



QUICK REFERENCE GUIDE

40 RC2 + 40 R

technical terms defined	<ul style="list-style-type: none"> > Travel: total amount the fork compresses > Sag: amount the fork compresses with the rider sitting on the bike in a normal riding position. > Compression damping: controls the rate at which the fork compresses. > Rebound damping: controls the rate at which the fork extends. > Preload: initial force placed on a spring. > Spring rate: force required to compress a spring one inch. 	
service intervals	<ul style="list-style-type: none"> > Before every ride: Wash and dry exterior > Every 25 hours: Clean and inspect dust wipers > Every 100 hours: Perform structural inspection > Every 200 hours or Annually: Inspect bushings / Change oil 	
tools and supplies	<ul style="list-style-type: none"> > Safety glasses > Bucket or drain pan > Paper towels and/or rags > Plastic faced hammer or mallet > Torque wrench (in-lb / N-cm) > FOX Suspension Fluid, 1 qt. bottle, 7 wt. FOX P/N: 025-03-004 	<ul style="list-style-type: none"> > 32mm 6-point socket > 10mm open-end or socket > 15mm open-end or socket > 5mm hex key > 2mm hex key > Measuring container with cc or mL increments
torque values	<ul style="list-style-type: none"> > Topcaps: 165 in-lb (1864 N-cm) > Left-side bottom nut: 50 in-lb (565 N-cm) > Right-side bottom nut: 50 in-lb (565 N-cm) > Crown pinch-bolts: 65 in-lb (734 N-cm) > Axle and Axle-pinch bolts: 19 in-lb (215 N-cm) > Rebound knob: 11 in-lb (124 N-cm) > (RC2 only) Low- and High-speed compression knobs: 4 in-lb (45 N-cm) 	
oil volumes	<ul style="list-style-type: none"> > Damper: 71cc > Damper bath: 40cc > Springs/Bushings: 40cc 	
disclaimer	<p>FOX Racing Shox is not responsible for any damages to you or others arising from riding, transporting, or other use of your fork or bicycle. In the event that your fork breaks or malfunctions, FOX Racing Shox shall have no liability beyond the repair or replacement of your fork pursuant to the terms outlined in the warranty provisions of this manual.</p>	specific exclusions from warranty <ul style="list-style-type: none"> > Parts replaced due to normal wear and tear and/or routine maintenance > Parts subject to normal wear and tear and/or routine maintenance > Parts that are damaged due to obvious abuse > Bushings > Seals (after the 90-day seal warranty period expires) > Suspension fluids
warranty policy	<p>The factory warranty period for your fork is one year (two years for countries in the EU) from the original date of purchase of the bicycle or fork. A copy of the original purchase receipt must accompany any fork being considered for warranty service. Warranty is at the full discretion of FOX Racing Shox and will cover only defective materials and workmanship. Warranty duration and laws may vary from state to state and/or country to country.</p> <p>Additionally, the seals on your fork are covered for 90 days from the date of purchase. After the 90 day period, they are considered wear-and-tear items and will not be covered under the warranty.</p> <p>Parts, components and assemblies subject to normal wear and tear are not covered under this warranty. FOX Racing Shox reserves the right to all final warranty or non-warranty decisions.</p>	general exclusions from warranty <ul style="list-style-type: none"> > Installation of parts or accessories not qualitatively equivalent to genuine FOX Racing Shox parts. > Abnormal strain, neglect, abuse and/or misuse > Accident and/or collision damage > Modification of original parts > Lack of proper maintenance > Shipping damages or loss (purchase of full value shipping insurance is recommended) > Damage to interior or exterior caused by improper cable routing, rocks, crashes or improper installation > Oil changes or service not performed by FOX Racing Shox or an Authorized Service Center
warranty instructions	<ul style="list-style-type: none"> > FOX Racing Shox offers 48-hour turnaround, which may vary. > Obtain an RA (Return Authorization) number and shipping address from FOX Racing Shox at 800.FOX.SHOX. Outside the USA, contact the appropriate International Service Center. > Mark the RA number and Return Address clearly on the outside of the package and send to FOX Racing Shox or your International Service Center with shipping charges pre-paid by the sender. > Proof-of-purchase is required for warranty consideration. > Include a description of the problem, bicycle information (manufacturer, year and model), type of FOX product, spring rate and return address with daytime phone number. 	
contact information	<p>FOX Racing Shox 130 Hangar Way Watsonville, CA 95076 USA Phone: 1.831.274.6500 North America: 1.800.FOX.SHOX (369.7469) Fax: 1.831.768.9312 E-mail: service@foxracingshox.com Website: www.foxracingshox.com Business hours: Monday – Friday 8 a.m. – 5 p.m. PST</p>	<p>method of payment & shipping</p> <p>Visa, MasterCard, Cashier's Check</p> <p>FOX Racing Shox uses UPS Ground Service within the USA.</p>

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DENOTES INFORMATION THAT, IF NOT FOLLOWED, CAN LEAD TO SERIOUS INJURY OR DEATH, OR CAUSE SERIOUS DAMAGE TO YOUR FORK.



DENOTES INFORMATION THAT MAY NOT BE OBVIOUS, OR THAT CAN HELP THE RIDER OUT WITH A DIFFICULT SITUATION.

