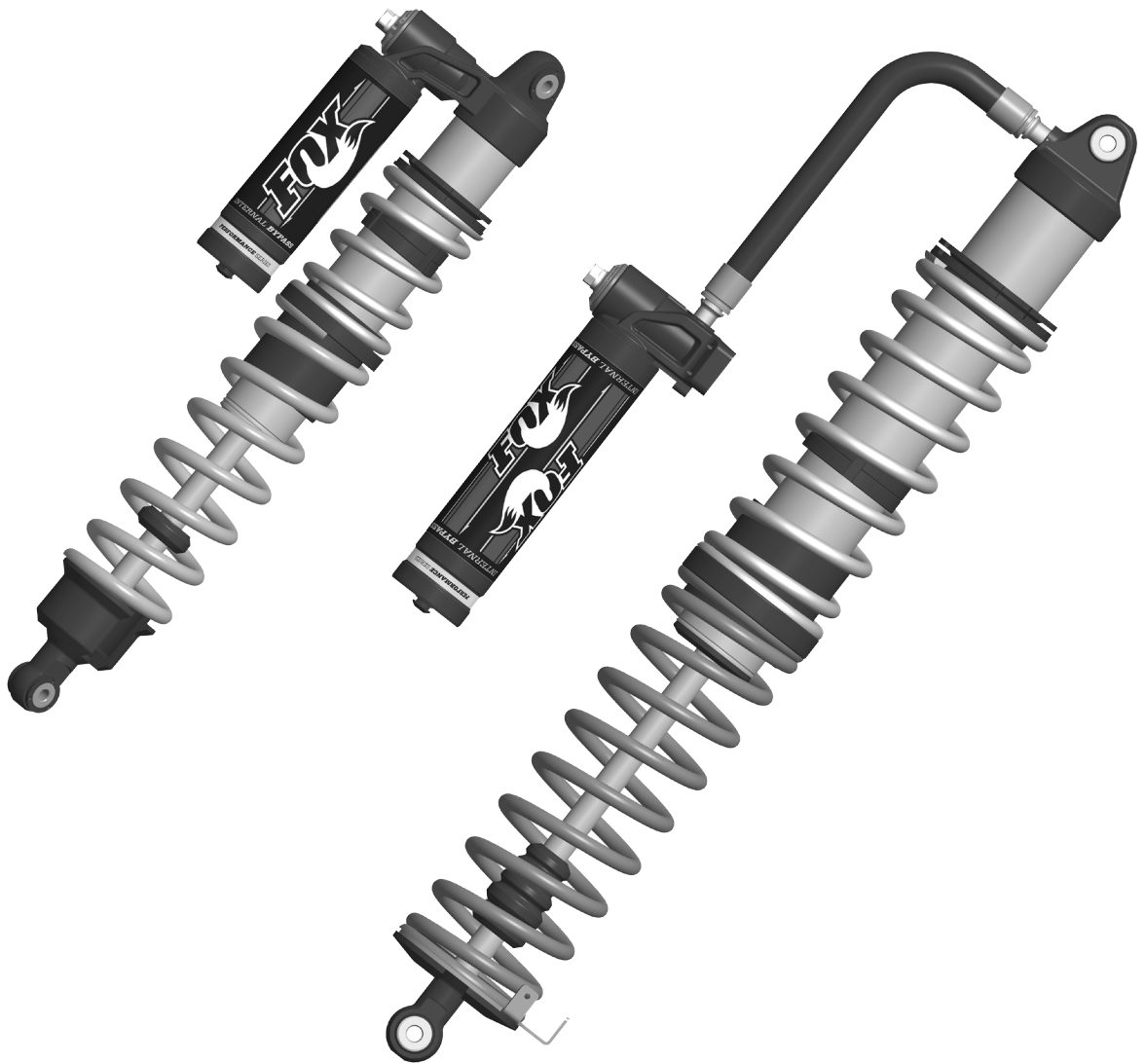


**FOX** *REDEFINE  
YOUR LIMITS*

**POLARIS XP 1000  
2.5 - 3.0 INTERNAL BYPASS  
OWNERS MANUAL**



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NOTICE: THE UTV PICTURED IN THIS MANUAL MAY NOT RESEMBLE YOUR ACTUAL VEHICLE. THE PROCEDURES OUTLINED IN THIS MANUAL WILL INSTRUCT YOU TO SET-UP AND ADJUST THE FOX PODIUM INTERNAL BYPASS SHOCK ABSORBER ON YOUR PARTICULAR UTV.

