

**FOX** REDEFINE  
**YOUR LIMITS**

FLOAT 3 EVOL RC2  
FACTORY SERIES  
OWNER'S MANUAL



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## CONGRATULATIONS

Thank you for choosing FOX FLOAT 3 EVOL RC2 shock absorbers for your ATV. In doing so we believe you have chosen the finest suspension products in the world.

FOX shocks have been designed, tested and assembled in the United States for more than 35 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. FOX recommends that this only be carried out by an authorized FOX service center.

## CONSUMERSAFETY

**WARNING:** Driving a ATV can be dangerous and can result in death or serious injury.

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

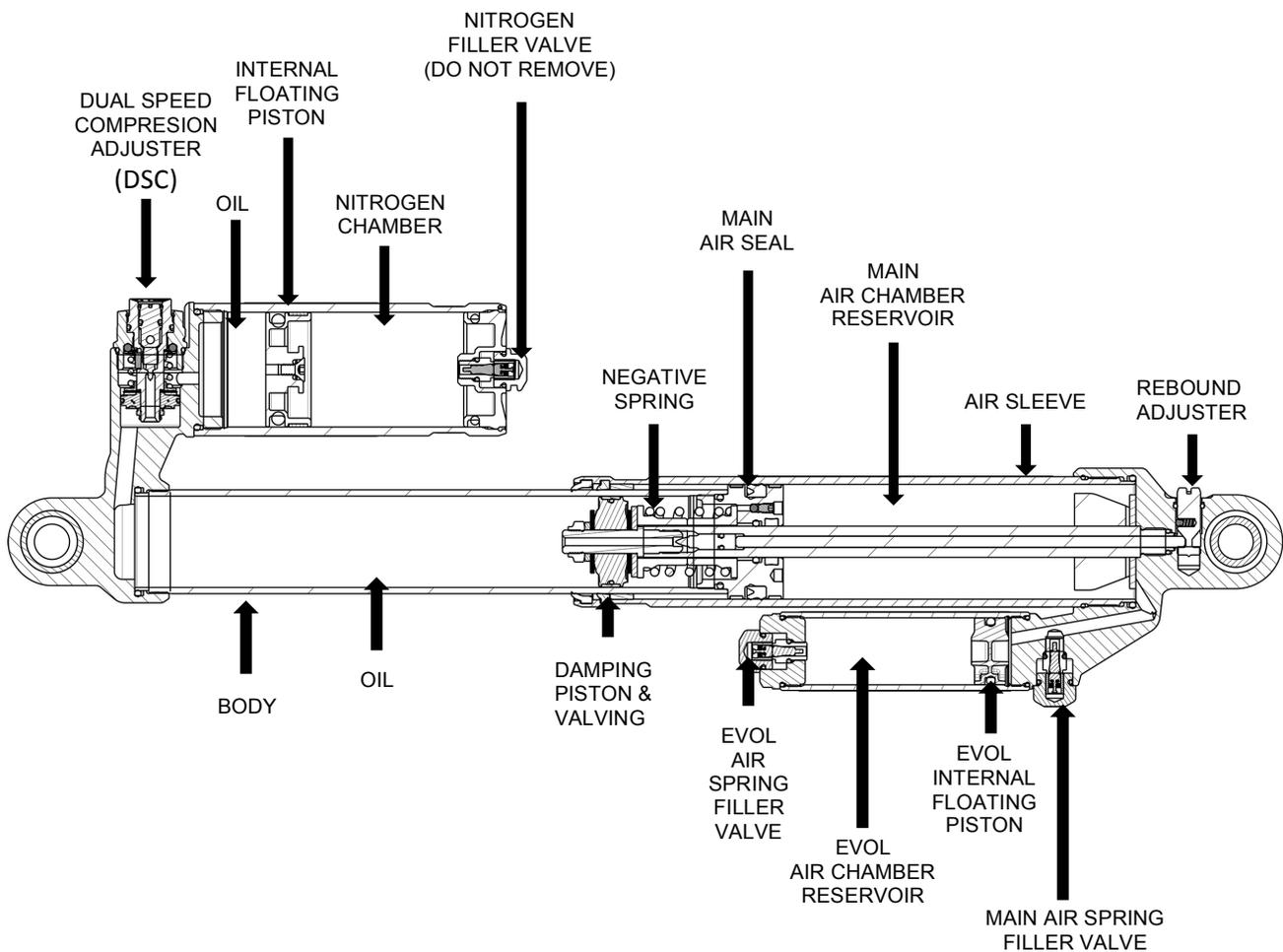
- Keep your vehicle and its suspension systems in optimal working condition.
- Always wear protective clothing, eye protection and a helmet.
- Know your limits and drive within them!

