

2.0 ZERO QS3-R FACTORY SERIES OWNERS MANUAL





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NOTICE: THE SNOWMOBILE PICTURED IN THIS MANUAL MAY NOT RESEMBLE YOUR ACTUAL SNOWMOBILE. THE PROCEDURES OUTLINED IN THIS MANUAL WILL INSTRUCT YOU TO MOUNT, SET-UP AND ADJUST THE FOX 2.0 ZERO QS3-R SHOCK ABSORBER ON YOUR PARTICULAR SNOWMOBILE MODEL.

Reference print standards 604-00-300 rev A



CONGRATULATIONS

Thank you for choosing FOX 2.0 ZERO QS3-R FACTORY SERIES shock absorbers for your snowmobile. In doing so, we believe that you have chosen the finest suspension products in the world. FOX shocks have been designed, tested and manufactured in the USA for more than 40 years.

As a consumer and supporter of FOX products, you need to be aware of the importance of setting up your shocks correctly to ensure maximum performance. This manual provides step- by-step instructions on how to set-up and maintain your shocks. It is a good idea to keep your proof of purchase with this manual and refer to it for service and warranty issues.

This manual does not contain step-by-step shock rebuild instructions. Rebuilding should be carried out by an authorized FOX service technician.

CONSUMER SAFETY

WARNING: Riding a Snowmobile can be dangerous and can result in DEATH OR SERIOUS INJURY.

Take responsibility for yourself and others seriously, and read the following safety tips:

- Keep your vehicle and its suspension systems in optimal working condition.
- Always wear protective clothing, eye protection and a helmet.
- Know your limits and ride within them!

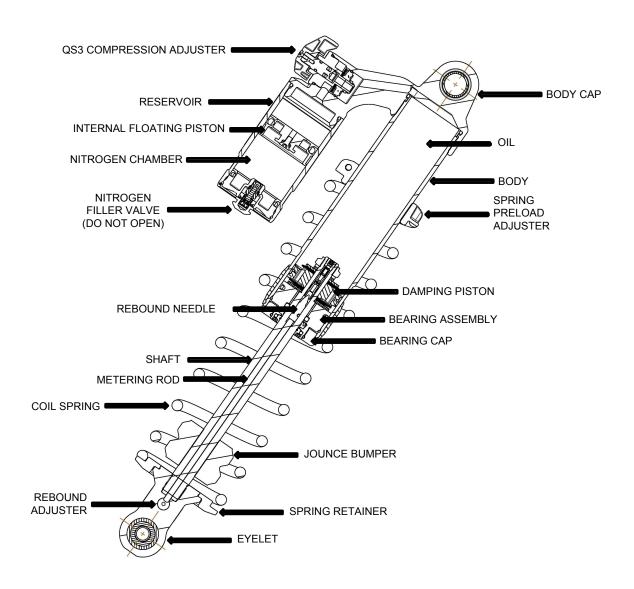
The FOX 2.0 ZERO QS3-R shock contains a high-pressure nitrogen charge. The shock should only be opened by a FOX technician.

WARNING: Opening a nitrogen pressurized shock can be dangerous and can result in SERIOUS INJURY OR DEATH. NEVER attempt to disassemble the damper of your 2.0 ZERO QS3-R shock. Do not puncture or incinerate the shock absorber damper portion. Always wear eye protection when installing or adjusting your shock absorber.