40

	RC2	R
travel	8 inches (203mm) Internally adjustable to 6" (152mm) in 1/2" (12mm) increments	
features	<ul style="list-style-type: none"> > Coil spring preload > Rebound > Low-speed compression > High-speed compression > Position sensitive damper > Internally adjustable travel 	<ul style="list-style-type: none"> > Coil spring preload > Rebound > Position sensitive damper > Internally adjustable travel
adjustments	<ul style="list-style-type: none"> > Rebound: red knob > Preload: blue knob > High-speed compression: large blue dial > Low-speed compression: smaller blue dial 	<ul style="list-style-type: none"> > Rebound: red knob > Preload: blue knob



LASER-ETCHED ALUMINUM PRELOAD ADJUSTER ■

OPTIMIZED EASTON® EA70™ STEERER ■

LASER-ETCHED ALUMINUM REBOUND ADJUSTER ■

FORGED 7050-T6 ALUMINUM
UPPER AND LOWER CROWN ■

INTERNAL TRAVEL ADJUST SYSTEM ■

TITANIUM COIL SPRING ■

HIGH-STRENGTH WEBBED-TRUSS FORK BRACE ■

DISC BRAKE HOSE GUIDE ■



PROTECTIVE CAP
(RC2 ONLY) ■

DH-SPECIFIC DISC BRAKE TABS ■

20MM THRU-AXLE ■

HIGH- AND LOW-SPEED COMPRESSION ADJUST
(RC2 ONLY) ■



CONGRATULATIONS!

Thank you for choosing **FOX 40** for your bicycle. In doing so, you have chosen the finest suspension fork in the world. FOX Racing Shox products are designed, tested and manufactured by the finest professionals in the industry in Santa Cruz County, California, USA.

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

For detailed service instructions, consult a FOX Service Manual for your particular product. This manual does not contain step-by-step detailed service instructions for a reason: FOX recommends that detailed service be performed by an Authorized Service Center or FOX Racing Shox.

CONSUMER SAFETY

- > Keep your bicycle and suspension system in optimal working condition.
- > Wear protective clothing, eye protection and helmet every time you ride.
- > Know and ride within your limits.
- > Follow IMBA's Rules of the Trail. For more information, go to www.imba.com:

- | | | |
|-----------------------------|------------------------|-------------------------|
| 1. Ride on open trails only | 2. Leave no trace | 3. Control your bicycle |
| 4. Always yield trail | 5. Never scare animals | 6. Plan ahead |

IMPORTANT SAFETY INFORMATION

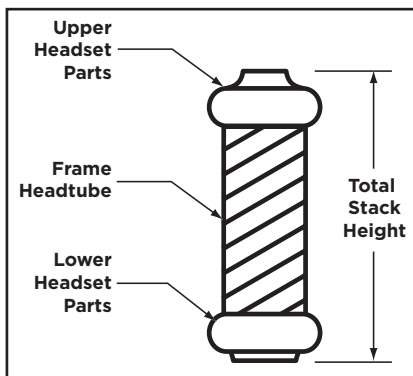
- > Verify that the brakes are installed and adjusted properly before riding the bicycle. Improperly installed or adjusted brakes can cause loss of control and serious or fatal injuries to the rider. Use only disc brakes designed by the manufacturer for use on the **FOX 40**. "V-style" brakes CANNOT be used on the **FOX 40**. Do not route brake cables or housing through the stem.
- > If your fork loses oil, tops out excessively or makes unusual noises, immediately stop riding and contact FOX Racing Shox or an Authorized FOX Racing Shox Service Center for inspection. Continued use of the fork can cause loss of control and serious or fatal injuries. Some noises such as spring rattle, oil flow and minor clicks are normal.
- > Use only FOX Racing Shox replacement parts. Using aftermarket parts on the **FOX 40** will void the warranty. Aftermarket replacement parts can also cause structural failure resulting in loss of control and serious or fatal injuries.
- > If mounting the bicycle in a carrier designed to hold a fork by its dropouts, use caution to not tilt the bicycle to either side. Tilting the bike with the dropouts in the carrier can cause structural damage to the fork. Ensure that the fork is fastened securely with the **bike carrier's thru-axle mount** and that the rear wheel is properly held. The four axle pinch-bolts must be torqued to specification when mounting to the bike carrier. If the bicycle ever tilts or falls from a bicycle carrier, do not ride it until it is examined by a qualified dealer, Authorized Service Center or FOX Racing Shox. A fork leg or dropout failure can cause loss of control and serious or fatal injuries.
- > The **FOX 40** does not include reflectors for on-road use. The **FOX 40** is designed to be used in competitive off-road riding and racing. Proper reflectors meeting the Consumer Product Safety Commission's (CPSC) requirements should be installed if the fork will be used on public roads.
- > The **FOX 40** has a crown/steerer assembly. These parts are pressed together in a one-time, precision press-fit operation. Replacement of any of these parts requires a completely new assembly. Do not attempt to remove or replace the steerer independently of the crown. DO NOT ATTEMPT TO ADD THREADS TO THREADLESS STEERERS. Modifying the crown/steerer assembly as described here can cause the rider to lose control of the bicycle resulting in serious or fatal injuries.

INSTALLING THE FOX 40

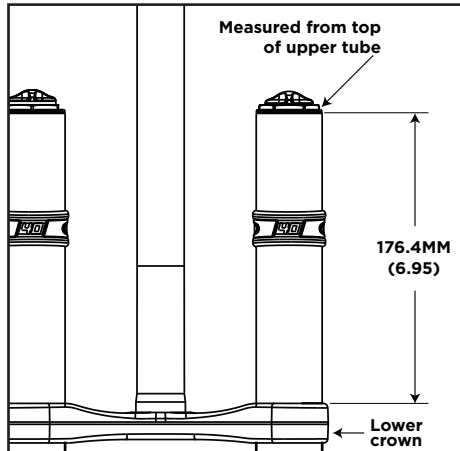
The **FOX 40** is available in two upper crown sizes to cover the varying range of headset tube dimensions. Measure the total stack height (see the figure below) to determine the proper upper crown size.

For total stack heights of 90 – 165mm, your FOX 40 should have the SMALL-LARGE UPPER CROWN.

For total stack heights of 165 – 181mm, your FOX 40 should have the EXTRA LARGE UPPER CROWN.