The Fox FLOAT 3 EVOL RC2 shock contains a high pressure nitrogen charge. The shock should only be opened by an authorized 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 FLOAT 3 EVOL RC2 shock. Do not puncture or incinerate the shock absorber or damper portion. Always wear eye protection when installing or adjusting your shock absorber.

## UNDERSTANDING THE FLOAT 3 EVOL RC2

FOX FLOAT (FOX Load Optimizing Air Technology) 3 EVOL SERIES air shocks are high-performance shock absorbers that use air as springs, instead of heavy steel coil springs or expensive titanium coil springs. Underneath that air sleeve is a high-performance, velocity-sensitive, shimmed damping system. FLOAT 3 EVOL SERIES air shock 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



FLOAT 3 EVOL RC2 shocks are built using 6061-T6 aluminum for light weight 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 FLOAT 3 EVOL RC2. The Air Sleeve and Reservoir are Genuine Kashima coated for reduced friction and long seal life. The damper shaft and seals are contained within the air sleeve, protecting them from debris, dirt and water.

## FOX PUMP

Your FLOAT 3 EVOL RC2 shock absorbers are shipped with a FOX dual scale air pump, shown below.



0-300psi Dual Scale Pump P/N 027-00-008

## AVAILABLE OPTIONS

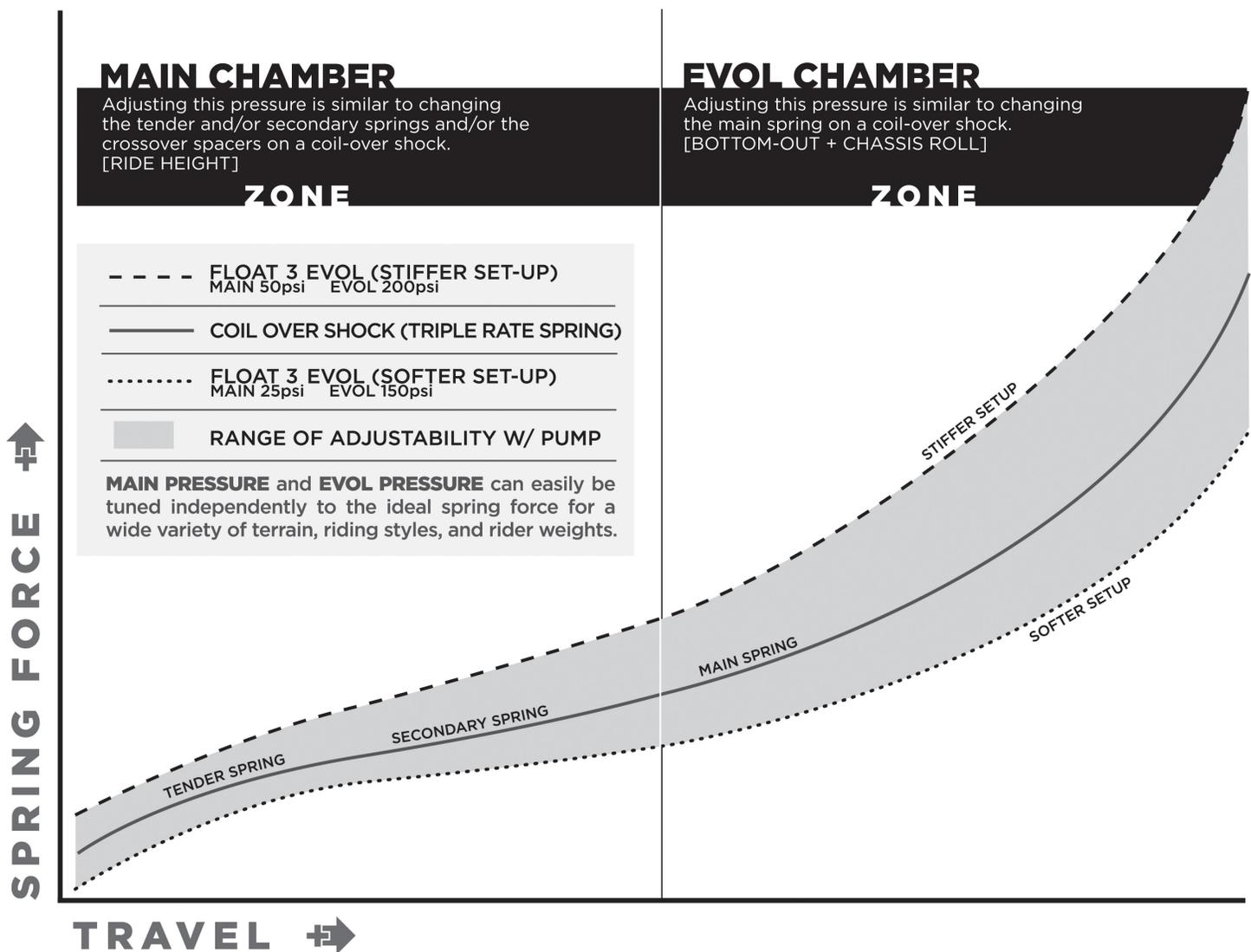


0-300psi Digital Pump P/N 027-00-010

## ADJUSTABLE PROGRESSIVE DUAL-STAGE AIR SPRING

Air springs are not just lightweight they are also progressive. What does that mean? As the graph below shows, during the second half of shock travel, the spring force builds rapidly. This virtually eliminates any harsh bottoming of the suspension and provides a “bottomless” feel.

With just one pump you can make quick, easy changes to your setup to fine tune your shock’s spring curve. Using air, there is an infinite number of spring rates available.



As you can see, by changing the pressures in the **MAIN** air chamber and the **EVOL** air chamber, you can get much softer or much firmer than a coil-over shock without ever having to change out a spring.

Your FLOAT 3 EVOL RC2 shocks come in the box ready-to-ride, but we encourage you to follow the procedures outlined in this manual to optimize their performance.

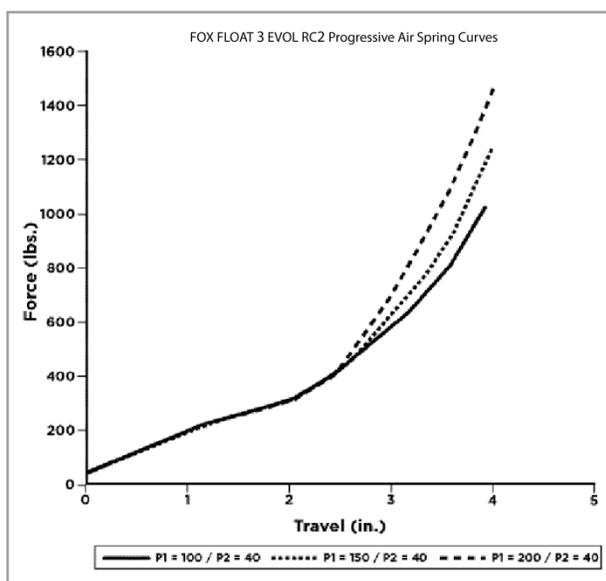
The air pressure in the **EVOL** air chamber is adjusted to control the vehicle corner roll and bottom-out characteristics in the last 1/3 of shock travel; the pressure in the **MAIN** air chamber is adjusted to change ride height and the suspension stiffness of the ATV.