Reference print standards 604-00-300 rev A

## CONGRATULATIONS

Thank you for choosing FOX PODIUM INTERNAL BYPASS SERIES shock absorbers for your UTV. 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.

## CONSUMER SAFETY

**WARNING:** Driving a UTV can be dangerous and can result in DEATH OR SERIOUS INJURY.

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

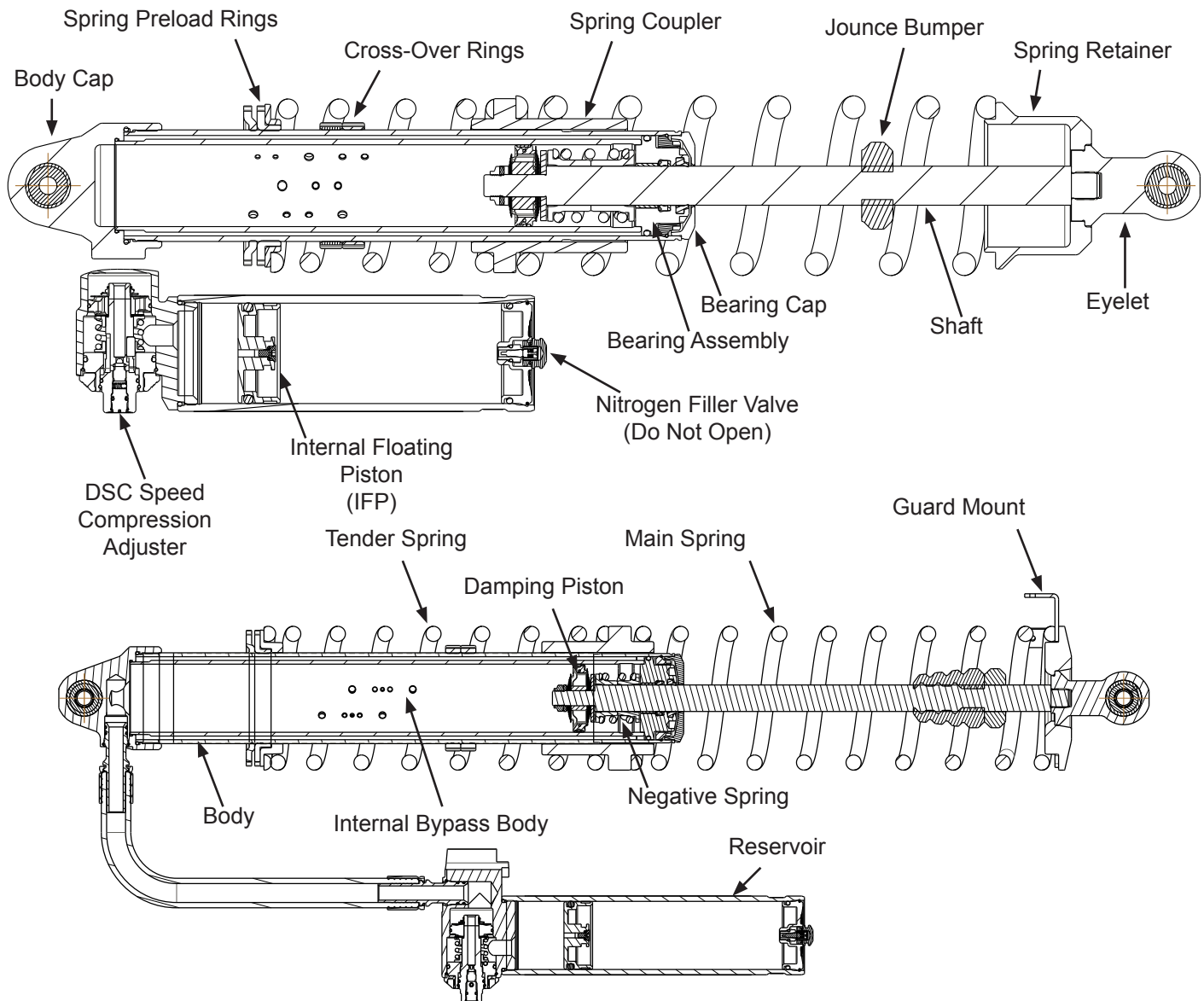
- Keep your bike and its suspension systems in optimal working condition.
- Always wear protective clothing, eye protection and a helmet.
- Know your limits and ride within them!