A qualified bicycle mechanic should install the **FOX 40**. Improperly installed forks are dangerous and can cause loss of control and serious or fatal injuries. The **FOX 40** is assembled with the lower crown set to 176.4mm below the top of the upper tubes. The lower crown position is set to allow a 6mm clearance between the bottom of the crown and the top of a 2.80" tire when bottomed out. **Do not change the position of the lower crown.**



- 1. Removing fork and installing crown race:** Place the bicycle in a repair stand. Remove the existing fork from the bicycle. Remove the crown race from the old fork with a crown race removal tool and install it with a crown race setter tool onto the new **FOX 40**. The crown race must be firmly seated against the top surface of the lower crown.



IF THE STEERER HAS ANY NICKS OR GOUGES, THE CROWN/STEERER ASSEMBLY MUST BE REPLACED. A NICK OR GOUGE CAN CAUSE THE STEERER TO FAIL PREMATURELY, WHICH CAN CAUSE LOSS OF CONTROL OF THE BICYCLE RESULTING IN SERIOUS OR FATAL INJURIES.

2. **Cutting steerer to proper length:** Install the fork on the bicycle with all of the headset parts and upper crown. The deep pocketed side of the upper crown faces downward on the bicycle. After eliminating play in the headset, lightly tighten the steerer pinch bolt on the upper crown with a 5mm hex wrench. Install the headset spacers (not required) and stem on the steerer and lightly tighten the stem pinch bolt(s). Mark the steerer with a scribe at the top edge of the stem. Remove the **FOX 40** from the bicycle and cut the steerer 3mm below the scribed mark. This 3mm clearance allows room for the stem cap to lightly tension the headset and eliminate any play. Use a flat file to deburr the outer and inner top edges of the newly cut steerer.
3. **Install star-fangled nut and steering stop bumpers:** With a star-fangled nut installation tool, install the star-fangled nut into the steerer so that it is 4-8 mm below the top edge of the steerer. Install one steering stop bumper onto each uppertube and place midway on the uppertube.
4. **Installing fork onto bicycle:** Install the **FOX 40** on the bicycle with all of the headset parts and upper crown. Install stem, stem cap and M6 stem cap bolt. With all three upper crown bolts loosened, lightly tighten the headset stem cap bolt to remove play in the system so that it turns freely without drag. With a 5mm hex key socket and torque wrench, torque all three upper crown bolts (see figure below) to 65 in-lb. Check that the torque on the four lower crown bolts (see figure below) is at 65 in-lb. **DO NOT OVERTORQUE** the pinch bolts. Over-torquing can damage the bolt(s), fracture the crown or damage the threads, and can cause failure of the fork and loss of control with serious or fatal injuries.

TIRE SIZES

- 5a. The **FOX 40** can accept tire sizes up to 2.80 inches wide. However, any tire larger than 26 x 2.60 must be checked for clearance using the following method. With the tire installed and inflated on the rim, measure the following three dimensions:

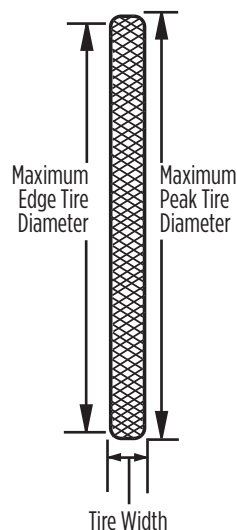
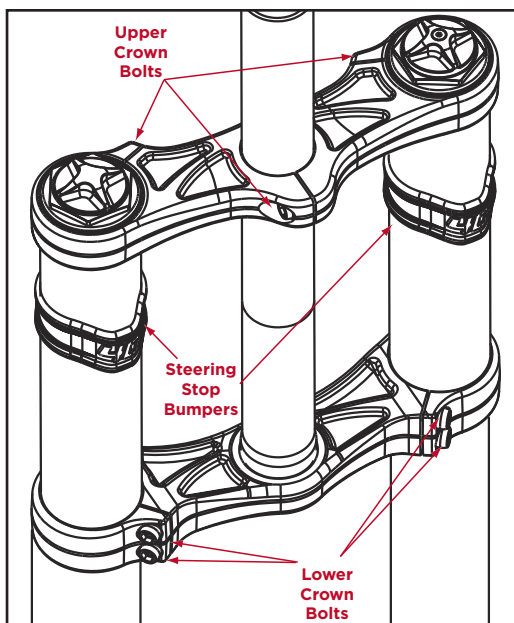
Maximum Peak Tire Diameter = 694 mm = 27.3 inch

Maximum Edge Tire Diameter = 670 mm = 26.4 inch

Maximum Tire Width = 71 mm = 2.80 inch



DO NOT USE A TIRE IF ANY MEASUREMENT EXCEEDS THE MAXIMUM DIMENSIONS SHOWN ABOVE. USING TIRES LARGER THAN THE DIMENSIONS SHOWN ABOVE IS NOT RECOMMENDED AND CAN CAUSE SERIOUS OR FATAL INJURIES.



5b. Installing the Front Wheel:

- a. Loosen the 4 axle pinch bolts on the lower leg with a 5mm hex key wrench.
 - b. Using a 5mm hex key wrench, turn counterclockwise to loosen and remove the axle.
 - c. Install the front wheel into the dropouts and install the axle into the lower leg.
 - d. Using a 5mm hex key wrench, turn clockwise and lightly tighten and torque the axle to the lower leg to 19 in-lb (215 N-cm).
 - e. Torque the two left side dropout pinch-bolts to 19 in-lb (215 N-cm).
 - f. Compress the fork on the bike a couple of times to let the right side of the dropout float and settle to its low-friction point. Torque the two right side dropout pinch-bolts to 19 in-lb (215 N-cm).
6. **Setting handlebars straight and torquing stem bolts:** Set the bike on the ground and sit on your bike to set the handlebars straight relative to the front wheel. Tighten the stem pinch bolts and torque fasteners according to the stem manufacturer's specifications. Check that the handlebar pinch bolts are torqued to the stem manufacturer's specifications.
 7. **Adjusting position of the steering stop bumpers:** Adjust the height and angle of the steering stop bumpers on the upper tubes so that you have the maximum turning angle, and protect your frame and upper tubes from denting during a crash. Depending on the shape and size of the frame tubes, you may need to use the tall part of the bumper to contact the frame tubes (see figure on page 7).