## Reference Air Pressures

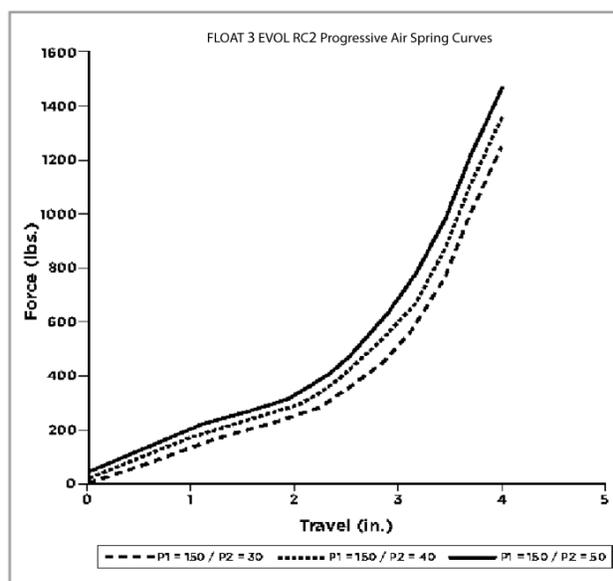
Rider Weight	EVOL Air Chamber	Main Air Chamber
100-140LB	100-195PSI	25-45PSI
141-199LB	110-210PSI	25-50PSI
200-250LB	120-225PSI	30-55PSI

**CALL 1.800.FOX.SHOX to get air pressure settings for your application and weight.**

The effects of changing the **EVOL** air chamber pressure and **MAIN** air chamber pressure are shown in the graphs below:



Changing EVOL Air Chamber pressure adjusts the bottom-out resistance of the shock.



Changing MAIN Air Chamber pressure steadily adjusts the spring curve.

## TEMPERATURE DEPENDENCY

The air pressures in the FLOAT 3 EVOL RC2 air shocks are slightly temperature dependent with roughly a 10psi air pressure change over a 100-degree temperature change. Because of this, it is best to set the air pressure in temperature conditions close to ambient temperature anticipated during riding. When temperatures change by more than 30 degrees Fahrenheit—or 17 degrees Celsius—it is recommended that the pressure settings be reset.

For example, if the temperature outside is 40°F (4°C) and the pressures are set while the ATV is in a garage in which the ambient temperature is 70°F (21°C), the shocks will be under-pressurized when taken outside due to the cold air temperature. Therefore, it is imperative that the pressures are re-adjusted when the ATV/shocks are taken from extreme warm to cold temperatures and vice-versa. Once the pressures are set for a given temperature, they will remain stable throughout the ride.

## INSTALLING YOUR SHOCKS

Your shock absorber should come supplied with the correct o-rings and reducers set to mount the shock correctly to your vehicle.