THE FOX PODIUM INTERNAL BYPASS shock contains a high-pressure nitrogen charge. The shock should only be opened by a FOX technician.

**IMPORTANT:** Orienting the shocks improperly can cause interference with the action of the bikes suspension resulting in possible loss of control, injury or death. If you do not possess the tools or the technical knowledge to mount your FOX shocks, have it performed by an authorized dealer.

**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 Podium Internal Bypass shock. Do not puncture or incinerate the shock absorber damper portion. Always wear eye protection when installing and adjusting your shock absorber.

## UNDERSTANDING THE PODIUM INTERNAL BYPASS



### INTERNAL BYPASS

Internal Bypass shocks deliver race-proven, position-sensitive damping technology and performance in a hassle-free package. Our patented position-sensitive internal bypass technology contains inner passages that allow fluid to bypass the piston through regulated ports as it moves through the travel. The new shocks allow for a plush, predictable ride over normal off-road driving conditions and also have the ability to ramp up damping force for extreme use. These heavy-duty, steel-bodied shocks are loaded with anodized billet aluminum components and race-bred internal valving—designed to bolt right on to your stock UTV. The Dual Speed Compression (DSC) adjuster provides versatility and precise tuning. A simple twist of either of the adjuster knobs allows for 24 separate low-speed and 24 high-speed compression levels. Increased cooling capability is achieved through increased body and reservoir diameters.

## READING THE SPRING RATE

FOX coil-over shocks only use quality, high stress race springs. The springs are a shot-peened, heat-treated chrome-silicon material, designed to give maximum travel and minimum weight. They are preset to ensure they don't sag over time.

TIP: The springs are typically labeled: XXXX-XXX-XXXX  
For example: 1200-300-0350

The first four digits indicate the spring free length: 1200 = 12.00 inches  
The middle three digits indicate the spring free internal diameter: 300 = 3.00 inches  
The last four digits indicate the spring rate: 0350 = 350 lb-in

## SETTING THE RIDE HEIGHT

All FOX coil-over shocks feature adjustable spring preload. Your vehicle performance is sensitive to ride height variations.



**WARNING:** Do not add excessive amounts of preload into the coil spring. Doing so may result in coil-bind, which could lead to spring failure and potential injury or death. To check coil-bind, put several zip-ties around individual coils. If they break or show contact, there is excessive preload. If you are at maximum preload and need more ride height, contact FOX for a stiffer spring.

## INSTALLING YOUR SHOCKS

Your shock absorber should come supplied with the correct reducers pre-installed to mount the shock 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.

### Front Shocks:

- Raise the front of the vehicle with a jack, support with jack stands and remove the stock shock absorbers. Document the reservoir orientation so the FOX replacement shocks mount in a similar manner so reservoirs are oriented toward the rear of the vehicle.
- Install the upper mounting bolt through the shock eyelet and upper suspension mount.
- Install the lower mounting bolt through the shock eyelet and lower suspension mount.
- Tighten the upper and lower shock bolts. Follow the Manufacturer's recommended torque specification of 40-44 ft-lb.
- After shocks have been tightened to the torque spec as listed, remove the jack stands and lower the vehicle.

### Rear Shocks:

- Raise the rear of the vehicle with a jack, support with jack stands and remove the stock shock absorbers along with the reservoir hose clamps, isolators and roost guards.
- In order to mount the FOX shocks, the plastic cover that goes around the stock shock hose will need to be removed and stored, as it will not be needed.
- Install the factory roost guards on the FOX shock absorbers with the original self tapping screws.
- Install the upper mounting bolt through the shock eyelet and upper suspension mount.
- Install the lower mounting bolt through the shock eyelet and lower suspension mount.
- Tighten the upper and lower shock bolts. Follow the Manufacturer's recommended torque specification of 70 ft-lb.