DISC BRAKE INSTALLATION

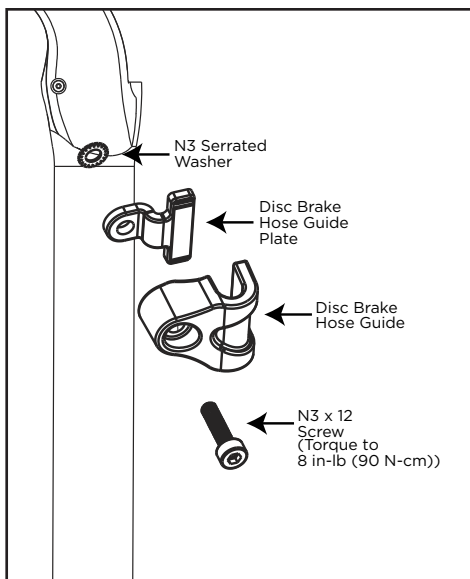
8. **Installing disc brakes:** The **FOX 40** is designed only for use with DH disc brakes with disc rotor sizes of 200 – 205 mm. The **FOX 40** can use DH mechanical or hydraulic brake systems.



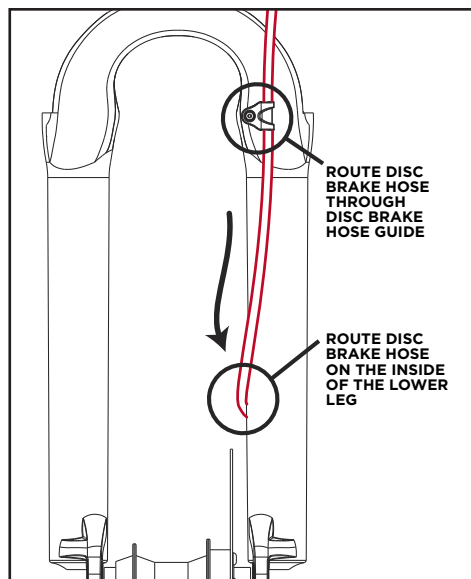
NEVER MODIFY THE LOWER LEG OR USE CANTILEVER RIM BRAKES.

The **FOX 40** disc bolt pattern uses:

- XC Caliper
 - XC Caliper Mount for International XC mount pattern
 - DH Size Rotor (200 – 205 mm outside diameter)
- a. Install DH disc brake system according to disc brake manufacturer's specifications. Be sure to torque all fasteners and bolts to manufacturer's recommendations. Consult the instructions that came with your disc brakes for proper installation procedures. It is recommended that **NEW** disc brake pads be installed to ensure proper alignment and to minimize drag. Test brakes for proper operation on flat land before hitting the trails.
 - b. Route the disc brake hose (for hydraulic disc brakes) or brake cable housing (for mechanical disc brakes) from the caliper to the **inside** of the lower leg and through the supplied disc brake hose guide as shown in the figure on the next page. Assemble the FOX disc brake hose guide parts as shown in the figure on the next page. Cut your brake hose or brake cable housing to the correct length and assemble according to disc brake manufacturer's specifications. Tighten the disc brake hose guide screw with a 2.5 mm-hex key wrench and torque to 8 in-lb (90 N-cm).



Disc Brake Hose Guide Parts Orientation

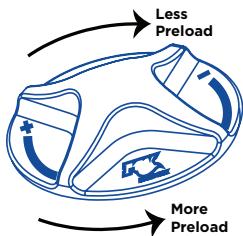


Disc Brake Hose Guide Routing

FORK TERMINOLOGY

- > **TRAVEL:** total amount the fork compresses
- > **SAG:** amount the fork compresses with the rider sitting on the bike in a normal riding position.
- > **COMPRESSION DAMPING:** controls the rate at which the fork compresses.
- > **REBOUND DAMPING:** controls the rate at which the fork extends.
- > **PRELOAD:** initial force placed on a spring.
- > **SPRING RATE:** force required to compress a spring one inch.

SETTING SAG



For best performance, it is necessary to set and adjust sag. Sag is how much the fork compresses, or “sags,” when the rider sits on the bicycle in a normal riding position. Generally, this is 15 – 25% of the total travel.

1. Install a zip tie with light friction on the upper tube and push it down until it contacts the fork seal. Carefully sit on the bike and assume a normal riding position. The fork should compress slightly. Being careful not to further compress the fork, dismount the bicycle. Measure the distance between the seal and the zip tie. This distance is sag.
2. Compare your sag measurement to the ones listed in the **SAG SETUP** table on the next page.

If your sag is lower than on the table, turn the preload knob counterclockwise one (1) full turn. Measure sag again and repeat adjustment if necessary.

If your sag is higher than on the table, turn the preload knob clockwise one (1) full turn. Measure sag again and repeat adjustment if necessary. If correct sag cannot be achieved by adjusting the preload knob, see the **SPRING TUNING** section on page 10.