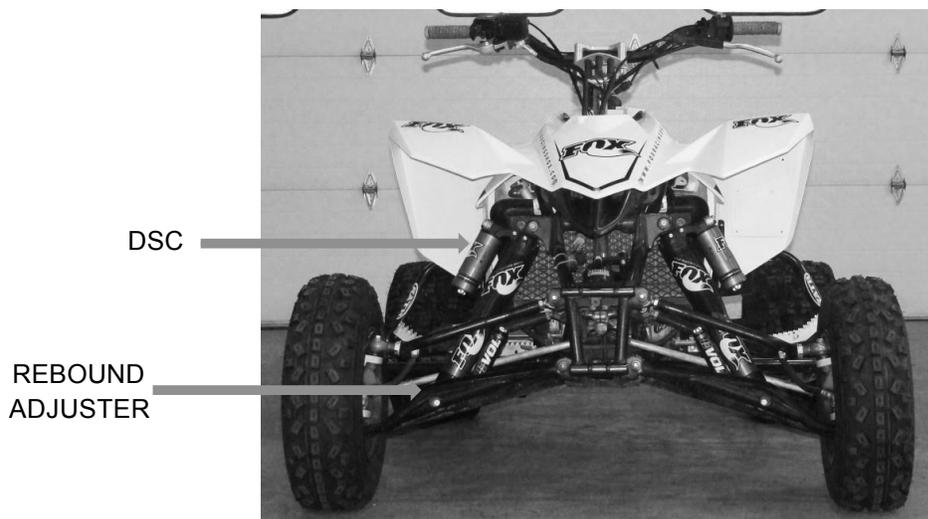
**WARNING:** Contact FOX if these reducers do not fit correctly. Correct shock mounting is critical for correct operation and for your safety.

DO NOT REMOVE NITROGEN FILL VALVE



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

FLOAT 3 EVOL RC2 shock absorbers are equipped with rebound adjust and compression adjust low speed and high speed, both rebound and compression settings are preset in the middle of the adjustment range. But it is recommended that you check the settings by counting the number of clicks in clockwise until adjuster stops. Back the adjuster out the same number of clicks you turned the adjuster in. Note these settings in TUNING NOTES Section.



**STEP 1** Install shock absorbers as per above photo with DSC mounted to the top with the DSC on outboard side of ATV.

Torque the original hardware to manufacturer's specifications. FOX FLOAT 3 EVOL RC2 air chambers do come pre-pressurized, but it is recommended that you check air pressures and perform the initial setup procedures before riding.

## SETTING UP THE FLOAT 3 EVOL RC2



**STEP 1** Ensure that your ATV is safely supported on a stand with the front wheels off the ground and the suspension fully extended.

**NOTE: ALWAYS SET EVOL CHAMBER AIR PRESSURE BEFORE SETTING MAIN CHAMBER AIR PRESSURE**



**STEP 2** Thread the pump onto the EVOL air filler valve until it is fully seated and air pressure registers on the pumps high pressure scale.

**NOTE: WHEN YOU ATTACH THE PUMP, THE HOSE AND GAUGE WILL FILL WITH AIR FROM THE AIR CHAMBER RESULTING IN A LOWER AIR PRESSURE READING THAN THE SHOCK WAS ORIGINALLY SET AT. THIS IS NORMAL.**

**STEP 3** Pump the shock up to the desired air pressure setting.  
You can decrease air pressure by pushing the BLACK-BLEED valve on pump.

(WARNING: DO NOT EXCEED 300PSI IN THE EVOL CHAMBER)

Pushing the bleed valve halfway down and holding it there will allow air to escape continuously from the pump and shock. Pushing the bleed valve all the way down and releasing it will allow only a small amount of pressure to escape (micro-adjust). When unthreading the pump from the air filler valve, the sound of air loss is from the pump hose only and not the shock. Your shock pressure will not change.



**STEP 4** Thread the pump onto the MAIN air filler valve until it is fully seated and air pressure registers on the pumps low pressure scale.

**STEP 5** Pump the shock up to the desired air pressure setting. You can decrease air pressure by pushing the BLACK-BLEED valve on pump.

(WARNING: DO NOT EXCEED 150PSI IN THE MAIN CHAMBER)



Full extension measuring point.

**STEP 6** Position floor jack under vehicle so that when the vehicle is raised both front and rear wheels come off the ground at the same time. Raise vehicle until both wheels would be able to rotated with a little drag.