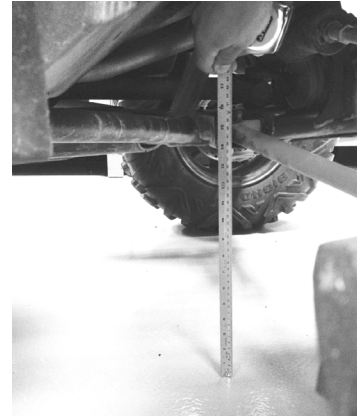
- Maneuver the reservoir and hose through the opening left by the cover that had been removed.
- Position the reservoir as shown and install the clamp cover and qty. 4 ¼-20 X 1.5" socket head cap screws. Tighten in a crisscross pattern and torque to 15 ft-lbs. be sure to use blue Loctite® 242 to ensure screws do not come loose.
- After shocks have been tightened to the torque spec as listed, remove the jack stands and lower the vehicle to the ground.



## CHECKING THE RIDE HEIGHT

- ONCE THE VEHICLE IS ON THE GROUND, THE SCRUB NEEDS TO BE TAKEN OUT OF THE TIRES SO THE RIDE HEIGHT CAN BE MEASURED. IN ORDER TO REMOVE THE SCRUB THE VEHICLE NEEDS TO BE ROLLED BACKWARDS AND FORWARDS AT LEAST 10 FEET.

MEASURE THE FRONT AND REAR RIDE HEIGHTS AS SHOWN ON A FLAT AND LEVEL SURFACE.



### FRONT

The front should always be set about 1/4" higher than the rear.

- The distance from the ground to the front outer frame rail should be between 14.00 -14.25"



### REAR

- The distance from the ground to the rear frame rail should be between 13.75-14.00"

Increase spring preload to increase the vehicles ride height.

**WARNING:** Be sure not to add too much preload into the coil spring. Doing so may result in coil-bind, leading to spring failure and potentially injury or death. If you are at maximum preload and need more ride-height, contact FOX for a stiffer spring.

The optimum vehicle ride height will be determined by exact vehicle configuration and usage. Individual vehicles can vary significantly in weight so it is important to check the ride height when you first install your shocks. For example, if you have added accessories to your vehicle that increase the weight, you may need to consider alternate spring rates.

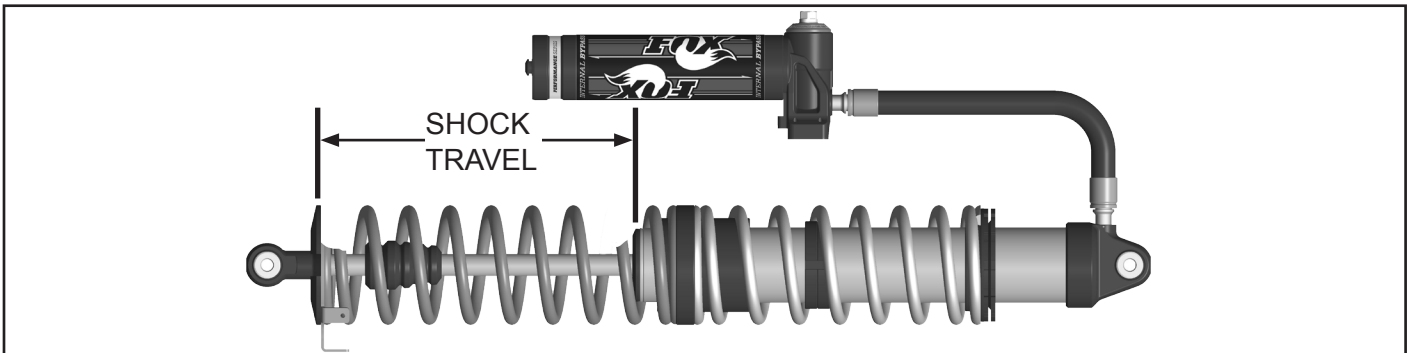
## ADJUSTING SPRING CROSSOVER (DUAL SPRING ONLY)

The spring crossover point is an important tuning parameter. A softer initial spring rate offers improved traction and hook-up while a higher spring rate deep into travel helps to resist bottoming on jump landings. As a rough guideline, the spring crossover point should be as deep into travel as possible without experiencing excessive bottoming. The crossover point is defined as a percentage of the total shock travel. The factory setting for the spring crossover point is 63.7 percent. This means that a 12.14-inch travel shock would have the crossover point at 7.734 inches (12.14 inches x 0.637) into the shock travel.