SAG SETUP

Travel	15 – 25% Sag
6 in. (152mm)	0.9 – 1.5 in. (23 – 38 mm)
6.5 in. (165mm)	1.0 – 1.6 in. (25 – 41 mm)
7 in. (178mm)	1.1 – 1.8 in. (27 – 45 mm)
7.5 in. (191mm)	1.1 – 1.9 in. (29 – 48 mm)
8 in. (203mm)	1.2 – 2.0 in. (30 – 51 mm)

SAG TROUBLESHOOTING

Symptom	Remedy
Too much sag	Change to higher rated coil spring
Too little sag	Change to lower rated coil spring
Excessive bottoming	Change to higher rated coil spring
Harsh ride; full travel not utilized	Change to lower rated coil spring

SPRING TUNING

Consult the **COIL SPRING GUIDELINES** table below to see if you need to change the coil spring on your **FOX 40** to achieve proper sag. The **FOX 40** is tuned by changing only the left-side coil spring. The coil spring is color coded, and may need to be changed depending on your weight:

COIL SPRING GUIDELINES

Fox Part #	Spring Rate	Color Code	Rider Weight (lbs.)
039-05-070	30 lb/in (339 N-cm)	Black	<90 – 120
039-05-071	35 lb/in (395 N-cm)	Purple	120 – 150
039-05-072	40 lb/in (452 N-cm)	Blue	150 – 180
039-05-063	45 lb/in (508 N-cm)	Green	180 – 210
039-05-074	50 lb/in (565 N-cm)	Yellow	210 – >240

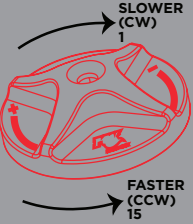


CHANGING THE COIL SPRING

1. With a 32mm 6-point socket wrench, loosen and remove the preload top cap (top of left leg). Remove the black spring spacers (4 spacers for 8 in./203mm travel, 3 for 7.5 in./191mm mm travel, 2 for 7 in./178mm travel, 1 for 6.5 in./165mm travel, and 0 for 6 in./152mm travel). Compress the fork slightly and remove the coil spring. You may need to firmly pull up on the spring to disengage it from the plunger shaft. Wipe the spring dry with a rag and check the color code.
2. Install the new spring by dropping it into the upper tube. Install the appropriate spacers according to your desired travel (see **CHANGING TRAVEL** on page 13), then torque the top cap to 165 in-lbs (1864 N-cm).
3. Measure and set sag as described in **SETTING SAG** on page 9.

ADJUSTING REBOUND

The rebound knob is the red knob located on top of the right fork leg, and has 15 clicks of adjustment. Rebound controls the speed at which the fork extends after compressing. Turning the knob clockwise slows down rebound; turning the knob counterclockwise speeds up rebound.

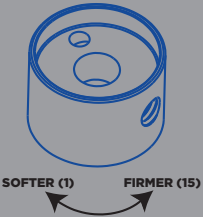


As a starting point, turn the rebound adjuster knob all the way clockwise (full in) until it stops, then turn counterclockwise 8 clicks.

REBOUND	Knob Setting (clicks OUT from full in)	Setting Description	Tuning Tips	Setup Tips
 <p>Right-side knob on topcap</p>	<p>1</p> 	Slow Rebound	Too slow and your fork will pack down and ride harsh.	If you increase your spring rate or air pressure, you will need to slow down your rebound.
	<p>8 (Factory setting)</p>	Average Rebound		
	<p>15</p> 	Fast Rebound	Too fast and you will experience poor traction and wheel hop.	If you decrease your spring rate or air pressure, you will need to speed up your rebound setting.

ADJUSTING HIGH-SPEED COMPRESSION (RC2 ONLY)



High-speed compression damping controls the force it takes to move the fork through its travel and how the wheel reacts to a bump. This adjuster rotates to stops at each end, and has 15 clicks of adjustment. It is preset from the factory at 1 click in from the full out (counterclockwise) position. The knob is protected by the black protective cap. Never ride your **FOX 40** without the black protective cap.

HIGH-SPEED COMPRESSION	Knob Setting (clicks IN from full out)	Setting Description	Tuning Tips	
 <p>Larger knob on bottom right</p>	<p>1</p> 	Soft Compression	Maximum wheel traction and bump compliance. If setting is too soft, you may bottom often on square-edged hits and G-outs.	
	<p>1 (Factory setting)</p>	Average Compression		
	<p>15</p> 	Firm Compression	Reduces bottom-out and provides maximum bump absorption. If setting is too firm, you may experience a harsh ride with bad traction and use too little available travel.	

“BOOST” FEATURE OF HIGH-SPEED COMPRESSION ADJUSTER (RC2 ONLY)

The high-speed compression adjuster is equipped with a maximum “Boost” setting. This setting offers increased bump force resistance well beyond the adjuster’s linear range up until the stop at full firm (clockwise).

To enable the “Boost” feature, turn the high-speed compression knob to the full in (clockwise) position to the stop with firm hand torque. You can use a 3mm hex key to assist in turning the knob to the full in position or to untorque when de-tuning the “Boost” feature.

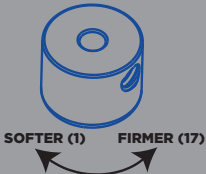




THE HIGH-SPEED COMPRESSION KNOB HAS A FEATURE THAT ALLOWS THE INSERTION OF A 3MM HEX KEY OR SIMILAR TOOL TO ASSIST IN TURNING THIS KNOB. DO NOT OVERTORQUE THE KNOB PAST THE STOP IN EITHER DIRECTION.

ADJUSTING LOW-SPEED COMPRESSION (RC2 ONLY)



Low-speed compression damping controls the influence of the rider's weight shifts and bike attitude under braking. This adjuster rotates to stops at each end, and has 17 clicks of adjustment. It is preset from the factory at 1 click in from the full out (counterclockwise) position. The knob is protected by the black protective cap. Never ride your **FOX 40** without the black protective cap.

