
http://www.stratashock.com

CONGRATULATIONS! You are the owner of a Stratos rear bicycle shock absorber.

Since the beginning, Stratos' products have forced the rapid evolution of bicycle suspension technology with innovation and quality. Your new shock absorber is no exception. Reading this manual will help you understand the features of your new damper so that you can set up and maintain it to fit your suspension needs. Information about each Stratos rear shock absorber is outlined below in detail. It is extremely important that you read all the information pertaining to your shock model before installing or riding on the shock.

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INSTALLATION INSTRUCTIONS: All rear shocks

Before beginning installation, be sure you have all necessary mounting and adjustment hardware. The Stratos Pro and Helix Pro shocks which utilize the optional pulley for compression adjustment, a cable stop is supplied. In addition, you will need to supply the following: a standard handlebar-mounted dropper shifter, dropper cable, cable housing and brackets, and one or more zip ties (for strapping the housing to the frame).

1. Remove mounting bolts from both ends of the existing shock unit.
2. Depending on the existing shock, pull the springs away from the frame. The shock should slide out of the mounting brackets easily.
3. Clean all shock mounting surfaces of dirt and grease. **NOTE:** Do not lubricate the mounting surfaces or the shock bushings. Doing so can attract dirt and cause premature bushing wear.
4. Place your new shock into the upper mounting bracket. Slide the mounting bolt through the bracket and the shock bushings. If your shock is remotely adjustable, use the supplied cable stop as the nut for tightening this bolt. Be sure to install the cable stop onto the same side of the bike as the damping-adjust pulley. If your shock is not remotely adjustable, use the original nut.
5. Bring the springs toward the frame so that the shock slides into the rear mounting bracket. Slide the rear mounting bolt through the bracket and bushings and tighten as described for the upper mount.
6. (Remote adjustable shocks only) Mount the shifter on the handlebar and run the cable and housing down to the cable stop. Thread the cable through the slot in the cable stop and connect it to the shifter. Tighten the cable-retainng screw with a Torx allen wrench. Make cable adjustments as you would a dropper until the pulley can be moved through its full range of motion via the shifter.

**** BEFORE RIDING:** Be sure that all connecting nuts and bolts for the suspension and linkage are tight.

**** If you have any further questions, contact Stratos Sports at (800) 966-2209.**

CONSUMER SAFETY INFORMATION:

**** Always inspect your shock before each ride for bolts or screws in the body or shock. Check all shock mounting and pivot hardware as well to be sure all bolts are properly secured.**

**** Never open the shock for any reason. Doing so will automatically void the warranty and can result in personal injury. If you feel the shock is not performing correctly, contact your local Stratos dealer or call Stratos directly at (800) 966-2209.**

CAUTION! Adjusting your shock's spring rate or damping characteristics will change your bike's handling and braking. Refer to your bicycle manufacturer's instructions, and after making major shock adjustments, always check for handling changes by taking a careful test ride in a hazard-free area.

INITIAL SET-UP: All rear shocks

Initial setup of all Stratos air-oil and HELIX shocks can be easily achieved by referring to the following air pressure chart. Additional HELIX set-up may require Coil spring preload adjustment (the "Lift-Over" System). However, air pressure and preload will vary from bike to bike, so it is recommended that the final set-up guidelines be **check available**. The height can be measured by placing a zip tie or O-ring on the shell of the shock and string the

rider's full weight on the bike saddle. This sets off the bike and increases the distance between the shaft upper and the O-ring or clip-in. **RECOMMENDED SAG HEIGHT IS ONE THIRD OF TOTAL SHOCK STROKE.** Air pressure and coil spring preload can be increased or decreased to reach correct shock sag. Additional set-up, in terms of rebound and compression rates (if applicable) are left up to individual rider preferences.

Air Pressure - Air Oil and Helix Race Shocks

Body Weight		Air Pressure	
lbs.	kg	psi	kPa
130-140	54-64	120-140	827-985
140-160	64-73	140-160	968-1120
160-180	73-82	160-180	1100-1241
180-200	82-91	180-200	1241-1379
200-220	91-100	200-220	1379-1518
220-240	100-109	220-240	1518-1664

AIR-OIL SHOCK ABSORBERS: The STRATASHOCK PRO, AH-1 and A.N.A. are high-quality air-sprung, oil-damped shock absorbers. Each model offers a different combination of adjustability in compression rate, rebound rate, and spring preload.