UNDERSTANDING THE 2.0 ZERO QS3-R

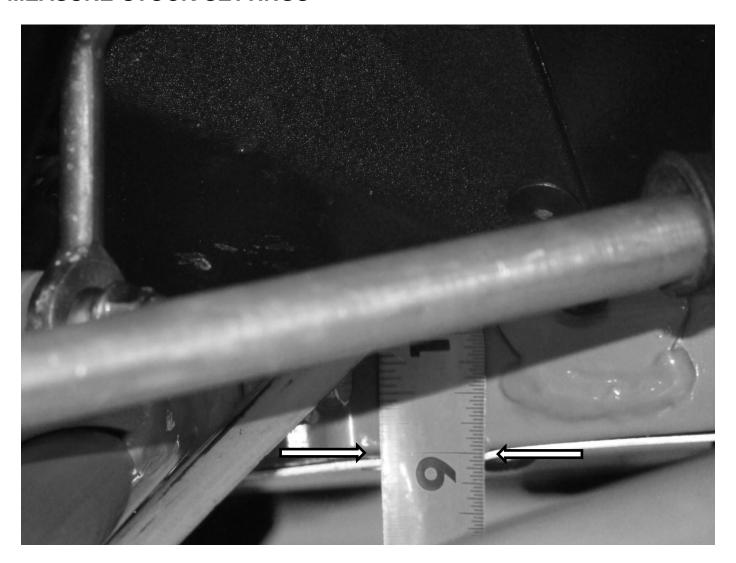
FOX 2.0 ZERO QS3-R shock absorbers set the industry standard for performance and durability. Equipped with external QS3 compression adjuster and a rebound adjuster, inside is a high performance, velocity-sensitive, shimmed damping system. The dampers contain high pressure nitrogen gas and FOX high viscosity index shock oil separated by an Internal Floating Piston system. This helps to ensure consistent, fade-free damping in most riding conditions.



FOX 2.0 ZERO QS3-R shocks are built using 6061-T6 aluminum for lightweight and strength. The chromed damper shaft is super-finished for low friction and long seal life. All of the seals and wipers are engineered specifically for the FOX 2.0 ZERO QS3-R shocks. The body and reservoir are Genuine Kashima coated for reduced friction and long seal life.



MEASURE STOCK SETTINGS



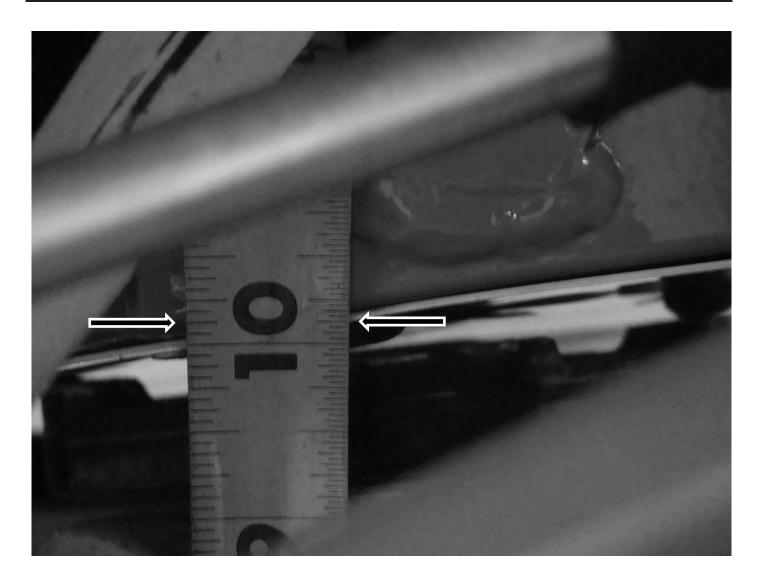
Step 1 BEFORE REMOVING STOCK SHOCK ABSORBERS

Start with the vehicle on a flat surface. Push down on the front bumper 3 times to settle the front end. Measure the ground clearance of the stock vehicle with the rider on board, from the low point or a structural part of the chassis. (Bottom of lower A-Arm mount)

This will be measurement A = 9.000" This measurement is known as ride height.

Measure the ride height with the intended rider and gear on board the vehicle.





Step 2 Raise the front end up until the shocks fully extend or the skis are just about to come off the floor. Re-measure from the previous point on the chassis to the ground.

This will be measurement B (Example 10.125") Full Extension

Step 3 B - A = Sag Example 10.125" - 9.000" = 1.125" of Sag

Use this measurement to set up your FOX 2.0 ZERO QS3-R

Full Extension – Ride Height = Sag

Optimal sag may vary, depending on your vehicle, rider weight and usage.