LOW-SPEED COMPRESSION	Knob Setting (clicks IN from full out)	Setting Description	Tuning Tips
 <p>Smaller knob on bottom right</p>		Soft Compression	Maximum wheel traction and bump compliance. Too soft and you may have excessive brake dive and wallowy feel.
	<p>1 (Factory setting)</p>	Average Compression	
		Firm Compression	Resists brake dive and keeps the fork up in the travel. Too firm and you may have poor traction in loose conditions.

HYDRAULIC BOTTOM-OUT SYSTEM

The **FOX 40 RC2** and **R** are equipped with a patent-pending Internally Adjustable Hydraulic Bottom-Out Control System. This feature can be adjusted inside the cartridge by a Fox Service Center. It comes preset from the factory at the medium setting.



DO NOT ATTEMPT TO DISASSEMBLE THE FOX 40 RC2 OR R CLOSED CARTRIDGE SYSTEM UNLESS YOU ARE AN AUTHORIZED FOX RACING SHOX SERVICE CENTER WITH THE APPROPRIATE TOOLS.

CHECK BEFORE EVERY RIDE

1. Check that the 20mm axle pinch bolts and crown pinch bolts are properly adjusted and tightened.
2. Clean the outside of your fork with soap and water and wipe dry with a soft dry rag. Do not spray water directly on the seal/upper tube junction. **DO NOT USE A HIGH PRESSURE WASHER ON YOUR FORK.**
3. Inspect entire exterior of fork for damage. The fork should not be used if any of the exterior parts appear to be damaged. Please contact an authorized dealer or FOX Racing Shox for further inspection and repair.
4. Check headset adjustment. Adjust headset if loose, according to manufacturer's recommendations.
5. Check that brake cables or hoses are properly fastened.
6. Check that the front and rear brakes operate properly on flat land.

CHANGING TRAVEL

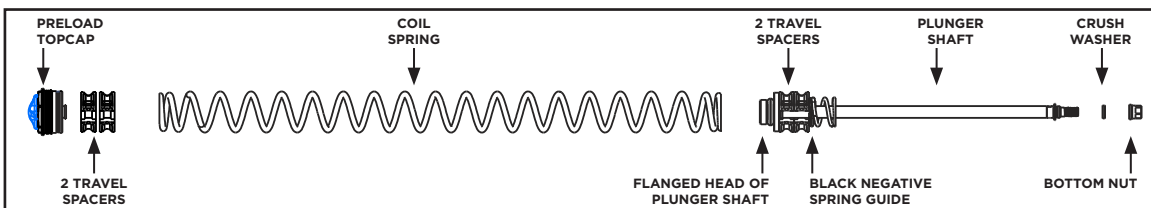
Travel on the **FOX 40** can be changed from 8" to 6" in 1/2" increments by rearranging the four internal travel spacers inside the left leg of the fork. With the proper tools and oil, changing travel can be done in about 15 minutes.

The following tools and supplies will be needed: A 32mm 6-point socket, 10mm open end wrench or socket, torque wrench, plastic hammer, oil drain pan, clean dry lint-free towels, measuring container, as well as the following:

Quantity	Part Number	Part Name
1	025-03-004-A	1 qt. bottle of Fox Suspension Fluid (7 wt.)

- The fork does not have to be removed from the bicycle for changing travel. Place the bicycle (or fork, if removed) in a bike stand. Using a 32mm socket wrench, remove the left side topcap. Remove the spacer(s) on top of the coil spring (4 spacers for 8", 3 spacers for 7.5", 2 spacers for 7", 1 spacer for 6.5", 0 spacers for 6").
- Using a 10mm socket wrench, unscrew the left side bottom nut 6 turns. Place a clean dry oil pan underneath the left side of the fork. Tap on the bottom nut with a plastic faced hammer to disengage the plunger shaft from the lower leg. Unscrew and remove the bottom nut and crush washer. Push up on the shaft with a thin screwdriver and let the oil drain.
- Compress the fork and pull the coil spring/plunger shaft assembly out of the top of the left side upper tube. Pull the coil spring off the plunger assembly.
- Looking at the diagram below, determine the number of travel spacer(s) needed on the plunger shaft for your desired travel. Slide the black negative spring guide away from the flanged head of the aluminum plunger shaft. Push and snap on the correct number of the travel spacers to the plunger shaft and slide back the black negative spring guide against the spacers.

TRAVEL SPACER SETTINGS		
Travel Setting	# of Spacers Under Topcap	# of Spacers on Plunger Shaft
8.0" (203mm)	4	0
7.5" (190mm)	3	1
7.0" (178mm)	2	2
6.5" (165mm)	1	3
6.0" (152mm)	0	4



FOX 40 Travel Spacer Orientation Diagram Set at 7" Travel

- Push and snap on the coil spring to the plunger shaft assembly. Install the coil spring/plunger shaft assembly into the top of the left side upper tube. Install the correct number of spacers on top of the coil spring and thread the topcap into the upper tube.
- Remove the bicycle from bike stand and turn the bike upside down. Using a thin screwdriver and sliding the lower leg up or down, push and align the plunger shaft so that it is aligned and comes through the hole in the lower leg. Once aligned, push the lower leg down and install the crush washer and bottom nut. Using a 10mm socket and torque wrench, torque the bottom nut to 50 in-lb (565 N-cm).

7. Turn the bike right side up and place it back into the bike stand. Remove the left side preload topcap and pour in 40 cc of FOX Suspension Fluid (7 wt.). Install and torque the preload topcap to 165 in-lb (1864 N-cm).
8. After changing the travel, compress the fork a few times and check for proper operation before riding—there should be no free movement or play in travel. If there is free movement in the fork or if it makes strange noises, disassemble the fork and check that all four spacers are in the fork and in the correct orientation for the desired travel.