In order to calculate your spring crossover ring placement, you need to know four important pieces of information:

1. Metal-to-metal shock travel in inches (measure before spring installation).
2. Main spring rate (lb-in) - marked on spring (see Reading the Spring Rate).
3. Tender spring rate (lb-in) - marked on spring (see Reading the Spring Rate).
4. Desired crossover point (as a percentage).

The shock travel is the exposed length of the shaft (including the bump stop) when the shock is fully extended. It may be easiest to measure before you install the shock.



Some shocks use external spacers below the bump stop to limit travel. Do not include the spacer length as part of the travel. The crossover point is a tunable parameter. It should be between 45 and 65 percent.

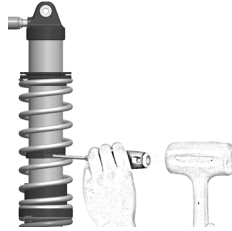
### SETTING THE CROSSOVER POINT

**NOTE:** ALWAYS WEAR EYE PROTECTION WHEN WORKING WITH SHOCK ABSORBERS.

**STEP 1** Set ride height as described on page five.

**STEP 2** Once you have established the correct preload, jack up the UTV and place on a stand to keep the wheel off the ground. The shock should be fully extended.





**STEP 3** Use a hammer and flat blade screwdriver, to loosen the crossover rings.

SPRING CORRECTION FACTOR	MAIN SPRING RATE (lb/in)															
	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500	
TENDER SPRING RATE (lb/in)	100	0.600	0.636	0.667	0.692	0.714	0.733	0.750	0.765	0.778	0.789	0.800	0.810	0.818	0.826	0.833
	150	0.500	0.538	0.571	0.600	0.625	0.647	0.667	0.684	0.700	0.714	0.727	0.739	0.750	0.760	0.769
	200	0.429	0.467	0.500	0.529	0.556	0.579	0.600	0.619	0.636	0.652	0.667	0.680	0.692	0.704	0.714
	250	0.375	0.412	0.444	0.474	0.500	0.524	0.545	0.565	0.583	0.600	0.615	0.630	0.643	0.655	0.667
	300	0.333	0.368	0.400	0.429	0.455	0.478	0.500	0.520	0.538	0.556	0.571	0.586	0.600	0.613	0.625
	350	0.300	0.333	0.364	0.391	0.417	0.440	0.462	0.481	0.500	0.517	0.533	0.548	0.563	0.576	0.588
	400	0.273	0.304	0.333	0.360	0.385	0.407	0.429	0.448	0.467	0.484	0.500	0.515	0.529	0.543	0.556
	450	0.250	0.280	0.308	0.333	0.357	0.379	0.400	0.419	0.438	0.455	0.471	0.486	0.500	0.514	0.526
	500	0.231	0.259	0.286	0.313	0.333	0.355	0.375	0.394	0.412	0.429	0.444	0.459	0.474	0.487	0.500
	550	0.214	0.241	0.267	0.294	0.313	0.333	0.353	0.371	0.389	0.405	0.421	0.436	0.450	0.463	0.476
	600	0.200	0.226	0.250	0.278	0.294	0.314	0.333	0.351	0.368	0.385	0.400	0.415	0.429	0.442	0.455
	650	0.188	0.212	0.235	0.257	0.278	0.297	0.316	0.333	0.350	0.366	0.381	0.395	0.409	0.422	0.435
	700	0.176	0.200	0.222	0.243	0.263	0.282	0.300	0.317	0.333	0.349	0.364	0.378	0.391	0.404	0.417
	750	0.167	0.189	0.211	0.231	0.250	0.268	0.286	0.302	0.318	0.333	0.348	0.362	0.375	0.388	0.400
	800	0.158	0.179	0.200	0.220	0.238	0.256	0.273	0.289	0.304	0.319	0.333	0.347	0.360	0.373	0.385
	850	0.150	0.171	0.190	0.209	0.227	0.244	0.261	0.277	0.292	0.306	0.320	0.333	0.346	0.358	0.370
	900	0.143	0.163	0.182	0.200	0.217	0.234	0.250	0.265	0.280	0.294	0.308	0.321	0.333	0.345	0.357
	950	0.136	0.156	0.174	0.191	0.208	0.224	0.240	0.255	0.269	0.283	0.296	0.309	0.321	0.333	0.345
1000	0.130	0.149	0.167	0.184	0.200	0.216	0.231	0.245	0.259	0.273	0.286	0.298	0.310	0.322	0.333	
1100	0.120	0.137	0.154	0.170	0.185	0.200	0.214	0.228	0.241	0.254	0.267	0.279	0.290	0.302	0.313	
1200	0.111	0.127	0.143	0.158	0.172	0.186	0.200	0.213	0.226	0.238	0.250	0.262	0.273	0.284	0.294	
1300	0.103	0.119	0.133	0.148	0.161	0.175	0.188	0.200	0.212	0.224	0.235	0.246	0.257	0.268	0.278	
1400	0.097	0.111	0.125	0.138	0.152	0.164	0.176	0.188	0.200	0.211	0.222	0.233	0.247	0.253	0.263	