INSTALLING YOUR SHOCKS

If you do not have the proper equipment, tools, floor jack or jack stand, torque wrench, ratchet socket set with wrench set and abilities to correctly install your shock, have the shock absorbers installed by a professional technician. Your shock absorbers come supplied with the correct reducers, pre-installed to mount to your vehicle.



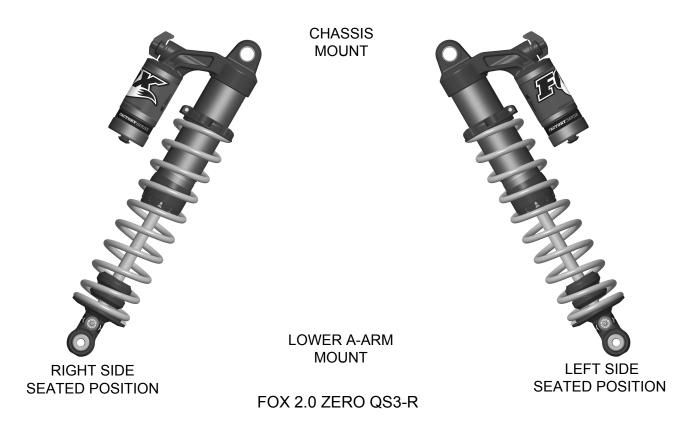
WARNING: CONTACT FOX IF THESE REDUCERS DO NOT FIT CORRECTLY. CORRECT SHOCK MOUNTING IS CRITICAL FOR CORRECT OPERATION AND FOR YOUR SAFETY.



WARNING: DO NOT REMOVE RESERVOIR NITROGEN FILLER CAP OR ATTEMPT TO CHANGE NITROGEN PRESSURE. DAMAGE TO SHOCK ABSORBER CAN OCCUR.

Shock absorbers equipped with rebound adjust and compression adjust (low speed an high speed) are preset. It is recommended that you check the settings by counting the number of full clicks in, turning the adjuster clockwise until it stops. Back the adjuster out the same number of full clicks you turned the adjuster in. Note these settings in TUNING NOTES Section.





Step 4 Ensure that your snowmobile is safely supported with a floor jack or jack stand with the skis off the ground. The suspension should be fully extended before removing the stock shocks. Install your FOX 2.0 ZERO QS3-R shock absorbers with the reservoirs oriented as shown in the picture above.

Step 5 Torque the original hardware to the manufacturer's specifications. The FOX 2.0 ZERO QS3-R shocks do come with the pre-load preset, but it is recommended that you make sure the pinch bolt on the preload ring is hand tight using a 5/32" allen wrench on initial setup, before riding.



2.0 ZERO QS3-R SETUP



ADJUSTING SPRING PRELOAD

To adjust the spring preload, first loosen the preload ring locking bolt. To increase spring preload, turn the preload ring clockwise, when looking from the reservoir side of the shock. To decrease the spring preload, turn the preload ring counterclockwise. Re-tighten the preload locking bolt once you have reached your desired spring preload.

Step 6 Lower the vehicle to the floor and remove the jack. Push down on the front bumper 3 times to settle the front end. With the intended rider and gear onboard, measure the ground clearance from the previous measuring point on the chassis. This will be measurement **C** (**Example 7.0 inches**) Ride Height

Step 7 B - C = New Sag Example 10.125"- 7.0"= 3.125" of sag

Step 8 In our example you would have to increase the spring preload to increase ride height and reduce sag by repeating previous steps 4 through 6. However, if the ride height would have been too high and sag too low, you would have to decrease spring preload.

Full Extension - Ride Height = Sag



TUNING THE FOX 2.0 ZERO QS3-R

SPRING FORCE

At this point you have set the sag of your vehicle by adjusting the spring preload. Your spring force should be near its optimal setting. If you feel that the front of the vehicle is too low while you are riding, increase the spring preload by 2 turns. If the vehicle is too high, decrease the spring preload by 2 turns. If you feel that you are passing through your available travel too quickly on big bumps or have too much roll in corners, try increasing the spring preload by 2 turns. If you feel that you are not fully utilizing your available travel or the sled does not roll over easy in corners (deep snow powder turns), try decreasing the spring preload by 2 turns.