Adjustable Feature	Spring Preload	Rebound Rate	Compression Rate
	Air Pressure	Rebound Knob	Knob / Pulley
A.N.A.	X		
AH-1	X	X	
STRATA PRO	X	X	X

- SHOCK COMPRESSION RATE** is adjusted either by a pulley, connected by cable to a handlebar-mounted thumbblew, or by a hand-lever "roll-over adjust" knob, located on the shock body (depending on your shock model). For faster compression speed, turn the knob or pulley counter-clockwise. For slower compression, turn it clockwise. The shock can be "locked out" by turning the knob or pulley clockwise as far as it will go.
- SHOCK REBOUND RATE** is adjusted by the round, dimpled knob at the top of the shock. For fastest rebound speed, turn the knob by hand so that the largest dimple points toward the arrow below. For slowest rebound speed, turn the knob in the opposite direction so that the smallest dimple points to the arrow. For accuracy in adjustment, each different-sized dimple on the knob represents a specific grade between fastest and slowest rebound.
- SPRING PRELOAD** is a function of air pressure inside the shock, and refers to the "stiffness" of the spring (higher air pressure = higher preload, etc.). Preload is adjusted by opening or reducing air through the air valve in the tail of the shock. This can be done with a standard high-pressure pump such as Dunlop's Zorospump. For specific information on air pressure guidelines, see the "SET UP" section.

IMPORTANT: NEVER ALLOW THE SHOCK TO COMPRESS AND EXTEND WITH LESS THAN 100 PSI. DOING SO WILL CAUSE MALFUNCTION.

COIL-OVER SHOCK ABSORBERS: The HELIX (100-190) (100, 150), EXPERT and SPORT - is a state-of-the-art class of mechanical coil- and air-sprung, oil-damped shock absorber. Each model offers a different combination of adjustability in compression rate, rebound rate, mechanical and air spring preload, and spring rate. All Dunlop coil-overs are equipped with a progressively-wound coil spring, to maximize performance over small and large hits. Additionally, the HELIX PRO OH is equipped with an external oil reservoir, allowing it to perform under the most extreme riding conditions. The design of the coil HELIX allows it to combine the fast start-up force and plush action of traditional coil shocks with the light weight and high-rate rebounding of air shocks. On a HELIX, the rider can achieve maximum wheel tracking by riding in the middle of the shock stroke, yet never feel a harsh bottom-out like on a traditional coil-over. The STRATASPORT has a mechanical coil spring and is oil-damped. It offers adjustment in spring preload.

Adjustable Feature	Spring Preload		Spring Rate	Rebound Rate	Compression Rate
	Air Press.	Coil	Air Press.	Reb. Knob	Knob / Pulley
StrataSport		X			
Helix Sport	X	X	X		
Helix Expert	X	X	X	X	
Helix Pro	X	X	X	X	X
Helix Pro OH	X	X	X	X	X

- SHOCK COMPRESSION RATE** is adjusted either by a pulley, connected by cable to a handlebar-mounted thumbblew, or by a hand-lever "roll-over adjust" knob, located on the shock body (depending on your shock model). For faster compression speed, turn the knob or pulley counter-clockwise. For slower compression, turn it clockwise. The shock can be "locked out" by turning the knob or pulley clockwise as far as it will go.
- SHOCK REBOUND RATE** is adjusted by the round, dimpled knob at the top of the shock. For fastest rebound speed, turn the knob by hand so that the largest dimple points toward the arrow below. For slowest rebound speed, turn the knob in the opposite direction so that the smallest dimple points toward the arrow. For accuracy in adjustment, each different-sized dimple on the knob represents a specific grade between fastest and slowest rebound.
- MECHANICAL SPRING PRELOAD** is adjusted by turning the preload collar on top of the coil spring. For higher preload, or a "stiffer" spring, tighten the collar down onto the spring by turning it clockwise, and for lower preload, turn the collar counter-clockwise to allow the spring to extend.
- AIR SPRING PRELOAD AND OVERALL SPRING RATE** are both functions of air pressure inside the shock. They are adjusted by injecting or releasing air through the air valve in the tail of the shock with a standard high-pressure pump such as Dunlop's Zorospump. Injecting air into the shock will increase the air spring preload (make the spring stiffer throughout the stroke) and make the spring rate more progressive (softer).

toward the end of the stroke, and releasing it'll lift the opposite. To reason for this from the shock, simply depress and release the end of the air valve as this small burst of air escapes. (See "Coil-Over Spring Curves" graph for more spring rate details.)
IMPORTANT! NEVER ALLOW THE SHOCK TO COMPRESS AND EXTEND WITH LESS THAN 90 PSI. DOING SO WILL CAUSE MALFUNCTION!