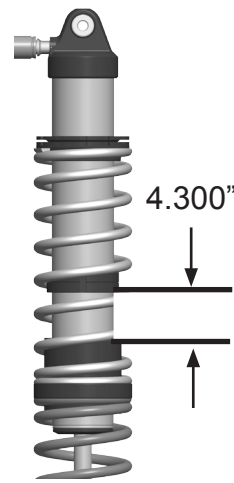
**STEP 4** Determine the Spring Correction Factor using the following table:

**STEP 5** Use the following formula to calculate crossover ring placement:

Crossover Ring Placement = Shaft Travel (in.) x Crossover Point x Spring Correction Factor

EXAMPLE

- 12.14-inch travel shock with a 250 lb-in main spring and an 200 lb-in tender spring.
  - The crossover point is set at 63.7 percent.
  - From the table above, the spring correction factor is 0.556.
  - From the above formula, the crossover ring placement value is 12.14 x 0.637 x 0.556 = 4.300 inches.
- IN THE ABOVE EXAMPLE, 63.7 PERCENT IS WRITTEN AS 0.637

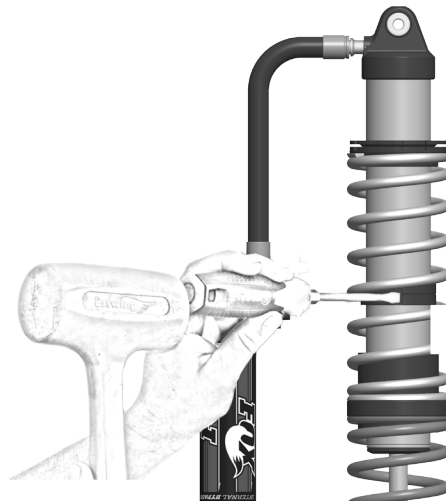


**Crossover ring placement value should match the distance from the top of the spring coupler to the bottom of the crossover ring.**  
**Example: 4.300 inches**

You may need a small, flexible ruler or measuring device to accurately determine the crossover ring location. Another useful way of measuring is to count the threads on the body (the thread pitch on the body is 14 threads per inch). If you know the crossover ring location, multiply by 14 to get the number of threads between the spring coupler and crossover ring.

In the example above,  $4.300 \text{ inches} = 4.300 \times 14 = 60 \text{ threads}$ .

Changing the spring preload, tender or main spring free-length or rate will mean that you need to reset the crossover ring placement.



**STEP 6** Adjust the crossover (as shown on the previous page) so that its distance from the spring coupler is equal to the crossover ring placement value calculated in Step 5. Lock the crossover rings together once complete with flat-bladed screwdriver and hammer.

**STEP 7** Remove the UTV from the stand.

## DUAL-SPEED COMPRESSION (DSC) ADJUST

The FOX DSC valve is an option on coil-over shocks and gives the ability to externally adjust the damping. The DSC has about 24 clicks of low-speed adjustment and about 24 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).



### LSC (LOW-SPEED COMPRESSION) ADJUSTMENT

The LSC is adjusted using a 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 wheel traction and the ride comfort of the vehicle.