REBOUND ADJUST



Rebound Adjusters

The rebound adjust feature on your FOX 2.0 ZERO QS3-R shocks gives you the ability to externally adjust the shock's rebound damping. Adjustments are made by turning the knob or the flat blade screw driver slot on the eyelet, located on the end of the shock absorber.

For slower rebound, turn the knob/screw clockwise.

The rebound adjuster has about 20 clicks of adjustment. The factory setting is 12 clicks out. The performance of the shock at this setting is close to the performance of the non-adjustable shock and is a good all-around setting.

The rebound damping affects how quickly the shock extends (rebounds). This adjustment affects how quickly the skis rebound when traveling through a series of large bumps and how quickly the front end responds in a corner.

The optimum rebound setting is usually found with the minimum damping required to give acceptable control. Excessive rebound damping will typically be felt as the "suspension packing". This can often be seen or felt as the vehicle travels through a series of similar-sized, successive bumps. It works well for the first two or three bumps and then bottoms hard on the third or fourth. This is because the shock has not rebounded quickly enough, and the shock "packs" into compression.

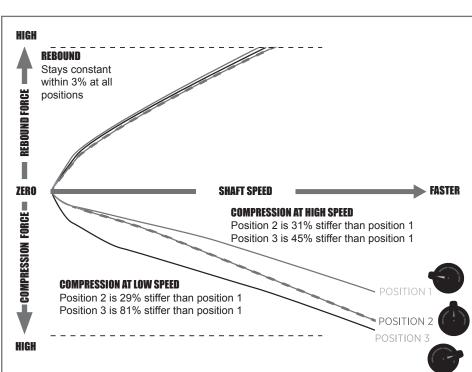


INTRODUCTION

FOX QS3 - 3 Position On-the-Fly Compression Adjuster

Our QS3 tool-free adjuster allows for simple repeatable suspension setting changes on the fly. Its wide range of compression adjustment provides noticeable changes of ride quality and handling without the complications of counting clicks. Choose a QS3 setting that gives you the most confidence, comfort, or handling characteristics with just a "flip of a switch."





TUNING COMPRESSION DAMPING	
Symptom	Remedy
Rigid, harsh ride	Decrease Position
Excessive Body Roll	Increase Position
Bottoms out on jump face and landings	Increase Position
Suspension not using full travel	Decrease Position



TUNING NOTES

DATE	COMMENTS	FULL EXTENSION	RIDE - HEIGHT =	= SAG	SPRING PRE LOAD	QS3 ADJ	REB ADJ



MAINTENANCE

PROPER INSPECTION AND MAINTENANCE IS ESSENTIAL TO MAINTAIN THE PERFORMANCE AND RELIABILITY OF YOUR SHOCK ABSORBERS.

It is important to keep the shock absorbers clean and free of dirt, ice and snow. The FOX Ice Scraper Technology will help eliminate moisture from entering the shock. Cleanliness will add to the FIST seal life. When cleaning the vehicle, avoid using a high-pressure washer near the seals as this could drive debris inside the FIST seal system.

Ideally, the shocks should be clean around the adjusters when changing the damping setting. A small blast of contact cleaner or brake cleaner before making adjustments will keep these parts clean and operating smoothly for years.

The service interval depends on how frequently and severely the snowmobile is ridden. As a guideline, if you race every weekend, you may want to change the oil in your shock at least every 10-20 hours of usage. Otherwise, it is generally recommended to have the shock absorbers completely serviced anually. FOX or an authorized factory service center can perform these procedures.

SERVICE

Contact FOX Service Center at 1.831.740.4619 or psservicemw@ridefox.com to receive a return authorization number before shipping shocks to one of the following service centers:

WARRANTY

All FOX products have a one-year warranty on defects in materials or workmanship. Please view the full warranty terms and conditions at www.ridefox.com Help Center/Powersports/Warranty or Contact a representative at: 1.831.740.4619. A service RMA will be issued. Ship shocks to one of the following service centers:

FOX Powersports Service 130 Hangar Way Watsonville, CA 95076 FOX Midwest Service Center 13461 Dogwood Drive Baxter, MN 56425