COIL-OVER SHOCKS - Spring Curves

All shock models in Stratos' HELIX line use pressurized air and a mechanical coil for a combined spring rate. A typical combined rate is broken down into its air and coil components below. For adjustment information, see "Coil-over Shocks" above.



COIL SPRING RATES

Each of Stratos' HELIX shocks is fitted with a specific coil spring according to the characteristics of the bicycle for which it was designed. For any given bicycle, the Helix is designed to accommodate 90% of all riders within modeling the shock spring. Rider weight above and below the "mean" can be accommodated by adjusting mechanical spring preload, and by adjusting air pressure between 100 and 100 psi.

The STRATASPORT, although fully adjustable, does do it's coil shocks, can accommodate a range of rider weights through adjustable mechanical spring preload. Despite all the adjustability, different weight springs can be ordered from the factory for replacement. If you find dissatisfied with your own shock chamber for any reason, please contact Stratos at (801) 954-1309.

CHANGING SPRINGS:

If it is necessary to change springs on your Helix shock, it is very important that you follow this step-by-step instruction!

1. Remove the shock from the bicycle.
2. Release as much spring tension as possible by turning the drop-out preload collar counter-clockwise.
3. Release all air in the shock by depressing the core of the schrader valve.
****Note: A pink oil residue will be expelled when the air is released. Do not be alarmed.**

NEVER ALLOW THE SHOCK TO EXTEND WHILE IT CONTAINS LESS THAN 90PSI. DOING SO CAN CAUSE MALFUNCTION! If you need to extend the shock after losing the air out, simply refill it; it will naturally extend.

4. Unscrew the air valve from the tail using a 3/8" box wrench.
5. Remove the lower spring retaining ring from the shock.
6. Slide the old spring over the shaft and tail, being careful not to scratch the shock's shaft.

7. Slide the new spring onto the tail and shaft, being careful not to scratch the shock's shaft.
8. Replace the lower spring retaining ring.
9. Replace the air valve. Be sure it is tight, but do not over-torque.
10. Refill the shock with air, using a high pressure pump.

MAINTENANCE: All road shocks

All Stratos' shocks are designed to be low-maintenance units. It is important, however, to keep the shaft and the cylinder bushings as clean and free from dirt as possible at all times, and to clean the shaft gently with a clean, fine-line cloth, so as not to scratch it. Also, always be sure to replace the air valve cap after making air pressure adjustments, so that the valve interior remains dirt and dust free.

Under normal circumstances, no rebuilding or internal reworking should be necessary for the life of the shock. However, if a problem develops, the shock can be returned for repair either to the factory or to an authorized service repair center.

Do not be alarmed by oil residue on the shaft of the shock after the first few rides. This is normal seepage from between the main seal and the shaft wiper and will subside over time.

WARRANTY:

Any Stratos seat shock bought by the factory to be defective materials and/or workmanship within one year of purchase will be repaired or replaced at the option of the factory, free of charge, when received at the factory. This warranty does not cover damage due to crashes or falls or bicycle frame mis-alignment. This warranty does not cover any wear shock when seal number has been abused or removed. Any modifications to shock disassembly done by the user will render this warranty null and void.

If warranty work is necessary, return the shock to the place of purchase or call Stratos at (800) 954-1309 to obtain repair authorization.

****In order to activate the warranty, fill out and return the registration card below.**

Warranty Registration Card

Name _____ Age _____

Address _____

Shock Model _____

Date of Purchase _____ Serial # _____

Location Purchased _____

How you heard about Stratos _____

Comments _____

This Warranty Registration Card protects you in establishing any warranty claims. Please cut it out, send it in, and enjoy the ride!



FOR MORE INFORMATION, please call 1-805-568-3509. For a Strata Slicker Kik, send a SASE to On-Sport LLC, 165 South Oceanview St., Santa Barbara, CA, 93101

Please
place stamp
here!



On-Sport LLC
165 South Oceanview St.
Santa Barbara, California 93101
U.S.A.