Choose a LSC setting that gives good body control (roll in corners, dive under braking, squat under acceleration, etc.) without causing excessive harshness or loss of traction.

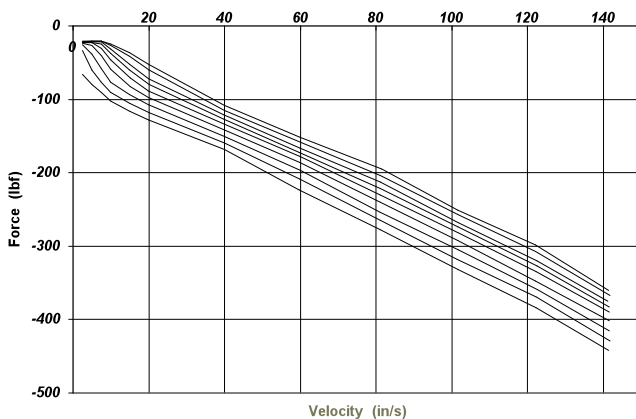
The graph below shows the typical range of adjust-ability for the LSC adjuster from full-firm to full-soft with the HSC adjuster held constant at 10 clicks out.

**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 below shows the typical range of adjust-ability for the HSC adjuster from full-firm to full-soft with the LSC adjuster held constant at 10 clicks:

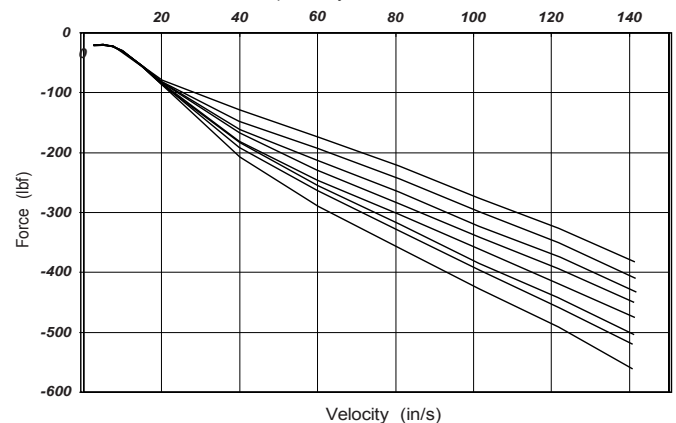
### LSC ADJUSTMENT RANGE

FOX DSC VALVE PERFORMANCE  
Low-Speed Adjuster dialed full soft to full stiff  
High-Speed Adjuster held constant at 10 Clicks



### HSC ADJUSTMENT RANGE

FOX DSC VALVE PERFORMANCE  
High-Speed Adjuster dialed full soft to full stiff  
Low-Speed Adjuster held constant at 10 Clicks





## MAINTENANCE

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

To avoid corrosion, you should keep the shocks and springs clean and free of dirt and moisture. The wiper seal will clean deposits from the shaft, but the shock won't necessarily fully compress every time. This means you could accumulate dirt at the bottom of the shaft and underneath the jounce bumper. Make sure you clean these areas completely to prevent shaft corrosion. Avoid using a high-pressure washer near the shaft seals or adjusters, as this could drive dirt inside the shock.

Make sure the ends of the spring and shock threads are clean and free of dirt before adjusting the preload ring this will make the adjustment easier and reduce wear.

Ideally, the shocks should be clean around the adjusters when changing the DSC 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 UTV is ridden. For optimum performance racing applications the shocks may require rebuilding every 10-20 hours of use. In non-racing environments to keep your shocks performing at optimum performance we recommend at least every 200 hrs of use or annually.

**WARNING:** Shock rebuilds take special 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). Contact a FOX Warranty representative at 1.800.FOX.SHOX (1.800.369.7469).

## SERVICE

Suspension Service Information on-line RA Request Form. <http://www.ridefox.com/service>  
Contact a FOX Service Center at 1.831.740.4619 or [psservicemw@ridefox.com](mailto:psservicemw@ridefox.com)  
To receive a return authorization number before shipping the shocks to one of the following service centers:

FOX Powersports Service  
130 Hanger Way  
Watsonville, CA 95076

FOX Midwest Service Center  
13461 Dogwood Drive  
Baxter, MN 56425