**Full Extension – Ride Height = SAG**

**STEP 7** Lower the ATV to the ground. Measure and set rider sag as described in next section.

## MEASURING AND SETTING RIDER SAG

To get the best performance out of your FLOAT 3 EVOL RC2, it is necessary to adjust the vehicle ride-height or “sag”. Sag is how much the shocks compress — or sag — when you sit on your ATV . As a general rule, your vehicle’s sag should be 35%–45% of full wheel travel. There are many factors that will influence your sag setting and ride height preference, including tire diameter, terrain and riding style. Use the following procedure to accurately measure and set the correct ride-height (sag) for your ATV . (Measuring assistance will be required)



**STEP 1** Position the bike on a flat surface and clear of any obstacles.

**STEP 2** Place pieces of cardboard under each wheel. As the suspension is compressed, the front wheels move outward. This is called “scrub.” Placing the cardboard under the wheels allows the suspension to move more freely.

**STEP 3** While wearing your normal riding gear, mount the ATV and stand in your normal riding position with both hands on the bars.

**STEP 4** Aggressively bounce up and down on the quad several times and allow the quad to settle.

**STEP 5** Have the assistant push down on the front end of the ATV. While the suspension is compressed turn the handle bars full left and full right then straighten handle bars and release the front suspension. Bounce a couple more times.

**STEP 6** Gently assume your seated riding position.



Measure from the ground to the bottom of the frame just below front motor mount.



Measure from the ground to the bottom of the frame just ahead of the rear foot peg.

**STEP 7** While still seated on the ATV, have the assistant measure the vertical distance from the ground to the bottom of the frame, under the front motor mount (front frame height). Then measure the vertical distance from the ground to the bottom of the frame just ahead of the rear foot peg (rear frame height).

**RECOMMENDED FRAME HEIGHT GUIDE LINES**

TERRAIN/ RIDING DISCIPLINE	FRONT TIRE DIAMETER	REAR TIRE DIAMETER	FRONT FRAME HEIGHT	REAR FRAME HEIGHT
MOTOCROSS	20"	18"	7 1/4"	7"
CROSS COUNTRY	21"	20"	7 3/4"	7 1/2"
WORCS	21"	20"	8"	7 3/4"
DESERT	23"	22"	9 1/4"	9"
SUPERMOTO	19"	18"	5 3/4"	5 1/2"

**STEP 8** If your ATV is sitting too low in the front, increase the **MAIN** air chamber pressure in the FLOAT 3 EVOL RC2. The following the procedures outlined previously and repeat all the steps above until you reach the desired ride height setting.

## TUNING THE FLOAT 3 EVOL RC2

### SPRING FORCE

At this point you have set the sag of your vehicle by adjusting the air chamber pressure. Your spring force should be near its optimal setting. If you feel that the front of the vehicle is too low as you are riding, increase the air chamber pressure by 5psi. If the vehicle is too high, decrease the air chamber pressure by 5psi.

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 EVOL air chamber pressure by 10 PSI. If you feel that you are not fully utilizing your available travel, try decreasing the EVOL air chamber pressure by 10 PSI.

Step 1 Lift the vehicle's front end off the ground.

Step 2 Release the air pressure from the MAIN air chamber.

Step 3 Re-set the EVOL air chamber pressure. (Do not exceed 300 psi)

Step 4 Re-set the MAIN air chamber pressure. (Do not exceed 150 psi)

Step 5 Reinstall air spring filler caps.

### REBOUND ADJUST



Rebound Adjuster

The Rebound Adjust feature on your FLOAT 3 EVOL RC2 shocks gives you the ability to externally adjust the shock rebound damping. Adjustments are made by turning Rebound Adjuster using a Quarter or a small flat-bladed screwdriver to turn adjuster on the Air Sleeve Body Cap 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 wheel will rebound when travelling through a series of large bumps and how quickly the front end responds in the 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