SERVICE INTERVALS

Performance, safety and the lifespan of your **FOX 40** depend on timely and proper maintenance. If you ride in extreme conditions, service and maintain your **FOX 40** more frequently. Perform the following preventive maintenance procedures at the appropriate time interval:

item	every ride	every 25 hours	every 100 hours	annually or every 200 hours
wash and dry exterior	X			
clean dust wipers		X		
inspect and lube foam rings		X		
perform structural inspection			X	
inspect bushings				X
change oil				X

SEALS AND FOAM RINGS

FOX 40 features a sealing system designed to keep your fork moving smoothly in all conditions. There are two parts to the system: the fork seal and the foam ring. The fork seal features a proprietary scraper lip geometry that keeps dirt out and oil in. The foam ring sits just below the fork seal. It is saturated with oil and in turn applies oil to the upper tube as it passes by. This keeps the fork moving up and down smoothly.

While **FOX 40**'s are designed to require minimal maintenance, periodic inspection and cleaning of the fork sealing system is required. It is normal on **FOX 40** for a small amount of oil and/or grease to accumulate on the upper tubes. This is necessary to keep the fork working smoothly and to keep dirt out. Furthermore, fork seals are grease packed at the factory. This grease tends to migrate out of the seals during the break-in period.

SEAL AND FOAM RING SERVICE

Storing the bicycle upside down and inverting the fork allows oil to run down to the foam rings and keeps them lubed and ready for your next ride. To check the conditions of the seal and foam rings, perform the following procedure:

1. Around the perimeter of the fork seals are small notches. Use a thin flat-blade screwdriver in these slots to gently pry the seal from the lower legs. Once loose, raise them all the way up to the lower crown. It is recommended that the tip of the screwdriver be covered with tape or a piece of material to protect the paint on the fork from being damaged.
2. Wrap a clean rag around the junction of the upper tubes and the lower legs. This will keep dirt out while the seals are being cleaned.
3. Use a rag to wipe around the outside diameter of the seal. Wipe until clean.
4. Remove the rags and check the foam rings which will be visible just inside the lower legs. They should be soaked with oil and should not contain any dirt or debris. If the foam rings are dry, use a few cc's of Fox Suspension Fluid to saturate them.
5. Wipe the upper tubes and slide the seals down into the lower legs. Carefully press the seals back into place. A thin flat-blade screwdriver can be

used to press in between the upper tube and the fork brace. It is recommended that the blade of the screwdriver be covered with tape or a rag to prevent damage to the seal. Inspect that seal is firmly seated against top surface of the lower leg.

6. Wipe off any excess oil and cycle the fork a few times to check for proper operation.

STRUCTURAL INSPECTION

UPPER TUBES

Look for scratches and dings on the upper tubes, which will prematurely wear seals and bushings. Big scratches and/or dings could compromise the integrity of your fork. Contact a FOX Service Center if any of the above are present on your **FOX 40**.

CROWNS

Check both upper and lower crowns for any damage, deformation or cracks. Contact a Fox Service Center if any are present.

LOWER LEGS

Inspect the lower leg for any damage around the brace region, tube sections, disc brake mounts and thru-axle dropouts. Check for cracks or flaking in the paint, which could be an indication of damage to the structure. Inspect the dropouts using the following method:

With the axle in place, torque the pinch bolts to the proper setting (19 in-lb). There should be a gap present on the under side of the drops. If there is no gap and the walls are touching, this indicates the pinch bolts have been over-torqued. The material in this region may be compromised as a result of the over-torqued pinch bolts. Contact a FOX Service Center if any of the above anomalies are present on your **FOX 40**.

BUSHING TECHNOLOGY AND INSPECTION

FOX 40's use hydrodynamic lubrication. This system force feeds oil into the tall, slotted bushings during the compression stroke. When the fork cycles up and down, the oil is trapped between bushings, upper tubes and seals.

Thermal expansion rates can cause the bushings to close in on the upper tubes, causing high friction and binding during normal operation. Correct bushing clearance is critical to prevent binding of the fork during normal operation.

Geometric dimensioning and tolerancing is a design practice used to ensure parts will work/fit during the manufacturing process. Bushings are sized before installation and re-checked for size after installation. Correct bushing tolerance is a diametric clearance of 0.0015" – 0.0090".

SHOWROOM TESTING

As you rock the fork back and forth while stopped with the front brake applied, the bushings have only a small amount of lubricant separating the bushing/upper tube. At this time you may notice a small amount of bushing play. Fork bushings must have clearance to perform correctly. Too little clearance will cause high friction, binding or bushing seizure when hot.

REAL WORLD TESTING

During normal riding conditions, hydrodynamic lubrication occurs when there is a complete separation of the upper tube from the bushing by a thin film of oil. Hydrodynamic lubrication is characterized by very low friction and no wearing of the bushings or shaft since there is no metal-to-bushing contact. During hydrodynamic lubrication, normal bushing clearance will not be noticeable.

Bushings should be checked annually for excessive wear. If excessive fore and aft movement is detected between the upper tubes and lower legs, contact an Authorized Fox Racing Shox Service Center or Fox Racing Shox for further instructions. Grasp the lower legs at the dropouts (axle), then push the fork straight back towards the rear wheel. Now pull it towards you. Next, grasp the fork near the upper tube/seal junction and try the same thing. If excessive movement is noticed, refer to the **QUICK REFERENCE GUIDE** on the inside front cover of this manual and contact FOX Racing Shox or an Authorized FOX Racing Shox Service Center.