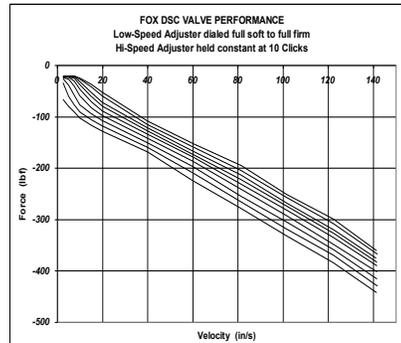
## DUAL-SPEED COMPRESSION (DSC) ADJUST

The FOX DSC valve is standard on FLOAT 3 EVOL RC2 shocks and gives you the ability to externally adjust the damping. The DSC has about 24 clicks of low-speed adjustment and about 22 clicks of high-speed adjustment. The factory setting is 12 / 12. 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 DSC valve gives the driver the ability to tune the shock for different terrain / personal preference on either side of this setting (softer or stiffer).

### LOW-SPEED COMPRESSION (LSC) ADJUST



LSC Adjuster



### LSC (LOW-SPEED COMPRESSION) ADJUSTMENT

The LSC is adjusted using a dime or flat-blade screwdriver in the middle of the adjuster.

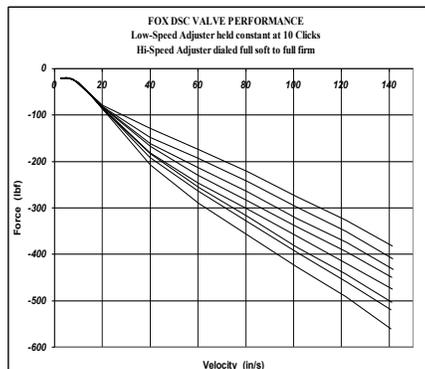
More damping = stiffer = clockwise

LSC primarily affects the compression damping during slow suspension movements such as G-outs or smooth jump landings. It also affects ride comfort of the vehicle.

Choose a LSC setting that gives good body control anti-roll in corners, without causing excessive harshness or loss of front end traction. The graph above shows the typical range of adjustability for the LSC adjuster from full-firm to full-soft with the HSC adjuster held constant at 10 clicks out.



HSC Adjuster



### HSC (HIGH-SPEED COMPRESSION) ADJUSTMENT

The HSC is adjusted using a 17 mm socket

More damping = stiffer = clockwise

The HSC adjuster affects the compression damping during medium-to-fast suspension movements such as steep jump faces, harsh flat landings and aggressive whoops. The goal is to run as little high-speed compression damping as possible without bottoming. The graph above shows the typical range of adjustability for the HSC adjuster from full-firm to full-soft with the LSC adjuster held constant at 10 clicks:



## **MAINTENANCE**

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

You should keep the shock clean and free of debris, dirt and water.

It is important to keep the shock absorbers clean and free of residue. The Samurai Sealing System in the air sleeve will clean deposits from the shock body and reduce the amount of debris entering the air sleeve. This will add to main air sleeve seal life. When cleaning the vehicle avoid using a high-pressure washer near the seals as this could drive debris inside the shock air sleeve.

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.

## **REBUILD / SERVICE INTERVALS**

Just like the oil in your car engine, the oil in your shock absorber breaks down over time and must be replaced. The service interval depends on how frequently and severely the vehicle is driven. For optimum performance racing applications the shocks may require rebuilding every 10-20 hours of use. Air sleeves should be service at a minimum of once per year. In non-racing environments to keep your shocks performing at optimum performance we recommend at least every 100-200 hrs. of use.

**WARNING:** Shock rebuilds take specialist knowledge and tools. It is essential that this is performed by an authorized FOX technician or service center.

## **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/ps-warranty](http://www.ridefox.com/ps-warranty) or contact a representative at 1.800.FOX.SHOX (1.800.369.7469).

## **SERVICE**

Contact FOX Service Center at 1.831.740.4619 or [psservicemw@ridefox.com](mailto:psservicemw@ridefox.com) to receive a return authorization number before shipping 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