CHANGING OIL

The following tools and supplies will be needed: A 32mm 6-point socket, 10mm open end wrench or socket, 15mm deep 6-point socket, torque wrench, 2mm hex key wrench (RC2 only), plastic hammer, small screwdriver, oil drain pan, clean dry lint-free towels, as well as the following:

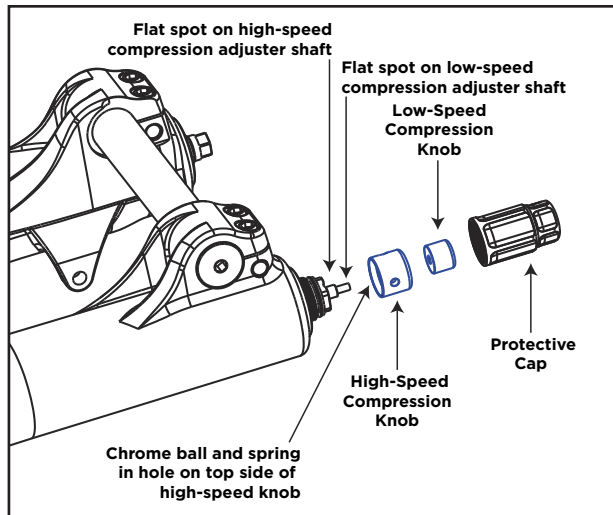
Quantity	Part Number	Part Name
1	025-03-004-A	1 qt. bottle of Fox Suspension Fluid (7 wt.)
1	241-01-002-C	8mm Crush washer
1	241-01-011	13mm Crush Washer

Oil change on the **FOX 40 RC2** or R fork consists of changing the lower leg oil bath in each leg. This oil bath service can be performed with the common tools listed above, and the fork does not have to be removed from the bicycle. This service will not require any disassembly of the closed RC2 or R cartridge.



DO NOT ATTEMPT TO DISASSEMBLE THE FOX 40 RC2 OR R CLOSED CARTRIDGE SYSTEM UNLESS YOU ARE AN AUTHORIZED FOX RACING SHOX SERVICE CENTER WITH THE APPROPRIATE TOOLS.

1. Place the bicycle or fork in a stand. Remove the disc brake caliper from the lower leg and secure it to the handlebars or frame. Using a 5mm hex key wrench, loosen the 4 axle pinch bolts. Using a 5mm hex key wrench, unscrew the axle five full revolutions counterclockwise and remove from the lower leg. Remove the front wheel from the bike.
2. Place a clean dry oil pan underneath the left side of the fork. Using a 10mm open-end wrench or socket, loosen the bottom nut 6 full turns. Tap on the bottom nut with a plastic faced hammer to disengage the plunger shaft from the lower leg. Unscrew and remove the bottom nut and 8mm crush washer. Pull the lower leg downward until you feel it stop. Let the oil drain into the oil pan.
3. **(RC2 ONLY)** Unscrew and remove the black protective cap. Using a 2mm hex key wrench, unscrew the set-screw approximately 2 turns and remove the low-speed compression adjuster knob. Using a 2mm hex key wrench, unscrew the set-screw approximately 2 turns and remove the high-speed compression adjuster knob. Be careful to note that the 1/8" diameter chrome steel detent ball and detent spring are in the machined hole in the high-speed compression adjuster knob.



4. Using a 15mm deep socket wrench, unscrew the bottom nut 4 turns. Place a clean dry oil pan underneath the right side of the fork. Using a 15mm deep socket on the bottom nut (to protect the adjusters), tap on the bottom nut with a plastic hammer to disengage the base stud from the lower leg. Remove the bottom nut and 13mm crush washer from the base stud and set them aside. Push up on the base stud to let the oil bath oil drain out of the fork into the drain pan.
5. If the oil looks black or a dark gray, flush both sides of the lower leg with clean oil. To flush the lower leg, turn the fork upside-down and add about 20cc of oil into each leg. If the fork is off the bike, you can move it around to get the clean oil all over the inside of the fork. Let the fork drain into the drain pan until it stops dripping.
6. Turn the bike or fork upside-down, pull up on the lower leg and add 40cc of FOX Suspension Fluid (7 wt) into the right-side bottom hole (damper side) of the lower leg. Keeping the lower leg in the up position, add 40cc of FOX Suspension Fluid (7 wt) into the left-side bottom hole (spring side) of the lower leg.
7. Slide the lower leg down until you can put on a NEW right-side 13mm crush washer with the old bottom nut. Thread on the bottom nut (2 to 3 turns max.). Using a 15mm deep 6-point socket, torque the cartridge bottom nut to 50 in-lb.
8. Slide the lower leg down further so the plunger stud on the left side of the fork goes through the hole of the lower leg. You may need to use thin screwdriver move and align the plunger shaft so that it goes through the hole of the lower leg. Install a NEW left-side 8mm crush washer with the old bottom nut. Thread on the bottom nut (2 to 3 turns max.). Using a 10mm socket, torque the plunger bottom nut to 50 in-lb.
9. **(RC2 ONLY)** Turn the bicycle right side up. Look at the two compression adjuster shafts on the bottom of the right side damper. If you cannot find both flats spots, rotate the adjuster shaft by lightly turning the shaft with needle nose pliers (see figure above). Using a 2mm hex key wrench, align and install the RC2 high-speed compression adjuster knob so that the set screw tightens on the flat spot of the shaft. Be careful that the detent spring and chrome steel ball are in the top-side of the machined hole. Be careful not to over-torque this knob because it will cause the knobs to bind. Now align and install the RC2 low-speed compression adjuster knob so that the set screw tightens on the flat spot of the shaft. The torque for both compression knobs is 4 in-lb. Turn the knobs to make sure they turn freely and install the black protective cap.
10. Wipe down the lower leg. Reinstall your disc brake caliper and torque fasteners to disc brake manufacturer's specifications. Using a 5mm hex key socket and torque wrench, reinstall the front wheel and thread in the axle and torque to 19 in-lb. Tighten the 2 left-side axle pinch bolts and torque to 19 in-lb. Compress the fork a few times to allow the right side of the fork leg to settle into its low friction spot. Tighten the 2 right side axle pinch bolts and torque to 19 in-lb. Your oil change is complete. Now go ride!

TUNING NOTES:

